# Solis Outdoor 4K Television Owner's Manual

SB- FS- 49- BL, SB- FS- 55- BL, SB- FS- 65- BL, SB- FS- 75- BL



# **Frontmatter**

### Dear Valued Customer

Thank you for choosing SunBrite. We're honored that you've chosen us to be a part of your outdoor experience.

At SunBrite, we've been developing and building the finest outdoor TVs since 2004 with the singular goal of delivering the best possible outdoor experience—to bring people together to share in the latest sports and entertainment while also enjoying all that the outdoors have to offer.

To ensure you receive the latest updates from SunBrite, please register your TV at this web address:

www.sunbritetv.com/support/product-support/product-registration

If, for any reason, you are not completely satisfied with your SunBrite TV, please let us know. Your experience is of the utmost importance to us, and we don't take it lightly. Reach our team of experts Monday through Friday from 9:00 am – 6:00 pm Eastern at 866-357-8688.

Again, thank you for choosing a SunBrite premium outdoor television. We know you had options, and we're grateful you chose us to help you create new experiences with your friends and family.

—The SunBrite Team

### Recycling

SunBriteTV operates a free mailback recycling program for consumers.

For more information on how to recycle your TV, please visit https://www.sunbritetv.com/support/recycling-programs or contact customer service at 866.357.8688.

### Regulatory/Safety Information

To review complete regulatory information for your SunBrite products, see the information located on the Snap One website at <a href="https://www.sunbritetv.com/snapone-legal">https://www.sunbritetv.com/snapone-legal</a>.

#### **AC Power requirements**

AC power outlet (receptacles), rated 125-V, single phase, 15 or 20 Amp, accessible to either ordinary, instructed, or skilled persons, shall be provided with GFCI protection.

A Residual current protective device (RCD) with rate residual operating current not exceeding 30m A shall be used in the MAINS supply to socket-outlets intended for general use.

The display must be connected to a grounded wall socket outlet.

The power plug is used as the primary disconnect for the TV and shall remain readily accessible.

#### **General Operation**

The front panel used in this product is made of glass. Therefore, it can break when the product is dropped or impacted.

The Liquid Crystal Panel is a very high technology product with 2,073,600 pixels, giving you fine picture details. Occasionally, a few non-active pixels may appear on the screen as a fixed point of blue, green, or red. This does not affect the performance of your product.

For added protection during a lightning storm, or when the SunBrite is left unattended and unused for long periods of time, disconnect it from the wall outlet and disconnect the antenna. This prevents damage due to lightning and power-line surges.

Do not place an outside antenna system 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, as contact with them might be fatal.

Never place a candle or flame on top of, or near, your SunBrite.

#### Preserve your eyesight

To reduce the eye strain and protect your vision when you watch your television, please take the following steps:

• Take regular and frequent breaks. Extended viewing may cause eye fatigue. We do not recommend watching for more than one hour without a break.

• Look away from the TV screen and focus on distant objects during the breaks for at least 10 minutes.

• Relax yourself during a break by doing eye exercises or outdoor activities.

The recommended viewing distance is to sit at least as far away as three times the vertical height of the screen.

Proper breaks and exercises relieve eye strain and fatigue.

#### Repair

Do not service SunBrite yourself: Opening the cover voids the warranty and exposes you to high voltage and other dangerous risks. Refer all servicing to a qualified service professional.

If any of the following conditions occurs, disconnect the power plug, and call a qualified service professional to perform repairs:

• When power plug 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.
- 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: Ensure that the service person uses replacement parts provided by SunBrite. Use of unauthorized parts can result in fire, electric shock and/or other danger.

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

# **Box Contents**

**Note:** When unboxing your TV, check all of the packing material to ensure you have all of the items listed below.

- Sun Brite TV
- SunBrite Outdoor remote
- WebOSRemote
- 2 AAA batteries (for SunBrite Outdoor Remote)
- 2 AA alkaline batteries (for WebOS Remote)
- Power plug

# Media Bay

All TV connections are made in the media bay, which is located on the rear of the television. Port locations are shown in the figures below.

The media bay is protected by a watertight cover that is fastened by three or four thumb screws (depending on model). Be sure to leave a drip loop in the cables as they exit the media bay. Torque media bay thumbscrews to 4kgf.cm (add 3.5 in-lb and 0.4 Nm).

Caution: Before mounting the TV outdoors, use the thumbscrews to fasten the media bay cover and ensure that it is watertight to prevent serious water damage to the TV.

**Note:** All installation must be conducted by trained and qualified technicians. We are not responsible for any personal injury or damage resulting from an improperly sealed media bay cover.



Media bay ports

In 49" and 55" model TVs, the IR control and speaker bar inputs are located on the right side panel of the media bay (see figure below).

In 65" and 75" model TVs, the IR control and speaker bar inputs are located on the left side panel of the media bay, below the power input port.



IR control and speaker bar ports

# Side Panel Controls

Buttons are provided on the left-hand side panel for controlling the TV without a remote.



**Power**: Turn on the TV by pressing the button once. Press and hold the button to turn off the TV. If the On-Screen Display (OSD) is active, this button functions as Enter or OK for the menu.

**Input**: This button switches between the different sources of the TV.

**Menu**: This button activates the OSD. If the OSD is active, this button returns the selection to the previous menu level.

**Up / Down**: These buttons change the TV channel up or down. If the OSD is active, these buttons function as up or down controls for the menu.

**VOL+ / VOL-**: These buttons increase or decrease the volume. If the OSD is active, these buttons function as right (VOL+) or left (VOL-) controls for the menu.

# **Remote Controls**

### SunBrite Outdoor Remote Control



**Solution Note:** The SunBrite Outdoor Remote uses IR only. It does not support voice control.

Requires 2 AAA batteries (included).

Requires small Phillips screwdriver to remove the four screws fastening the weatherresistant battery cover.

### WebOS Remote Control



Requires 2 AA alkaline batteries, included.

**Note:** The WebOS Remote uses IR and Bluetooth.

**7** Caution: The WebOS Remote is not weatherproof and should be stored indoors.

#### Pairing the WebOS Remote

You must pair the WebOS Remote prior to use as follows:

- 1. Turn on the TV. After about 20 seconds, point the remote toward the TV and then press the Wheel (OK).
- 2. The remote control is automatically registered and the pairing completion message is displayed on the TV screen.

If the WebOS Remote failed to register, turn the TV off and back on. Then, try to register again.

#### **Button Functions**

Select Settings > Settings > General > Accessibility > Learn Remote Control. Follow the on-screen instructions. Press a button on the remote control for more information about the button.

### Smart Device Remote Control

To control your TV using a smart device, download the official "LG ThinQ" app on Apple Store or Google Play.

**Note:** Beware of look-alikes! Download only the app that lists LG Electronics Inc. as the developer and shows the icon below.



#### Preview



LG ThinQ app on Apple Store

# LG ThinQ

LG Electronics, Inc.

Discover how a connected life with ThinQ makes your life easier.



#### LG ThinQ app on Google Play

Once the app is installed, perform the following:

- 1. Follow the directions in the app.
- 2. Log in to your LG account.

- 3. Allow the app to use Bluetooth.
- 4. Tap Add Device > TV. The app searches for your TV.
- 5. Pair the TV with the app by entering the on-screen code.
- 6. Follow the remaining directions in the app.

#### Set up TV On with Smart Device Remote Control

To set up WOL (Wake- On- LAN) or Bluetooth to work using a smart device as the remote control, perform the following:

For Wi- Fi control, navigate to All Settings > General > Devices > External Devices > TV On With Mobile > Turn on via Wi- Fi. Set 'Turn on via Wi- Fi' to 'On'.

**Note:** This must be set even when controlling via a wired LAN. To control via Wi- Fi, the router must support Wireless Multimedia Extensions (WMEor WMM).

Bluetooth control is also available.

# First Time Power On

When plugging in your TV for the first time, it automatically turns on and walks you through the initial setup. Follow the onscreen instructions using the SunBrite Outdoor Remote.

**Pro Tip:** SunBrite TVs ship in APS (Auto Power Save) Mode. For the best outdoor viewing experience, switch the picture mode to Vivid.

To switch your SunBrite to Vivid mode:

- 1. Press the Settings button on your remote.
- 2. Select Picture Mode.

# **Network Connection**

Pro Tip: Begin by setting up a Wi- Fi connection, then set up the Ethernet connection. Having Wi- Fi as a secondary connection is recommended as the system automatically reverts to Wi- Fi if the Ethernet connection fails. Whichever connection (Wi- Fi or Ethernet) is active when the TV is powered off, that connection must be used to turn the TV back on using Wake- on- LAN.

#### **Establishing a Wi- Fi Connection**

• Go to All Settings > General > Devices > Network > Wi- Fi Connection

Pro Tip: Wired connections are more reliable and faster than wireless connections, so use a wired connection whenever possible. Wi- Fi connections are subject to interference from building materials which may limit the range and speed of your Wi- Fi connection. If it's impossible to use a wired connection, explore solutions to improve your Wi- Fi coverage. This may include relocating access points, adding access points, or adding Wi- Fi repeaters.

Your TV has a dual-band wireless antenna built in, so it can establish a wireless connection to your network. Ensure your wireless access points are working before starting.

Here, you see the available SSIDs. Select the desired SSID and enter the password.

#### Ethernet

Use your TV's LAN port for direct connection to your network.

• Go to All Settings > General > Devices > Network > Wired Connection (Ethernet)

**Pro Tip:** For best results, set your router to use Dynamic Host Configuration Protocol (DHCP). This way, the router automatically provides the TV with an IP address, subnet mask, gateway, and DNS, so you don't have to enter them manually. You may want to add a router reservation for the TV for reliable IP control.

**Caution:** When using the LAN port for IP control, connect the cable to the network router or switch before connecting it to the TV's LAN port.

#### Other options

Add a Hidden Wireless Network: If your wireless network does not broadcast its SSID, this command allows you to enter your network's name, security mode, and password.

Connecting via WPS PBC and WPS PIN are also available.

# **IP Control**

Your TV supports IP control through the local area network (LAN). The TV can accept valid commands issued by another device in the same network through the predefined network interface and command format, such as shutdown, volume up / volume down, switch channels, etc.

### Control4 OS Compatibility

This driver is designed to work seam lessly with Control4 OS 3.4.2 and later, ensuring optimal performance and reliability.

Turn on the TV to ensure that the SDDP is broadcast from the TV to the network before adding to the Control4 project in composer.

**Pro Tip:** Pro Tip: For the most reliable IP control, connect your device via Ethernet.

**Pro Tip:** Pro Tip: Reserve your TV's IP address using DHCP reservation. It's easy to set up through your router's settings or via OvrC if you're using a compatible networking device.

#### **Control Method**

This driver supports both IP (network) and IR control. The control method is determined by the Communication Method property on the driver. (i.e., navigate to System Design, select the driver, go to the Properties tab, and set the Communication Method). Ensure the appropriate control binding is established:

- For Network control, use the Network Connections tab.
- For IR control, use the Control/AV Connections tab.

Although multiple control connections can be configured, only the control method specified by the Communication Method property will be utilized.

#### IP Control (Control4 driver only)

This TV supports SDDP. See "Adding the TV to Control4 via SDDP" on page 23, below, for instructions.

#### IR Control (Control4 driver only)

To enable IR control, perform the following:

In Composer, set the Communication Method property to IR.

Properties Actions Desumentation	and Long	
Actions Documentation	n Lua	
Log Level	1 - Error	~
Log Mode	Off	~
Driver Version	214	
Set Power On Delay Seconds	4	•
Set Power Off Delay Seconds	4	÷
Set IR Input Command Delay Sec	3	¢
Set Command Delay Milliseconds	100	\$
Set Ramp Interval Milliseconds	200	<b>\$</b>
Communication Method	IR	~
Tuner Region	South Korea, North/Latin America except Colombia Model	~

Bind the IR connection to a Control4 controller's IR output.

Either position the IR emitter correctly on the front of the TV or connect directly to the 3.5 mm IR input on the rear of the TV to ensure proper control.

**Solution Note:** This TV does not support RS-232 communication.

### IP Control Setup

To set up IP Control on your TV, perform the following steps:

- 1. Connect your TV to a wired or wireless network.
- 2. Unhide the IP Control Setup menu.
  - Navigate to Menu > All Settings > General > Network. Move the cursor onto Network, but do not press OK!

b. Then, input "82888" using the number keys. Enter the digits in quick succession. It takes a few seconds for the IP Control menu to appear.



- 3. With the 'IP Control Setup' menu open:
  - a. Set Control4 SDDP to 'On' and
  - b. Set Wake-on-LAN to 'On' (TV power on)

P IP Con in	IP Control Setup			WIT	≥ : ×
TV / Inputs	TV Name webOS TV SB-V4-55-BL			/	
No Sional	TV SW Version 7.4.0-2706 (mullet-meru)		+ Connect Mobile		A
	MAC Address (Wired) 64:E4:A5:FE:B9:EA (Wireless)04:F4:D8:51:45:F3		ne Dashboard		
AV	Network IP Informatio	Connect Home IoT n Devices		Change the Mood with Lights	Get Home Appliance Notifications
Live TV Antenna/Cable	LG Channels Control4 SDDP		7		
C: AV	<b>Network IP Control</b> <sup>On</sup>	>			
HDMI 2	Wake On LAN	•			

4. To enable Network IP Control and generate a keycode, go to Network IP Control and press OK.

r	IP Control Setup		W	2 : ×
TV / I	TV Name webOS TV SB-V4-55-BL	/ Bluetooth		11
	TV SW Version 7.4.0-2706 (mullet-meru) No Signai	AirPlay Connect	: Mobile	
	MAC Address (Wired) 64:E4:A5:FE:B9:EA (Wireless)04:F4:D8:51:45:F3	Smart Ways to Use Home Dash	hboard	
AV	Network IP Information	Connect Home IoT Devices	Change the Mood with Lights	Get Home Appliance Notifications
	ive TV LG Channels Control4 SDDP			
¢,	Network IP Control On	>		
	Wake On LAN	•		

- 5. In the Network IP Control menu perform the following:
  - a. Set Network IP Control to 'On'.
  - b. Highlight the Generate Keycode button and press OK. Record the key code.
    Treat it like a password, as it is required for network security.

T 🕤 Network IP Control	≥ : ×
TV / I On On On	
Generate Keycode + No Signal AirPlay Connect Mobile	
AV Ways to Use Home Dashboard	Get Home
Live TV Antenna/Cable IP Channels	Notifications



6. Enter the TV's key code into the driver's Password property.

Note: Each time a new key code is generated, any previous key codes are invalidated.

### Adding the TV to Control4 via SDDP

Pro Tip: With the TV powered on and SDDP enabled, your TV will appear in Composer's Discovered tab under the manufacturer SILICONPLAYER. See the following screenshots.

ionno-					
Locations	Di	scovered	My Dri	ivers	Search
Туре		Manufactu	rer	Model	
wattbox_wb300	vb	WattBox		WB-30	0VB-IP-5
A/V Switch		SnapAV		MoIP C	ontroller
Media Service		Sonos		Zonepl	ayer
Media Service		Sonos		Zonepl	ayer
Audio/Video		SILICONPL	AYER	SB-FS-	49-BL

SDDP OvrC-MolP-D4	-64-91-22-01-FF
PIONEER VSX-1	Solis TV
SDDP Pioneer V	IP Address: 10.0.2.170 Address: SILICONPLAYER tv:SR-ES-49-BL-LGwebOSTV:2b2adcb1-0816-4c27-a8df-2364c5b73fa7
SDDP Sonos-384	IsSDDP: True
SDDP Sonos-48/	Manufacturer: SILICONPLAYER
SDDP Sonos-F0F	Model: SB-FS-49-BL Driver: sb_tv_SB-FS-49-BL.c4z
upnp:rootdevice	Primary Proxy: tv
um dial-multiscreen-o	m service dial:1

To automatically add your TV to your Control4 system, perform the following:

- Turn on your TV to ensure that the SDDP is broadcast from the TV to the network. The TV does not broadcast SDDP when in sleep mode.
- 2. With your TV connected to the network, start Composer Pro and connect to a Director.

- 3. Click System Design (default view).
- 4. In the Items pane, click the Discovered tab. View the devices in the list. In the project, click the room to add the device to.
- 5. In the Discovered list (Items pane), double-click the device to add it to the project.

## Adding the TV to a Control System Manually

To manually add a TV to a control system, you will need:

- the MAC address of the network connection
- the IP address of the TV
- Network > IP control > key code

Basic IP control is achieved by using Wake-on-LAN to turn the TV on, then all remaining control is done by encrypted API commands, including Power Off.

Pro Tip: We highly recommend that you connect the TV to the network using Ethernet instead of Wi- Fi.
 Whichever connection (Wi- Fi or Ethernet) is active when the TV is powered off, that connection must be used to turn the TV back on using Wake- on- LAN.

Snap One is actively working with other third-party control systems to create SunBrite TV drivers.

SB-FS-49-BL	
Sunbrite   Television   IP	8/26/2024
SB-FS-55-BL	
Sunbrite   Television   IP	8/26/2024
SB-FS-65-BL	
Sunbrite   Television   IP	8/26/2024
SB-FS-75-BL	
Sunbrite   Television   IP	8/26/2024
SB-V4-49-BL	
Sunbrite   Television   IP	8/26/2024
SB-V4-55-BL	
Sunbrite   Television   IP	8/26/2024
SB-V4-65-BL	
Sunbrite   Television   IP	8/26/2024

Figure 1. Composer Pro Search Tab.

# Home Screen

The simple design of the Home screen menu makes it easy to navigate. You can easily add or delete applications according to your needs.

To access the Home screen, press the Home button on your remote and use the D-pad to make your selection.

To exit the Home screen, press the Input button on your remote or use the D-pad to move the cursor to the Recent Inputs icon near the center of the screen and press the OK button.



Home Screen

### Managing Apps

#### **Adding Apps**

Find apps in the Featured List or search for them in the Search (magnifying glass icon).

**7 Caution:** Use discretion when downloading apps. Report suspicious or malicious apps using the link provided in the apps options vulnerability report link.

#### Edit App List

Select an app, then press and hold the OK button. This allows you to rearrange and delete installed applications.

💕 Note: Certain built- in apps cannot be deleted.

# **Settings Menu Tree**

Picture Mode
Vivid
Standard
APS (Auto Power Save) (default)
Cinema
Sports
Game Optimizer
Sound Mode

Standard

Cinema

Clear Voice

Sports

Music

#### Sound Out

TV Speaker

Bluetooth Device

Mobile Device

**Optical Out Device** 

HDMI (ARC) Device

Wired Headphones

Bluetooth Device + TV Speaker

Optical Out Device + TV Speaker

Wired Headphones + TV Speaker

#### Game Optimizer

Enable/Disable Game Optimizer Settings

#### Game Tab

#### Game Genre

Standard

FPS (First Person Shooter)

RPG (Role-playing Game)

RTS (Real-time Strategy)

Sports

#### **Reduce Blue Light**

Off

Level 1

Level 2

#### Dark Room Mode

Off

Level 1

Level 2

Game Dashboard: Enable/Disable

#### **Picture Tab**

#### Game Genre

Standard

FPS (First Person Shooter)

RPG (Role-playing Game)

RTS(Real-time Strategy)

Sports

Black Stabilizer: 0-20

White Stabilizer: 0-20

Reset

#### Network

Wired Connection (Ethernet)

Wi-Fi Connection

#### All Settings

Picture

Select Mode

#### Aspect Ratio

User Selection

Just Scan

#### **Advanced Settings**

#### Brightness

Panel Brightness

Adjust Contrast

Black Level

Auto Dynamic Contrast

Gamma (Adjust brightness)

Video Range

#### Color

Color depth

Tint

Color Gamut

#### **Fine Tune**

Color adjustment

Reset

#### White Balance

Color temperature

Reset

#### Clarity

Adjust sharpness

Noise reduction

Realcinema

TruMotion

Apply to all Inputs

Reset

#### Sound

Select Mode

#### Sound Out

Use TV Speaker

#### Use Wired Speaker

Optical Out Device

HDMI (ARC) Device

Wired Headphones

#### Use Wireless Speaker

**Bluetooth Device** 

Mobile Device

#### Use External Speakers with TV Speaker

Bluetooth Device + TV Speaker

Optical Out Device + TV Speaker

Wired Headphones + TV Speaker

#### **Advanced Settings**

Balance

Equalizer

Apply to all Inputs

Reset

#### Installation Type

Stand (not recommended)

Wall-mounted

Automatic Volume Adjustment: Enable/disable

#### Match Screen and Sound

TV Speaker Delay

Bypass

#### Select HDMI Input Audio Format

#### HDMI 1

Bitstream

РСМ

#### HDMI 2

Bitstream

РСМ

#### HDMI 3

Bitstream

РСМ

LG Sound Sync: Enable/disable

#### **Digital Sound Output**

Pass through

Auto

РСМ

eARC Support: Enable/disable

#### General

AI Service

#### **Voice Recognition Help**

Guide for voice commands

#### **Voice Recognition Settings**

Voice Response: Enable/disable

#### AI Recommendation

Smart Tips: Enable/disable

Next Picks: Enable/disable

Reser Usage Data

#### Game Optimizer

Enable/Disable Game Optimizer Settings

Game Tab

Game Genre

Standard

FPS (First Person Shooter)

RPG (Role-playing Game)

RTS (Real-time Strategy)

Sports

Reduce Blue Light

Off

Level 1 Level 2 Dark Room Mode Off Level 1 Level 2 Game Dashboard: Enable/Disable Picture Tab Game Genre Standard FPS (First Person Shooter) RPG (Role-playing Game) RTS (Real-time Strategy) Sports Black Stabilizer: 0-20 White Stabilizer: 0-20 Reset Family Settings Reset Password

#### Usage Limit Setting

On/Off

#### Start Time

End Tim e

Repeat

Eye Care Mode (reduce blue light): On/Off

Volume Limit Mode: On/Off

Screen Time Report

#### Channels

#### **Channel Tuning**

Auto Tuning

Manual Tuning

#### **Channel Manager**

Edit all channels

Edit favorites

#### Devices

#### **TV Management**

Home/Store Mode

Quick Start+: On/Off

#### **TV** Information
Device Name

Model

Serial Number

 $web\,OS\,TV\,Version$ 

Total Power On Time

Available Internal Storage

Patent Information

MAC Address (Wired)

MAC Address (Wireless)

ESN

VSN

Widevine

### **External Devices**

Connect Bluetooth Controller
Universal Control Settings
HDMI 1
HDMI 2
AV
Optical

### Audio out/headphones

Bluetooth

Manage Settings

### HDMI Settings

HDMI Deep Color: On/Off

SIMPLINK (HDMI-CEC): On/Off

### Network

Wired Connection (Ethernet)

Wi-Fi Connection

### IP Control (hidden menu)

On/Off

Generate Key Code

Wake-On-LAN: On/Off

### System

### Language

Menu Language

Audio Language

Keyboard Languages

### Location

Zip Code

Services Country

#### Time and Timer

Set automatically

Tim e

Date

Tim e Zone

## Timers

Sleep Timer

Power On Timer

Power Off Timer

Auto Power Off after 4 Hours: On/Off

## Safety

Enable the function: On/Off

## **TV Program Locks**

TV Lock

Children Age

### Fantasy Violence

General Age

Sexually Suggestive Dialogue

Adult Language

Sexual Situations

Violence

Movie Lock (G, PG, PG- 13, R, NC- 17, X)

Downloadable Rating

### Channel Locks

All

Antenna

Cable

LG Channels

## Application Locks

Input Locks

Reset Password

LG Account

#### **Additional Settings**

#### Notifications

#### Home Settings

Home Auto Launch

Home Promotion

Content Recommendation

Standby Light: On/Off

Screen Saver Promotion: On/Off

#### **Pointer Options**

Tracking Speed (Slow, Normal, Fast)

Pointer Size (Small, Medium, Large)

### Advertisement

Reset AD ID

Lim it AD Tracking: On/Off

LivePlus: On/Off

Settings Help: On/Off

Set ID

Reset to Initial Settings

#### **Energy Saving**

Energy Saving Setup (Off, Min, Med, Max)

#### Screen Off

## Accessibility

#### Audio Guidance

Enable the function: On/Off

Speed

Volume

Pitch

Learn Remote Control

TV Power Sound: On/Off

## Enjoy TV Sound Together

Off, Bluetooth Device, HDMI (ARC) Device

High Contrast: On/Off

Grayscale: On/Off

Invert Colors: On/Off

## **Closed Caption**

Closed Caption: On/Off

### Analog Mode

CC1-CC4, TEXT1-TEXT4

#### **Digital Mode**

HD Mode (Off, Service1-Service6)

## **HD Mode Option**

Style (Set by Program, Custom) Size Font Text Color Text Opacity Background Color Background Opacity Edge Type Edge Color Window Color

Position Settings (Position, Reset)

## Support

## Software Update

Software Version

Auto Update: On/Off

Check for Updates

User Guide

#### Privacy and Terms

User Agreements

Legal Notice

Open Source Software Notice

Do Not Sell My Personal Information: On/Off

Edit Mode

# Live TV

You may tune live TV channels either automatically or manually. The Channel Manager allows you to edit all channels (lock/unlock, delete/restore) and edit a favorite channels list.

## Automatic Tuning (Scan)

All Settings > General > Channels > Channel Tuning > Auto Tuning

## Manual Tuning

All Settings > General > Channels > Channel Tuning > Manual Tuning

## **Channel Manager**

All Settings > General > Channels > Channel Manager

# Screen Sharing

SunBrite webOS supports several types of screen sharing and mirroring technologies, which allow users to display content from their devices on the TV screen. Here are the primary methods:

- Apple AirPlay 2
- Chromecast is available, but limited, for specific video sites.

# Bluetooth

Your SunBrite TV can pair with Bluetooth devices such as speakers, headphones, keyboards, etc. If maximum number of paired devices is reached, another device must be unpaired before pairing a new device.

Certain Bluetooth devices may experience compatibility issues.

## Pairing a Bluetooth device

Before pairing your Bluetooth device, ensure it's in pairing mode (see its manual for instructions) and within range of the TV. After pairing is completed, the TV saves data for the connected device.

To pair a Bluetooth speaker, for example, perform the following steps:

- 1. Navigate to All Settings > Sound > Sound Out > Use Wireless Speaker
- 2. Follow the onscreen instructions to connect to the device.

# **USB Storage Devices**

Connect a USB storage device (USB stick or digital camera) to the TV's USB port to view the stored media on your TV.

Please use only USB storage devices form atted as FAT32, exFAT, or NTFS.

We recommend that you use an external USB device with a rated voltage of 5V or less and a rated current of 500m A or less. If you use a device requiring a higher voltage/current than the rated voltage/current, it may not operate properly.

**Solution Solution Second Secon** 

For details and tips, refer to the TV's built- in User Guide (All Settings > Support > User Guide).

# Media Player

To access the Media Player, first insert a valid USB storage device, then press the Input button on the remote, and select the USB input.

The media player plays most popular media formats with the ability to play multiple files in a loop.

## Popular supported media formats

- Video form ats: MOV, M4V, MP4 and others
- Image formats: JPG and others
- Audio form ats: MP3, WAV, and others

# **Setting Shortcuts**

Upon pressing the Settings (gear icon), several shortcuts will appear on the display. Shortcuts may be added or removed by going into Edit Mode (pencil icon).



Editing in Edit Mode

# **Picture Settings**

Picture settings include Mode, Aspect Ratio, Brightness, Color, and Clarity.

All settings > Picture



**Pro Tip:** Customize one of the existing picture modes to best suit nighttime outdoor viewing. Set the Panel Brightness (backlight) to a very dim level, etc.

Pro Tip: For automation, picture mode can be changed using the control API to switch to your custom nighttime mode after sunset and back to a daytime picture mode during the day.

# Sound Settings

Sound settings include Mode, Sound Out, Balance, Equalizer, Installation Type, Automatic Volume Adjustment, Match Screen and Sound, LG Sound Sync, Digital Sound output, and eARC support.

All settings > Sound



# Sound Out

## Listening to the TV through Bluetooth devices

To listen to the TV through Bluetooth devices, navigate to:

All Settings > Sound > Sound Out > Use Wireless Speaker

Follow the onscreen instructions to connect to the device.

## HDMI(ARC) Device

CEC & ARC are referred to as SIMPLINK on this TV. SIMPLINK (HDMI-CEC) must be enabled on the TV for ARC to work.

If you enable Sound Out > HDMI (ARC) Device, the TV automatically turns on CEC (Simplink).

Otherwise, to enable CEC, navigate to the following setting:

All Settings > General > Devices > HDMI Settings > SIMPLINK (HDMI- CEC)

Basic operation of CEC allows a CEC source HDMI device to turn your SunBrite TV on / off. This is generally off by default on your source device, consult the help manual for your source device to enable this feature.

SIMPLINK (HDMI-CEC) will also control the volume level of a compatible amplifier using the TV's remote.

ARC allows audio to be returned to an amplifier using HDMI2.

## eARC

To use eARC, navigate to All Settings > Sound > Advanced Settings > eARC Support and enable the setting.

**Note:** Older ARC- enabled amplifiers may not be compatible with eARC. If you're experiencing audio problems with an older amplifier, disable eARC in your TV.

# Advanced Settings

All Settings > Sound > Advanced Settings

Multiple sound presets are provided along with an equalizer for fine tuning sound output.

Apply to all Inputs: Apply the current Balance and Equalizer settings to all input.

Reset: Sets the sound settings to default.

Installation Type: Select Stand or Wall-Mounted per your preferences.

Automatic Volume Control: Enable to prevent the perceived volume from changing when you switch TV channels.

**Match Screen and Sound**: Adjust the digital audio output delay time to sync sound from an external speaker with the images on the TV. This is only applicable when Audio Output is set to ARC or when external audio players are connected via the Digital Audio Out jack.

Select HDMI Input Audio Format: Select Bitstream or PCM for any of the HDMI inputs.

**LG Sound Sync**: This makes connecting a sound bar to your TV easy and wire free using Bluetooth technology.

**Digital Sound Output**: (PCM, Auto, or Passthrough) Select the digital audio output form at that best suits the audio device type. This is only applicable when Audio Output is set to ARC.

eARC Support: Enable/disable

**Note:** Be aware of the TV's Sound Out setting as it is easy to accidentally change the Sound Out setting. If you end up with no audio, check the Sound Out setting first.

# **General Settings**

General settings include, Al Service, Game Optimizer, Family Settings, Channels, Devices, Network, System, Energy Saving, and Accessibility.

All settings > General



# Al Service

Includes voice recognition settings and AI recommendations.

# Game Optimizer

All Settings > General > Game Optimizer

These settings allow you to fine tune your gaming experience with game genre selection, blue light reduction, dark room mode, and more.

Set the TV's picture mode to Game Optimizer before changing settings.

# Family Settings

Includes Usage Limits, Eye Care Mode, Volume Limit Mode, and Screen Time Reports.

# Channels

Includes settings for managing related broadcast channels.

## Devices

Includes settings for setting up the TV and external devices connected to the TV.

TV Information: Displays Device name, model, serial number, webOS TV version, total power on time, available internal storage, patent info, MAC addresses, ESN, VSN, and Widevine.

**Note:** For Bluetooth audio, see Sound > Sound Out section.

# Accessibility & System

## Accessibility

All Settings > General > Accessibility

The Accessibility menu provides options to aid the visually or hearing impaired.

Here you can customize your caption style, configure your closed-caption options, and set up various accessibility services.

Audio Guidance reads whatever words are on the screen.

Learn Remote Control allows you to use another remote control to control your TV.

TV Power Sound plays a sound when the TV is turned off, when enabled.

Enjoy TV Sound Together: Sound is produced by the TV speaker and an external speaker simultaneously. Volume can be controlled separately by each device.

High Contrast, Grayscale, and Invert Colors: Various color options are provided.

Closed Caption: Various closed caption options are provided.

# Voice Control

You can easily and quickly access the TV's various functions with voice control. Voice Control requires the WebOS Remote, which must be paired to the TV.

- Press and hold the Voice Recognition button on the WebOS Remote and say the function you want to launch or the keyword you want to use for your search. We recommend pronouncing the words in a slow, accurate manner about 4 inches from the WebOS Remote's mic.
- 2. Release the Voice Recognition button after you speak and the corresponding function is launched.

Menu Language must be set as the official language of the country in Location to see correct search results. If Menu Language is not set as the official language, som e functions may be limited.

You can change the language in All Settings > General > System > Language > Menu Language.

The languages available for voice recognition features may be changed in accordance with Service Operation Policy.

Details of service may vary by model.

**Note:** Please note that the services enabling voice commands, voice recognition, and other smart features may be changed, removed, or terminated, without notice by LGE or its third-party providers.

You can change the voice-related settings or see which features are available to be used with the voice in All Settings > General > Al Service > Voice Recognition Settings/ Voice Recognition Help.

# Support Settings

Includes Software Update, internal User Guide, and Privacy & Terms.

## All settings > Support



# Software Update

Update your TV to the latest firm ware.

# User Guide

Check descriptions for all the TV's functions.

# Solis, 49" Model Specifications

Screen size	48.5-inch diagonal, LG Display UHD panel, RGBW (M+)
Screen resolution	3840x2160
Screen finish	Hard coating(2H), Anti-glare treatment of the front polarizer
	(Haze 28%(Typ.))
Exterior	Powder-coated aluminum
Colors	Black only
Viewing angles	R/L 178°, U/D 178°
Brightness	1500 nits (cd/m <sup>2</sup> )
Contrast ratio	1100:1
Fram e rate	60 Hz standard
Viewing angles	R/ L 178°, U/ D 178°
Response tim e	8 milliseconds
TV form ats	2160p (HDMI only), 1080p. 1080i, 720p, 720i. 480p. 480i
RF input connector	Antenna/CATV (NTSC/ATSC 2/QAM) xl
HDMI input	3 inputs (Supports HDMI 2.1. HDMI 2.0, HDM11.4, HDCP 1.4a HDCP
connector	2.2) (eARC on HDMI 2)
Video composite	Composite Video xI, L/ R Audio Inputs xI
input connector	(Requires Adapter, not included)
Control set	Direct IR control,
Control set	IP control
Audio out	2 x 8W down firing internal speakers (included) or
	Speaker bar (not included)
	Toslink optical audio (fixed)
	Analog 3.5mm (variable)
Color gam ut	NTSC 72%

Back light	Direct LED
Smart TV	LG Web OS 22
	Wi- Fi: 2.4/5 GHz
Network	10/100 Ethernet
	Bluetooth 5.0
Exterior	Powder-coated alum inum
Color	Black only
Input nowor	GCFI protected 100-240 VAC, 50/60Hz, 4.7A max (See AC Power
input power	Requirem ents, above, for details)
Operating	$22^{\circ}$ to $422^{\circ} \Gamma (0^{\circ}$ to $50^{\circ} C)$
temperature	$32^{\circ}10^{\circ}122^{\circ}F.(0^{\circ}10^{\circ}50^{\circ}C)$
Non-operating	
temperature	- 24° to 140° F. (- 31° to 60° C)
Weatherproof rating	IP55
TV dimensions	$44 \times 26 \times 425$ in (1119 × 660 × 109 mm)
(W×H×D)	44 x 26 x 4.25 III. ( III6 x 660 x 106 IIIIII)
Media bay	10.25 x 14 x 167 in (260 x 356 x 42 m m)
dimensions	(See detailed media bay drawing)
(W×H×D)	(bee detailed media bay drawing)
VESA mount pattern	200×200
Shipping	
dimensions	47.9 × 29.8 × 8.9 in. (1216 × 757 × 227 m m)
(W×H×D)	
TV weight	39.4 lb / 17.9 kg
Shipping weight	51.6 lb / 23.4 kg
Residential	2 years
Warranty	
Commercial	2 years

warranty		
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Solis, 49 Model Dimensions



# Media Bay Space



# Solis, 55 Model Specifications

Screen size	54.64- inch diagonal, LG Display UHD panel, RGBW (M+)
Screen resolution	3840x2160
LCD surface	Hard coating(2H), Anti-glare treatment of the front polarizer
treatment	(Haze 28%(Typ.))

Exterior	Powder-coated aluminum
Colors	Black only
Viewing angles	R/ L 178°, U/ D 178°
Brightness	1500 nits (cd/m <sup>2</sup> )
Contrast ratio	1100:1
Frame rate	60 Hz standard
Viewing angles	R/ L 178°, U/ D 178°
Response tim e	8 milliseconds
TV form ats	2160p (HDMI only), 1080p. 1080i, 720p, 720i. 480p. 480i
RF input connector	Antenna/CATV (NTSC/ATSC 2/QAM) xl
HDMI input	3 inputs (Supports HDMI 2.1. HDMI 2.0, HDM11.4, HDCP 1.4a HDCP
connector	2.2) (eARC on HDMI 2)
Video composite	Composite Video xI, L/ R Audio Inputs xI
input connector	(Requires Adapter, not included)
Control set	Direct IR control,
	IP control
	2 x 8W down firing internal speakers (included) or
Audio out	Speaker bar (not included)
	Toslink optical audio (fixed)
	Analog 3.5mm (variable)
Color gam ut	NTSC 72%
Backlight	Direct LED
Smart TV	LG Web OS 22
Network	Wi- Fi: 2.4/5 GHz
	10/100 Ethernet
	Bluetooth 5.0
Exterior	Powder-coated aluminum
Color	Black only

Input power	GCFI protected 100-240 VAC, 50/60Hz, 4.9A max (See AC Power
	Requirem ents, above, for details)
Operating	32° to 122° E (0° to 50° C)
temperature	
Non-operating	- 24° to 140° E (- 31° to 60° C)
temperature	
Weatherproof rating	IP55
TV dimensions	$49.3 \times 28.8 \times 4.24$ in (12516 $\times 7315 \times 107.7$ mm)
(W×H×D)	$49.3 \times 20.0 \times 4.24 \text{ m}. (1231.0 \times 731.3 \times 107.7 \text{ mm})$
Media bay	10.55 x 18.96 x 167 in (268 x 4815 x 42 m m)
dimensions	(See detailed modia bay drawing)
(W×H×D)	(See detailed media bay drawing)
VESA mount pattern	400×400
Shipping	
dimensions	53.41× 32.54 × 9.21in. (1356.6 × 826.5 × 234 mm)
(W×H×D)	
TV weight	49.3 lb / 22.4 kg
Shipping weight	63.7 lb / 28.9 kg
Residential	2 10 2 15
Warranty	2 years
Commercial	2 vears
warranty	2 years

Solis, 55 Model Dimensions



# Media Bay Space



# Solis, 65 Model Specifications

Screen size

64.53- inch diagonal, LG Display UHD panel, RGBW (M+)

Screen resolution	3840x2160
LCD surface	Hard coating(2H), Anti-glare treatment of the front polarizer
treatment	(Haze 28%(Typ.))
Exterior	Powder-coated aluminum
Colors	Black only
Viewing angles	R/ L 178°, U/ D 178°
Brightness	1500 nits (cd/m <sup>2</sup> )
Contrast ratio	1100:1
Frame rate	60 Hz standard
Viewing angles	R/ L 178°, U/ D 178°
Response tim e	8 milliseconds
TV form ats	2160p (HDMI only), 1080p. 1080i, 720p, 720i. 480p. 480i
RF input connector	Antenna/CATV (NTSC/ATSC 2/QAM) xl
HDMI input	3 inputs (Supports HDMI 2.1. HDMI 2.0, HDM11.4, HDCP 1.4a HDCP
connector	2.2) (eARC on HDMI 2)
Video composite	Composite Video xI, L/ R Audio Inputs xI
input connector	(Requires Adapter, not included)
Control set	Direct IR control,
	IPcontrol
	2 x 8W down firing internal speakers (included) or
Audio out	Speaker bar (not included)
	Toslink optical audio (fixed)
	Analog 3.5mm (variable)
Color gam ut	NTSC 72%
Back light	Direct LED
Smart TV	LG WebOS 22
Network	Wi- Fi: 2.4/5 GHz
INCLWOIK	10/100 Ethernet

	Bluetooth 5.0
Exterior	Powder-coated aluminum
Color	Black only
Input power	GCFI protected 100-240 VAC, 50/60Hz, 5.6A max (See AC Power
	Requirem ents, above, for details)
Operating	$32^{\circ}$ to $122^{\circ}$ E (0° to 50° C)
temperature	
Non-operating	- 24° to 140° F (- 31° to 60° C)
temperature	
Weatherproof rating	IP55
TV dimensions	579 x 319 x 4 2 in (1470 4 x 808 95 x 107 4 m m)
(W×H×D)	57.3 × 51.3 × 4.2 III. ( H70.4 × 000.35 × 107.4 III III )
Media bay	11.97 x 20.83 x 1.67 in. (304 x 529 x 42 mm)
dimensions	(See detailed media bay drawing)
(W×H×D)	
VESA mount pattern	400×400
Shipping	
dimensions	61.85 × 37.69 × 8.9 in. (1571.0 × 957.0 × 227.0 mm)
(W×H×D)	
TV weight	63.1lb / 28.6 kg
Shipping weight	81.1lb / 36.8 kg
Residential	2 years
Warranty	
Commercial	2 10 2 15
warranty	2 30410

Solis, 65 Model Dimensions



# Media Bay Space



# Solis, 75 Model Specifications

Screen size	74.52- inch diagonal, LG Display UHD panel, RGBW (M+)
Screen resolution	3840x2160
LCD surface	Hard coating(2H), Anti-glare treatment of the front polarizer
treatment	(Haze 28%(Typ.))

Exterior	Powder-coated aluminum				
Colors	Black only				
Viewing angles	R/ L 178°, U/ D 178°				
Brightness	1500 nits (cd/m <sup>2</sup> )				
Contrast ratio	1100:1				
Frame rate	60 Hz standard				
Viewing angles	R/ L 178°, U/ D 178°				
Response tim e	8 milliseconds				
TV form ats	2160p (HDMI only), 1080p. 1080i, 720p, 720i. 480p. 480i				
RF input connector	Antenna/CATV (NTSC/ATSC 2/QAM) xl				
HDMI input	3 inputs (Supports HDMI 2.1. HDMI 2.0, HDM11.4, HDCP 1.4a HDCP				
connector	2.2) (eARC on HDMI 2)				
Video composite	Composite Video xI, L/ R Audio Inputs xI				
input connector	(Requires Adapter, not included)				
Control set	Direct IR control,				
Control Set	IP control				
	2 x 8W down firing internal speakers (included) or				
Audio out	Speaker bar (not included)				
	Toslink optical audio (fixed)				
	Analog 3.5mm (variable)				
Color gam ut	NTSC 72%				
Back light	Direct LED				
Sm art TV	LG Web OS 22				
Network	Wi- Fi: 2.4/5 GHz				
	10/100 Ethernet				
	Bluetooth 5.0				
Exterior	Powder-coated aluminum				
Color	Black only				
Input newer	GCFI protected 100-240 VAC, 50/60Hz, 6.1A max (See AC Power				
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input power	Requirem ents, above, for details)				
Operating	32° to 122° F. (0° to 50° C)				
temperature					
Non-operating	- 24° to 140° E (- 31° to 60° C)				
temperature					
Weatherproof rating	IP55				
TV dimensions	$66.6 \times 38.5 \times 4.23$ in (1602.1 $\times 0.78.0 \times 10.74$ mm)				
(W×H×D)	66.6 × 38.5 × 4.23 In. (1692.1 × 978.9 × 107.4 mm)				
Media bay	$12.01 \times 20.87 \times 167$ in (305 × 530 × 42 mm)				
dimensions	(See detailed media bay drawing)				
(W×H×D)	(See detailed media bay drawing)				
VESA mount pattern	400×400				
Shipping					
dimensions	71.26 × 43.31 × 11.18 in. (1810.0 × 1100.0 × 284.0 mm)				
(W×H×D)					
TV weight	87.3 lb / 39.6 kg				
Shipping weight	108.11b / 49.0 kg				
Residential	2 10 2 15				
Warranty	2 years				
Commercial	2 vears				
warranty	2 years				

Solis, 75 Model Dimensions



## Media Bay Space



# Mounting

# Ordering a Mount

To order a UL- certified SunBrite outdoor- rated mount, contact your Authorized SunBrite dealer, call SunBrite Customer Care at 866.357.8688, or visit us at <u>www.SunBriteTV.com</u>.

Caution: To avoid blocking the media bay door, use the "X" mounting pattern (shown below) for the 49", 55", and 65" TV models. Consult the mount's instruction manual for specific installation instructions.



Single Arm Articulating Mount (SB-WM-ART1-M-BL) shown in "X" pattern

Model	Flat Mount	Tilt Mount	Single arm articulating	Dual arm articulating
49	SB- WM- F- L- BL	SB- WM- T- L- BL	SB- WM- ART1 M- BL	SB- WM- ART2- L- BL
55	SB- WM- F- L- BL	SB- WM- T- L- BL	SB- WM- ART1 M- BL	SB- WM- ART2- L- BL

## Recommended Compatibility Chart

65	SB- WM- F- XL- BL	SB- WM- T- XL- BL	SB- WM- ART1- M- BL	SB- WM- ART2- XL- BL
75	SB- WM- F- XL- BL	SB- WM- T- XL- BL	n/a	SB- WM- ART2- XL- BL

#### **Compatible SunBrite Mounts**

The following mounts will work with your TV, but be sure to verify mount specifications for size and weight compatibility with your TV.

#### Flat / Flat Tilt Mounts

- SB- WM- T- XL- BLK
- SB- WM- F- XL- BLK
- SB- WM- F- L- BL
- SB- WM- F- M- BL
- SB- WM- T- L- BL
- SB- WM- T- M- BL

#### Articulating Mounts

- SB- WM- ART2- XL- BL
- SB- WM- ART2- L- BL
- SB- WM- ART1- M- BL
- SB- WM- ART1- S- BL

#### **Ceiling Mounts**

- SB- CM- T- L- BL
- SB- CM- T- M- BL

#### Deck Pole (requires a mount as well)

• SB- DP46XA

#### **VESA** Patterns

The SunBrite TV has a VESA standard pattern of 200 x 200 for the 49<sup> $^{\circ}$ </sup> model and 400 × 400 for the 55<sup> $^{\circ}$ </sup>, 65<sup> $^{\circ}$ </sup>, and 75<sup> $^{\circ}$ </sup> models.

- Use stainless steel, VESA M8, 20mm long screws for mounting the TV.
- Torque mounting screws to 10 in-lb / 1Nm (12kgf.cm).

**Caution:** Your TV accepts a maximum mounting screw length of 20 mm. If using screws longer than 20 mm, add washers to the screws until the mount is fastened firmly to the TV.

**Caution:** To prevent water damage, do not install in vertical (portrait) orientation or upside down as speaker ports are located on the bottom panel.

7 Caution: To maximize the life of your TV, do not mount it where its rear panel is subject to direct sunlight.

#### On a wall

Do not mount your SunBrite directly to a wall. Use a SunBrite all-weather TV mount for safety and security.

#### On a stand

Your TV does not come with a stand, nor do we recommend using one.

#### From a ceiling

Use SunBrite All-Weather Ceiling Mounts for best results.

# **Optional Speaker Bar**

Your TV has internal, down firing speakers. In certain cases, you may consider using a speaker bar to redirect the sound to better suit the environment.

The optional speaker bar and required adapter cable are not included with your SunBrite TV. These accessories are available through your local dealer, reseller, or at SunBriteTV.com.

**Note:** When using a SunBrite speaker bar, the internal speakers are disconnected and audio is played through the speaker bar. It is not possible to use the internal speakers when using a SunBrite speaker bar.

**Caution:** Before detaching (or attaching) the speaker, turn off the TV and disconnect the power plug.



Speaker bar (SB-SP557 or SB-SP-S-L1-BL)



Premium speaker bar (SB-AW-SNDBR-S-Bor SB-AW-SNDBR-M-B)

## Speaker Bar Compatibility Chart

<b>T</b> 1/	Standard Speaker	Premium Speaker		
IV	Bar	Bar		
49-inch	SB- SP557	SB- AW- SNDBR- S- B		
55-inch	SB- SP557	SB- AW- SNDBR- M- B		
65-inch	SB- SP- S- L1- BL	SB- AW- SNDBR- M- B		
75-inch	SB- SP- S- L1- BL	SB- AW- SNDBR- M- B		

For speaker bar compatibility, refer to the following chart:

## Accessories

#### 4- conductor DIN adapter (CBL- 213-00)

Attach the 4- conductor DIN adapter (included with speaker bar) to the speaker bar connector and then plug the 3.5mm plug inside the media bay into the speaker bar output.



4-conductor DIN adapter

## **Dust Cover**

Keep the TV covered with the optional SunBriteTV Outdoor Dust Cover when not in use. The fitted dust cover is designed to protect the LCD panel from harmful UV rays from direct sunlight, and keeps wind-blown objects from scratching the surface of the panel.

To order a Dust Cover, contact your Authorized SunBrite dealer, call SunBrite Customer Care at 866.357.8688, or visit us at <u>www.SunBriteTV.com</u>.

#### **Dust cover SKUs:**

- SB- DC- 49- GRY
- SB- DC- 55- GRY
- SB- DC- 65- GRY
- SB- DC- 75- GRY

# Caring for your TV

## Cleaning the screen

To clean the LCD panel, turn the TV off and disconnect the power plug from the wall outlet. Gently wipe the surface of the display panel with a water- damp microfiber, cotton, or flannel cloth. If the front panel is dusty, use an anti- static brush, which is commercially available.

Caution: Caution: Do not use tissues, rags, sponges, or paper towels, which can damage the screen and leave behind lint. Do not use chemical cleaners.

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

## Cleaning the cabinet

Clean only with dry cloth.

Turn off the main power and disconnect the power plug from the wall outlet.

To avoid scratching the frame, use a soft, lint-free cloth for cleaning.

Ensure nothing falls into the TV while you are cleaning it.

# **IP** Control Guide

## IP Control Configuration

To enable IP Control, see <u>IP Control</u>.

## Device Discovery via SDDP

Simple Device Discovery Protocol (SDDP) is a protocol developed by Control4 to allow devices to be added to a control system. webOS TV support protocol version 1.0.

- On TV startup, TV sends NOTIFY ALIVE message.
- When Control4 SDDP is enabled on IP Control Setup screen, it generates NOTIFY IDENTIFY message.
- Before TV is powered off, it sends NOTIFY OFFLINE.
- WebOS TV will also respond to SEARCH request method.

## Device Discovery via SSDP

LG webOS TV supports Simple Service Discovery Protocol (SSDP) defined by UPnP Forum. There are three standard device and service types currently available for discovery:

- urn:schemas-upnp.org:device:Basic:1
- urn:schemas-upnp.org:service:dial:1
- urn:schemas-upnp.org:device:MediaRenderer:1

From the Basic device, Manufacturer, TV's IP address, and Model Number can be obtained.

Each device/services also generate SSDP NOTIFY ssdp:alive and ssdp:byebye events upon powered up and down, respectively.

## Encryption Protocol for IP Control Message Exchange

### **Encryption Specification**

For IP Control message exchange, AES (Advanced Encryption Standard) is used with following specification:

- Block Length: 128 bit
- Key length: 128 bit
- Initialization Vector (IV) length: 128 bit.
- Block Cipher Mode: Cipher Block Chaining (CBC)

### Encryption Key

Eight (8) digits (alphanumeric) password will be shown on IP Control Setting menu. IP Control client encrypts the password with PBKDF2 (Password-Based Key Derivation Function 2) method. First 16 Bytes of encrypted password are AES128 key. Following parameters must be used:

- Algorithm:sha256
- Salt: 0x63,0x61,0xb8,0x0e, 0x9b,0xdc,0xa6,0x63,0x8d,0x07,0x20,
  0xf2,0xcc,0x56,0x8f,0xb9 Number of Iteration: 2\*\*14

TCP port number 9761 is used on TV to receive all IP control commands.

#### **IV Generation**

IV is 16 byte string and must be randomly generated for each command encryption. It can be randomized using the secrets.token\_bytes(16) function in Python, for example.

#### Operation

Clear text message must be terminated with '\r' (0x0d). Use VOLUME\_MUTE on command as example.

V	0	L	U	М	E	_	М	U	Т	E	0	n	<b>'</b> \'	
-	-													

If the length of the message is not multiple of 16, then padding is required.

V	0	L	U	М	E	_	М	U	Т	E		ο	n	ʻ\r'	'\1'
---	---	---	---	---	---	---	---	---	---	---	--	---	---	------	------

The value to be padded is the number of bytes to be padded. In this case, it is 1. The entire 16 byte text in hex is 56 4f 4c 55 4d 45 Sf 4d 55 54 45 20 6f 6e 0d 01.

Apply AES- 128 encryption algorithm. This will result in the follow cipher string in hex:

d2 d3 2b fe ac 13 f4 43 5e 6f 2f 54 2e ea 9c	d2	d3 2b fe	fe ac 13	f4 43 !	5e 6f	2f 54	2e ea	9c 18
--	----	----------	----------	---------	-------	-------	-------	-------

Output of AES 128 encryption is a string of length as input with padding.

Send to receiver with IV prefixed. Since IV is 16 bytes. Total length is (16 + olen)

Encrypted IV (AES ECB)	Encrypted message (AES CBC)	
0	15	(15+olen)

IV must be encrypted using AES-128 ECB mode. If IV is 16 Os, the encrypted IV is: D2 82 1C AO AD 64 86 CB 20 56 AB 88 15 03 35 08

Send only the Encrypted message. In this case, it is byte streams: DF E7 7A 7D E0 56 03 AS 9E D5 316E CS 52 FA CI On Linux, this is can done through command echo and nc as follows:

echo - e '\ xd2\ xd3\ x2b\ xfe\ xac\ x13\ xf4\ x43\ x5e\ x6f\ x2f\ x54\ x2e\ xea\ x9c\ x18 Inc <TV IP> 9761

Receiver applies decryption with a received IV from TV and encrypt the message using TV side IV. Please note that this IV is generated by TV and thus different than an IV generated at 4.3.. For "VOLUME\_MUTE on" command, the response from the server is: ce 53 7c e4 b8 82 98 c6 a4 3e 2189 af Sf 20 2f and after decryption:

# 

For now, just ignore characters after '\ n'

## Wake-on-LAN

Wake-on-LAN (WoL) is performed by sending a magic packet to the TV's mac address to power it on. For that to work, both TV and the other device must be connected to the same subnet.

To enable WoL, go to Settings->General->Mobile TV On and set "Turn on via Wi-Fi" to on.



The wake procedure for Wake-on-Wireless-LAN (WoWLAN) is the same as in wired case. Only you will need a Wi-Fi MAC address. The router needs to support Wireless Multimedia Extensions (WME or WMM) for WoWLAN to work.

The magic packet is a broadcast frame containing 6 bytes of all 255 (FF FF FF FF FF FF FF in hexdecimal), followed by sixteen repetitions of the target TV's 48-bit MAC address, for a total of 102 bytes.

Port number 4343 or any number can be used. TV's IP address or broadcast IP address can be used for destination address. For example, if your TV's IP address is 192.168.52.147, you would use 192.168.5.255.

When testing WoWLAN, you must disconnect the Ethernet cable.

# New System Commands

Function	Command	Example Return Values	
1Manufacturer detail	GET_MANUFACTURER	Manufacturer: mfg name	
2 Model name	MODEL_NAME	Model Name: WebOS22	
3 Firm ware version	FIRMWARE_VERSION	Firm ware Version: 02.03.36	
4 Firm ware available	IS_FIRMWARE_ AVAILABLE	Firm ware Available: Yes / No	
5 Power status	POWER_STATUS	Power Status: active / always ready	
6 Current App +HDMI status	CURRENT_APP	APP: com.webos.app.hdmi1 HDCP: 1.4/2.2 Hot plug: connected / disconnected	
7 Carial num har		Sorial Number: SK 1V407	
7 Serial number	GEI_SERIAL_NUMBER	Serial Number: SKJ Y107	
8 Audio codes	GET_CURRENT_AUDIO codec	Audio codec: PCM/ AC3	
9 Signal detection: video	GET_CURRENT_VIDEO signal	Video signal type: 720x480	
10 Audio output	GET_CURRENT_AUTIO	Sound output:external_arc / tv_ speakers	
11 Friendly name	FRIENDLY_NAME	Friendly name:[mfg] webOS TV WEBOS22	
12 ARC signal status	ARC_STATUS	Arc State:not_ready / eARC / ARC	
13 Lamp hours	LAMP_HOURS	Lamp hour: 29/30/35	

## PICTURE\_MODE update (2023 updates)

New Picture Mode options are added for IP Control. Now it supports multiple picture modes within HDR or Dolby Vision content playing. Note that commands do not support change among SDR, HDR, or Dolby Vision as they are set by sources.

#### Example

PICTURE\_MODE vivid

Picture Mode	SDR	HDR	Dolb y Vision
Vivid	vivid	vivid	vivid
Standard	normal	normal	normal
Auto Power Save	eco		
Cinema	cinema	cinema	cinema
Sports	sports		
Game	game	game	game

## KEY\_ACTION update (2023 updates)

Two KEY\_ACTION commands have been added. They pause or stop the playing content accordingly.

- KEY\_ACTION pause
- KEY\_ACTION stop

## Command Reference List

### **TV Control Commands**

Command is composed of two parts: Main commands with capital letters (e.g. VOLUME\_MUTE) and their associated subcommands (e.g. On or Off). Some main commands for settings (e.g. PICTURE\_BACKLIGHT) may have integer-based parameter values (e.g. 0-100). The specific use cases will be explained in the "Note" column in the below table.

Usage: [Main command] [Sub-command / parameter value] [Sub-command 2, if any] Examples:

- REMOTECONTROL\_LOCK on
- VOLUME\_CONTROL 15
- KEY\_ACTION quickmenu

Veranda 4 and Solis		Function	Command	Note
1    Power    Main command: POWER    The "POWER on" command is now supported for Always      1    Power    Sub- commands: off, on    The "POWER on" command is now supported for Always      Ready power state.    TVs without Always    Ready Mode, Wake-on-LAN must be use to turn on the TV in a cases.	1	Power	Command Main command: POWER Sub-commands: off, on	Note Veranda 4 and Solis do not support Always Ready and must be turned on using Wake- on-LAN. The "POWER on" command is now supported for Always Ready power state. For TVs without Always Ready Mode, Wake- on-LAN must be used to turn on the TV in all cases.

2	Accord Patio	ASPECT_RATIO	For video mode and
2	Aspect Ratio	4by3,16by9,setbyoriginal	live TV only
			screenmuteon:mute
		SCREEN MUTE	OSD and video
2	Saraan Muta		videom uteon: m ute
5	Screen Mute	screenm uteon, videom uteon,	video only
		allmuteoff	allmuteoff:turns off all
			m ute types
		VOLUME_MUTE	
4	Volum e Mute	on off	
5	Volume	VOLUME_CONTROL	
	Control	0 to 100	
			IP control commands
		PICTURE MODE	cannot switch between
			SDR, HDR, and Dolby
		SDR: vivid, normal, cinema, game,	Vision. That is set by
6	Picture Mode	eco, sports	the TV and content
		HDR: vivid, normal, cinema, game	provider app/source
		Dolby Vision: vivid, normal, cinema,	device. If you switch an
		game	incompatible picture
			mode, the command
			will be ignored.
7	Backlight	PICTURE_BACKLIGHT	
	Duoningin	0 to 100	
6		PICTURE_CONTRAST	
8	Contrast	0 to 100	
9	Brightness	PICTURE_BRIGHTNESS	

		0 to 100	
10	Color / Colour	PICTURE_COLOUR 0 to 100	Please note the spelling of "COLOUR".
11	Tint	PICTURE_TINT 0 to 100	0 = Red tint maximum 50 = No tint 100 = Green tint maximum
12	Sharpness	PICTURE_SHARPNESS 0 to 50	Note that this setting has a range of 0 to 50 unlike the rest.
13	Colour Tem perature	PICTURE_COLOUR_TEMPERATURE 0 to 100	0 = Warm tone maximum 50 = Neutral tone 100 = Cold tone maximum
14	Remote Control Lock Mode	REMOTECONTROLLER_LOCK	
15	Audio Balance	AUDIO_BALANCE 0 to 100	0 = Left maximum 50 = Left-Right balanced 100 = Right maximum
16	Audio Equalizer	AUDIO_EQUALIZER 1to 5: 1= 100 Hz 2 = 300 Hz	Sound > Sound Mode Settings > Equalizer must be ON Example: Tuning 1kHz for 3

		3 = 1kHz	
		4 = 3 kHz	
		5 = 10 kHz	
		0 to 20:	AUDIO_EQUALIZER 3 13
		0 = -10	
		1= -9	
		20 = +10	
	Froray	ENERGY_SAVING	*screenoff may not be
17	Saving	Auto, screenoff*, m a xim um , m edium ,	compatible with some
		m inim um , off	newer TV models
		CHANNEL_SETTING_ATSC_ATV	
		[channel number] antenna	
		CHANNEL_SETTING_ATSC_ATV	ATV Example:
		[channel number] cable	CHANNEL_SETTING_
		CHANNEL_SETTING_ATSC_DTV	ATSC_ATV 11antenna
4	Tune	[channel number] cablemaj	
18	Command	CHANNEL SETTING ATSC DTV	DTV Example:
			CHANNEL_SETTING_
		[major channel number] [min.	ATSC_DTV 10 2
		channel numberj antennanotphy	antennanotphy
		CHANNEL_SETTING_ATSC_DTV	
		[major channel number] [min.	
		channel number] cablenotphy	
19	Channel Add	CHANNEL_ADD_DELETE	

	/ Del	add, delete	
		KEY_ACTION	
20	Key	Exit, channelup, channeldown, volum eup, volum edown, arrowright, arrowleft, volum em ute, deviceinput, sleep reserve, livetv, previouschannel, favoritechannel, pause, stop, returnback, captionsubtitle, arrowup, arrowdown, m yapp, settingm enu, ok, quickm enu, videom ode, audiom ode, channellist, bluebutton, yellowbutton, greenbutton, redbutton, aspectration, audiodescription, program m order, userguide, sm arthom e, sim plelink, fastforward, rewind, program m info, program guide, play, slowplay, soccerscreen, screenbright, num ber0, num ber1, num ber2, num ber3, num ber4, num ber5, num ber6, num ber7, num ber8, num ber9	Example (key command): KEY_ACTION returnback Example (toggle): KEY_ACTION simplelink
21	Input Select	INPUT_SELECT dtv, atv, cadtv, catv, hdm i1, hdm i2, hdm i3, hdm i4	APP_LAUNCH is the recommendedmethod for selecting HDMI input. Example: APP_LAUNCH com.webos.app.hdmi3
22	Launch App	APP_LAUNCH appid	See Example Application

			Identifications, for
			example application
			IDs.
			Veranda 4 and Solis do
	Launch	LAUNCH WEBOS APP	not support Always
	Always Ready		Ready and must be
			turned on using Wake-
23		Art, Clock, Movements, Moments,	on-LAN.
	Smart Home	Sound Palette, Launch Game Card,	Note that these
	Cards	LaunchSportsCard	subcommands contain
			capital letters.

## Status Query Commands

	Function	Command	Note
1	MAC Address	GET_ MACADDRESS wired, wifi	
2	Mute State	MUTE_STATE	
3	Current Volum e	CURRENT_VOL	
4	Current App	CURRENT_APP	
5	Get IP Control State	GET_ IPCONTROL_ STATE	Return ON if server is healthy. Otherwise, the command will time out.

# Example Application Identifications (appid)

webOS has unique appids that are used with the APP\_LAUNCH command.

Example: APP\_LAUNCH com.webos.app.lgchannels

This command launches LG Channels Home.

The following are example appids of other system built- in apps on webOS 4.0 or later.

Applications	Identifications (ID)	
Settings	com.palm.app.settings	
Photo &	com.webos.app.photovideo	
Video		
Music	com.webos.app.music	
Guide	com.webos.service.iepg	
Browser	com.webos.app.browser	
	com.webos.app.hdmi1	
НОМІ	com.webos.app.hdmi2	
	com.webos.app.hdmi3	
	com.webos.app.hdmi4	

Sixty of the most popular webOS applications and their appids are listed below:

Applications	Identifications (ID)
Aha	aha
Amazon Alexa	amazon.alexa
Amazon Music	com.theadelab.amclient-lg
Am a zon Prim e	amazon
AMC+	com.amcplus1.app
Apple Music	com.apple.applemusic

com.apple.appletv	
com.apple.appletv.web	
com.britbox.webos	
com.app.cbsnews	
com.discovery.dplus	
com.disney.disneyplus-prod	
com.duplexiptv.app	
imdbtv	
com.fubotv.app	
com.funimation.webapp	
glwiz	
com.haystacktv.app	
hulu	
iboplayer	
com .iptvsmarters.app	
com.webos.app.lgchannels (lgchannels.us)	
com.wbd.stream	
com.moviesanywhere.app	
Netflix	
newsmax	
com.ondemandkorea.ctv.webos	
pandora.lgerp.app	
com.cbs-all-access.webapp.prod	
com.peacock.tv	
cdp-30	

Pluto TV	com.plutotv.app
Pure Flix	com.pureflix.smarttv
Redbox	com.twc.csg.redbox
Shahid	net.mbc.shahid-lgapp
Shop Tim e	com.lgshop.app
Showtime	com.showtime.app.showtime
Showtim e Anytim e	com.showtime.app.showtimeanytime
SiriusXM	sir.12465.3738
SlingTV	com.movenetworks.app.sling-tv-sling-
Singrv	production
Smart IPTV	siptv
Smart STB	sm a rtstb
SmartOne IPTV	com.smartone-iptv.app
Spotify	spotify-beehive
SSIPTV	com.ssiptv.app
STARZ	com.starz.app.starz-lgtv
TikTok TV	com.tiktok.app.tv
Tubi	com.tubitv.ott.tubi
TV Cast	de.2kit.castbrowserlg
Twitch	tv.twitch.tv.starshot.lg
Viki	com.viki.lg
Vix	vix
VUDU	vudu
WebVideo Caster	com.instantbits.cast.webvideo
Xfinity Stream	com.comcast.app
YouTube	youtube.leanback.v4
YouTube Kids	youtube.leanback.kids.v4

YouTube TV	youtube.leanback.ytv.v1
ZeeS	com.zeeS.app

# **IR Control**

Your TV supports IR control. The TV can accept valid commands issued by another device using "IR Hex Codes" below for commands such as discreet power, discreet input, etc.

**Note:** IR control does not support discreet picture mode. You must use IP control instead.

**Solution Solution State <b>State State State State State State State**

Either position the IR emitter correctly on the front of the TV or connect directly to the 3.5 mm IR input on the rear of the TV to ensure proper control.

# **IR Hex Codes**

This TV is based on the LG TV code set. IR commands and hex codes are provided below.

Pro Tip: When copying and pasting the hex codes, use the HTML version of this manual, <u>here</u>.

The PDF version of this document introduces extra carriage returns when copying and pasting the hex codes. You may need to clean up the codes before pasting into the final destination.

Command	Group	Hex Code
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Notfliv		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016
Nethix	APP Select	003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f 0016
		0015 0016 0015 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f 0016
		05e9 0155 0055 0016 0e33
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Prim e	ADD Solo of	0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
Video	APP Select	003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 003f
		0016 0015 0016 0015 0016 0015 0016 003f 0016 0015 0016 003f 0016 05ea
		0155 0055 0016 0e34
	Channel	0000 006c 0022 0002 0155 00ab 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
DASH (-)		003f 0016 003f 0016 0015 0016 0015 0016 003f 0016 0015 0016 003f 0016 003f
		0016 0015 0016 0015 0016 003f 0016 003f 0016 0015 0016 003f 0016 05ea
		0155 0055 0016 0e35
	Channel	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Channel		0016 003f 0016 0015 0016
Down		0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016
		003f 0016 05eb
		0155 0055 0016 0e37
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Channel Up	Channel	0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016
		003f 0016 05eb

Command Group		Hex Code
		0155 0055 0016 0e36
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Favorite	Channal	0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016
Channel	Channel	003f 0016 003f 0016 003f 0016 0015 0016 0015 0016 0015 0016 003f 0016
		0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 003f 0016
		05eb 0155 0055 0016 0e35
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Quida	Channal	0016 003f 0016
Guide	Channel	0015 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 0015 0016
		0015 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 0015 0016
		05eb 0155 0055 0016 0e36
	Channel	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Number		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
Numbero		0015 0016 0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 003f 0016
		003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 05eb
		0155 0055 0016 0e37
	Channel	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Number 1		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016
Numberi		0015 0016 0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 0015 0016
		003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 05ec
		0155 0055 0016 0e37
	Channel	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
Number 0		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Num der 2		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016
		0015 0016 0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 003f 0016

Command	Group	Hex Code
		0015 0016 003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 05ec
		0155 0055 0016 0e38
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Number 3	Channel	0016 003f 0016
Number 5		0015 0016 0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 0015 0016
		0015 0016 003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 05ec
		0155 0055 0016 0e38
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Number 4	Channal	0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
Number 4	Channel	003f 0016 0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 003f 0016
		003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 05ec
		0155 0055 0016 0e36
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Number 5	Channel	0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016
Number 5	Channei	003f 0016 0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 0015 0016
		003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 05eb
		0155 0055 0016 0e35
	Channel	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Number6		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016
Numbero		003f 0016 0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 003f 0016
		0015 0016 0015 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016
		05eb 0155 0055 0016 0e37
Number 7	Channel	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016

Command	Group	Hex Code
		003f 0016 0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 0015 0016
		0015 0016 0015 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016
		05ec 0155 0055 0016 0e37
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
	Channel	0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Number 9		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
Numbero		0015 0016 003f 0016 003f 0016 0015 0016 0015 0016 0015 0016 003f 0016
		003f 0016 003f 0016 0015 0016 0015 0016 003f 0016 003f 0016 003f 0016 05ec
		0155 0055 0016 0e37
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Number O	Channal	0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016
Number 9	Channel	0015 0016 003f 0016 003f 0016 0015 0016 0015 0016 0015 0016 0015 0016
		003f 0016 003f 0016 0015 0016 0015 0016 003f 0016 003f 0016 003f 0016 05ec
		0155 0055 0016 0e38
	Channel	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
SVD		0016 003f 0016 0015 0016
JAP		0015 0016 0015 0016 003f 0016 0015 0016 0015 0016 003f 0016 0015 0016
		003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 0015 0016 05e9
		0155 0055 0016 0e34
	Channel	0000 006d 0022 0002 0157 00ac 0015 0016 0015 0016 0015 0041 0015 0016
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016
Turner		0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0016 0015 0041
Tuner		0015 0041 0015 0016 0015 0041 0015 0016 0015 0041 0015 0041 0015 0041
		0015 0016 0015 0016 0015 0041 0015 0016 0015 0041 0015 0016 0015 0016
		0015 0689 0157 0056 0015 0e94
HDMI1	Input	0000 006d 0022 0002 0157 00ac 0015 0016 0015 0016 0015 0041 0015 0016
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016

Command	Group	Hex Code
		0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0016 0015 0041
		0015 0041 0015 0041 0015 0016 0015 0016 0015 0041 0015 0041 0015 0041
		0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016 0015 0016
		0015 0689 0157 0056 0015 0e94
		0000 006d 0022 0002 0157 00ac 0015 0016 0015 0016 0015 0041 0015 0016
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016
	lanut	0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0016 0015 0016
	Input	0015 0041 0015 0041 0015 0016 0015 0016 0015 0041 0015 0041 0015 0041
		0015 0041 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016 0015 0016
		0015 0689 0157 0056 0015 0e94
		0000 006d 0022 0002 0157 00ac 0015 0016 0015 0016 0015 0041 0015 0016
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016
		0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0016
HDMI3	Input	0015 0016 0015 0041 0015 0016 0015 0041 0015 0041 0015 0041 0015 0016
		0015 0041 0015 0041 0015 0016 0015 0041 0015 0016 0015 0016 0015 0016
		0015 0689 0157 0056 0015 0e94
		0000 006d 0022 0002 0157 00ac 0015 0016 0015 0016 0015 0041 0015 0016
	Input	0015 0016 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016
		0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0016 0015 0041
AV		0015 0016 0015 0041 0015 0041 0015 0016 0015 0041 0015 0016 0015 0041
		0015 0016 0015 0041 0015 0016 0015 0016 0015 0041 0015 0016 0015 0041
		0015 0689 0157 0056 0015 0e94
	Input	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Toggle Input		0016 003f 0016
		0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016
		0015 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 003f 0016 05ec
		0155 0055 0016 0e35
Menu	Menu	0000 006b 0022 0002 0158 00ab 0016 0015 0016 0015 0016 0040 0016 0015

Command	Group	Hex Code
		0016 0015 0016 0015 0016 0015 0016 0015 0016 0040 0016 0040 0016 0015
		0016 0040 0016 0040 0016 0040 0016 0040 0016 0040 0016 0040 0016 0040
		0016 0015 0016 0015 0016 0015 0016 0015 0016 0040 0016 0015 0016 0015
		0016 0015 0016 0040 0016 0040 0016 0040 0016 0040 0016 0015 0016 0040
		0016 05fd 0157 0055 0016 0e63
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Cattinga	Мари	0016 003f 0016
Settings	Menu	0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 0015 0016 0015 0016
		0015 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 05ec
		0155 0055 0016 0e32
	Menu	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016
INTO		0015 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 003f 0016
		0015 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 0015 0016
		05ea 0155 0055 0016 0e33
	Navigation	0000 006c 0022 0002 0155 00ab 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
DACK		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
DAUN		0015 0016 003f 0016 0015 0016 003f 0016 0015 0016 0015 0016 003f 0016
		003f 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f 0016 003f 0016 05eb
		0154 0056 0016 0e31
	Navigation	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
CANCEL (EXIT)		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016
		0015 0016 003f 0016 003f 0016 0015 0016 003f 0016 0015 0016 0015 0016
		0015 0016 003f 0016 0015 0016 0015 0016 003f 0016 0015 0016 003f 0016
		05eb 0155 0055 0016 0e37

Command	Group	Hex Code
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Down	Navigation	0016 003f 0016 0015 0016
Down		0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 0015 0016 0015 0016
		003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 05ec
		0155 0055 0016 0e39
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Fretor	Navigation	0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
Enter		003f 0016 0015 0016 0015 0016 0015 0016 003f 0016 0015 0016 003f 0016
		003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 05eb
		0155 0055 0016 0e37
		0000 006c 0000 0024 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
Home	Navigation	003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 003f
		0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 05ec
		0155 0055 0016 05ec
	Navigation	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
loft		0016 003f 0016
Left		003f 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016
		0015 0016 0015 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 05ed
		0155 0055 0016 0e37
Right	Navigation	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016
		003f 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016
		0015 0016 0015 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 05eb

Command	Group	Hex Code
		0155 0055 0016 0e37
	Navigation	0000 006b 0022 0002 0158 00ab 0016 0015 0016 0015 0016 0040 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 0040 0016 0040 0016 0015
Lin		0016 0040 0016 0040 0016 0040 0016 0040 0016 0040 0016 0015 0016 0015
Up		0016 0015 0016 0015 0016 0015 0016 0015 0016 0040 0016 0015 0016 0040
		0016 0040 0016 0040 0016 0040 0016 0040 0016 0040 0016 0015 0016 0040
		0016 0600 0157 0055 0016 0e68
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Davias		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016
Pause	Раураск	0015 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016 0015 0016 0015 0016 0015 0016 003f 0016 0015 0016 05ed
		0155 0055 0016 0e3b
		0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
	Diascharach	0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Play		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
FIdy	Flayback	0015 0016 0015 0016 003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f
		0016 003f 0016 003f 0016 0015 0016 0015 0016 003f 0016 0015 0016 05ed
		0155 0055 0016 0e39
	Playback	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
Doo		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016
Rec		003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016 0015 0016 003f
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 0015 0016 05eb
		0155 0055 0016 0e36
Power On	Power	0000 006d 0022 0002 0157 00ac 0015 0016 0015 0016 0015 0041 0015 0016
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016
		0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0016 0015 0016
		0015 0041 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0041
Command	Group	Hex Code
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		0015 0041 0015 0016 0015 0041 0015 0041 0015 0041 0015 0016 0015 0016
		0015 0689 0157 0056 0015 0e94
Power Off	Power	0000 006d 0022 0002 0157 00ac 0015 0016 0015 0016 0015 0041 0015 0016
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016
		0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0041 0015 0016
		0015 0041 0015 0016 0015 0016 0015 0016 0015 0041 0015 0041 0015 0016
		0015 0041 0015 0016 0015 0041 0015 0041 0015 0041 0015 0016 0015 0016
		0015 0689 0157 0056 0015 0e94
Power Toggle	Power	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 0015 0016
		0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016
		003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 003f 0016 05ec
		0155 0055 0016 0e36
Mute Toggle	Volum e	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016
		0015 0016 003f 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016
		003f 0016 003f 0016 0015 0016 003f 0016 003f 0016 003f 0016 003f 0016 05ed
		0155 0055 0016 0e35
Volum e Down	Volum e	0000 006c 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016
		0015 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 05ea
		0155 0055 0016 0e30
Volum e Up	Volum e	0000 006d 0022 0002 0156 00aa 0016 0015 0016 0015 0016 003f 0016 0015
		0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016 003f 0016 0015
		0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 0015 0016 003f 0016

Command	Group	Hex Code
		0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 0015 0016 003f 0016
		0015 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 003f 0016 05e8
		0155 0055 0016 0e2f

# Troubleshooting

### Voice control problems

Voice control is only available using the included webOS remote.

#### Picture problems

No picture, or black and white picture: Disconnect the TV power plug from AC outlet and re-connect after 60 seconds. Check that the Color Saturation is set to 50 or higher. Try different TV channels.

The picture is distorted: The compression of video content may cause picture distortions, especially in fast-moving pictures from sports programs and action movies. If the signal reception is weak or poor, screen distortion may be visible but it is not a malfunction. Mobile phones used close to the TV (within 1m) may cause noise on analogue and digital channels.

The picture is blurry, flickering, or cuts out momentarily: All Settings > Picture > Advanced Settings > Clarity > Adjust Sharpness. You can try to increase or decrease the Sharpness. If you use an external antenna, check the direction, position and connection of the antenna. Adjust the direction of your antenna, or reset or fine tune the channel.

The picture appears red, purple, pink, and other colors: All Settings > Picture > Advanced Settings > Color > White Balance. You can try to increase or decrease the White Balance. The picture appears wavy and distorted: Some electrical appliances may affect the TV. If you turn off the appliance and the interference goes away, then move it further away from TV. Insert the power plug of the TV into another power outlet.

If the problem persists, check the broadcast signal strength or refer to the external device's manual.

### Network problems

The TV cannot connect to your network or apps: Ensure the TV has an Ethernet or wireless connection to your network. Contact your Internet service provider and ensure your access is working.

The wireless network connection fails: Make sure you are getting a signal from your wireless modem or access point, and that it is connected to the Internet. Shut off any appliances that interfere with wireless.

The wireless network signal is too weak: Position your wireless router or access point in a more central location. Avoid putting it in a corner.

### Sound problems

There is no sound or the sound is too low at maximum: Check the volume control of the device (cable or satellite box, DVD, Blu- ray, etc.) connected to your TV.

There is no sound, but the picture is normal: Check the volume settings. Ensure that the audio is not muted.

The speakers are making an odd sound: Make sure that the audio cable is connected to the correct audio output connector on the external device. For antenna or cable connections, check the signal information. A weak signal may cause distortion.

The audio is distorted: Some electrical appliances may affect the TV. If you turn off the appliance and the interference goes away, then move that appliance further away from TV. Move the TV's power plug to another power outlet.

The sound is scratchy or cuts out momentarily: If you use an external antenna, check the direction, position, and connection of the antenna. Adjust the direction of your antenna or reset or fine tune the channel.

#### External device connection problems

I have connected an external source to my TV but I get no picture and/or sound: Check that the connection between the external device and your TV is not loose. Ensure you have selected the correct input source.

There is no signal or weak signal in the cable box: If there is no signal occasionally, disconnect the cable from the TV and plug it back in after 60 seconds. Change to another HDMI port. Replace the HDMI cable.

There is no sound: Check if the Audio Out option in the menu is ARC/eARC, if not, you need to check whether the external power amplifier device is connected to the ARC port or optical port of the TV. Go to All Settings > Sound > Sound Out > Use TV Speaker. Check whether the power amplifier device port is connected correctly.

The remote control does not work: Confirm that TV still has power and is operational. Check that the batteries are correctly installed. Place new batteries in the remote control. If some buttons don't work, but the volume buttons work normally, the problem is likely with the application.

#### Media file problems

Some files can't be played: Most files can be played back.

You might experience problems with corrupted files or with files that have high bitrate, unsupported resolution, unsupported container, or unsupported codec.

## App problems

Netflix won't play: Turn off the TV, wait at least 10 seconds, and turn it back on. Then, reopen Netflix. If the problem persists, reset the TV to factory settings (All Settings > System > Reset to Initial Settings).

Disney+ won't play: Turn off the TV, wait at least 10 seconds, and turn it back on. Then, reopen Disney+. If the problem persists, reset to factory settings (All Settings > System > Reset to Initial Settings).

#### Miscellaneous problems

The TV is hot: Watching media causes the TV to generate heat. After extended use, it may feel hot to the touch. This is not a defect and does not affect the TV's functionality.

Caution: To maximize the life of your TV, do not mount it where its rear panel is subject to direct sunlight.

The TV smells of plastic: This smell is normal for a new TV and will dissipate over time.

When I turn on my TV, there is a delay of a few seconds before the picture appears: This is normal. The TV is initializing and searching for previous setting information.

#### **Technical Support**

For chat and telephone, visit snp1.co/techsupport • Email: TechSupport@SnapOne.com. Visit snp1.co/tc for discussions, instructional videos, news, and more.

#### Warranty and Legal Notices

Find details of the product's Limited Warranty and other resources such as regulatory notices and patent and safety information, at **snapone.com/legal** or request a paper copy from Customer Service at **866.424.4489**.

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