



Figures and illustrations in this User Manual are provided for reference only and may differ from actual product appearance. Product design and specifications may be changed without notice.

Important Warranty Information Regarding Television Format Viewing

Wide screen format LED Displays with aspect ratios of 16:9 (the ratio of the screen width to screen height) are primarily designed to display wide screen format full-motion video. The images displayed on them should primarily be in the wide screen 16:9 ratio format, or expanded to fit the screen if your model offers this feature and the images are constantly moving. Displaying stationary graphics and images on screen, such as the dark sidebars on non-expanded standard format television video and programming, should be limited to no more than 2% of the total television viewing per week. Additionally, viewing other stationary images and text such as stock market crawls, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. Displaying stationary images that exceed the above guidelines can cause uneven aging of LED Displays that leave subtle, but permanent burned-in ghost images in the LED picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars. On LED models that offer picture sizing features, use these controls to view different formats as a full screen picture. Be careful in the selection and duration of television formats you use for viewing. Uneven LED aging as a result of format selection and use, as well as burned-in images, are not covered by your Samsung limited warranty.

SAMSUNG ELECTRONICS NORTH AMERICAN LIMITED WARRANTY STATEMENT

Subject to the requirements, conditions, exclusions and limitations of the original Limited Warranty supplied with Samsung Electronics (SAMSUNG) products, and the requirements, conditions, exclusions and limitations contained herein, SAMSUNG will additionally provide Warranty Repair Service in the United States on SAMSUNG products purchased in Canada, and in Canada on SAMSUNG products purchased in the United States, for the warranty period originally specified, and to the Original Purchaser only.

The above described warranty repairs must be performed by a SAMSUNG Authorized Service Center. Along with this Statement and the Original Limited Warranty Statement, a dated Bill of Sale as Proof of Purchase must be presented to the Service Center. Transportation to and from the Service Center is the responsibility of the purchaser. Conditions covered are limited only to defects in material or workmanship, and only those encountered in normal use of the product. Exclusions include, but are not limited to, any originally specified provisions for in-home or on-site services, minimum or maximum repair times, exchanges or replacements, accessories, options, upgrades, or consumables.

For the location of a SAMSUNG Authorized Service Center, please call toll-free:

- In the United States: 1-800-SAMSUNG (1-800-726-7864)

- In Canada: 1-800-SAMSUNG



EN68-04797F-01

Still image warning

Avoid displaying still images (such as jpeg picture files) or still image elements (such as TV channel logos, panorama or 4:3 image format, stock or news bars at screen bottom etc.) on the screen. Constant displaying of still pictures can cause ghosting of LED screen, which will affect image quality. To reduce risk of this effect, please follow below recommendations:

- Avoid displaying the same TV channel for long periods.
- Always try to display any image on full screen, use TV set picture format menu for best possible match.
- Reduce brightness and contrast values to minimum required to achieve desired picture quality, exceeded values may speed up the burnout process.
- Frequently use all TV features designed to reduce image retention and screen burnout, refer to proper user manual section for details.

Securing the Installation Space

Keep the required distances between the product and other objects (e.g. walls) to ensure proper ventilation.

Failing to do so may result in fire or a problem with the product due to an increase in the internal temperature of the product.

When using a stand or wall-mount, use parts provided by Samsung Electronics only.

If you use parts provided by another manufacturer, it may result in a problem with the product or an injury due to the product falling.

The appearance may differ depending on the product.

Be careful when you contact the TV because some parts can be somewhat hot.

Installation with a stand.

Installation with a wall-mount.



Contact SAMSUNG WORLDWIDE

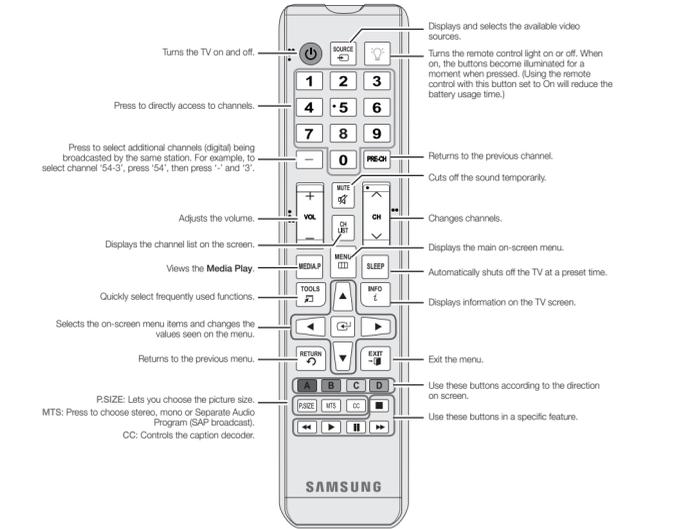
If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

Country	CANADA	U.S.A
Address	Samsung Electronics Canada Inc., Customer Service 55 Standen Court Mississauga Ontario L5R 4B2 Canada	Samsung Electronics America, Inc. 85 Challenger Road Ridgefield Park, NJ 07660
Customer Care Center ☎	1-800-SAMSUNG (726-7864)	
Web Site	www.samsung.com/ca (English) www.samsung.com/ca/fr (French)	www.samsung.com

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Remote Control

This remote control has Braille points on the Power, Channel, and Volume buttons and can be used by visually impaired persons.

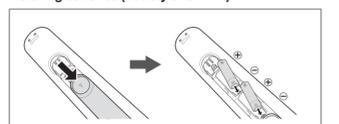


Display Modes (HDMI/DVI Input)

4 series: 1366 x 768@60Hz / 5 series: 1920 x 1080@60Hz

Mode	Resolution	Horizontal Frequency (Hz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync (H/V)	1366 x 768	1920 x 1080
IBM	720 x 400	31.469	70.087	26.322	-/+	✓	✓
	640 x 480	35	60.000	25.175	-/+	✓	✓
	832 x 624	49.726	74.551	57.284	-/+	✓	✓
	1152 x 870	68.681	75.952	100	-/+	✓	✓
	864 x 480	31.469	59.959	26.175	-/+	✓	✓
	640 x 480	37.861	72.809	31.5	-/+	✓	✓
MAC	640 x 480	37.5	75	31.5	-/+	✓	✓
	800 x 600	37.879	60.317	45	-/+	✓	✓
	800 x 600	48.077	72.188	50	-/+	✓	✓
	800 x 600	48.875	75	49.5	-/+	✓	✓
	1024 x 768	48.363	60.344	65	-/+	✓	✓
	1024 x 768	56.476	70.069	75	-/+	✓	✓
VESA DMT	1024 x 768	60.000	60.000	75.000	-/+	✓	✓
	1152 x 864	67.5	75	108	-/+	✓	✓
	1280 x 720	45	60	74.25	-/+	✓	✓
	1280 x 800	49.702	59.959	60.5	-/+	✓	✓
	1280 x 1024	63.881	60.232	108	-/+	✓	✓
	1280 x 1024	79.876	75.025	135	-/+	✓	✓
3966 x 798	47.712	59.79	65.5	-/+	✓	✓	✓
	1440 x 900	55.505	59.959	105	-/+	✓	✓
	1600 x 900HBR	60	60	108	-/+	✓	✓
	1680 x 1050	65.29	59.954	146.25	-/+	✓	✓
	1920 x 1080	67.5	60	148.5	-/+	✓	✓

Installing batteries (Battery size: AAA)



- NOTE
- Use the remote control within 23 feet from TV.
- Bright light may affect the performance of the remote control.
- Avoid use when nearby fluorescent lights or neon signs.
- The Color and shape may vary depending on the model.

Warning! Important Safety Instructions

Please read the safety instructions below before installing and using the product.

CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any internal part of this product.

This symbol indicates that important literature concerning operation and maintenance has been included with this product.

- The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of this apparatus, and to protect it from overheating, these slots and openings must never be blocked or covered.
 - Do not cover the slots and openings with a cloth or other materials.
 - Do not block the slots and openings by placing this apparatus on a bed, sofa, rug or other similar surface.
 - Do not place this apparatus in a confined space, such as a bookcase or built-in cabinet, unless proper ventilation is provided.
- Do not place this apparatus near or over a radiator or heat register, or where it is exposed to direct sunlight.
- Do not place a vessel containing water (vases etc.) on this apparatus, as this can result in a risk of fire or electric shock.
- Do not expose this apparatus to rain or place it near water (near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool etc.). If this apparatus accidentally gets wet, unplug it and contact an authorized dealer immediately.
- Make sure to pull out the power cord from the outlet before cleaning.
- This apparatus uses batteries. In your community, there might be regulations that require you to dispose of these batteries properly to protect the environment. Please contact your local authorities for disposal or recycling information.
- Do not overload wall outlets, extension cords, or adapters beyond their capacity, since this can result in fire or electric shock.
- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at the plug end, where connected to adapters, and at the point where they exit from the apparatus.
- To protect this apparatus from 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 or cable system. This will prevent damage to the set due to lightning and power line surges.
- Before connecting the AC power cord to the DC adaptor outlet, make sure the voltage designation of the DC adaptor corresponds to the local electrical supply. (Depending on the model)
- Never insert anything metallic into the open parts of this apparatus. Doing so may create a danger of electric shock.
- To avoid electric shock, never touch the inside of this apparatus. Only a qualified technician should open this apparatus.
- Make sure to plug the power cord in until it is firmly inserted. Pull on the plug, not the cord, when removing the power cord from the outlet. Do not touch the power cord with wet hands.
- This apparatus does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact an authorized dealer or service center.
- Be sure to pull the power plug out of the outlet if the TV is to remain unused or if you are to leave the house for an extended period of time (especially when children or disabled people will be left alone in the house).
 - Accumulated dust can cause an electric shock, an electric leakage, or a fire by causing the power cord to generate sparks and heat, or cause the insulation to deteriorate.
- Be sure to contact an authorized service center, when installing your set in a location with heavy dust, high or low temperature, high humidity, chemical substances or where it will operate for 24 hours a day such as in an airport, a train station, etc. Failure to do so may cause serious damage to your set.
- Use only a properly grounded plug and receptacle.
 - An improper ground may cause electric shock or equipment damage. (Class I equipment only.)
- To turn off the apparatus completely, you must pull the power plug out of the wall socket. Consequently, the power plug should be readily accessible at all times.
- Do not allow children to hang onto the product.
- Store the accessories (batteries, etc.) in a location safely out of the reach of children.
- Do not install the product in an unstable location such as a shaky shelf, a slanted floor, or a location exposed to vibration.
- Do not drop or impart a shock to the product. If the product is damaged, disconnect the power cord and contact a service center.
- To clean the product, unplug the power cord from the power outlet and wipe the product using a soft cloth dipped in a small amount of water.
- Do not use any chemicals such as wax, benzene, alcohol, thinners, insecticide, air freshener, lubricant or detergent. This may damage the appearance or erase the printing on the product.
- Do not expose the apparatus to dripping or splashing.
- Do not dispose of batteries in a fire.
- Do not short circuit, disassemble, or overheat the batteries.
- There is a danger of explosion if you replace the batteries with the wrong type of battery. Replace only with the same or equivalent type.
- WARNING - TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.**

Getting Started

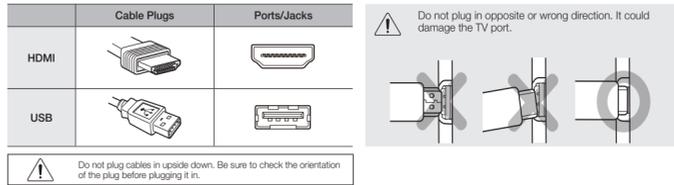
Accessories

- Remote Control (AA59-00600A) & Batteries (AAA x 2)
- Warranty Card / Regulatory Guide
- Owner's Instructions
- Power Cord
- AC/DC Adapter (for 19", 22" models)
- Stand Wire Holder (BN61-06370A) (for 28", 29" models)

Input Cables (Sold Separately)

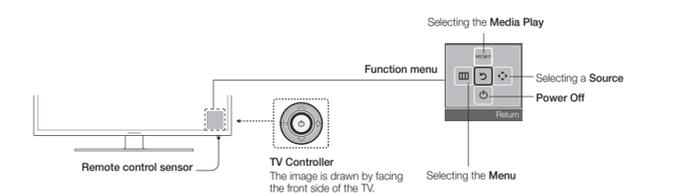
- Audio
- Composite (AV)
- Component
- Coaxial (RF)
- HDMI
- HDMI-DVI

Make sure you have the correct cable before plugging it in. Illustrations of common plugs and jacks are shown below.



TV Controller (Panel Key)

The TV's Controller, a small joy stick like button on the rear left side of the TV, lets you control the TV without the remote control.



- Exits the menu when pressing the controller more than 1 second.
- When selecting the function by moving the controller to the up/down/left/right directions, be sure not to press the controller. If you press it first, you cannot operate it to move the up/down/left/right directions.

Plug & Play (Initial Setup)

When you turn the TV on for the first time, a sequence of screens and on-screen prompts will assist you in configuring the TV's basic settings. Press the POWER button. **Plug & Play** is available only when the Input source is set to TV. Set the initial setup following instructions that the TV guides.

Connecting the power cord and antenna. (refer to 'Connections')

Channel Menu

Seeing Channels

Channel List

- Add, delete or set Favorite channels and use the program guide for digital broadcasts. Select a channel in the **All Channels**, **Added Channels**, **Favorite** or **Programmed** screen by pressing the **▲/▼** buttons, and pressing the **ENTER** button. Then you can watch the selected channel.
- All Channels**: Shows all currently available channels.
- Added Channels**: Shows all added channels.
- Favorite**: Shows all favorite channels.
- Programmed**: Shows all currently reserved programs.
- Using the remote control buttons with the **Channel List**
 - Green (Zoom)**: Enlarges or shrinks a channel number.
 - Yellow (Select)**: Selects multiple channel lists. Select desired channels and press the Yellow button to set all the selected channels at the same time. The **✓** mark appears to the left of the selected channels.
 - TOOLS**: Displays the **Channel List** option menu. (The Options menu may differ depending on the situation.)
- Channel Name Edit**: (analog channels only) Assign your own channel name.
- Select All**: Select all the channels in the channel list.
- Deselect All**: Deselect all the selected channels.
- Change Info**: You can only select **Deselect All** when one or more channels are selected.
- Auto Program**: Scans for a channel automatically and stores in the TV.
- Programmed (in Channel List)**
 - Channel List → Programmed → TOOLS**: You can view, modify or delete a show you have reserved to watch.
 - Change Info**: Change a show you have reserved to watch.
 - Cancel Schedules**: Cancel a show you have reserved to watch.
 - Information**: Display a show you have reserved to watch. (You can also change the reservation information.)
 - Select All / Deselect All**: You can select or deselect all channels in the channel list.

Channel Status Display icons

- ✓: A channel selected.
- ♥: A channel set as a Favorite.
- Ⓢ: A reserved program.
- Ⓢ: A program currently being broadcast.

Memorizing channels

Antenna (Switch to Cable / Switch to Air [TOOLS])
Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV (i.e. an Air or a Cable system).

Auto Program

- When selecting the Cable TV system: Selects the cable system. **STD**, **HRC** and **IRC** identify various types of cable TV systems. Contact your local cable company to identify the type of cable system that exists in your particular area. At this point, the signal source has been selected.
- After all the available channels are stored, it starts to remove scrambled channels. The **Auto Program** menu then reappears.
- Press the **ENTER** button to stop the channel store during **Auto Program**.

How to Stop Auto Programming

- Press the **ENTER** button.
- A message will ask **Stop Auto Program?**. Select **Yes** by pressing the **◀** or **▶** button.
- Press the **ENTER** button.

Other Features

Clear Scrambled Channel

This function filters out scrambled channels after **Auto Program** is completed. This process may take up to 20-30 minutes.

Press the **ENTER** button to stop the **Clear Scrambled Channel**.

This function is only available in **Cable** mode.

Channel List

Channel List Option Menu

Set each channel list using the **Channel List** menu options. Option menu items may differ depending on the channel status.

Picture Menu

Mode [TOOLS]

- Select your preferred picture type.
- When connecting a PC, you can only select **Entertain** and **Standard**.
- Dynamic**: Suitable for a bright room.
- Standard**: Suitable for a normal environment.
- Movie**: Suitable for watching movies in a dark room.
- Entertain**: Suitable for watching movies and games.
- Only available when connecting a PC.

Samsung MagicAngle (for 19", 22" models)

Adjust screen viewing Angle to optimize screen quality according to your viewing position.

- Samsung MagicAngle**: When viewing the screen at an angle from below or above by setting the appropriate mode for each position you can obtain a similar picture quality as viewing the screen directly from the front.
- Off**: Select when viewing from the front position.
- Lean Back Mode**: Select when viewing from a slightly lower position.
- Standing Mode**: Select when viewing from the upper position.
- Mode**: Adjust screen viewing angle.
- When **Samsung MagicAngle** is set to **Lean Back Mode** or **Standing Mode**, **Gamma** is not available.

Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)

Your television has several setting options for picture quality control.

When connecting a PC, you can only make changes to **Backlight**, **Contrast**, **Brightness** and **Sharpness**.

Advanced Settings

- (available in **Standard** / **Movie** mode)
- Compared to previous models, new Samsung TVs have a more precise picture.
- When connecting a PC, you can only make changes to **Gamma** and **White Balance**.
- Dynamic Contrast**: Adjusts the screen contrast.
- Black Tone**: Selects the black level to adjust the screen depth.
- Flesh Tone**: Emphasize pink "flesh tone".
- Color Space**: Adjusts the range of colors available to create the image.
- White Balance**: Adjusts the color temperature for a more natural picture.
- R-Offset / G-Offset / B-Offset**: Adjusts each color's (red, green, blue) darkness.
- R-Gain / G-Gain / B-Gain**: Adjusts each color's (red, green, blue) brightness.
- Reset**: Resets the **White Balance** to it's default settings.
- Gamma**: Adjusts the primary color intensity.
- Motion Lighting**: Reduce power consumption by brightness control of the displayed image.
- Available in **Standard** mode only.

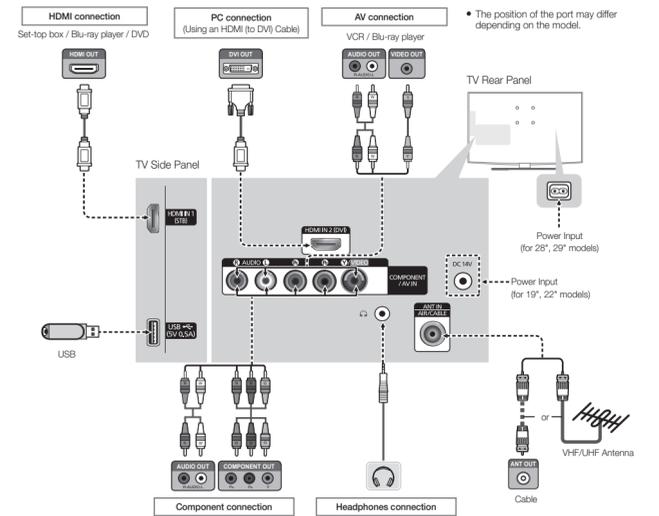
Sound Menu

Mode [TOOLS]

- Standard**: Selects the normal sound mode.
 - Music**: Emphasizes music over voices.
 - Movie**: Provides the best sound for movies.
 - Clear Voice**: Emphasizes voices over other sounds.
 - Amplify**: Increase the intensity of high-frequency sounds to allow a better listening experience for the hearing impaired.
- #### Equalizer
- (standard sound mode only)
- Balance L/R**: Adjusts the balance between the right and left speakers.
 - 100Hz / 300Hz / 1kHz / 3kHz / 10kHz (Bandwidth Adjustment)**: Adjusts the level of specific bandwidth frequencies.
 - Reset**: Resets the equalizer to its default settings.

Connections

- For the best picture and audio quality, connect digital devices using an HDMI cable.
- If you connect an external device to the TV that uses an older version of HDMI, the video and audio may not work. If this occurs, ask the manufacturer of the device about the HDMI version and, if it is out of date, request an upgrade.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- PC/DVI AUDIO IN** input is not supported.
- For an HDMI to DVI cable connection, you must use the HDMI IN 2 (DVI) port.
- Connecting through the HDMI cable may not be supported depending on the PC.
- If an HDMI to DVI cable is connected to the HDMI IN 2 (DVI) port, the audio does not work.
- For Set-top box connection using HDMI cable, we highly recommend you to connect the HDMI IN 1 (STB) port.



Changing the Input Source

Source List

- Use to select TV or an external input source such as a DVD player / Blu-ray player / cable box / STB satellite receiver.
- Press the **SOURCE** button.
- Select a desired external input source.
- TV / AV / Component / HDMI / HDMI2/DVI**
 - You can only choose external devices that are connected to the TV in the **Source List**, connected inputs will be highlighted.

Information

You can see detailed information about the connected external device.

How to use Edit Name

Edit Name lets you associate a device name to an input source. To access **Edit Name**, press the **TOOLS** button in **Source List**. Name the device connected to the input jacks to make your input source selection easier.

- When connecting a PC to the HDMI IN 2(DVI) port with HDMI cable, you should set the TV to **PC mode** under **Edit Name**.
- When connecting a PC to the HDMI IN 1(DVI) port with HDMI to DVI cable, you should set the TV to **DVI PC mode** under **Edit Name**.
- When connecting an AV device to the HDMI IN 2(DVI) port with HDMI to DVI cable, you should set the TV to **DVI mode** under **Edit Name**.

Setup Menu

Language

- Set the menu language.
- Choose between **English**, **Español**, and **Français**.

Setting the Time

- The current time will appear every time you press the **INFO** button.
- Clock**: Setting the clock is for using various timer features of the TV.
 - If you disconnect the power cord, you have to set the clock again.
 - Clock Mode**: Set the current time manually or automatically.
 - Clock Set**: Set the **Month**, **Day**, **Year**, **Minute** and **am/pm**.
 - Available only when **Clock Mode** is set to **Manual**.
 - Time Zone**: Select your time zone.
 - DST (Daylight Saving Time)**: Switches the DST (Daylight Saving Time) mode is set to **Auto**.
 - Sleep Timer [TOOLS]**: Automatically shuts off the TV after a preset period of time. (30, 60, 90, 120, 150 and 180 minutes).
 - To cancel the **Sleep Timer**, select **Off**.

Timer 1 / Timer 2 / Timer 3

- Three different on / off timer settings can be made. You must set the clock first.
- On Time / Off Time**: Set the hour, minute, am/pm and Activate / Inactivate. (To activate the timer with the setting you have chosen, set to **Activate**.)
- Volume**: Set the desired volume level.
- Contents**: When the **On Time** is activated, you can turn on a specific channel or play back contents such as photo or audio files.
 - TV/USB**: Select **TV** or **USB**. (Make sure that a USB device is connected to your TV.)
 - Antenna**: Displays the current antenna source.
 - Channel**: Select the desired channel.
 - Music/Photo**: Select the folder containing MP3/JPEG files on the USB device.
 - The maximum displayed number of files, including sub folders, in one folder of USB storage device is 2000.
 - The media may not be playing smoothly when the device lower than USB 2.0.
- Repeat**:

Program Rating Lock

The **Program Rating Lock** feature automatically locks out programs that are deemed inappropriate for children. The user must enter a PIN (personal identification number) before any of the Program Rating Lock restrictions are set up or changed.

- Program Rating Lock is not available in **HDMI** or **Component** mode.

The default PIN number of a new TV set is "0-0-0-0".

- Program Rating Lock:** You can block rated TV Programs.

TV Parental Guidelines: You can block TV programs depending on their rating. This function allows you to control what your children are watching.

MPPAA Rating: You can block movies depending on their MPPAA rating. The Motion Picture Association of America (MPAA) has implemented a rating system that provides parents or guardians with advanced information on which films are appropriate for children.

Canadian English: You can block TV programs depending on their Anglophone Canadian.

Canadian French: You can block TV programs depending on their French Canadian rating.

Downloadable U.S. Rating: Parental restriction information can be used while watching TV channels.

Change PIN: The Change PIN screen will appear. Choose any 4 digits for your PIN and enter it in **Enter New PIN**. Re-enter the same 4 digits in **Confirm New PIN**. When the Change PIN screen disappears, press the OK button. The TV has memorized your new PIN.

If you forget the PIN, press the remote-control buttons in the following sequence, which resets the pin to "0-0-0-0": POWER (off) → MUTE → 8 → 2 → 4 → POWER (on)

Caption

(On-Screen Text Messages)

Caption: You can switch the caption function on or off. If captions are not available, they will not be displayed on the screen.

The **Caption** feature does not work in **Component** or **HDMI** mode.

Caption Mode: You can select the desired caption mode.

Default / CC1-CC4 / Text1-Text4: (analog channels only) The Analog Caption function operates in either analog TV channel mode or when a signal is supplied from an external device to the TV. (Depending on the broadcasting signal, the Analog Caption function may or may not work with digital channels.)

Default / Service1-Service6 / CC1-CC4 / Text1-Text4: (digital channels only) The Digital Captions function works with digital channels.

Service1-6 may not be available in digital caption mode depending on the broadcast.

Digital Caption Options: (digital channels only)
Size: Options include Default, Small, Standard and Large. The default is Standard.

Font Style: Options include Default and Styles 0 to 7. The default is Style 0.

Foreground Color: Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan.

You can change the color of the letter. The default is White.

Background Color: Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. You can change the background color of the caption. The default is Black.

Foreground Opacity: This adjusts the opacity of text. Options include Default, Transparent, Translucent, Solid and Flashing.

Background Opacity: This adjusts the opacity of the caption background. Options include Default, Transparent, Translucent, Solid and Flashing.

Return to Default: This option sets each Size, Font Style, Foreground Color, Background Color, Foreground Opacity and Background Opacity to its default.

Digital Caption Options are available only when **Default** and **Service1-Service6** can be selected in **Caption Mode**.

The Foreground and Background cannot be set to have the same color.

Melody

Set so that a melody plays when the TV is turned on or off.

- The **Melody** does not play.
 - When no sound is output from the TV because the MUTE button has been pressed.
 - When no sound is output from the TV because the volume has been reduced to minimum with the VOL- button.
 - When the TV is turned off by **Sleep Timer** function.

Eco Solution

Energy Saving: This adjust the brightness of the TV in order to reduce power consumption. If you select **Picture Off**, the screen is turned off, but the sound remains on. Press any button except volume button to turn on the screen.

Eco Sensor (for 5 series): To enhance your power savings; the picture settings will automatically adapt to the light in the room.

If you adjust the **Backlight**, the **Eco Sensor** will be set to **Off**. **Min. Backlight:** When **Eco Sensor** is On, the minimum screen brightness can be adjusted manually.

If **Eco Sensor** is On, the display brightness may change (become slightly darker in most cases) depending on the surrounding light intensity.

No Signal Power Off: Sets how quickly the TV switches to standby mode, if no picture is being received.

Disabled when the PC is in power saving mode.

Auto Power Off: The TV will be automatically turned off when no user operations to receive for 4 hours.

Auto Protection Time

If the screen remains idle with a still image for a certain period of time defined by the user, the screen saver is activated to prevent the formation of ghost images on the screen.

Support Menu

Self Diagnosis

Picture Test: Use to check for picture problems. If the problem continues to occur, check the color pattern.

Sound Test: Use the built-in melody sound to check for sound problems.

Signal Strength: (digital channels only) An HD channel's reception quality is either perfect or the channels are unavailable. Adjust your antenna to increase signal strength.

Reset: Reset all settings to the factory defaults.

The PIN input screen appears before the setup screen.

Enter your 4-digit PIN. Change the PIN using the **Change PIN** option.

Software Upgrade

Software Upgrade can be performed by downloading the latest software from samsung.com to a USB memory device.

HD Connection Guide

Refer to this information when connecting external devices to the TV.

Contact Samsung

Visit information when your TV does not work properly or when you want to upgrade the software. You can find information regarding our call centers and how to download products and software.

Media Play

Enjoy photos, music and/or movie files saved on a USB Mass Storage Class (MSC) device.



Connecting a USB Device

- Turn on your TV.
- Connect a USB device containing photo, music and/or movie files to the USB jack on the side of the TV.
- When USB is connected to the TV, you can select **Media Play (USB)** in **Applications** menu.

Using the Media Play Menu

- Press the MENU button. Press the ▲ or ▼ button to select **Applications**, then press the ENTER button.
- Press the ▲ or ▼ button to select **Media Play (USB)**, then press the ENTER button.
- Press the ◀ or ▶ button to select an icon (**Videos**, **Music**, **Photos**, **Settings**), then press the ENTER button.

It might not work properly with unlicensed multimedia files. Need-to-Know List before using **Media Play (USB)**

- Supported file systems are FAT and NTFS.
- Certain types of USB Digital camera and audio devices may not be compatible with this TV.

Media Play only supports USB Mass Storage Class (MSC) devices. MSC is a Mass Storage Class Bulk-Only Transport device. Examples of MSC are Thumb drives and Flash Card Readers. Devices should be connected directly to the TV's USB port. USB HDD is not supported.

Before connecting your device to the TV, please back up your files to prevent them from damage or loss of data. SAMSJUNG is not responsible for any data file damage or data loss.

A USB device that requires high power (more than 0.5A) may not be supported.

Do not disconnect the USB device while it is loading.

The higher the resolution of the image, the longer it takes to display on the screen.

The maximum supported JPEG resolution is 15360 x 8640 pixels. If a file is corrupted or the TV does not support the file type, the "Not Supported File Format" message appears.

The TV cannot play MP3 files with DRM that have been downloaded from a for-pay site. Digital Rights Management (DRM) is a technology that supports the creation, distribution, and management of digital content in an integrated and comprehensive way, including protecting the rights and interests of content providers, preventing illegal copying of contents, and managing billings and settlements.

PTP device is not supported.

If an over-power warning message is displayed while you are connecting or using a USB device, the device may not be recognized or may malfunction.

If the TV has no input during the time set in **Auto Protection Time**, the Screensaver will run.

The power-saving mode of some external hard disk drives may be released automatically when your connect them to the TV.

If you use a USB extension cable, the TV may not recognize the USB device or may not be able to read the files on the device.

If a USB device connected to the TV is not recognized, the list of files on the device is corrupted, or a file in the list is not played, connect the USB device to a PC, format the device, and check the connection.

If a file you deleted from the PC is still found when you run **Media Play**, use the "Empty the Recycle Bin" function on the PC to permanently delete the file.

Photos only supports sequential jpeg format.

The scene search and thumbnail functions are not supported in the **Videos**.

If the number of files and folders saved on a USB storage device is approximately over 4000, the files and folders may not appear and some folders may not be opened.

The maximum displayed number of files, including sub folders, in one folder of USB storage device is 2000.

The media may not be playing smoothly when using the device lower than USB 2.0.

Videos

- Press the ◀▶ buttons to select **Videos**, then press the ENTER button in the **Media Play** menu.
- Press the ◀▶/▲▼ buttons to select the desired video in the file list.
- Press the ENTER button or [] (Play) button.
 - The selected file is displayed on the top with its playing time.
 - If video time information is unknown, playing time and the progress bar are not displayed.
 - During video playback, you can search using the ◀▶ buttons. In this mode, you can play movie clips contained in a game, but you cannot play the game itself.

Supported Subtitle Formats

Name	File extension
MPEG-4 timed text	.txt
SAM	.srt
SubRip	.srt
SubViewer	.sub
Micro DVD	.sub or .bit
SubStation Alpha	.ssa
Advanced SubStation Alpha	.ass

Name	Container	Format
Xsub	AVI	Picture Format
SubStation Alpha	MKV	Text Format
Advanced SubStation Alpha	MKV	Text Format
SubRip	MKV	Text Format
MPEG-4 Timed text	MP4	Text Format

Supported Video Formats

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
.mp4	MP4	DxV3, H.14x, S.16.0	1920x1080	6-30	30Mbps	MP3 / AAC / ADPCM / AAC
		H264	1920x1080	6-30	30Mbps	
		AVC	1920x1080	6-30	30Mbps	
.avi	AVI / MKV	MPEG	640x480	6-30	10Mbps	
		DxV3, H.14x, S.16.0	1920x1080	6-30	30Mbps	MP3 / AC3 / LPCM / ADPCM / DTS / DTS Com
		MPEG SP, ASP	1920x1080	6-30	30Mbps	
.asf	ASF	H264	1920x1080	6-30	30Mbps	
		MPEG	640x480	6-30	10Mbps	
		DxV3, H.14x, S.16.0	1920x1080	6-30	30Mbps	MP3 / AC3 / LPCM / ADPCM / WMA / WMA Pro
.m2v	ASF	MPEG SP, ASP	1920x1080	6-30	30Mbps	
		H264	1920x1080	6-30	30Mbps	
		MPEG	640x480	6-30	30Mbps	

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
.ts	TS	MPEG2	1920x1080	6-30	30Mbps	AC3 / MP3 / DD+ / HE-AAC
		H.264 BP, MP4P	1920x1080	6-30	30Mbps	
		MPEG1	1920x1080	24/25/30	30Mbps	
.m2p	PS	MPEG2	1920x1080	24/25/30	30Mbps	AC3 / MP3 / LPCM / AAC
		H.264 BP, MP4P	1920x1080	6-30	30Mbps	
		MPEG SP, ASP	1920x1080	6-30	30Mbps	MP3
.3gp	3GPP	H.264	1920x1080	6-30	30Mbps	
		H.264	1920x1080	6-30	30Mbps	
		H.264	1920x1080	6-30	30Mbps	MP3
.flv	formats	H.264	1920x1080	6-30	30Mbps	
		H.264	1920x1080	6-30	30Mbps	
		H.264	1920x1080	6-30	30Mbps	MP3

* Supported Photo Formats

Image	Photo	Resolution
JPEG	Base-line Progressive	15360 x 8704 1024 x 768

Other Restrictions

- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table above.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- The menu may take longer to appear if the video's bit rate exceeds 10Mbps.
- Video content can not be played, if there are many contents in one file.

Video Decoder	Audio Decoder
Supports up to H.264, Level 4.1 H.264 FMO / ASO / RS, VC1 SP / MP / AP/1 and AVC-In: not supported. MPEG4 SP, ASP : - Below 1280 x 720: 60 frame max - Above 1280 x 720: 30 frame max H.265 is not supported. GMC is not support.	Supports up to WMA7, 8, 9 STD, 9 PRO, and 10 PRO WMA 9 PRO and WMA 10 PRO support 5.1 channel. (LBR mode of WMA Pro is not supported.) WMA Lossless is not supported.

Music

- Press the ◀▶ buttons to select **Music**, then press the ENTER button in the **Media Play** menu.
- Press the ◀▶/▲▼ buttons to select the desired Music in the file list.
- Press the ENTER button or [] (Play) button.
 - During music playback, you can search using the ◀▶ buttons.
 - [] (REW) and [] (FF) buttons do not function during play.
 - Only displays the files with MP3 file extensions. Other file extensions are not displayed, even if they are saved on the same USB device.

If the sound is abnormal when playing MP3 files, adjust the **Equalizer** in the **Sound** menu. (An over-modulated MP3 file may cause a sound problem.)

Photos

- Press the ◀▶ buttons to select **Photos**, then press the ENTER button in the **Media Play** menu.
- Press the ◀▶/▲▼ buttons to select the desired photo in the file list.
- Press the ENTER button or [] (Play) button.

NOTE

- While a photo list is displayed, press the [] (Play) / ENTER button on the remote control to start the slide show.
- All files in the file list section will be displayed in the slide show.
- During the slide show, files are displayed in order.
- During the slide show, you can adjust the slide show speed using [] (REW) or [] (FF) button.
- You can move to other file using the ◀▶ buttons.

Troubleshooting

If the TV seems to have a problem, first review this list of possible problems and solutions. If none of these troubleshooting tips apply, visit samsung.com, then click on Support, or call Samsung customer service at 1-800-SAMSUNG.

Problem	Possible Solution
Flickering and Dimming	If your Samsung television is flickering or dimming sporadically, you may need to disable some of its energy efficient features like the Eco Sensor or the Energy Saving features. If you follow below step with your remote, you can turn them features off or on. <ul style="list-style-type: none">Energy Saving: MENU → Setup → Eco Solution → Energy SavingEco Sensor: MENU → Setup → Eco Solution → Eco Sensor (for 5 series)
Component Connections / Screen Color	If you find that the color on your Samsung television's screen is not correct or black and white, first run a Self Diagnosis on the TV to make sure there are no device problems. <ul style="list-style-type: none">Self Diagnosis: MENU → Support → Self Diagnosis → Picture Test If the test is ok, try making sure: <ul style="list-style-type: none">Your connections are all consistent. For example, if you've used the AV In jack on your TV, make sure you have used the AV Out jack on your video source.Try making sure you have connected to the correct jacks. For example, if you use the Component jacks, labeled Pb, Pr, and Y, to connect your TV and video source, make sure you have connected the blue Pb jack on the video source to the blue Pb jack on the TV, the red Pr jack on the video source to the red Pr jack on the TV, and so on. Go in to Picture on user menu then try adjusting options mentioned above.
Screen Brightness	If you find that the colors on your Samsung TV are correct but just a little too dark or bright, there are some settings you should check before calling for a repair. <ul style="list-style-type: none">Backlight, Contrast, Brightness, Sharpness, Color, Tint (G/R) and so on. Go in to Picture on user menu then try adjusting options mentioned above.
Unwanted Powering Off	If your Samsung TV appears to turn off by itself, there may be an issue with either your Timer settings or your Eco friendly No Signal Power Off feature. <ul style="list-style-type: none">First make sure your Sleep Timer is not accidentally set. The sleep timer allows you the comfort of falling asleep with the TV still on but, turns it off after a certain period of time so as not to waste energy.Sleep Timer: MENU → Setup → Time → Sleep TimerIf the Sleep Timer is not activated, you may have engaged the No Signal Power Off or Auto Power Off feature.No Signal Power Off: MENU → Setup → Eco Solution → No Signal Power OffAuto Power Off: MENU → Setup → Eco Solution → Auto Power Off
Trouble Powering On	Before Turn on check red light on the right or left button of your TV. Press power on button on TV or remote and it will blink about 5 times before turning on. If you find that you are having trouble powering on your Samsung television, there are a number of things to check before making a call to the service department. <ul style="list-style-type: none">If you happen to be using the TV as a monitor and the stand-by light only blinks for a few seconds when you press the power button, your PC is in sleep mode. To take your PC out of sleep mode, press a key on your keyboard or move the mouse. Then try turning your TV on.If you're sure your power cord, remote control, and PC are functioning properly, you may be having a cable issue. If you have a cable or satellite box, your TV may appear to be off because the cable or satellite box is not outputting a signal. To test the signal output of your cable or satellite box, press the guide or info button on the cable or satellite box remote control. If the screen displays the guide or info data, the problem is caused by the box.
Stand Assembly	If you have any trouble to assemble the stand though you refer to "Install the Stand" mentioned at separate guide.
Cannot find channel	Re-run plug and play.
Poor picture	First, perform the Picture Test and to see if your TV is properly displaying the test image. Go to MENU → Support → Self Diagnosis → Picture Test If the test image is properly displayed, the poor picture may be caused by the source or signal. <ul style="list-style-type: none">If you have an analog cable/satellite box, upgrade to a digital set top box. Use HDMI or Component cables to deliver HD (high definition) picture quality.Cable/Satellite subscribers: Try HD channels from the channel line up.AV/Cable Antenna connection: Try HD channels after performing Auto Program.Many HD channels are up scaled from SD(Standard Definition) contents.Adjust the Cable/Set top box video output resolution to 1080i or 720p.
The picture is distorted: macroblock error, small block, dots, pixelization.	<ul style="list-style-type: none">Compression of video contents may cause picture distortion, especially on fast moving pictures such as sports and action movies.A weak signal can cause picture distortion. This is not a TV problem.Mobile phones used close to the TV (within 3.3m) may cause noise in the picture on analog and digital channels.
The picture is distorted: macroblock error, small block, dots, pixelization.	<ul style="list-style-type: none">Adjust the Picture options in the TV menu. (Go to Picture Mode / Color / Brightness / Sharpness)Adjust the Energy Saving option in the TV menu. (Go to MENU → Setup → Eco Solution → Energy Saving)Try resetting the picture to view the default picture setting. (Go to MENU → Picture → Picture Reset)
There is a dotted line on the edge of the screen.	<ul style="list-style-type: none">If the picture size is set to Screen Fit, change it to 16:9.Change the cable/satellite box resolution.
The picture is black and white.	If you are using an AV composite input, connect the video cable (yellow) to the Green jack of component input 1 on the TV.

When changing channels, the picture freezes or is distorted or delayed.	<ul style="list-style-type: none">If connected to a cable box, please try to reset it. (Reconnect the AC cord and wait until the cable box reboots. It may take up to 20 minutes).Set the output resolution of the cable box to 1080i or 720p.
Sound Problem	First of all, please perform the Sound Test to confirm that your TV audio is properly operating. (Go to MENU → Support → Self Diagnosis - Sound Test) If the audio is OK, the sound problem may be caused by the source or signal. Please check the volume of the device (Cable/Set Box, DVD, Blu-ray, etc.) connected to your TV. The picture is good but there is no sound. <ul style="list-style-type: none">If you are using an external device, check the device's audio output option (ex. you may need to change your cable box's audio option to HDMI when you have a HDMI connected to your TV).Reboot the connected device by reconnecting the device's power cable.
The speakers are making an inappropriate noise.	<ul style="list-style-type: none">Check the cable connections. Make sure a video cable is not connected to an audio input.For Antenna or Cable connections, check the signal information. A weak signal may cause sound distortion.Perform the Sound Test as explained above.
No Picture, No Video	The TV will not turn on. <ul style="list-style-type: none">Make sure the AC power cord is securely plugged into the wall outlet and the TV.Make sure the wall outlet is working.Try pressing the POWER button on the TV to make sure the problem is not the remote.If the problem still occurs, refer to Remote control does not work below.
The TV turns off automatically.	<ul style="list-style-type: none">Ensure the Sleep Timer is set to Off in the Time menu.If your PC is connected to the TV, check your PC power settings.Make sure the AC power cord is plugged in securely to the wall outlet and the TV.When you are watching TV connected to an antenna or cable connection, the TV will turn off after 10 - 15 minutes if there is no signal.
There is no picture/video.	<ul style="list-style-type: none">Check the cable connections. (Remove and reconnect all cables connected to the TV and external devices).Please try Auto Program to add available channels to the TV input. For example, if an external device's output is HDMI, it should be connected to an HDMI input on the TV.Make sure your connected devices are powered on.Be sure to select the TV's correct source by pressing the SOURCE button on the remote control.Reboot the connected device by reconnecting the device's power cable.
RF(Cable/Antenna) Connection	The TV is not receiving all channels. <ul style="list-style-type: none">Make sure the coaxial cable is connected securely.Please try Auto Program to add available channels to the channel list.Go to MENU → Channel → Auto Program then select Auto and make sure the correct Cable TV signal type is set in the menu. There are 3 options. (STD, HRC and IRC)Verify the antenna is positioned correctly.
No Caption on digital channels.	<ul style="list-style-type: none">Check the Caption Setup menu. Try changing Caption Mode Service1 to CC1.Some channels may not have caption data.
The picture is distorted: macroblock, error, small block, dots, pixelization.	<ul style="list-style-type: none">Compression of video contents may cause picture distortion. Especially on fast moving pictures such as sports and action movies.A weak signal can cause picture distortion. This is not a TV problem.
Others	Remove the left and right audio connectors from the set-top-box. If the buzzing stops, this indicates that the set-top-box has a grounding issue. Replace the Component video cables with an HDMI connection. The picture will not display in full screen. <ul style="list-style-type: none">HD channels will have black bars on either side of the screen when displaying up scaled SD (4:3) contents.Black bars on the Top & Bottom will be shown on movies that have aspect ratios different from your TV.Adjust the picture size option on your external device or change the TV to full screen.
The remote control does not work.	<ul style="list-style-type: none">Replace the remote control batteries with correct polarity (+/-).Clean the transmission window located on the top of the remote control.Try pointing the remote directly at the TV from 5-6 feet away.
The cable/set-top box remote control does not turn the TV on or off, or adjust the volume.	Pressing the Cable/Set top box remote control to operate the TV. Refer to the Cable/Set top box user manual for the SAMSUNG TV code.
A "Mode Not Supported" message appears.	Check the supported resolution of the TV and adjust the external device's output resolution accordingly. Refer to resolution settings in this manual.
Caption on the TV menu is greyed out.	<ul style="list-style-type: none">You cannot select Caption in the TV menu when watching content from a device connected via HDMI or Component.Caption must be activated on the external device.
There is a plastic smell from the TV.	This smell is normal and will dissipate over time.

TV Signal Strength is unavailable in the Self Diagnosis test menu.	This function is only available for digital channels from an Antenna / RF / Coax connection.
TV is tilted to the right or left on the screen.	Remove the stand base from the TV and reassemble it.
The Channel menu is greyed out (unavailable).	The Channel menu is only available when you select the TV source.
Your settings are lost after 30 minutes or every time the TV is turned off.	If TV is in the Store Demo mode, it will reset audio and picture settings every 30 minutes. Please change from Store Demo mode to Home Use mode using the Plug & Play procedure. Press the SOURCE button to select TV mode, go to MENU → Setup → Plug & Play → ENTER.
You have intermittent loss of audio or video.	Check the cable connections and reconnect them. Loss of audio or video can be caused by using overly rigid or thick cables. Make sure the cables are flexible enough for long term use. If mounting the TV to the wall, we recommend using cables with 90 degree connectors.
You see small particles when you look closely at the edge of the frame of the TV.	This is part of the product's design and is not a defect.
POP TV's internal banner ad appears on the screen.	Select Home Use under Plug & Play mode. (For details, refer to Plug & Play (Initial Setup)).
This TFT LED panel uses a panel consisting of sub pixels which require sophisticated technology to produce. However, there may be a few bright or dark pixels on the screen. These pixels will have no impact on the performance of the product.	
Watch these troubleshooting on video at www.samsung.com/spns.	
Some functions and pictures shown in this manual are available on specific models only.	
You can keep your TV at optimum condition to upgrade the latest firmware on web site (s	