SAMSUNG

E-MANUAL

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Model_____ Serial No._____

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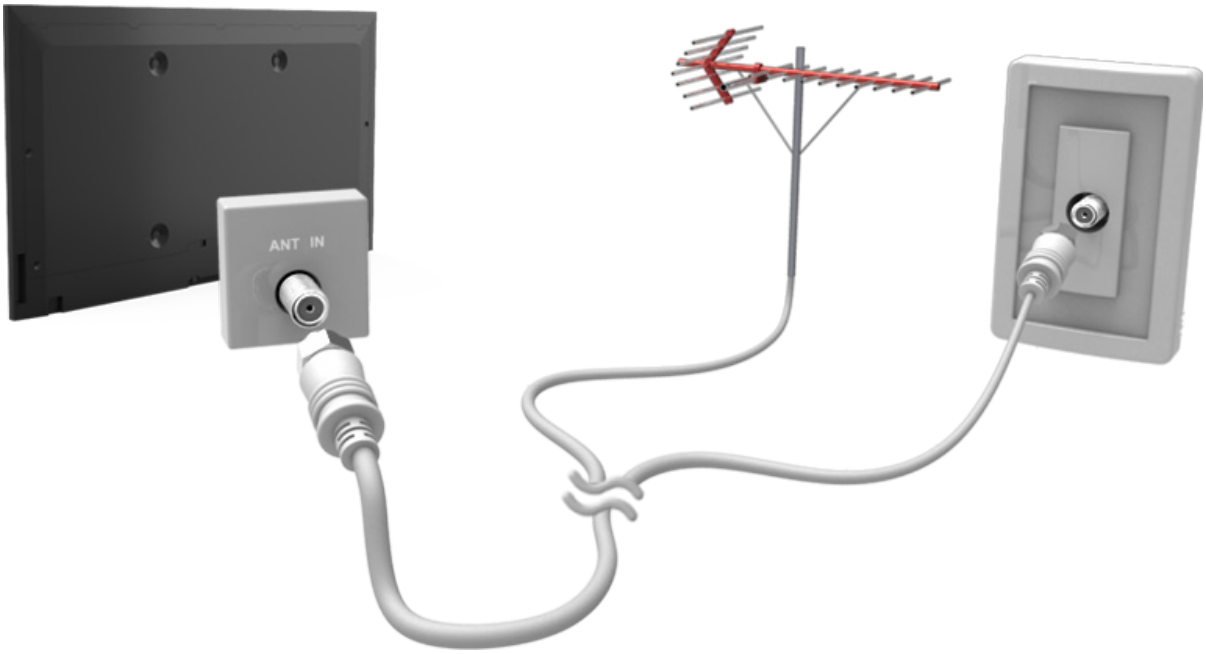
Glossary

Antenna Connection

If you are not connecting your TV to a cable or satellite box, you must connect an antenna or a cable outlet to the TV to receive broadcast signals.

Connect a cable from an antenna or cable outlet to the ANT IN connector as shown in the diagram below.

An antenna connection is not necessary when a cable box or satellite receiver is used.



Video Device Connections

Your TV has a variety of connectors for video input from external devices such as cable boxes, satellite receivers, Blu-ray players, DVD players, camcorders, and gaming consoles. Below is a list of featured connectors shown in descending order of picture quality.

- HDMI
- Component
- Composite (A/V)

Connect a video device to the TV via an HDMI connector for the best picture quality. If the device does not have an HDMI connector, try a component connector to get the next best picture quality.

The number of connectors and their names and locations may vary depending on the model.

Refer to the external device's operating manual when connecting it to the TV. The number of external device connectors and their names and locations may vary depending on the manufacturer.

HDMI Connection

The following types of HDMI cables are recommended:

- High-Speed HDMI Cable
- High-Speed HDMI Cable with Ethernet

Use an HDMI cable with a thickness of 0.55 inches (14mm) or less.

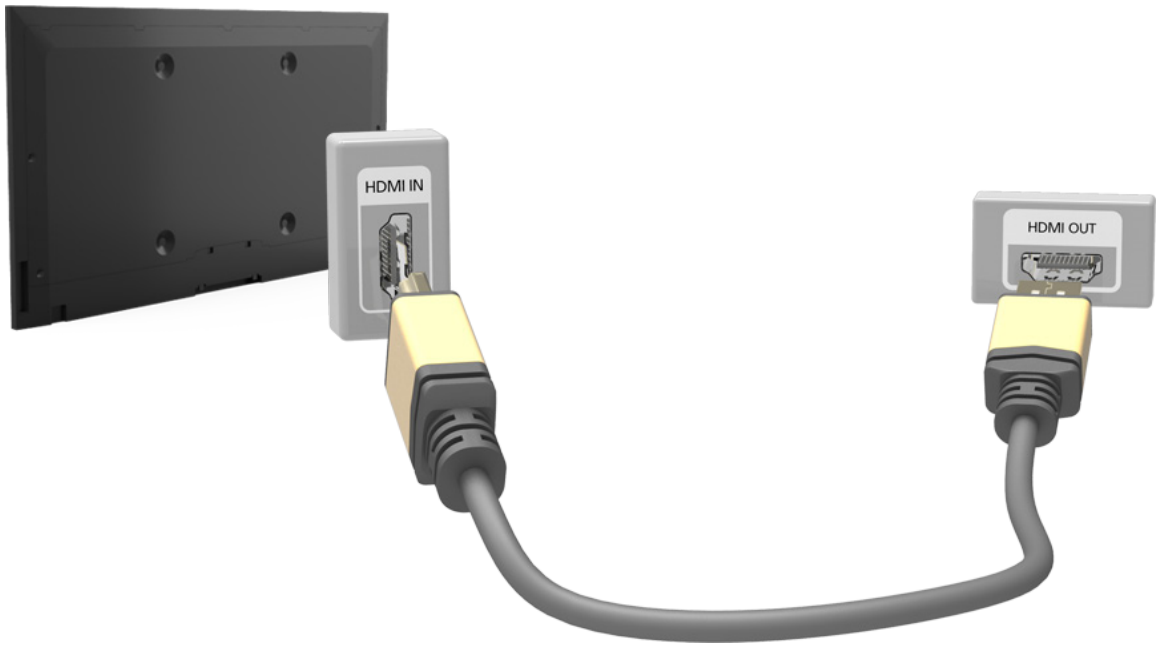
Using a non-certified HDMI cable may result in a blank screen or a connection error.

Some HDMI cables and devices may not be compatible with the TV due to different HDMI specifications.

This TV does not support HDMI Ethernet Channel. Ethernet is a LAN (Local Area Network) built with coaxial cables standardized by the IEEE.

Refer to the diagram and connect the HDMI cable to the video device's HDMI output connector and the TV's HDMI input connector.

The number of connectors and their names and locations may vary depending on the model.



Once the connection has been made, press the SOURCE button to select the connected external device.

Component Connection

Refer to the diagram and connect the Component cable to the TV's component input connectors and the device's component output connectors.

Make sure the cable colors match the connector colors.

Once the connection has been made, press the SOURCE button to select the connected external device.

Composite (A/V) Connection

Refer to the diagram and connect the AV cable to the TV's AV input connectors and the device's AV output connectors.

If you are using the TV's AV input connectors, connect the device's audio output to the TV using a Y connector.

Once the connection has been made, press the SOURCE button to select the connected external device.

Audio Input and Output Connections

Your TV has a variety of connections for audio input from devices such as Blu-ray players and DVD players and for audio output to such devices as amplifiers. The connections are listed below.

- Digital Audio (Optical)
- Audio (Analog)

For better audio quality, it is a good idea to use an AV receiver.

The number of connectors and their names and locations may vary depending on the model.

Refer to the external device's operating manual when connecting it to the TV. The number of external device connectors and their names and locations may vary depending on the manufacturer.

Digital Audio (Optical) Connection

Connecting an AV receiver to the TV via a digital audio (optical) connector lets you listen to digital audio.

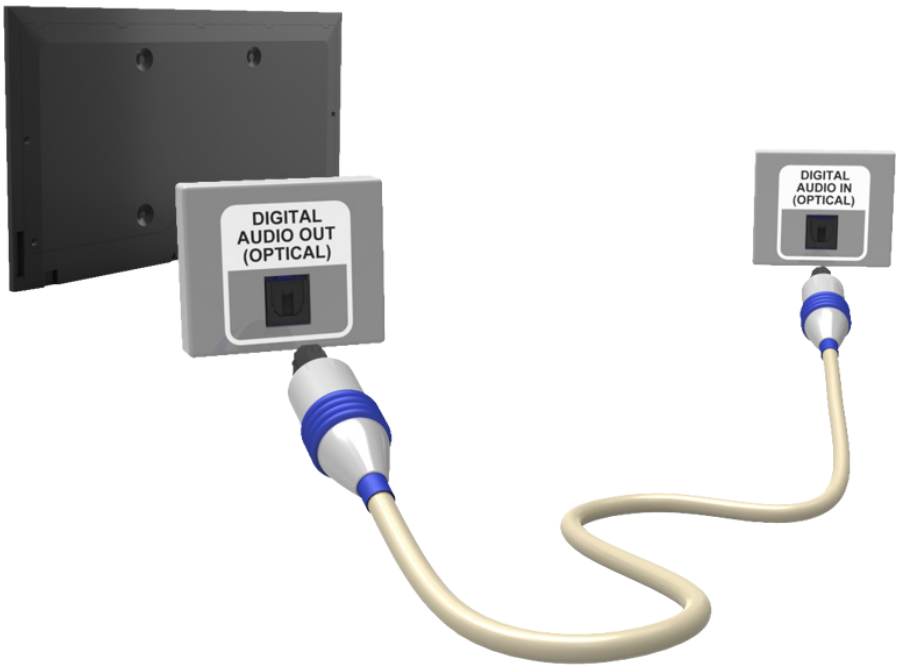
Connecting a device using an optical cable does not automatically turn off the TV speakers. To turn off the TV's speakers, set **TV Sound Output** (**Sound** > **Speaker Settings** > **TV Sound Output**) to something other than TV Speaker.

Adjust the audio device's volume using its remote control.

An unusual noise coming from the audio device while you are using it may indicate a problem with the audio device itself. If this occurs, ask for assistance from the audio device's manufacturer.

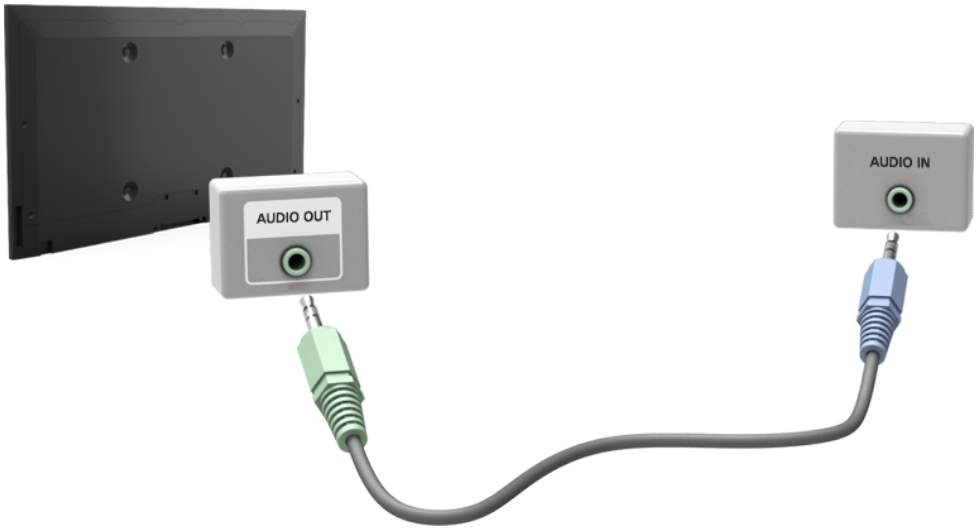
Digital audio is only available with 5.1-channel broadcasts.

Refer to the diagram and connect the optical cable to the TV's digital audio output connector and the device's digital audio input connector.



Audio Output Connection

Refer to the diagram and connect an audio cable to the TV's audio output connector and the device's audio input connector.



Once the connection has been made, press the SOURCE button to select the connected external device.

Connecting to a Computer

You can connect a computer directly to the TV using an HDMI or DVI to HDMI cable and use the TV as a monitor. You can also connect the TV to a computer via your home network and access media files saved on the computer on the TV screen. The kinds of connections you can make are listed below.

To use the TV as a Computer Monitor

- Connect through the HDMI Port using an HDMI cable.

  You can connect the computer to the TV using an HDMI cable and display the computer screen on the TV.

- Connect though the HDMI (DVI) port using a DVI to HDMI cable.

  You can connect a computer to the TV by connecting the computer's DVI port to the TV's HDMI (DVI) port with a DVI to HDMI cable and display the computer screen on the TV.

To Access Media Files on a Computer and View or Play Them on the TV

- Connect Through Samsung Link.

  Quickly access photo, video, and music files saved on a computer on which Samsung Link software is installed, even if you do not connect the TV directly to the computer.

- Connect Through DLNA Using Your Home Network.

  Quickly access photo, video, and music files saved on a computer by connecting the TV and the computer to the same router or AP.

Connecting Through the HDMI Port

For an HDMI connection, we recommend one of the following HDMI cable types:

- High-Speed HDMI Cable
- High-Speed HDMI Cable with Ethernet

Use an HDMI cable with a thickness of 0.55 inches (14mm) or less. Using a non-certified HDMI cable may result in a blank screen or a connection error.

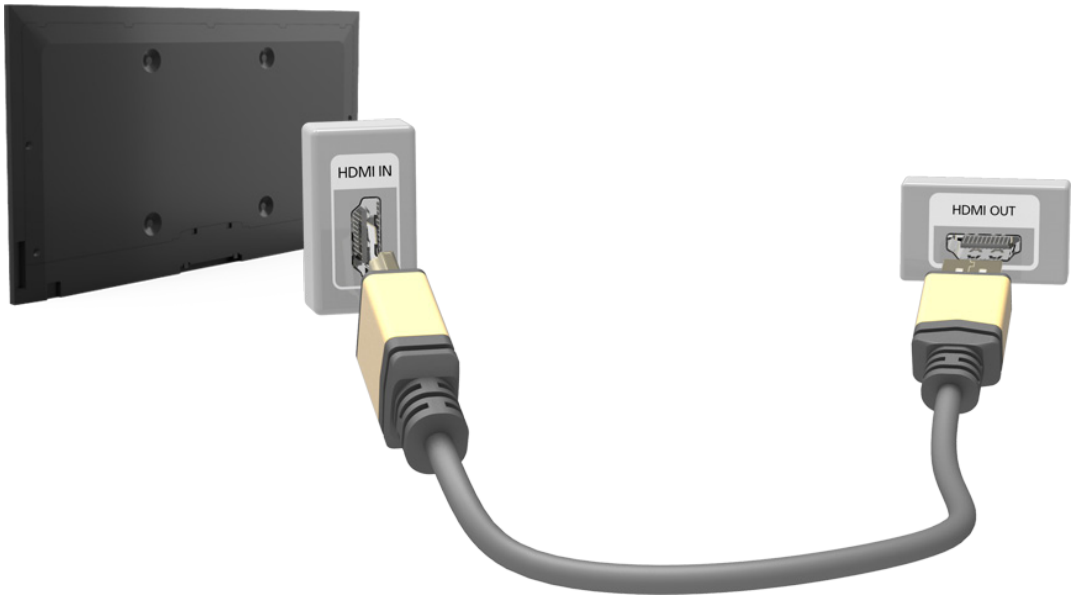
Some HDMI cables and devices may not be compatible with the TV due to different HDMI specifications.

This TV does not support HDMI Ethernet Channel. Ethernet is a LAN (Local Area Network) built on coaxial cables standardized by the IEEE.

Many computer graphics adaptors do not have HDMI ports, but have DVI ports instead. If your computer graphics adaptor has a DVI port, use a DVI to HDMI cable to connect the computer to the TV. For more information, refer to "Connecting With a DVI to HDMI Cable".

Refer to the diagram and connect an HDMI cable to the computer's HDMI output connector and the TV's HDMI input connector.

The number of ports, and their names and locations may vary depending on the model.



Once the connection has been made, press the SOURCE button to select the connected external device.

Connecting With a DVI to HDMI Cable

If the graphics adapter of your computer does not support the HDMI interface, connect the computer to the TV with a DVI (Digital Visual Interactive) to HDMI cable. Note that the DVI to HDMI connection is only supported by the HDMI (DVI) port and does not support audio signal transmission. To listen to the computer sound, connect external speakers to the computer's audio output connector.

For the resolutions supported by the TV, refer to "Read Before Connecting a Computer (Supported Resolutions)".

Refer to the diagram and connect the DVI to HDMI cable to the TV's HDMI (DVI) port and the computer's DVI output port.

Once the connection has been made, press the SOURCE button to select the connected external device.

Connecting Through Samsung Link

Quickly access photo, video, and music files saved on a computer on which Samsung Link software is installed. In addition, using Samsung Link, you can view or play the content of a computer which is registered with Samsung Link through your Samsung account, even if the computer and the TV are not connected to the same router or AP.

1. On a computer, navigate to the Samsung content and service portal (http://link.samsung.com), and then sign into your Samsung account.

   To install the Samsung Link desktop software, you need to sign into your Samsung account. If you don't have a Samsung account, create one first.

2. Install the Samsung Link desktop software. When the installation is complete, the computer will be registered with Samsung Link.
3. Specify a folder on the computer to connect to the TV. You can view or play the photo, video, and music files in the specified folder on the TV.

   For more information about using the Samsung Link desktop software, refer to the Help section of the Samsung Link software.

Connecting Through DLNA Using Your Home Network

Quickly access and play photo, video, and music files stored on a computer on the TV.

1. Connect the TV and the computer to the same router or AP. Once you connect them to the same router or AP, a home network is configured.

   DLNA is the technology that lets TV's, computers, and mobile devices connected to one wired or wireless router share content.

2. On the computer, select [Control Panel] > [Network and Internet] > [Network and Sharing Center] > [Change advanced sharing settings], and then select [Choose media streaming options...] to activate media streaming.
3. From the list, set the TV to [Allowed].
4. Launch Windows Media Player on a computer. Select [Settings] > [Library Management], and then add the location where photo, video, and music files are saved to play them on the TV.

   Alternatively, you can move the files to the default folder specified by Windows Media Player, and then play or view them on the TV.

   As long as File Sharing is activated, unauthorized access may occur. When you do not need to access data, disable File Sharing.

Connecting To a Mobile Device

You can connect a mobile device such as a smartphone or tablet directly to the TV, or connect it to the network and display the mobile device's screen or play its content on the TV. The kinds of connections you can make are listed below.

- **Connect by Mirroring the Mobile Device's Screen on the TV (Screen Mirroring)**

  Wirelessly connect the TV and the mobile device with the mirroring function. You can view the mobile device's screen on the TV screen.

  This option is available only on a mobile device that supports the mirroring function.

- **Connect Mobile Devices without a Wireless Router (Wi-Fi Direct)**

  Wi-Fi Direct enables you to connect the TV and the mobile device without a router or AP. Quickly access and play photo, video, and music files in the connected mobile device on the TV.

  This option is available only on a mobile device that supports the Wi-Fi Direct function.

- **Connect Through Samsung Link**

  Samsung Link enables you to play photo, video, and music files saved on a Samsung Link-enabled mobile device easily, without the need for a connection to the TV.

- **Connect Through DLNA Using Your Home Network**

  You can conveniently play photo, video, and music files saved on a mobile device by connecting the mobile device and the TV to the same router or AP.

Screen Mirroring

MENU > Network > Screen Mirroring Try Now

Wirelessly connect a mirroring-enabled mobile device to the TV and play the video and audio files stored on the device on the TV. Mirroring refers to the function that plays the video and audio files located on a mobile device on a TV and on the mobile device simultaneously.

- To use the Screen Mirroring function, the mobile device must support a mirroring function such as AllShare Cast or Screen Mirroring. To check whether your mobile device supports the mirroring function, please visit the mobile device manufacturer's website.
- The video or audio may intermittently stop depending on network conditions.

Connecting via a mobile device

1. On the mobile device, run **Screen Mirroring**. The mobile device searches for available devices to connect to.
2. In the search result list, select the TV. The TV displays a pop-up at the top of the screen.
3. In the pop-up, select **Allow** to connect the mobile device.
   - All previously allowed mobile devices will automatically connect without needing approval.
   - If you select **Deny**, the device cannot connect. In addition, you are setting the device's connection status to Deny and it will not be able to connect in the future unless you change its connection status. To change the connection status of a denied device, Navigate to **Network** > **Screen Mirroring** > **Device Manager**, select the device, and then select **Allow**.

Connecting by Automatically Allowing the Connection

1. Navigate to **Network** > **Screen Mirroring**, and then select **Screen Mirroring**. The **Screen Mirroring** function starts. You can also start screen mirroring by pressing the **SOURCE** button on your remote, and then selecting **Screen Mirroring** from the list at the top of the screen.
2. Launch Screen Mirroring on your mobile device. The device searches for available devices.
3. Select the TV from the list. The TV automatically allows the connection and the device connects.

   If the mobile device cannot connect, try turning the TV off and on.

Managing the Connection Status of Previously Connected Mobile Devices

This function is only available if devices have previously connected to the TV or have previously attempted to connect and been denied.

1. Navigate to **Network** > **Screen Mirroring** > **Device Manager**. The TV displays a list of devices that have previously connected to the TV or have tried to connect to the TV and been denied. The status of the connection (Allow/Deny) is also displayed.
2. Select a device. A pop-up appears.
3. In the pop-up, you can select Allow connection, Deny connection, or Delete the device from the list.

Connecting Mobile Devices without a Wireless Router (Wi-Fi Direct)

Navigate to **MENU** > **Network** > **Wi-Fi Direct** Try Now

You can connect a mobile device with the Wi-Fi Direct feature directly to the TV without using a wireless router or AP. By connecting a mobile device to the TV through **Wi-Fi Direct**, you can play photo, video, and music files saved on the mobile device on the TV.

- This option is available only on a mobile device that supports the Wi-Fi Direct function. Please check if your mobile device supports Wi-Fi Direct.
- The video or audio may intermittently stop depending on network conditions.

1. Enable Wi-Fi Direct on the mobile device, and then navigate to **Network** and select **Wi-Fi Direct** on the TV. The TV automatically scans for and displays a list of available devices. The TV's name also appears on the mobile device.
2. Select the device from the list to initiate a connection. If a connection request is made by the TV, a permission message appears on the mobile device and vice versa.
3. Allow the connection. The TV and mobile device connect.

Connecting Through Samsung Link

Samsung Link lets you play the photo, video, and music files saved on a Samsung Link-enabled mobile device. In addition, using Samsung Link, you can play the content of a mobile device, which is registered to Samsung Link through your Samsung account, even if the mobile device and the TV are not connected to the same router or AP.

1. Run the Samsung Link app on the mobile device, and then sign in to your Samsung account.

   - To use Samsung Link, you have to sign in to your Samsung account. If you don't have a Samsung account, create one first.

2. Access and play photo, video, and music files saved on the mobile device.

   - For more information about using the Samsung Link mobile software, refer to the Help section of the software.

Connecting Through DLNA Using Your Home Network

Quickly access and play photo, video, and music files stored on a mobile device on the TV.

1. Connect both the TV and the mobile device to the same router or AP. Once you connect them to a single router or AP, a home network is configured.

   DLNA is the technology that lets TV's, computers, and mobile devices connected to one wired or wireless router share content.

2. Enable File Sharing on the mobile device. You can play the content shared on the mobile device on the TV.

   As long as File Sharing is active, unauthorized access can occur. When you do not need to access data, disable File Sharing.

Specifying the Name of the TV on a Network

MENU > **Network** > **Device Name** Try Now

Choose or specify a name for the TV that will appear on mobile devices and laptop computers.

1. Select **Device Name** from the **Network** menu, and then choose a name from the list that appears. Alternatively, select **User Input** to enter a name manually.
2. Check the name from a mobile device or laptop computer.

Switching Between Video Sources

Press the SOURCE button to switch between external devices connected to the TV. For example, to switch to a game console connected to the second HDMI connector, press the SOURCE button. The Source List appears across the top of the screen. From the Source List, select HDMI2.

The connector names may vary depending on the product.

Other Functions Available When You Display the Source List

A number of functions are available in the pop-up Options menu when the TV displays the Source List. The functions that appear in the Options menu vary, depending on the source you selected in the Source List and the external device connected to the source.

To view the Options menu, press the TOOLS button or press and hold the button.

The functions that appear in the Options menu can include any of the following:

- Edit Name: Lets you assign a device name to an input source, for example, Blu-ray to HDMI1. To assign a device name to an input source, follow these steps:

1. Open the Source List. The list appears in a horizontal line across the top of the TV. Using your remote, highlight the source you want to assign a device name to.
2. Select Edit Name in the Options menu. The on-screen keyboard appears.
3. Using the keyboard, enter a new name. You can enter up to 15 characters.
4. When finished, select DONE on the keyboard, and then press the button.

- Information: View information about the connected devices.
- Remove USB: Use to safely remove a USB device connected to the TV. This option is only available when a USB device has been selected.
- Delete: Use to delete an external device from a source. When you delete an external device from a source, you erase the information the TV has stored about the device and you delete the association the device has with the source.

The Universal Remote Function

This function may not be available depending on the country or model.

When you display the Source List, the Universal Remote Setup button is displayed in the upper right corner of the screen. Select this button to start the Universal Remote function. The Universal Remote function lets you control cable boxes, Blu-ray players, home theaters, and other external devices using your TV remote control. Refer to the "Controlling External Devices with the TV Remote - Using the Universal Remote" section for more information on using the Universal Remote function.

Displaying and Using the On-Screen Remote

The KEYPAD button may not be available depending on the model or area.

Press the KEYPAD button on the remote to display the On-Screen Remote on the TV's screen. Use the On-Screen Remote to enter numbers, control content playback, and use the features and functions of the TV, just like a real remote.

The On-Screen Remote buttons may vary depending on the TV features or functions you are using.

Button	Description
Web Browser	Launches the Web Browser.
PIP	Lets you display video from an external device or computer on the main screen and a TV broadcast in a picture-in-picture window.
P.Mode	Lets you select the Picture Mode. Availability depends on the specific model and area.
Speaker Settings	Lets you select the speakers which will play the TV's audio. You must connect a home theater or amplifier with external speakers to the TV to use this function.
Schedule Manager	Press to display to the Schedule Manager screen.
MEDIA PLAY	Lets you play media content saved on USB devices.
MENU	Displays the TV's menu on the screen.
e-Manual	Opens the e-manual.

Controlling External Devices with the TV Remote - Using the Universal Remote

MENU > System > Universal Remote Setup

This function may not be available depending on the model or region.

The universal remote control feature lets you control cable boxes, Blu-ray players, home theaters, and other third-party external devices connected to the TV using the TV's remote control. For each external device you want to control, you must run the universal remote set up process. The first step in the process is connecting the IR extender cable (included) to the TV and positioning the transmitter end of the cable in front of the device you want to control.

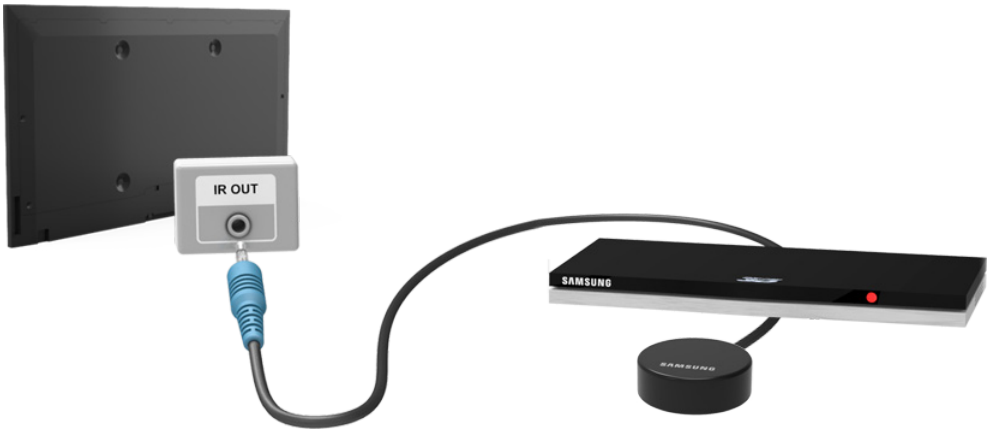
Certain external devices connected to the TV may not support the universal remote feature.

Connecting the IR Extender Cable

The color and design of the IR extender cable may vary depending on the model.

To begin the universal remote set up process, connect the IR extender cable (included) to the TV's IR output connector as shown in the diagram. Then, position the transmitter end within 4 inches (10 cm) of the external device's remote control sensor, pointing in the direction of the sensor.

There can be no obstacles between the transmitter end of the IR extender cable and the external device. Any obstacles will interfere with the transmission of the remote control signals.



Setting Up the Universal Remote Control

If you want to control a set-top-box, you need to have your zip code and your cable provider's name and location on hand before you begin. If you want to control a Blu-ray player or home theater, you need the manufacturer's name and the device's model number.

1. Turn on the external device you want to control with the universal remote function.
2. Press the **SOURCE** button on your remote to bring up the **Source** screen.
3. Select the **Universal Remote Setup** icon.

   You can also start Universal Remote Setup through the TV's menu. Navigate to **System** > **Universal Remote Setup**.

4. The TV checks if the IR Extender cable is connected. If it confirms the connection, press the button.
5. Select the type of device you want to control - set-top-box, Blu-ray player, or home theater.
6. Follow the directions on the screen to complete the set up and register the device. The directions will be different, depending on the device you want to control.

   If the external device does not respond after being registered, register it again using its model number.

   You must leave the IR extender in place so that it faces the external device to be able to control the device.

Controlling an External Device with the TV Remote

During the universal remote set up process, the TV registers the connector (source) the external device is connected to. To control a registered external device with your TV's remote, select the external device on the Source List.

1. Press the **SOURCE** button on your remote.
2. Select the source (connector) the device is connected to (HDMI1, HDMI2, etc.). If the external device is a Blu-ray player, home theater, or similar kind of device, the external device's home screen or menu appears on the TV screen. If the external device is a set-top-box, a channel appears on the screen.
3. Aim the remote at the IR sensor on the TV to control the device.

Universal Remote Features

1. Press SOURCE to display the Source list.
2. Select Universal Remote Setup from the top of the screen. This initiates the universal remote setup process.
3. Select an external registered device on the Universal Remote Setup screen. The following options are available:

- **Use with Set-Top Box**

  Listen to the audio from a set-top box through the home theater that is connected to the TV.

  This is available only if you have selected a set-top-box in Step 3 and you have a home theater connected to the TV.

- **Use with Blu-ray player**

  Listen to the audio from a Blu-ray player through the home theater that is connected to the TV.

  This is available only if you have selected a Blu-ray player in Step 3 and you have a home theater connected to the TV.

- **Use with Home Theater**

  Listen to the audio from an external device through the connected home theater.

  This is available only if you have selected a set-top-box or Blu-ray player in Step 3 and you have a home theater connected to the TV.

- **Source Setup**

  Change the TV's input source of your selected external device.

- **Synced TV power**

  When set to On, the connected set-top-box turns off when you turn the TV off.

  This is available only if you have selected a set-top-box in Step 3. You can only sync TV power to a set-top-box.

- **Rename**

  Rename the registered external device. The name can be up to 15 characters long.

- **Delete**

  Remove the external device from the list of registered devices. The device is de-registered and you will no longer be able to control it with the Universal Remote function.

Controlling the TV with a Keyboard

MENU > System > Device Manager > Keyboard Settings Try Now

Connecting a keyboard makes it easy to control most of the functions on the TV.

Certain models do not support USB HID class keyboards.

Connecting a Keyboard

Connecting a USB Keyboard

Plug the keyboard cable into the TV's USB port. A connection message appears on the screen.

Using the Keyboard

Use the following remote features with the USB keyboard connected to the TV.

- Arrow Keys (moving the focus), Windows Key (MENU Button), Menu List Key (TOOLS Button), Enter Key (Select/run item), ESC (RETURN Button), Number Keys (Number Buttons)
- F1 (A), F2 (B), F3 (C), F4 (D), F5 ( ), F6 (SOURCE Button), F7 (CH List), F8 (Button), F9/F10 (Volume Buttons), F11 / F12 (Channel Buttons)
- Page Up/Page Down: Scroll web browser pages up/down.

Changing Keyboards Try Now

Select System > Device Manager > Keyboard Settings > Select Keyboard. Designate which keyboard to use.

Only one keyboard can be used at a time.

Input Languages, Keyboard Type, and Switch Language Key

Select **System** > **Device Manager** > **Keyboard Settings** > **Keyboard Options**. The following options are available: Try Now

- **Keyboard Language**

  If the keyboard supports multiple languages, choose the language you want to use from the displayed list.

- **Keyboard Type**

  Match the Keyboard Type to the language selected in **Keyboard Language**.

  The **Keyboard Type** list varies depending on which language was selected under **Keyboard Language**.

- **Switch Input Language**

  If the keyboard supports multiple languages, choose the key you want to use to switch between languages.

Controlling the TV with a Mouse

MENU > **System** > **Device Manager** > **Mouse Settings** Try Now

Connecting a mouse makes it easy to control most of the functions on the TV.

Certain models do not support USB HID class mice.

Connecting a Mouse

Connecting a USB Mouse

Plug the mouse cable into the TV's USB port. A connection message appears on the screen.

Using the Mouse

Once a USB mouse is connected to the TV, a pointer appears on the TV's screen. You can use this pointer to control the TV in the same way you use a pointer on a computer.

- **Selecting and Running an Item**

  Left-click using the mouse.

- **Showing Tools Buttons**

  Right-clicking displays the Tools buttons on the screen so that you can easily use the TV's functions.

  The Tools buttons may vary depending on the function your are using.

- **Scrolling the TV Menu or Screen**

  Move the mouse wheel up or down. This scrolls the TV menu or screen up/down.

- **Exiting the TV Menu or Feature**

  Click the X button. This closes the menu.

  The X button appears on the TV menu when a mouse is being used. Left-clicking once while using a feature displays the X button on the current screen.

Changing Mice Try Now

Select **System** > **Device Manager** > **Mouse Settings** > **Select Mouse**. Designate which mouse to use.

Only one mouse can be used at a time.

Changing Mouse Buttons and Pointer Speed Try Now

Select **System** > **Device Manager** > **Mouse Settings** > **Mouse Options**. The following options are available:

- **Primary Button**

  Choose which button (left or right) to use to select and run items.

- **Pointer Speed**

  Adjust the movement speed of the pointer that appears on the screen.

Entering Text Using the On-Screen QWERTY Keypad

A QWERTY keypad appears when you need to enter text (entering the network password, logging into your Samsung account, etc.), allowing you to enter text using your remote control.

Using Additional Functions

Select ⚙ on the QWERTY keyboard screen. The following options are available:

- **Recommended text**

  Enable/disable the Recommended Text feature Enabling the **Recommended text** feature allows you to quickly enter text starting with the characters you typed in by displaying recommended words. To enter the word "Internet," for example, all you have to do is enter "In" and select the word "Internet" from the list of recommended words. The word is memorized so that you can enter the same text again more easily.

- **Reset recommended text data**

  Delete both the recommended words and the memorized words to clear the list.

- **Predict Next Letter**

  Enable/disable the Text Prediction feature. Enabling the Text Prediction feature eliminates the need to find and select individual character keys. To enter the word "Internet," for example, select "I". A predicted word will then appear next to the I key. Simply select the predicted word to enter "Internet".

  This feature is limited to words that have previously been added to the dictionary.

Establishing a Wired Internet Connection

Connecting the TV to the Internet gives you access to online services and SMART features, and lets you update the TV's software quickly and easily through the Internet.

Using Cat 7 LAN Cables

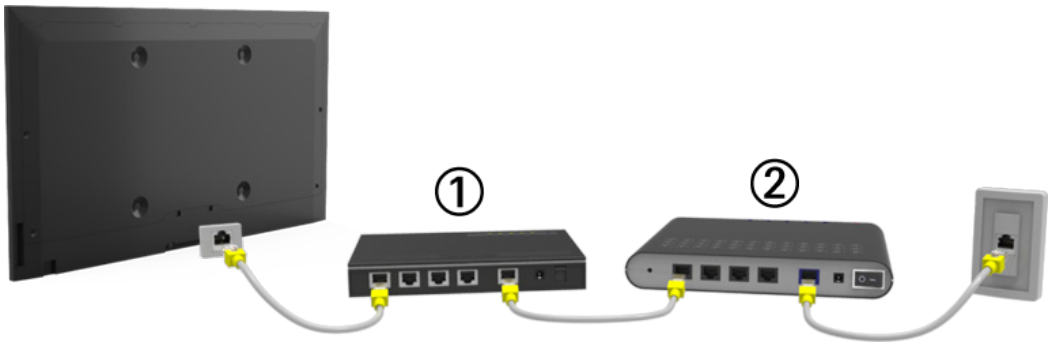
We recommend using Cat 7 LAN cables to link your TV to the Internet Access Points.

The TV will not be able to connect to the Internet if the network speed is below 10Mbps.

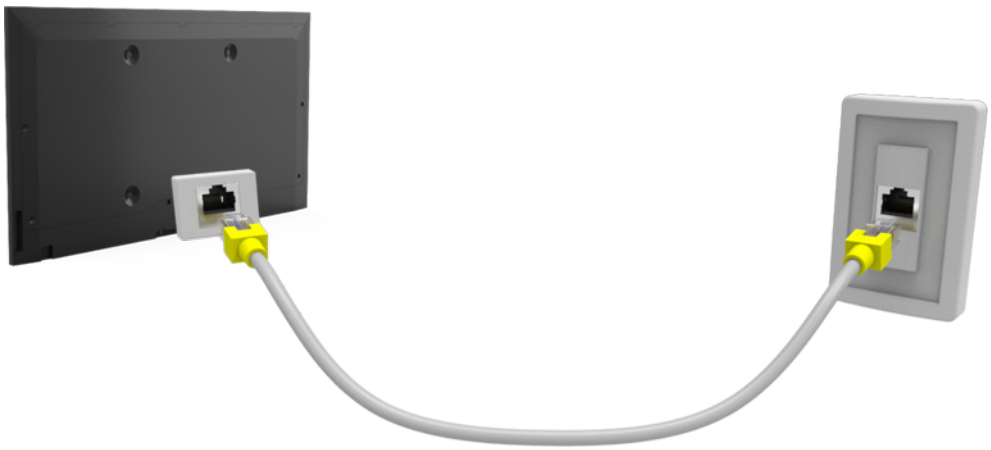
There are three ways to connect the TV to your Internet Access Points. Using Cat 7 cables, connect the TV to the Access Points as shown in one of the following illustrations.

- External Modem

- ① IP Router + ② External Modem



- Wall-mounted LAN Outlet



Connecting to a Wired Internet Network Automatically

MENU > **Network** > **Network Settings** Try Now

Automatically connect to an available network.

1. Set the **Network type** to **Wired**, and then select **Connect**.
2. The TV attempts to connect to an available network. Once it is successful, you will see a confirmation message. Select **OK**. If the attempt fails, try again, or connect manually.

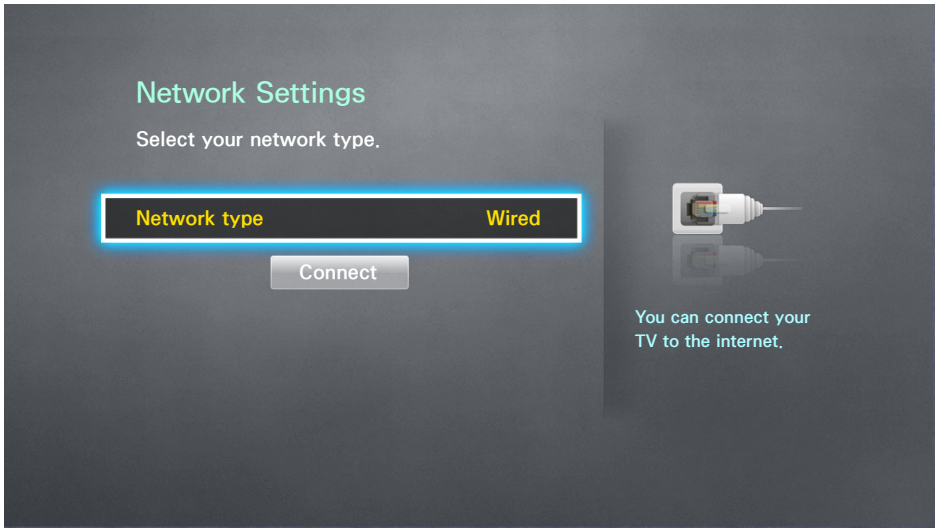
Connecting to a Wired Internet Network Manually

MENU > Network > Network Settings

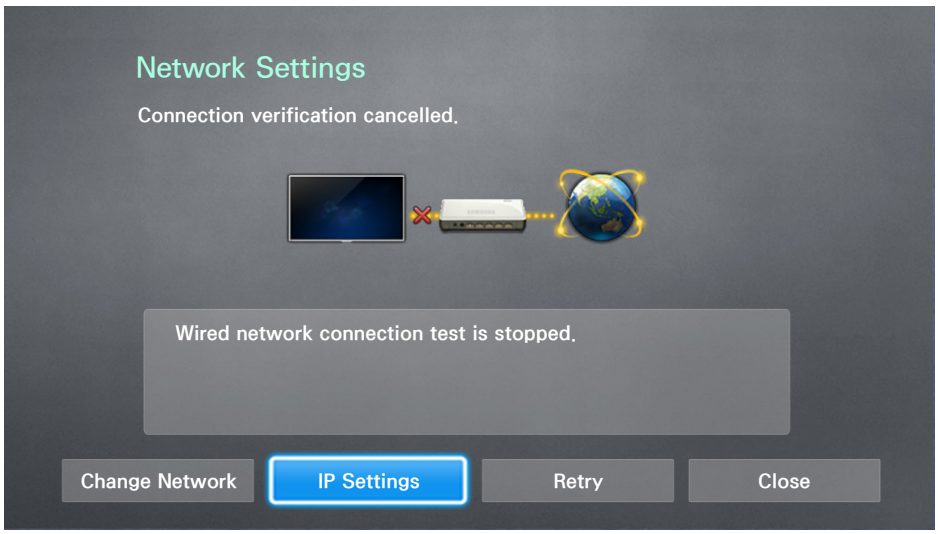
With networks that require a static IP address, you will need to enter the IP address, subnet mask, gateway, and DNS values manually to connect to the network. To get these values, contact your Internet Service Provider (ISP).

Refer to the "Dynamic versus Static IP Addresses" section for more information on dynamic IP and static IP addresses.

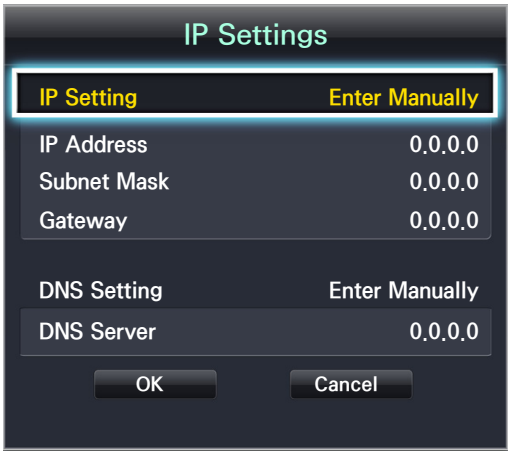
1. Set the Network type to Wired, and then select Connect.



2. Select Stop when the TV attempts to connect to the network. Once the network connection has been interrupted, select IP Settings.



3. In the IP Settings screen, set **IP Setting** to **Enter Manually**.



4. Select **IP Address**. When the IP Address entry window appears, enter three digits into each field on the IP Address line. If the value has less than three digits, add leading zeroes. For example, to enter 10, enter 010. After three digits have been entered in a field, the highlight automatically jumps to the next field.

   Enter numbers by pressing the number buttons. After you have filled in all four fields, press the button again.

5. Repeat the process for **Subnet Mask**, **Gateway**, and **DNS Server**.

6. When done, select **OK**.

7. The TV attempts to connect to the network again using the settings you entered. Once it has established the connection, it displays a confirmation message. Select **OK**.

   The network connection speed may differ depending on the DNS server settings.

   For details on the DNS server settings, contact your Internet service provider (ISP).

Establishing a Wireless Internet Connection

Connecting the TV to the Internet gives you access to online services and SMART features, and lets you update the TV's software quickly and easily through the Internet.

Connecting to a Wireless Internet Network Automatically

MENU > Network > Network Settings

Connect the TV to the Internet via a wireless router. Make sure you have the wireless router's SSID (name) and password settings before attempting to connect. The password can be found on the wireless router's configuration screen.

1. On the Network Settings screen, set Network type to Wireless. The TV automatically displays a list of available wireless networks.
2. Select a network. If the network you want doesn't appear in the list, select Add Network, and enter the network's SSID (name) manually.
3. Using the on-screen keyboard that appears, enter the password. When finished, select Done. If the selected network is not security-enabled, the TV will by-pass the on-screen keyboard and attempt to connect right away.
   - To select a character on the on-screen keyboard, highlight the character and then select it. Select Caps to view capital letters. Select the 123#& key to view additional characters.
   - To view the password as you enter it, select Show Password.
4. The TV attempts to connect to the network. Once a connection is established, the TV displays a confirmation message. Select OK. If the attempt fails, try again or connect manually

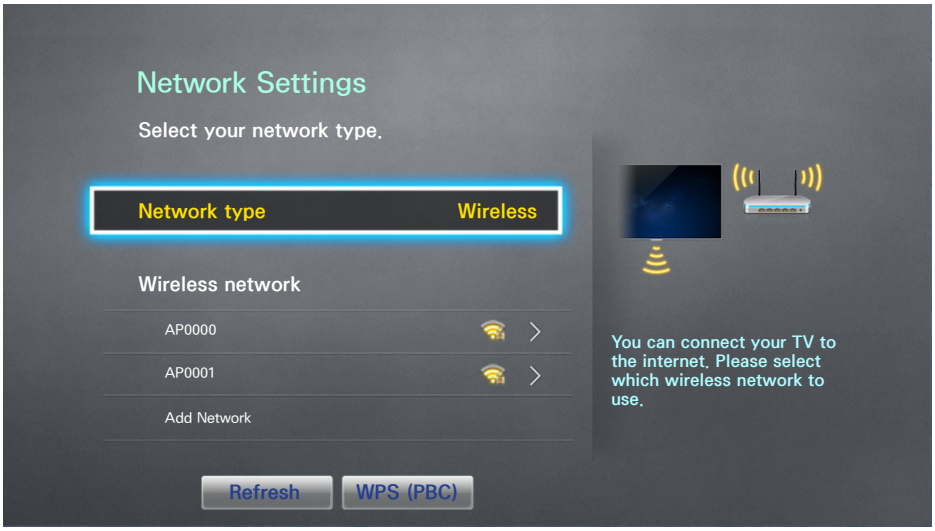
Connecting to a Wireless Internet Network Manually

MENU > Network > Network Settings

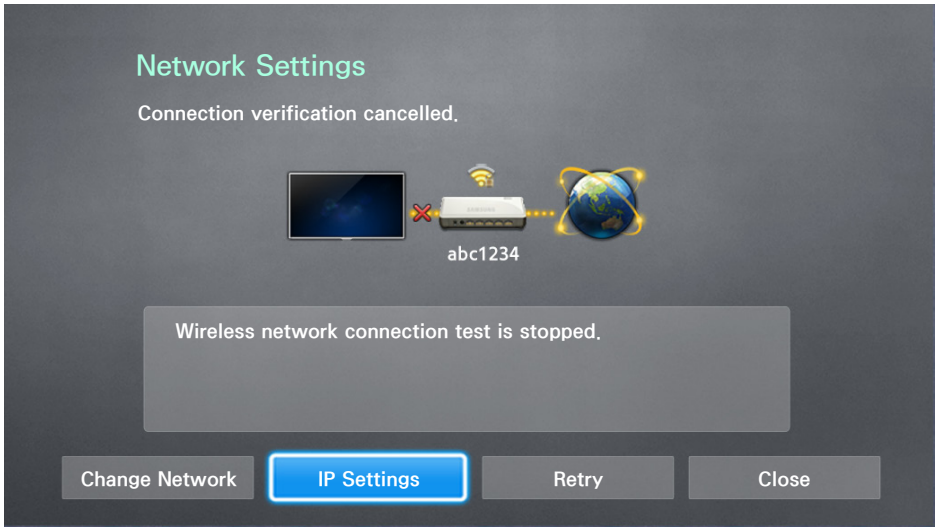
With networks that require a static IP address, you will need to enter the IP address, subnet mask, gateway, and DNS values manually to connect to the network. To get the IP address, subnet mask, gateway and DNS values, contact your Internet Service Provider (ISP).

Refer to the "Dynamic versus Static IP Addresses" section for more information on dynamic IP and static IP addresses.

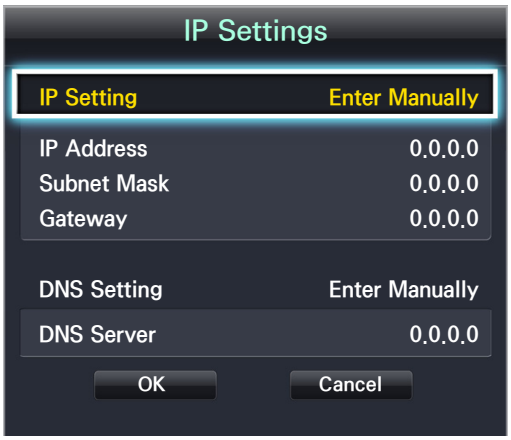
1. On the Network Settings screen, set **Network type** to **Wireless**. The TV automatically displays a list of available wireless networks.



2. Select a network. If the network you want doesn't appear in the list, select **Add Network**, and enter the network's SSID (name) manually.
3. Using the on-screen keyboard that appears, enter the password. When finished, select **Done**. If the selected network is not security-enabled, the TV will by-pass the on-screen keyboard and attempt to connect right away.
   - To select a character on the on-screen keyboard, highlight the character and then select it. Select Caps to view capital letters. Select the 123#& key to view additional characters.
   - To view the security password as you enter it, select **Show Password**.
4. Select **Stop** when the TV attempts to connect to the network. Once the network connection has been interrupted, select **IP Settings**.



5. In the IP Settings screen, set **IP Setting** to **Enter Manually**.



6. Select **IP Address**. When the IP Address entry window appears, enter three digits into each field on the IP Address line. If the value has less than three digits, add leading zeroes. For example, to enter 10, enter 010. After three digits have been entered in a field, the highlight automatically jumps to the next field.

   Enter numbers by pressing the number buttons. After you have filled in all four fields, press the button again.

7. Repeat the process for **Subnet Mask**, **Gateway**, and **DNS Server**.

8. When done, select **OK**.

9. The TV attempts to connect to the network again using the entered settings. Once it has established the connection, it displays a confirmation message. Select **OK**.

   Network connection speeds may differ depending on the DNS server settings.

   For details on the correct DNS server settings, contact your Internet service provider (ISP).

Connecting to a Wireless Internet Network with WPS

MENU > **Network** > **Network Settings**

If the router has a WPS push button, you can use it to connect the TV to the router automatically. WPS automatically configures the SSID and WPA key settings.

- Your router must support WPS to use the WPS functionality.

1. On the **Network Settings** screen, set **Network type** to **Wireless**. The TV automatically displays a list of available wireless networks.

2. Select **WPS (PBC)**, and then press the router's WPS or PBC button within two minutes.

3. The TV automatically acquires the SSID and password settings, and then connects to the network. Once a connection is established, the TV displays a connection message. Select **OK**.

Troubleshooting Internet Connectivity Issues

If you are not able to connect the TV to the Internet, read the information below.

Troubleshooting Wired Internet Connectivity Issues

No network cable found Try Now Try Now

Make sure the network cable is plugged in. If it is connected, make sure the router is turned on. If it is on, try turning if off and on again.

IP auto setting failed Try Now

Do the following or configure the **IP Settings** manually.

1. Ensure that the DHCP server is enabled on the router and reset the router.
2. If this does not work, contact your Internet Service Provider for more information.

Unable to connect to the network Try Now

Do the following:

1. Check all **IP Settings**.
2. Ensure that the DHCP server is enabled on the router. Then, unplug the router and plug it back in.
3. If this does not work, contact your Internet Service Provider for more information.

Connected to a local network, but not to the Internet Try Now

1. Make sure that the Internet LAN cable is connected to the router's external LAN port.
2. Check the DNS values in **IP Settings**.
3. If the problem persists, contact your Internet Service Provider.

Network setup is complete, but unable to connect to the Internet Try Now

If the problem persists, contact your Internet Service Provider.

Troubleshooting Wireless Internet Connectivity Issues

Wireless network connection failed, Try Now Try Now

Selected wireless router not found. Go to **Network Settings** and select the correct router.

Unable to connect to a wireless router Try Now Try Now

Check the following:

1. Check if the router is turned on. If it is, turn it off and on again.
2. Enter the correct password if required.

IP auto setting failed Try Now

Do the following or configure the **IP Settings** manually.

1. Make sure that the DHCP server is enabled on the router. Then, unplug the router and plug it back in.
2. Enter the correct password if required.
3. If this does not work, contact your Internet Service Provider for more information.

Unable to connect to the network Try Now

Do the following:

1. Check all **IP Settings**.
2. Enter the correct password if required.
3. If this does not work, contact your Internet Service Provider for more information.

Connected to a local network, but not to the Internet Try Now

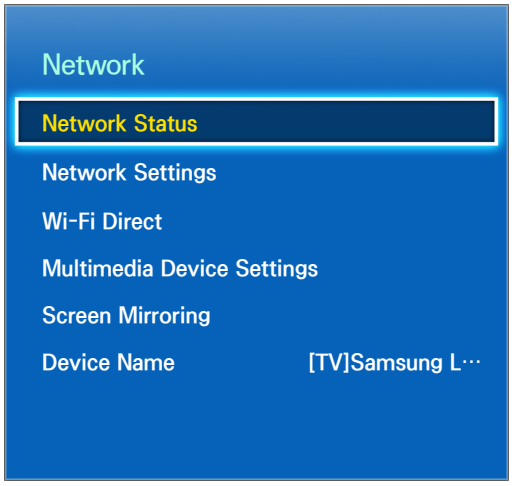
1. Make sure that the Internet LAN cable is connected to the router's external LAN port.
2. Check the DNS values in **IP Settings**.
3. If the problem persists, contact your Internet Service Provider.

Network setup is complete, but unable to connect to the Internet Try Now

If the problem persists, contact your Internet Service Provider.

Checking the Internet Connection Status

MENU > **Network** > **Network Status** Try Now



Your TV's menu may differ from the image above, depending on the model.

View the current network and Internet status.

Smart Hub

MENU > Smart Hub > Open Smart Hub Try Now

With Smart Hub, you can surf the web and download apps.

- Some of the Smart Hub services are for pay services. To use a for pay service, you must have an account with the service provider or a Samsung Apps TV account. Refer to the "Using Smart Hub with a Samsung Account" section for more information.
- The TV must be connected to the Internet to access Smart Hub.
- Some Smart Hub features may not be available depending on the service provider, language, or region.
- To use Smart Hub, you must agree to the end user agreement and privacy policy. Otherwise, you will not be able to access the features and services associated with them. You can view the entire text of the **Terms & Policy** by navigating to **Smart Hub** > **Terms & Policy**. If you want to stop using Smart Hub, you can cancel the agreement. Try Now
- Smart Hub service outages can be caused by disruptions in your Internet service.

Testing Smart Hub connections

MENU > Support > Self Diagnosis > Smart Hub Connection Test

If Smart Hub is not functioning, navigate to **Support** > **Self Diagnosis** > **Smart Hub Connection Test**. Diagnose the problem by checking the internet connection, your ISP, the Samsung server and the Samsung Apps panels.

- After completing the test, if Smart Hub continues to have problems, contact your Internet Service Provider or a Samsung Contact Center.

Opening the First Screen

Press the button while watching TV to open the **First Screen**.

On the **First Screen**, search through favorite apps, channels, or sources and access previously run or frequently used functions.

Setting your favorite item

1. Press the button to open the **First Screen**, and move to a desired item.
2. Press and hold the button. The Options menu appears.
3. In the Options menu, select **Add to Favorites** to add the selected item to the favorite list, which will move top of the list.

   To delete a favorite item, select it, and then press and hold the button to display the context menu. Then, select **Remove from Favorites**.

Deleting browsing history

1. Press the button to open the **First Screen**, and select **Clear All**. You will be asked to confirm your selection.
2. Select **OK** on the screen. Your browsing history is deleted completely.

   However, the Favorites list items will not be deleted.

   You can also delete your browsing history by selecting **Clear All** in the **Smart Hub** > **First Screen Settings** menu.

Moving to the Panel Screen

Press the button to open the **First Screen**, and select the Panel icon. On the Panel screen for each service panel, the following are available:

- **SAMSUNG APPS**

  You can enjoy a variety of free and for pay news, sports, weather, and gaming apps on the TV as you would on a smart phone or tablet.

- **On TV**

  This function is only available in the U.S.A. and Canada.

  You can view the current programs on TV at a glance and view Program Recommendations by Channel or by Time for programs that will be broadcast later.

Using the Smart Hub Tutorial

MENU > **Support** > **Smart Hub Tutorial**

Select **Support** > **Smart Hub Tutorial**. The tutorial introduces you to the basics of using Smart Hub and the Smart Hub panels.

Resetting Smart Hub

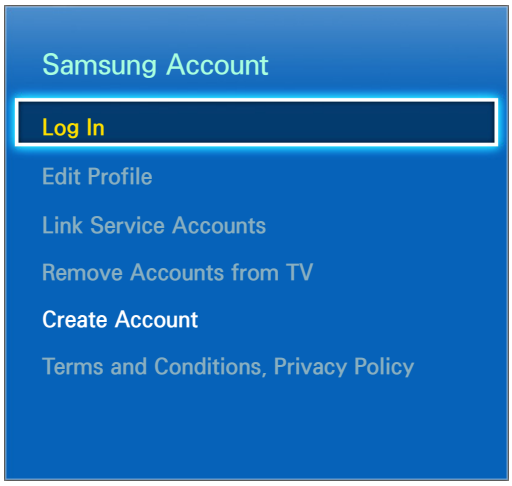
MENU > **Smart Features** > **Smart Hub Reset**

Smart Hub Reset lets you remove all Samsung accounts and everything linked to them, including apps, from the TV. To access Smart Hub Reset, you must enter your Smart Hub password.

To use Smart Hub again fully after resetting it, you must agree to the terms and conditions again.

Open the **System** menu, choose **Setup**, and then follow the initial setup procedure.

Using Smart Hub with a Samsung Account



Your TV's menu may differ from the image above, depending on the model.

Creating a Samsung Account

MENU > Smart Hub > Samsung Account

Some of the Smart Hub services are for pay services. To use a for pay service, you must have an account with the service provider or a Samsung Apps TV account (a Samsung account).

You can create a Samsung account using your email address as your ID.

- To create a Samsung account, you must be over 14 years old.
- To create a Samsung account, you must agree to the Samsung account end user agreement and privacy policy. Otherwise, you cannot create a Samsung account. You can view the entire content of the agreement by navigating to Smart Hub > Samsung Account > Terms and Conditions, Privacy Policy.
- You can also create a Samsung account at http://content.samsung.com. Once you have an account, you can use the same ID on both the TV and the Samsung website.

Creating a Samsung Account Using the Create Samsung Account Menu

1. Press the **MENU** button on your remote, and then select **Smart Hub** > **Samsung Account** > **Create Account** > **Create Samsung Account**. The Terms and Conditions screen appears.
2. Press the ⏎ button to agree to the Terms and Conditions, and then press ⏎ button again.

   If you want to reveiw the Terms and Conditions, select the View Details buttons.

3. Select the Email field. The keyboard pop-up appears. Enter your e-mail address. Use the directional keys to move from character to character, and then press the ⏎ button to select a character. Select the **Caps** button on the left to enter capital letters. Select the 123#& button to view and select additional symbols. Select **.com** at the bottom of the keyboard to enter .com.
4. When finished, select **Done** on the keyboard. The **Create Account** screen reappears.
5. Enter a password, your first name, and last name in the same fashion.

   If you want your account to be password protected, select "Password (Security: High)" in the field below the Password field. If you don't, select "No password required". You still need to create a password, however. Other functions in your account require that you enter a password.

   Leave "Sign me in automatically" checked if you want the TV to log you in to your account automatically when you turn the TV on.

6. Select the Date of Birth field, and then select numbers pressing the up or down directional buttons, or, on a standard remote, using the number pad. Move from month to day to year by pressing the left or right directional buttons. Press the **RETURN** button on the remote when done.
7. After you have finished with all the fields, select **Next**. The Image Selection screen appears.
8. Select an image to use to identify your account. The Account Created screen appears. Press the ⏎ button. You are signed in to your Samsung account.

   If you have an existing account saved on the TV, you must be logged out of the account to create new accounts on the TV.

Creating a Samsung Account using a Facebook Account

If you have a Facebook account, you can use the account to create a Samsung account.

1. Press the **MENU** button on your remote, select **Smart Hub** > **Samsung Account**. And then select **Log In**. The Sign In screen appears.
2. Select ⊕, and then select **Create with Facebook** on the Sign In screen.
3. Enter your Facebook ID and password and select **Sign In**.
4. The Terms and Conditions screen appears.
5. Press the ↵ button to agree to the Terms and Conditions, and then press the ↵ button again.
6. Follow the directions on the Create Account screen to create a Samsung account.
7. Once a Samsung account is created, you are automatically signed in.

   If you create a Samsung account using your Facebook account, they are automatically linked.

Signing in to a Samsung Account

MENU > **Smart Hub** > **Samsung Account** > **Log In**

1. Press the **MENU** button on your remote, and then select **Smart Hub** > **Samsung Account** > **Log In**.
2. On the Log In screen, select your account. And then select **Sign In** on the Sign In screen.
3. If you don't need to enter a password, login proceeds. If you need to enter a password, the on-screen keyboard appears. Enter your password. When finished, select **Done**.

Linking Your Samsung Account to External Service Accounts

MENU > Smart Hub > Samsung Account > Link Service Accounts

Linking your Samsung account to an external service accounts lets you automatically log in to the linked account when you log into your Samsung account. For example, you can download the Facebook application - which lets you access Facebook from your TV - and then link your Facebook account to your Samsung account. Logging into your Samsung account then automatically logs you into your Facebook account as well and lets you access it directly from the TV.

To use **Link Service Accounts**, you must first log into your Samsung account.

Linking a Service Account

1. Log in to your Samsung Account.
2. Navigate to **Smart Hub** > **Samsung Account**, and then select **Link Service Accounts**. The accounts you can link to your Samsung account are displayed.
3. Select an account from the list. The Link to other accounts window appears on the screen.
4. Enter the current ID and password of the account to log in and select **OK**.
5. When the login is complete, the account is linked to the Samsung account.

Disconnecting a Linked Account

1. Navigate to **Smart Hub** > **Samsung Account**, select **Link Service Accounts**. Select an account to unlink.
2. A confirmation dialog box appears. Select **Yes** to unlink the account.

Changing and Adding Information to a Samsung Account

MENU > Smart Hub > Samsung Account

Using the Samsung Account menu, you can manage your Samsung account.

To change the account information, you must be logged in to your Samsung account.

1. Navigate to Smart Hub > Samsung Account, and then select Edit Profile. The keyboard appears.
2. Enter your password, and then selec Done. The Edit Profile screen appears.

The Edit Profile screen lets you do the following:

- **Change Your Profile Image**

  Select Edit Profile Picture to change your profile image.

- **Choose a Samsung Account Sign-in Method**

  Select Sign-in Method and choose a sign-in method from the drop down that appears.

- **Turn Auto Login On or Off**

  Select Sign me in automatically. Auto Login automatically logs you in to your Samsung account when you turn the TV on. A check mark indicates that Auto Login is on.

- **Enter Basic User Information**

  You can enter your first name, last name, and date of birth.

- **Add a Credit Card to Your Samsung Account**

  Select Add Card to add a credit card to your Samsung Account. Adding a credit card to your account makes it easier to purchase online movies and TV shows. Follow the easy directions on the screen.

- **Subscribe to the Samsung e-Newsletter**

  You can receive emails containing information about Samsung products, new service announcements, special offers, and events.

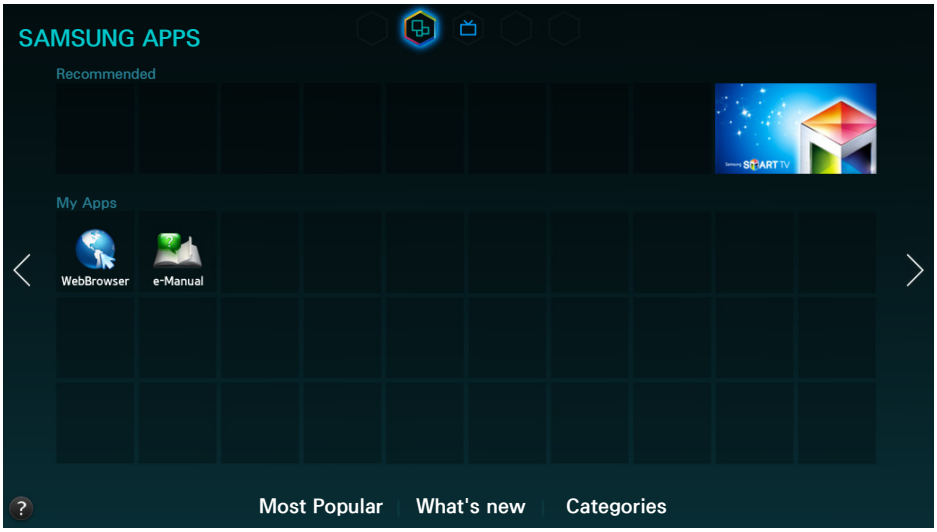
Deleting a Samsung Account from the TV

MENU > Smart Hub > Samsung Account > Remove Accounts from TV

Navigate to Smart Hub > Samsung Account and select Remove Accounts from TV. The account and password information for the currently signed in account is deleted from the TV. The account information for any external accounts linked to the signed in account is also deleted from the TV.

Only the information for the current signed in account is deleted. Account information for all other accounts saved on the TV remain.

Using the SAMSUNG APPS Panel



Usability depends on your specific model and local region.

Smart Hub offers a variety of free news, sports, weather, and gaming apps you can install directly to and enjoy on your TV. The first line on the screen contains apps recommended by Samsung. These apps were automatically downloaded to your TV when you set up Smart Hub. The lines of apps below the first line contain some apps that were automatically downloaded to your TV and other apps you have selected and downloaded.

Your TV must be connected to the Internet for you to use SAMSUNG APPS.

When Smart Hub is launched for the first time, the default apps are automatically installed. The default apps may differ depending on the region.

Using Supported Features via the Pop-Up Menu - Downloaded Apps

Move the focus to an app in the second row or below, and then press and hold the button. The Tools menu appears displaying the following functions.

- **Move**

  Lets you relocate an app on the screen.

- **Delete**

  Lets you remove a selected app from your TV.

- **Multi Delete**

  Lets you remove multiple apps from the TV.

- **View Details**

  Displays detailed information about a selected app.

- **Change View**

  Lets you change how the apps are sorted on the screen, by **Custom** or **Most Played**.

- **Lock/Unlock**

  Lets you lock or unlock an app.

- **Update Apps**

  Displays a list of apps that have updates available. You can select which apps to update.

Using Supported Features via the Pop-Up Menu - Recommended Apps

Move the focus to a recommended app in the top row, and then press and hold the button. A drop down list appears with the following functions.

- **View Details**

  Displays detailed information for a selected app.

- **Update Apps**

  Lets you update the apps when updates are available.

- **Lock/Unlock**

  Lets you lock or unlock an app.

Installing an App

Quick Installation

1. On the **SAMSUNG APPS** screen, select **Most Popular**, **What's new**, or **Categories**.

   Most Popular and **What's new** show the most popular and new Samsung apps, respectively. To view the entire app list by genre, select **Categories**. When the Categories screen appears, select a category icon to view the apps in that category.

2. Move the focus to an app, and then press and hold the button. A pop-up menu appears.
3. On the pop-up menu, select **Download**.

   Most apps are free to install.

   While an app is being installed, the progress bar appears at the bottom of the app icon so that you can monitor the progress of the installation.

4. The selected app is installed on the TV.

   You can view installed apps on the **SAMSUNG APPS** screen.

Installing an App from the Detailed App Information Screen

1. On the **SAMSUNG APPS** screen, select **Most Popular**, **What's new**, or **Categories**.

   The **Most Popular** and **What's new** show the most popular and new Samsung apps, respectively. To view the entire app list by genre, select **Categories**. When the Categories screen appears, select a category icon to view the apps in that category.

2. Select an app from the list. Detailed information about your selection appears on the screen.
3. Select **Download** to install the selected app on the TV.

   Most apps are free to install.

   While an app is being installed, the progress bar appears at the bottom of the app icon so that you can monitor the progress of the installation.

4. When the installation is complete, the **Download** button changes to **Open**.

   You can view installed apps on the **SAMSUNG APPS** screen.

Additional Notes

- When the TV's internal memory is insufficient, you can install an app on a USB device.
- You can view icons for the apps saved on the USB device on the Apps screen only when the device is connected to the TV. You can use an app installed on a USB device only when the USB device is connected to the TV. If the USB device is disconnected while the app is running, the app is terminated.
- You can use the app installed on the USB device on a PC or another TV.

Launching an App

Select an app on the **SAMSUNG APPS** screen, and then press the button. You can also start an app from its Detail screen.

Default Apps

Default apps download to your TV automatically during set up.

e-Manual

The embedded e-manual contains information about your TV's key features.

Web Browser

Web Browser is an Internet browsing app. Using Web Browser, you can surf the Internet on the TV in the same manner as you would using a PC - even while watching a TV program using PIP. Use a keyboard and mouse for a more convenient web browsing experience.

The browsing page may differ from that on a PC.

Relocating an App on the Apps Screen.

1. On the **SAMSUNG APPS** screen, select to the app you want to move.
2. Press and hold the button. A pop-up menu appears.
3. On the pop-up menu, select **Move**.

   You may be asked to change the view to Custom.
4. Highlight an app you want to move. Move the app to a desired location use the arrows buttons.
5. When the app is in it's new location, press the button.

   You cannot move Recommended Apps.

Deleting an App from the TV

If an app is deleted, the data related to the app is also deleted.

Deleting an App

1. On the **SAMSUNG APPS** screen, move to the app you want to remove.
2. Press and hold the button. A pop-up menu appears.
3. On the pop-up menu, select **Delete**. A removal confirmation window appears.
4. Select **Yes**. The selected app is deleted.

Removing Multiple Apps

1. On the **SAMSUNG APPS** screen, move to an app you want to remove.
2. Press and hold the button. A pop-up menu appears.
3. On the pop-up menu, select **Multi Delete**. A check box appears on the app icons.
4. Select all the apps you want to delete. A check mark appears on each app you select. When done, select **Delete** at the bottom of the page. A removal confirmation window appears.
5. Select **Yes**. The selected apps are deleted.

Rating/Reviewing an App

On the detailed app information screen, you can rate an app or send a review to the app developer.

To rate or review an app, you must log into your Samsung account. You can only rate or review with a TV purchasing apps and games.

Updating Apps

1. On the **SAMSUNG APPS** screen, select an app.
2. Press and hold the button. A pop-up menu appears.
3. On the pop-up menu, select **Update Apps**. A pop-up window listing all the apps with available updates.
4. Select the apps you want to update, and then select **Update**. All the selected apps are updated to the latest version.

   You can choose all the apps listed in the Update window at once by selecting Select All.

Setting Auto App Update

To update apps automatically, navigate to **Smart Hub** > **Apps Settings** and set **Auto Update** to **On**. The apps will then be updated automatically when an update becomes available.

Using Other App Features and Functions

MENU > Smart Hub > Apps Settings Try Now

You can configure additional app features and functions.

Setting Push Notification

The Push notification function lets publishers of some apps installed on the TV send alarm messages containing news about their apps, modification information, etc. The messages are displayed on your screen as you watch TV.

1. Navigate to Smart Hub > Apps Settings > Push Notification Settings, and then set Push Notification to On.
2. On the Push Notification screen, select the apps you want push notifications for.

   The Push Notification app lists only the apps that support Push Notification Settings.

Using Channel Bound Apps.

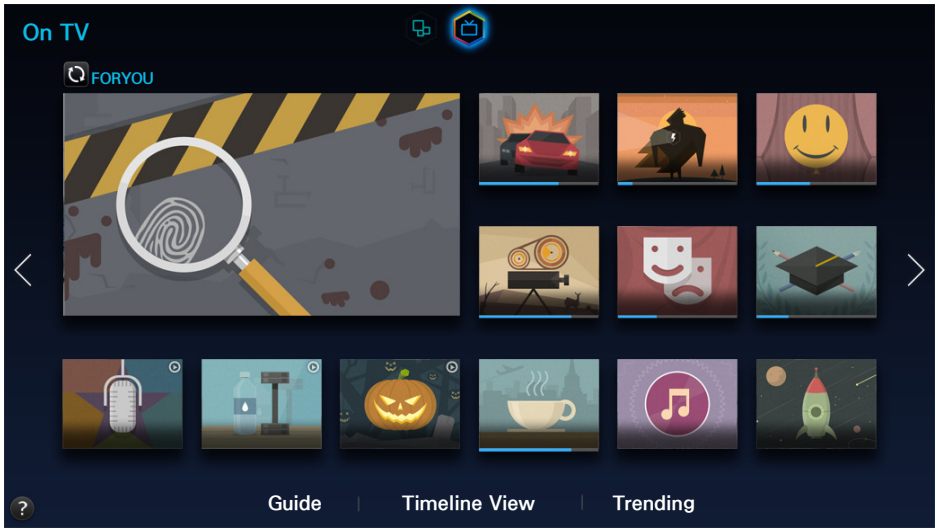
A Channel-Bound App is an app that is linked to a particular channel. These apps provide services for or information about programs on the linked channel while you are watching the programs.

Navigate to Smart Hub > Apps Settings and set Channel-Bound Apps to On.

You can use this feature only when an app supporting Channel-Bound Apps is installed on the TV.

Using the On TV Panel

This function is only available in the U.S.A. and Canada.



Usability depends on your specific model and local region.

On TV displays your current program live in a small window, a list of recommended programs currently on other channels, and a list of of recommended programs that will air later. You can use these lists to change the channel and watch another program. You can also use these lists to view more information about recommended programs running later, including how much time is left until they air. In addition, you can set up a Schedule Viewing of a program that hasn't aired.

To view a program recommended by **On TV**, select the image. The TV changes the channel and displays the program you selected.

Availability of recommended content depends on the specific model and area.

You must connect the TV to the Internet to use **On TV**.

The channels or programs recommended by **On TV** may differ from the actual channels or programs depending on the broadcast information provider.

You can use the following features by selecting the buttons at the bottom of the screen.

- **Viewing the Program Schedule of Digital Channels**

  Select **Guide** at the bottom of the screen to view the program schedule of each digital channel. You can check the program schedule and even set up a Schedule Viewing. For more information about **Guide**, refer to the "Using the Guide" section.

  The Guide provides information only about digital channels. Analog channels are not supported.

- **Program Recommendations by Time**

  Select **Timeline View** at the bottom of the screen to view program recommendations for different times of the day.

- **Popular Videos**

  Select **Trending** at the bottom of the screen to see what is the most trendy or popular content on Twitter, and then set up a Schedule Viewing to view that content.

Using Supported Features via the Pop-Up Menu

Move the focus to a desired program, and then press and hold the button. The following options are available:

Available options may differ depending on the selected program.

- **Viewing Detailed Information**

  Lets you view detailed information about the program you selected.

- **Reserving**

  Lets you set up a Scheduled Viewing for the program you selected.

Viewing Detailed Program Information

1. Move the focus to a desired program, and then press and hold the button. A context-sensitive menu appears.
2. On the context-sensitive menu, select **View details**. Detailed information about the selected program screen appears.

Select a program from the list to see more information about the program and to access the following options:

- **Moving to a Channel**

  Jumps to the selected program's channel.

- **Reserving**

  Lets you set up a **Schedule** for the program.

- **Viewing Related Content**

  View a list of content related to the program. If you select an item from the list, the detailed information screen of the selected item appears.

- **Rate**

  Lets you rate the program.

- **Sharing**

  You can share information about the selected program via an SNS.

Configuring On TV Settings

MENU > Smart Hub > On TV Settings > Set Up Service Provider

Lets you select the source of your TV programs and the source of the program information that appears on the On TV screen (the signal source, cable company provider, etc.). Follow the Instructions that appear on your TV screen when you start this function. Set Up Service Provider is only available if you have not set up Smart Hub.

Receiving Recommended Content Notification

You can configure the TV to display a notification when a frequently watched program is broadcast.

Navigate to Smart Hub > On TV Settings and set Automatic Notifications to On.

Changing Recommendation Type

Lets you choose the kind of program notifications you will see. Select Preference to see notifications for shows you watch often or Popularity to see notifications for popular shows. You must enable Automatic Notifications for this function to work. See Automatic Notifications above.

Navigate to Smart Hub > On TV Settings, select Recommendation Type and set it to a desired type.

Removing Adult Content from the Recommended List

Enabling Block Adult Content prevents the On TV screen from listing TV programs with adult content.

Navigate to Smart Hub > On TV Settings and set Block Adult Content to On.

Using the Multimedia (Playing Photos, Videos, and Music)

- You cannot play media content if the content is not supported by the TV. For more information, refer to "Read Before Playing Photo, Video, or Music Files".
- Backup important files before connecting a USB device. Samsung is not responsible for damaged or lost files.

Playing Media Content Saved on a USB Device

1. To use the multimedia function, press the KEYPAD button, and then select Media Play or press the SOURCE button. The USB devices connected to the TV are listed.
2. Select the device you want to access. The folders and files in the selected USB are listed.
3. Select the media content you want to play from the list. The media content plays.
   - Alternatively, navigate to the media content you want to play, and then press the ► button to play the content.
4. To exit, press the ■ button or RETURN button.

- If you connect a USB device to the TV while watching the TV, the New Device Connected pop-up appears. Select All, Music, Videos, or Photos, and then press the button. The folders and files on the USB device are listed.
- Alternatively, if you select a USB device on the Source screen, a pop-up window appears on the screen displaying the folders and files of the USB device.

Safely Removing a USB Device

1. Press the SOURCE button. The Source screen appears.
2. Navigate to the USB device you want to remove. Press and hold the button. An options list window appears.
3. Select Remove USB in the list.

Playing Photos

You can play photos saved on USB device. Try Now

Buttons and Functions Available While Viewing Photos

The TV displays the buttons below when you press the button while viewing photos from a multimedia source. The playback buttons disappear if the RETURN button is pressed.

- **Pause** / **Play**

  Start or stop the slideshow. Using slideshow, you can play all the photos in a folder one by one.

- **Previous** / **Next**

  View the previous or the next photo.

- **Settings**

  The following functions are available when you select the Settings button.

Function	Description
Slideshow Settings	Speed: Set the slideshow speed. Effects: Apply transition effects for the slide show.
Rotate	Rotate the photo.
Zoom	Zoom in by up to a factor of 4.
Picture Mode	Change the Picture Mode setting.
Background Music	Listen to background music while viewing photos. The music file must be saved in the same device as the photo file. When background music plays, the mini player appears on the screen. Using the mini player, you can pause the current music file or play another music file.
Sound Mode	Change the Sound Mode setting. This option is supported only when background music is playing.
Select Speakers	Choose the speakers to play the background music through. Only available if you have a home theater or receiver connected to the TV.
Send	This function is the same as the 'Copy' function of a computer. Using this function, you can send the current photo to another storage device. To see a list of the storage devices supported by this feature, refer to "Compatible Storage Devices for File Transfers".
Information	View detailed information about the current photo.

Playing Videos

You can play Videos saved on USB device. Try Now

Buttons and Functions Available While Viewing Videos

The TV displays the buttons listed below when you press the button while viewing videos from a multimedia source. The playback buttons disappear if the RETURN button is pressed.

- **Pause** / **Play**

  Pause or play the video.

  When the video is paused, you can use the following functions. The TV does not play audio when the video is paused or when you are using the Step or Slow Motion functions described below.

  – **Step**: Whenever you press the button, it scans the paused video one frame at a time.

  – **Slow Motion**: Select the button to play the video in slow playback speed (1/8, 1/4, 1/2).

- **Rewind** / **Fast Forward**

  Rewind or fast forward the video.

- **Previous** / **Next**

  Select the button twice to play the previous video. Selecting once starts the current video from the beginning.

  To play the next video, select the button.

- **Settings**

  The following functions are available when you select the Settings button.

Function	Description
Select Scene	Thumbnails: Select a scene and play the video from the scene. Thumbnails is not available if 1) the thumbnail of the video is not extracted yet, 2) the video contains audio only or 3) the video play time is shorter than 60 seconds. Chapter Titles: Select and play another video in the same folder. Time Bar: You can use the < and > buttons to scan through the file in 10-second intervals or enter a specific time value to jump to that point in the video.
Subtitle	Control the subtitles of the video. Language: Turn the subtitles on or off. Sync: When the video and the subtitles are not synchronized, you can adjust the synchronization. Reset Sync: Reset the subtitle synchronization adjustment to 0. Size: Choose the font size for the subtitles. Encoding: If the subtitles are not working, you can change the encoding language.
Repeat	Set the repeat mode. Repeat One repeats the current video only. Repeat All repeats all videos contained in the folder.
Picture Size	Change the picture size. The supported video sizes are determined by the video content.
Picture Mode	Change the Picture Mode setting.
Sound Mode	Change the Sound Mode setting.
Select Speakers	Choose the speakers to play the audio through. Only available if you have a home theater or receiver connected to the TV.
Audio Language	Choose a desired audio language. This option works only when the video supports multi-track sound.
Information	View detailed information about the video.

Playing Music

You can play Music saved on USB device. Try Now

Buttons and Functions Available While Playing Music

The TV displays the buttons listed below when you press the button while playing music files from a multimedia source. The playback buttons disappear if the RETURN button is pressed.

- **Pause** / **Play**

  Pause or resume the music.

- **Rewind** / **Fast Forward**

  Rewind or fast forward the music file. Repeatedly select the button to make the rewind/fast forward speed up to 3 times faster. To restore normal playback speed, select ►.

- **Previous** / **Next**

  Select the ⏮ button twice to play the previous music file. Selecting ⏮ once starts the current music file from the beginning.

  To play the next music file, select the ⏭ button.

- **Repeat**

  Set the repeat mode. **Repeat One** repeats the current music file only. **Repeat All** repeats all music files contained in the folder.

- **Shuffle**

  Play the music files in random order.

- **Select Speakers**

  Choose the speakers to play the audio through. Only available if you have a home theater or receiver connected to the TV.

- **Sound Mode**

  Change the Sound Mode setting.

Functions on the Media Content List Screen

On the media content list screen of a storage device, the following functions are provided.

- **Filter**

  Filters the media content so only one type of content - photo, video, or music - is displayed.

- **Options**

  Displays viewing and playing options. The options displayed vary, depending on the type of content you have selected. Not all options listed below are displayed at the same time.

  This function is not available when **Filter** is set to **All**.

The following options are available when you select the Options button.

Function	Description
Slide Show	Start the slide show. Available for photos only.
Play Selected	Play only content you want from the media content list.
Send	This function is the same as the 'Copy' function of a computer. Using this function, you can send media content to another storage device. To see a list of the storage devices supported by this feature, refer to "Compatible Storage Devices for File Transfers".
Encoding	If the media content's title will not display properly, you can change the encoding language. Available for music files only.
Rename Playlist	You can change the name of the playlist you created. Available for music only.
Delete Playlist	Delete a playlist that you created. Available for music only.
Add to Playlist	Add a file to a playlist that you created or create a new playlist. Available for music files only.

Digital Broadcast Information at a Glance

MENU > Broadcasting > Guide Try Now Try Now

The Guide provides an overview of each digital channel's program lineup. You can check the program schedules and set up a Schedule Viewing.

Press the GUIDE button on the remote to launch the Guide.

The information in the Guide is for digital channels only. Analog channels are not supported.

Using the Guide

To access the Guide functions, press and hold the button. A popup window listing the following functions appears.

Channel Filter

Channel filter lets you filter the channels in the Guide by the following categories: Added Ch. and Favorites 1 - Favorites 5.

Navigating the Program Schedule

You can move the Guide by 2 hours in either direction each time you press the or button. You can only view programs scheduled after the current time.

Schedule Manager

This displays the schedule manager. For information about the Schedule Manager, see "Setting Up a Schedule Viewing".

Edit Favorite Channels

Edit favorites lets you designate a channel you have selected in the Guide as a favorite.

To use Edit Favorite Channels:

1. Highlight a channel you want to add to your favorites in the Guide.
2. Press the TOOLS button. The Guide functions pop-up window appears.
3. Select Edit Favorite Channels. The Edit Favorites window appears.
4. Select the Favorites list you want to put the channel into.

Viewing Detailed Information

You can view detailed information about a selected program. The program information may differ depending on the broadcast signal and may not be available at all for certain programs.

- Select a current program on another channel, and then **View Details** to **Watch** the program.
- Select an upcoming program, and then select **View Details** to set up a **Schedule Viewing**.

For more information about watching or **Schedule Viewing** refer to "Setting Up a Schedule Viewing".

Checking Current Program Info

To get information about a show, press **INFO** on your remote.

To view the program info, you must first set the TV's clock. Go to **Clock** (**System** > **Time** > **Clock**).

The program information may vary depending on the type of incoming signal and may not be available at all for certain programs.

Use the < and > buttons to view information about upcoming programs. Select a program to set up a **Schedule Viewing** for that program.

For more information on **Schedule Viewing**, refer to "Setting Up a Schedule Viewing".

Changing the broadcast signal

MENU > **Broadcasting** > **Antenna** Try Now

You can choose the appropriate DTV mode for your viewing environment. Choose **Air** or **Cable**. **Air** is suitable for homes equipped with a separate, over-the-air antenna. **Cable** is suitable for homes that have subscribed to a local cable-service or satellite-service provider.

Do not use this function if your TV is connected to a cable or satellite box.

Digital Channel Signal Info and Strength

MENU > **Support** > **Self Diagnosis** > **Signal Information** Try Now

Select **Support** > **Self Diagnosis** > **Signal Information**. This displays the digital channel's signal information and strength.

If your TV is attached to a separate, over-the-air antenna, you can use the signal strength information to adjust the antenna for increased signal strength and improved HD channel reception.

Signal information is only available for digital channels.

Setting Up a Schedule Viewing

Configure the TV to show a specific channel or program at a specific time and date. The icon appears next to programs that have been configured for a Schedule Viewing.

- To set up a Schedule Viewing, you must first set the TV's clock. Go to **Clock** (**System** > **Time** > **Clock**).
- It is not possible to make a viewing schedule for a program that is currently on air.

Digital Channel Schedule Viewing

You can set up **Schedule Viewing** for programs on digital channels on the following screens:

- **The Guide Screen**
- **The Program Info Screen**

The Guide Screen

To set up a scheduled viewing on the **Guide** screen, follow these steps:

1. Press the **GUIDE** button on your remote.
2. On the Guide screen, use your remote control to highlight, and then select a program you would like to view.
3. On the Information Screen that appears, select **Schedule Viewing**. The program is scheduled for viewing. The **Guide** screen re-appears.

The Program Info Screen

To set up a **Schedule Viewing** on the **INFO** screen, follow these steps:

1. Change the channel to the channel that will be broadcasting the program you want to schedule.
2. Press the **INFO** button.
3. Move right to see program information for later broadcasts. The program information for the programs that will be broadcast later on that channel is displayed on the screen.
4. Highlight and then select the program you want to schedule. The Information screen appears.
5. Select **Schedule Viewing**. The program is scheduled for viewing. Press the **RETURN** button on your remote.

Analog Channel Schedule Viewing

MENU > **Broadcasting** > **Schedule Manager** Try Now

When you set up a scheduled viewing for an analog channel, you need to know the channel, day or days of the week the program is airing, and the time the program is airing.

To set up a schedule viewing for an analog station, follow theses steps:

1. Press the **MENU** button, and then select **Broadcasting** > **Schedule Manager**.
2. On the **Schedule Manager** screen, select **Schedule**. The **Schedule Viewing** screen appears.
3. On the **Schedule Viewing** screen, select the **Antenna** connection (**Air** or **Cable**), and then move to the Channel field.

   If you only receive your TV broadcasts through **Air** or **Cable**, the Antenna connection field displays only **Air** or only **Cable**.

4. Highlight the Channel field, and then select it. Scroll it up or down, find the desired channel, and then select it. Move to the Repeat field.
5. Highlight the Repeat filed, and then select it. Select **Once**, **Manual**, **Sat~Sun**, **Mon~Fri**, or **Everyday**. If you select manual, you must also highlight and select the days you want.
6. Move to the Time field, and then select it. Set the hours by using the Up/Down directional buttons to move the numbers up or down. Do the same for the am/pm and minutes fields.
7. When done entering the time, press **RETURN**.
8. Select **OK** at the bottom of the **Schedule Viewing** screen.

Canceling a Schedule Viewing

To cancel a specific scheduled viewing, follow these steps:

1. Press the **MENU** button, and then select **Broadcasting** > **Schedule Manager**.
2. On the **Scheduled** screen, select the scheduled viewing. A pop-up menu appears.
3. Select **Delete** to cancel.
4. Select Yes on the "Remove this show" pop-up. The scheduled viewing is removed.

Editing a Schedule Viewing

To edit the time, days, or channel of a Schedule Viewing, follow these steps:

1. Press the **MENU** button, and then select **Broadcasting** > **Schedule Manager**.
2. On the **Scheduled** screen, select the scheduled viewing. A pop-up menu appears.
3. Select **Edit**.
4. Change the time, days, or channel in the way described in Analog Channel **Schedule Viewing**. Select **OK** when done.

Using the Channel List

MENU > Broadcasting > Channel List Try Now

Press and hold the GUIDE button while watching TV to bring up the Channel List and change the channel or check programs on other digital channels.

Select a channel from the Channel List to jump to it right away. To quickly scroll through the list, use the channel up/down buttons. This moves the focus one page at a time.

The Channel List screen contains the following icons:

- A : An analog channel
- : A favorite channel
- : A locked channel

- **Using Options**

  Press the < button, and then select Options. The following options are available:

Function	Description
Antenna	Choose Air or Cable as the DTV mode. Air is suitable for homes equipped with separate, over-the-air antennas. Cable is suitable for homes that subscribe to a local cable-service or satellite-service provider.
Genre	Sort the list so that it includes channels of a selected genre only. You can only use Genre if you have set the channel mode in the Channel List to Added Ch. and only if the added channels contain genre information.
Edit Favorites	Designate favorite channels. Refer to the "Creating a Personal Favorites List" section for more information.

- **Viewing the Added Channels or Favorites Lists**

  In the Channel List, press the > button, and then select Added Ch. or Favorites. Favorites will only appear if you have registered at least one favorite channel. For more information, refer to "Creating a Personal Favorites List".

Registering, Removing, and Editing Channels

MENU > Broadcasting > Edit Channel Try Now

Remove channels from the index of channels, restore removed channels, and rename analog channels. The Edit Channel screen icons indicate the following:

- A : An analog channel
- : A favorite channel
- : A locked channel

Registering and Removing Channels

MENU > Broadcasting > Edit Channel

Removing Registered Channels

Removing a registered channel from the channel index removes it from the list of channels you can access using the CH.LIST buttons on your remote.

1. Move the highlight to a channel, and then select it to remove it. Repeat to select additional channels.
2. To unselect a channel, move the highlight to the channel, and then select it.
3. To select all channels, select Options, and then select Select All from the list. You can also select Deselect All.
4. After you have made your selections, select Delete.

Adding Back Removed Channels

You restore channels to the index of channels by adding them back. Removed channels are displayed in gray in the **All** list only. In addition, the **Add** option is only available for removed channels.

1. Select **Options** to display a list of options. Select **Category** from the list, and then select **All**.
2. Move the highlight to a channel you want to add. Repeat to select additional channels.
3. To unselect a channel, move the highlight to the channel, and then select it.
4. To select all channels, select **Options**, and then select **Select All** from the list. You can also select **Deselect All**.
5. After you have made your selections, select **Add**.

Editing Registered Channels

MENU > **Broadcasting** > **Edit Channel**

Select **Options** at the bottom left of the screen to access the following options. The available options may vary depending on the broadcast signal.

- **Select All**

  Selects all channels displayed on the **Edit Channel** screen.

- **Antenna**

  Choose **Air** or **Cable** as the DTV mode.

- **Category**

  Channels stored in the TV are grouped into the following categories: **All** and **Added Ch.**.

- **Edit Favorites**

  Designate favorite channels. For more information, refer to "Creating a Personal Favorites List".

- **Rename Channel**

  Rename analog channels. The new name can be up to 5 characters long.

- **Information**

  View detailed information about the current program.

Program Rating Lock

MENU > Broadcasting > Program Rating Lock

The Program Rating Lock feature lets you block programs based on their ratings. This is useful for controlling what children watch on TV. Program Rating Lock does not block programs originating from external sources, such as Blu-ray players, DVD players, or USB files.

Every time you access the Program Rating Lock feature, you must enter the security PIN. You must also enter this PIN to watch a blocked program. The default PIN is 0000. To change the PIN, go to System > Change PIN.

The Program Rating Lock is available only in TV mode.

Blocking Programs Using the TV Rating

To block content, select a rating category to lock. All programs at that level and higher are blocked and require the PIN to watch. To unblock a category, select the lock icon. To unblock all the categories in a row, select the lock under ALL.

Categories on the left:

- TV-Y: Young children
- TV-Y7: Children 7 and over
- TV-G: General audience
- TV-PG: Parental guidance
- TV-14: Viewers 14 and over
- TV-MA: Mature audience

Categories on the top:

- ALL: Lock all TV ratings.
- FV: Fantasy violence
- V: Violence
- S: Sexual situations
- L: Adult Language
- D: Sexually Suggestive Dialog

Blocking based on Movie Rating (MPAA)

Block movies based on their MPAA rating. This applies to all material with supplied ratings in the USA.

From the MPAA:

"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."

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

- G: General audience (no restrictions).
- PG: Parental guidance suggested.
- PG-13: Parents strongly cautioned.
- R: Restricted. Children under 17 should be accompanied by an adult.
- NC-17: No children under age 17.
- X: Adults only.
- NR: Not rated.

Blocking Based on Canadian English Rating

Block material based on its English Canadian rating. This applies to all rated material viewed on English-Canadian TV channels.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

- C: Programming intended for children under age 8
- C8+: Programming generally considered acceptable for children 8 years and over to watch on their own
- G: General programming, suitable for all audiences.
- PG: Parental Guidance
- 14+: Programming containing themes or content which may not be suitable for viewers under the age of 14
- 18+: Adult programming

Blocking Based on Canadian French Rating

Block material based on its French Canadian rating. This applies to all rated material viewed on French-Canadian TV channels.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

G: General

8 ans+: Programming acceptable for children 8 years and over to watch on their own

13 ans+: Programming that may not be suitable for children under the age of 13

16 ans+: Programming not suitable for children under the age of 16

18 ans+: Programming restricted to adults

Blocking Based on Downloadable U.S. Rating

Block material based on its **Downloadable U.S. Rating**. This rating system only applies to material originating from US DTV channels.

Parental restriction information is automatically downloaded while you watch DTV channels. This download may take several seconds. If the information is unavailable from the broadcasting station, the **Downloadable U.S. Rating** menu is deactivated.

Parental restriction levels differ depending on the broadcasting station. The default menu name and the **Downloadable U.S. Rating** name changes depending on the downloaded information.

Even when the on-screen display is set to another language, the **Downloadable U.S. Rating** menu appears only in English.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

Watching Blocked / Restricted Programs

To watch a blocked program, enter the PIN when requested.

When initially showing a restricted program or movie, the screen is blank because the **Program Rating Lock** blocks it. Enter the PIN to unblock the program when a message appears requesting the code.

Creating a Personal Favorites List

MENU > Broadcasting > Edit Favorites Try Now

You can designate frequently watched channels as favorite channels. Favorite channels are highlighted in the Edit Channel and Channel List screens with the 💚 symbol. You can create up to 5 favorite channel lists.

Registering Channels as a Favorites

MENU > Broadcasting > Edit Favorites

Registering the Current Channel as a Favorite

To register the current channel as a favorite:

1. While watching a TV channel, press the TOOLS button.
2. Select Edit Favorites from the list.
3. In the popup window that appears, select the Favorites lists you want, and then select OK.

   You can select more than one Favorites list.

4. Select OK again. The TV has added the current channel to the Favorites list(s) you selected.

Registering Multiple Channels as Favorites

To register multiple channels as favorites at the same time:

1. Press the **MENU** button, and then select **Broadcasting** > **Edit Favorites**.
2. Select the channels that you want to add to your Favorites list(s) from the list in the screen.
3. Select **Change Fav.** on the screen.
4. Press the button repeatedly on the standard remote to cycle through the Favorites list until the list you want appears.
5. Select **Add** on the screen. The TV adds the channels you selected to the Favorites list you chose.

Selecting from Favorite List Channels Only

To flip through Favorite list channels only and select a channel using the channel up/down buttons:

You can select a Favorites list only if it contains at least one favorite channel.

1. Press the **MENU** button, and then select **Broadcasting** > **Channel List**. The **Channel List** appears.
2. Press the > button. A Favorites list appears.
3. Press the < or > button to view other Favorites list.
4. Highlight a channel from the selected Favorites list using the channel up/down buttons, and then select it. The channel changes.

Editing a Favorites List

MENU > Broadcasting > Edit Favorites

You can rename and edit Favorites lists.

Edit Favorites Screen Menu Items

Select Options on the Edit Favorites screen to access the following options:

- Copy to Favorites

  Copy channels from one favorite channels list to another. Refer to the "Copying Channels from One Favorites list to Another" section for more information.

  You can use Copy to Favorites only if you have registered one or more channels to at least one Favorites list.

- Rename Favorites

  Rename an existing favorite channels list. Refer to the "Renaming a Favorites List" section for more information.

  You can use Rename only if you have registered one or more channels to at least one Favorites list.

- Antenna

  Choose between Air and Cable.

- Edit Channel

  Lets you manage the channels saved on the TV. For more information, refer to "Registering, Removing, and Editing Channels".

- Information

  View detailed information about the current program.

Removing Registered Channels from a Favorites List

To remove channels from a favorite list:

1. Select **Change Fav.**.
2. Press the ⏎ button repeatedly to change the Favorites list on the screen to the Favorites list you want to use.
3. Select the channels you want to remove from the selected Favorites list.
4. Select **Delete**. The channels are removed.

Rearranging a Favorites List

To rearrange the order of the channels in a favorite channels list:

1. Select **Change Fav.** at the screen.
2. Press the ⏎ button repeatedly to change the Favorites list displayed to the Favorites list you want to use.
3. In the selected Favorites list, choose the channels you want to rearrange.

   The TV will move the channels you selected as a group and rearrange them so they are displayed one after another in their new location.

4. Select **Change order**. The Change Order highlight appears highlighting the channel you chose that is closest to the top of the screen.
5. Press the ∧/∨ arrow buttons to relocate the channels you selected. Press the ⏎ button to set the channels into their new location in the list.

Renaming a Favorites List

To rename an existing favorite channels list:

1. Select **Options** on the screen. A list of Options appears.
2. Select **Rename Favorites** from the list. A popup window appears.
3. In the popup window, select the Favorites list whose name you want to change. The on-screen keyboard appears.
4. On the keyboard, select the **Clear** button on the right. The current name displayed in the text entry field disappears.
5. Using the keyboard, enter a new name. The new name can be up to 20 characters long.
6. When finished, select **Done**. The list of favorite lists appears displaying the renamed list. Select **OK**.

Copying Channels from One Favorites list to Another

To copy channels from one favorite channels list to another:

1. Select **Change Fav.**
2. Press the button repeatedly to change the displayed Favorites list to the Favorites list that contains the channels you want to copy.
3. Select **Options** on the screen. A list of Options appears.
4. Select **Copy to Favorites** from the list. A popup window appears.

   Copy to Favorites is only available if there are channels in at least one Favorites list.
5. In the popup list, select the Favorites lists you want to copy the selected channels to.
6. When done, select **OK**. The TV copies the channels. Select **OK** again.

Making Sports Programs More Realistic with Soccer Mode

MENU > System > Soccer Mode

This function is not available in the U.S.A and Canada.

Enabling Soccer Mode

MENU > System > Soccer Mode > Soccer Mode

Go to System > Soccer Mode and then set Soccer Mode to On. The picture and sound modes of the TV are automatically optimized for sports events.

- Enabling Soccer Mode changes the Picture Mode to Stadium and the Sound Mode to Stadium, and disables some Picture and Sound menus.
- Press the button to turn Soccer Mode on or off.
- A (Zoom): Pause playback and divide the picture into 9 parts. Select a part to zoom it in.

TV-Viewing Support Features

Showing Captions

MENU > System > Accessibility > Caption Try Now

You can watch TV broadcasts with captions.

Even if enabled, captions will not be displayed by programs that do not support captions.

Enabling Captions Try Now

Select System > Accessibility > Caption > Caption

The TV cannot control or modify DVD or Blu-ray subtitles. To control DVD or Blu-ray subtitles, use the subtitle feature of the DVD or Blu-ray player and the player's remote control.

Selecting the Caption Language Try Now

Select System > Accessibility > Caption > Caption Mode to display a list of subtitle modes. The list of modes may vary depending on the broadcast.

- 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 broadcast 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 caption function works with digital channels. Service1 - Service6 may not be available in digital caption mode depending on the broadcast.

Changing the Font Color, Caption Size, and Font Opacity Try Now

Change the font color, background color, and size settings.

Select **System** > **Accessibility** > **Caption** > **Digital Caption Options** and then choose the setting to change.

- **Size**

  Use to change the font size. **Size** is not supported by analog channels.

- **Font Style**

  Choose the font style for the subtitles.

- **Font Color**

  Use to change the font color.

- **Background Color**

  Use to change the caption's background color.

- **Window Color**

  Use to select the color of the digital caption window.

- **Font Opacity**

  Use to change the caption's opacity.

- **Background Opacity**

  Use to change the background's opacity.

- **Window Opacity**

  Use to select the transparency level of the digital caption window.

- **Edge Type**

  Use to select outline type of the digital captions.

- **Edge Color**

  Use to select the color outline of the digital captions.

- **Return to Default**

  This restores all caption display options to **Default**. Setting to **Default** applies the TV station's transmitted settings.

The foreground and background color and opacity settings cannot be the same.

Enabling the Audio Guide for the Video Description

MENU > System > Accessibility > Video Description Try Now

Select System > Accessibility > Video Description. Activates the audio guide for the visually impaired. This function is only available with broadcasts that provide this service.

PIP Broadcast Viewing

MENU > Picture > PIP Try Now

Use the PIP ("Picture-In-Picture") function to watch TV in a small window within the main screen while also watching content from a DVD player, Blu-ray player, computer, or a different external device on the main screen.

Select Picture > PIP to display the PIP settings screen. The PIP settings screen contains the following options:

- **PIP Setting**

  Activates/deactivates PIP.

- **Antenna**

  Choose Air or Cable as the digital channel mode.

- **Channel**

  Select the PIP sub-picture channel.

- **Size**

  Select the PIP sub-picture size.

- **Position**

  Select the PIP sub-picture position.

- **Select Sound**

  Select the audio source.

Choose a broadcast.

- You cannot use PIP while using Smart Hub or the 3D function. (Applies in countries or for models supporting 3D.)
- Turning off the TV automatically disables PIP.
- Playing a game or using the karaoke feature on the main screen can result in lower PIP picture quality.
- For PIP to work, the main screen's source must be Component or HDMI and the input resolution must be less Full HD (FHD - 1080p). The PIP sub-screen supports digital channels only.

Scanning for Available Channels

MENU > Broadcasting > Auto Program Try Now

Automatically scans and indexes all channels received through the TV's antenna input connector.

- Do not use this function if your TV is connected to a cable or satellite box.
- If the TV has saved channels, Auto Program deletes the existing list, and then saves the newly scanned channels.

1. Select **Broadcasting** > **Auto Program**.
2. Select **Start** when prompted. This initiates the Auto Program function. The process can take up to 30 minutes to complete.

Selecting the Broadcast Audio Language

MENU > Broadcasting > Audio Options Try Now

Configure the program's audio language. Audio Options functions differently for analog and digital channels.

- Press the **INFO** button to view the current broadcast's audio signal information.

Selecting the Broadcast Audio Language (Digital)

- **Selecting a Language** Try Now

  Select **Audio Options** > **Preferred Language**, and then choose a language. Digital broadcasts contain audio signals in multiple languages. Digital programs that include the language you selected in **Preferred Language** are automatically played using that language. If the language you selected is not supported by the broadcast signal, the TV will use the default audio language broadcast by the TV station.

Selecting the Broadcast Audio Language (Analog)

- **Listening to Multi-Track Sound** Try Now

  Select **Audio Options** > **Multi-Track Sound**. Configure the audio for the current broadcast. **Multi-Track Sound** can be set to mono or stereo, depending on the broadcast signal or program. However, this option is automatically set to mono if the broadcast signal or program does not support stereo.

  Press the **INFO** button to view the current broadcast's audio signal information.

  While watching TV, press the **TOOLS** button, and then select **Multi-Track Sound**.

Fine-Tuning the Screen

MENU > **Broadcasting** > **Channel Settings** > **Fine Tune** Try Now

Available for analog broadcasts only.

Analog pictures can become shaky and full of noise. If this happens, you can fine-tune the signal and/or reduce noise to clear up the picture.

1. Select **Broadcasting** > **Channel Settings** > **Fine Tune**. An adjustment bar appears on the screen.
2. Press the < or > button to make adjustments. Select **Save** or **Close** to apply the new setting. Select **Reset** to reset the Fine-Tune operation.

Remove Scrambled Channels

MENU > **Broadcasting** > **Channel Settings** > **Clear Scrambled Channel**

Remove scrambled channels from your auto-programed channel list.

Changing the Picture Mode and Adjusting the Picture Quality

Choosing the Right Picture Mode for the Viewing Environment

MENU > Picture > Picture Mode Try Now

The following picture modes utilize different contrast and brightness settings to provide the best viewing experience for the environment.

Navigate to **Edit Name**, if you use the PC setting for PC or DVI PC, you can only available **Standard** and **Entertain**.

Some options may not be supported depending on the model or country.

- **Dynamic**

  If the ambient lighting is too bright and makes the screen blurry, use this mode to make the picture clearer.

- **Standard**

  This is the default mode suitable for most environments.

- **Natural**

  This mode is useful for reducing eye strain.

- **Movie**

  Appropriate for darkened rooms, for watching movies, and when experiencing eye fatigue. Darkens the screen and reduces glare.

- **Entertain**

  Sharpens images for a more dynamic viewing experience.

  This mode is only available when you use a PC setting for **PC** or **DVI PC** on **Edit Name**.

Adjusting the Picture Quality for Each Picture Mode

MENU > Picture

Select one of the settings below from the Picture menu to display the slide bar for the selected setting. Adjust the value by pressing the < or > button on your remote. Choose a different setting by pressing the ∧ or ∨ button. Adjusted values are applied to the current source and picture mode.

The Color and Tint (G/R) settings cannot be adjusted when the TV is connected to a computer via an HDMI to DVI cable.

Choose a Picture Mode - Dynamic, Standard, Natural, Movie - and then adjust the settings.

- Backlight Try Now

  Adjusts the brightness of individual pixels. Decreasing the brightness reduces power consumption.

- Contrast Try Now

  Adjusts the screen contrast.

- Brightness Try Now

  Adjusts the overall brightness.

- Sharpness Try Now

  Sharpens or dulls the edges of objects.

- Color Try Now

  Adjusts the overall color saturation.

- Tint (G/R) Try Now

  Adjusts the ratio of green to red. Increase the green value to saturate the greens and the red value to saturate the reds.

Adjusted values are saved by the TV for the current source and picture mode, and remain in effect each time the source and picture mode is selected. Consequently, the TV can have different picture settings for each external source.

Applying the Current Picture Settings to Other Input Sources Try Now

MENU > Picture > Apply Picture Mode

You can apply the picture quality setting that you configured for the TV to all external devices connected to the TV or to the current source only.

To apply the setting to all external devices connected to the TV, select All Sources. To apply the setting to the current input only, select Current Source.

Fine-Tuning Each Picture Mode (Advanced Settings)

MENU > Picture > Advanced Settings Try Now

Select Picture > Advanced Settings to fine-tune how images are displayed on the TV screen for each Picture Mode.

- Advanced Settings is only available when the Picture Mode is set to Standard or Movie.
- When the TV is connected to a computer via an HDMI-DVI cable, only White Balance and Gamma can be adjusted.

Choose a Picture Mode and then adjust the settings.

- Dynamic Contrast Try Now

  Automatically adjusts the screen contrast. Use this option to achieve the optimal contrast setting.

- Black Tone Try Now

  Adjusts the black color depth.

- Flesh Tone Try Now

  Darkens or lightens skin tones.

- RGB Only Mode Try Now

  Adjusts the red, green, and blue levels individually.

- **Color Space**

  For the LED 5200, 5300, 4300 and 4200 series models, **Custom** is not supported.

  Adjusts the range of colors (the color space) that the TV can display. **Auto** automatically adjusts the color space depending on the input signal. **Native** applies a range that is wider than the input signal. **Custom** allows you to adjust the color space manually.

- **White Balance**

– **For the LED 5200, 5300, 4300 and 4200 series models**

  You can adjust the color temperature of the picture to make white objects look white and the overall picture appear natural. You can adjust each of the 3 color's luminosity with the offset menu and the brightness with the gain menu. To restore the default values, select **Reset**.

– **For the LED 6200 series and higher**

  You can adjust the color temperature of the picture to make white objects look white and the overall picture appear natural.

  2 Point: Lets you adjust red, green, and blue luminosity with the offset menu and brightness with the gain menu. To restore the default values, select **Reset**.

  10 Point: Divides red, green, and blue into 10 sections each, and lets you modify the white balance by adjusting the brightness of each section. Select the section to adjust in the **Level** field.

  You can use the **10 Point** function only when the **Picture Mode** is set to **Movie**. Some external devices may not support this function.

- **Gamma** Try Now

  Adjusts the primary color intensity.

- **Motion Lighting** Try Now

  Adjusts the brightness in response to on-screen movements to reduce power consumption.

  This feature is only available when the **Picture Mode** is set to **Standard** and is not available in 3D mode. (Applies in countries or for models supporting 3D.)

  Adjusting the **Contrast**, **Brightness**, and other picture quality settings deactivates **Motion Lighting**.

Adjusting the Picture for Easier Viewing (Picture Options)

MENU > Picture > Picture Options Try Now

Select Picture > Picture Options to make additional adjustments for a better viewing experience.

When the TV is connected to a computer via an HDMI-DVI cable, only Color Tone can be adjusted.

Choose a Picture Mode and then adjust the settings.

- Color Tone Try Now

  Adjusts the color tone. The setting is applied on an individual Picture Mode basis. When you select a new Picture Mode, the TV applies the Color Tone you selected for that mode automatically.

  If the Picture Mode is set to Dynamic, you will only be able to choose Cool or Standard.

- Digital Clean View Try Now

  Reduces static and ghosting caused by a weak signal. Selecting Auto Visualization displays the signal strength on the screen. Green indicates the best possible signal.

  This function is only available for analog channels.

- MPEG Noise Filter Try Now

  Reduces MPEG noise and improves video quality.

- HDMI Black Level Try Now

  Some external devices connected to the TV via an HDMI cable can have issues such as low black level, low contrast, and dull colors. Use HDMI Black Level to adjust the black level to compensate.

  HDMI Black Level is only available when you are viewing content from an external device connected to the TV via an HDMI connection.

- **Film Mode** Try Now

  Optimizes the picture quality for movies. Select this mode for watching movies.

  This feature is only available when you are watching a TV broadcast or when the input signal is AV, Component (480i, 1080i), or HDMI (1080i).

- **Auto Motion Plus**

  This function is only available with the LED 6200 series and higher.

  Removes blurring and judder from scenes with rapid movement. If you select **Custom**, you can configure Blur Reduction and Judder Reduction manually and set **LED Clear Motion** on for a sharper LED image.

  If you have **Auto Motion Plus** on, and then bring up the **INFO** screen, the **INFO** screen displays the resolution and frequency of the incoming video signal (60Hz). This frequency is not the same as the frequency of the picture the TV is displaying when **Auto Motion Plus** is on.

  If **LED Clear Motion** is **On** and the TV is receiving a 60Hz video signal, the screen may flicker.

- **LED Clear Motion**

  This function is only available for the LED 5200, 5300, 4300 and 4200 series.

  Removes drag from fast scenes with a lot of movement to provide a clear picture.

Viewing in 3D

MENU > Picture > 3D

3D is not available in the U.S.A. and Canada and is only available on LED 6200 series TVs or higher.

The 3D option lets you view 3D media content and broadcasts. You will need to wear Samsung 3D Active Glasses to play 3D content. IR-type Samsung 3D Active Glasses and third-party 3D glasses are not supported.

- Carefully read the health and safety information concerning 3D viewing before viewing 3D content. Refer to the "3D Precautions" section for more information.
- Whether 3D video is displayed in true HD is usually determined by the quality and format of the video.

Starting 3D

1. Press the 3D button on your remote control or select the 3D On-Screen Remote.
2. Play 3D content.
3. Put on the Samsung 3D glasses, and then turn the glasses on. 3D viewing is enabled.

The ideal viewing distance is three times the height of the screen or more. 3D images may not appear if you do not adhere to the recommended viewing angle or distance.

The 3D feature may not work properly if there is another 3D product or an electronic device running nearby. If there is a problem, keep other electronic devices as far away as possible from the 3D Active Glasses.

The left and right 3D images may initially overlap when the TV is turned on. It takes a moment for the display to optimize and the overlapping to stop.

There are several restrictions when using 3D TV:

- Launching Smart Hub automatically disables 3D mode.
- PIP cannot be used.
- Certain Picture options are disabled.

Changing the 3D Mode

MENU > Picture > 3D > 3D Mode

1. Press the **3D** button on your remote to start the 3D function, and then select **3D Mode** under **Picture > 3D**.
2. Choose from the 3D modes that appear on the screen. The supported 3D Modes may vary depending on the 3D content.

   3D Mode is automatically configured for most 3D content.

The following 3D Modes are available. However, mode availability may vary depending on the 3D content's format.

The supported resolutions vary for each mode. Refer to the "Supported Resolutions for 3D Modes" section for more information.

- (Off)

  Deactivates 3D viewing.

- (Normal)

  Converts normal images to 3D images.

  Some formats do not support this mode.

- (L/R)

  Splits a single image into left and right overlapping images to create the 3D effect.

- (T/B)

  Splits a single image into top and bottom overlapping images to create the 3D effect.

Adjusting the 3D Effect

MENU > Picture > 3D

Configure the viewpoint, depth, and other 3D settings for a custom viewing experience.

All 3D effects with the exception of **3D Auto View** can only be used while watching 3D content.

- **Adjusting the 3D Viewpoint**

  Select **Picture** > **3D** > **3D Perspective**. Use the adjustment bar shown on the screen to adjust the viewpoint.

- **Adjusting the 3D Depth**

  Select **Picture** > **3D** > **Depth**. Use the adjustment bar shown on the screen to adjust the depth.

  This option cannot be used if 3D mode is set to (L/R) or (T/B).

- **Reversing the Left/Right 3D Images**

  Select **Picture** > **3D** > **L/R Change**. Use to reverse the left and right images.

- **Displaying 3D Content in 2D**

  Select **Picture** > **3D** > **3D → 2D**. Use to enable 2D viewing of 3D content.

  This function is not available if 3D mode is set to (Normal) or (Off).

- **Adjusting 3D Brightness**

  Select **Picture** > **3D** > **3D Light Control**. Adjust the 3D brightness level. If the screen is too dark, select **High**.

Picture Support Functions

PIP Broadcast Viewing

MENU > Picture > PIP Try Now

Watch video from an external device such as a Blu-ray player on the main screen while viewing a TV broadcast in a picture-in-picture window.

Select Picture > PIP to display the PIP settings window. The PIP settings window contains the following options:

- **PIP**

  Activates/deactivates PIP.

- **Antenna**

  Choose Air or Cable as the input source for the PIP sub-picture window.

- **Channel**

  Selects the PIP sub-picture channel.

- **Size**

  Selects the PIP sub-picture size.

- **Position**

  Selects the PIP sub-picture position.

- **Select Sound**

  Selects the audio source.

Choose a broadcast.

- PIP cannot be used while Smart Hub or 3D is active. (Applies in countries or for models supporting 3D.)
- Turning off the TV automatically disables PIP.
- Playing a game or using the karaoke feature on the main screen can result in a lower PIP picture quality.
- For PIP to work, the main screen's source must be Component or HDMI and the input resolution must be less than FHD (Full HD). The PIP sub-screen supports digital channels only.

Changing the Picture Size and Position

Choosing the Right Screen Size Try Now

MENU > Picture > Picture Size > Picture Size

Most TV programs and videos are displayed in full screen, but some programs and videos are displayed in sizes that are larger or smaller. You can change the screen size for such programs and videos so that the picture fits the screen better.

Supported screen sizes vary depending on the input signal. Refer to the "Picture Sizes and Input Signals" section for more information about supported screen sizes.

- **16:9**

  Set the picture to the 16:9 wide-screen format.

- **Zoom1**

  Magnify 16:9 pictures vertically. A magnified picture can be moved up and down.

- **Zoom2**

  Magnify Zoom1 picture even more. A magnified picture can be moved up and down.

- **Wide Fit**

  Enlarge the aspect ratio of the picture so it fits the entire screen. Enjoy 4:3 images as undistorted 16:9 images.

- **4:3**

  Sets the picture to basic 4:3 mode.

- **Screen Fit**

  Displays the full image without any cutoff.

- **Smart View 1**

  Reduces a 16:9 picture by 50%.

- **Smart View 2**

  Reduces a 16:9 picture by 25%.

Adjusting the Screen Position Try Now

MENU > **Picture** > **Picture Size** > **Position**

Adjusts the screen position.

This option is only available with **Size** set to **Zoom1**, **Zoom2**, **Wide Fit**, or **Screen Fit**. When the TV is tuned to a digital channel, the screen position cannot be adjusted if the **Picture Size** is set to **Screen Fit**.

1. To adjust the screen's position, select **Picture** > **Picture Size** > **Position**. A popup window appears.
2. Select **Position** again from the popup window.
3. Press the ∧, ∨, < or > button to move the screen. When done, select **Position** and then **Close**. Select **Reset** to reset the screen position.

Listening to Audio Only with the Screen Turned Off (Picture Off)

MENU > **Picture** > **Picture Off** Try Now

Turns off the screen and plays audio through the speakers only. To turn the screen back on, press any button other than the power and volume buttons.

Resetting the Picture Mode Settings

MENU > **Picture** > **Reset Picture** Try Now

Use this option to reset the current **Picture Mode** to its factory settings. This does not affect the settings of other Picture Modes.

Changing the Sound Mode and Using Sound Effects

Choosing the Right Sound Mode for the Environment

MENU > Sound > Sound Mode Try Now

Sound modes apply preset adjustments to the sound output, optimized for different viewing and listening circumstances.

The sound modes cannot be used when you are listening to audio through external speakers.

- **Standard**

  This is the normal sound mode.

- **Music**

  This mode emphasizes normal music instead of voices.

- **Movie**

  This mode is calibrated to provide the best sound for movies.

- **Clear Voice**

  This mode emphasizes voices.

- **Amplify**

  This mode increases the overall intensity of high-frequency sounds for a better listening experience. It is designed for hearing-impaired listeners.

Using Sound Effects

MENU > Sound > Sound Effect Try Now

Use sound effects to alter how the TV projects sound.

Sound effects can only be used if the **Sound Mode** is set to **Standard**.

The sound effects cannot be used when you are listening to audio through external speakers.

Choose a **Sound Effect** and then adjust the settings.

- **DTS TruSurround HD** Try Now

  Produces sound that will make you feel like you are sitting in a movie theater or concert hall.

- **DTS TruDialog** Try Now

  Increases voice intensity to make dialog clearer.

- **Equalizer** Try Now

  Lets you adjust the speaker balance and make bandwidth adjustments. Select **Reset** to reset the settings.

Sound Support Functions

Selecting Speakers

MENU > Sound > Speaker Settings > TV Sound Output

TV Sound Output lets you choose which speakers the TV uses for audio output. Select Sound > Speaker Settings > TV Sound Output, and then select the speakers from the list. To listen to audio through the TV's speakers and the speakers of a connected AV receiver or home theater simultaneously, select TV Speaker. If this causes an echo effect, choose any speaker option other than TV Speaker to mute the TV speakers, or turn off the receiver or home theater.

Using external speakers alone disables the volume button and the mute function. In addition, certain Sound options are also disabled.

- TV Speaker

  Listen to the TV's audio through the TV's internal speakers.

- Audio Out

  Listen to the TV's audio though headphones or through the speakers of a device connected to the TV via a digital optical cable.

Designating the TV's Installation Type

MENU > Sound > Speaker Settings > TV Installation Type

Specify the TV's installation type. Choose between Wall Mount and Stand to optimize the TV's sound automatically.

Enabling Digital Audio Output

MENU > Sound > Additional Settings Try Now

This Smart TV is SPDIF-enabled. The Sony Philips Digital Interface (SPDIF) provides digital audio output to speakers and various digital devices, including A/V Receivers and home theaters.

- Audio Format Try Now

  Selects the Digital Audio output (SPDIF) format. The available Digital Audio output (SPDIF) formats may vary depending on the input source.

- Audio Delay Try Now

  This setting helps correct timing mismatches between the audio and video tracks when you are watching TV and listening to audio through a digital audio device. Enabling the feature displays a slide bar that you can use to adjust the delay by up to 250ms.

- Dolby Digital Comp Try Now

  Set Dolby Digital compression mode.

- Auto Volume Try Now

  When you change channels, video sources, or content, Auto Volume automatically adjusts the TV's volume level so that the volume level remains the same for all sources. For example, if you switch from a streaming video application to a Blu-ray player or a favorite TV channel, Auto Volume can modify the volume up to 12db to equalize the sound.

  The Auto Volume function has two settings: Normal and Night. Normal applies a normal level of volume adjustment. Night applies a slightly lower volume level and is ideal for late-night TV viewing. If you want to use the volume control of a connected source device to control the sound, deactivate the Auto Volume function. When you use the Auto Volume function with a source device, the device's volume control may not function properly.

Listening to 3D Audio in 3D Mode

MENU > Sound > 3D Audio

This function is not available in the U.S.A and Canada.

This function is only available for the LED 6200 series models.

3D audio technology provides immersive sound that matches the pop-up effect of 3D video by using perspective in the audio depth control.

This function is only available in 3D mode.

Resetting All Sound Settings

MENU > Sound > Reset Sound Try Now

Use to reset all sound settings to the factory defaults.

Setting the Time and Using the Timer

Setting the Current Time

MENU > System > Time > Clock Try Now

Set the clock manually or automatically.

To view the time after the clock is set, press the INFO button on your remote.

The clock must be reset every time the power is disconnected.

Setting the Clock using Digital Broadcast Info

MENU > System > Time > Clock > Clock Mode Try Now

Set Clock Mode to Auto. The TV automatically downloads the correct time from a digital channel. To enable this option, the TV's Antenna jack must be connected to either an antenna or a cable output and must be receiving digital broadcasts. The accuracy of the time information received may vary depending on the channel and signal. If your TV is connected to a set-top-box or satellite box using HDMI or Component connections, you must set the time manually.

If the Clock is Wrong in Auto Mode...

MENU > System > Time > Clock > Time Offset Try Now

If the time the TV sets automatically is incorrect, you can offset the clock in 1-hour increments by as much as -/+ 12 hours. Select System > Time > Clock > Time Offset, and then offset the clock to the correct time.

Time Offset adjusts the time through a network connection and is only available if the Clock Mode is set to Auto and the TV is connected to the Internet though a local area network.

Time Offset adjusts the time if the TV fails to receive time information through normal digital broadcast signals.

Setting the Clock Manually

MENU > System > Time > Clock > Clock Set Try Now

To enter the time and date manually, follow these steps.

1. Set **Clock Mode** to **Manual**, and then select **Clock Set**.
2. Select **Date**. The date entry pop-up appears.
3. Use the ∧ and ∨ buttons to change the month. When done, move to the date field and then the year field and set them in the same fashion. When done, press the **RETURN** button on your remote.
4. Select the **Time** field. Use the ∧ and ∨ buttons to set the hour.
5. When done, move to the minutes field and then the am/pm field and set them in the same fashion. When done, press the **RETURN** button on your remote.

Using the Timers

Using the Sleep Timer

MENU > System > Time > Sleep Timer Try Now

This function automatically shuts off the TV after a preconfigured period of time. Select **System** > **Time** > **Sleep Timer**. You can set the timer up to 180 minutes in 30-minute increments.

Turning On the TV using On Timer

MENU > System > Time > On Timer Try Now

Set the On Timer so that the TV turns on automatically at a chosen time. You can set up three separate On Timer configurations concurrently: On Timer 1, On Timer 2, and On Timer 3. The On Timer is only available if the Clock has been set.

- Setup

  Select Off, Once, Everyday, Mon~Fri, Sat~Sun, or Manual. If you select Manual, you can select the days you want the On Timer to turn on the TV by highlighting each day, and then selecting it.

- Time

  Set the time that the TV turns on automatically. See "Setting the Clock Manually" for time setting instructions.

- Volume

  Specify the volume the TV will set itself to when it turns on.

- Source

  Select a signal source from the list. This is the source the TV will access when it turns on. If you want to use a USB device, that USB device must be connected to the TV before you start the On Timer set up. To play back media from an HDMI or Component source such as a DVD player, Blu-ray player, or set-top-box, you must leave the device on. It must be on and playing when the TV turns on.

- Antenna

  If you have set the Source to TV, select a broadcast signal source, Air or Cable.

- Channel

  If you have set the Source to TV, select a channel.

- Music / Photo

  If you have set the Source to USB, specify a USB device folder containing music files in the music field and/or a folder containing photos in the photo field. If you select a folder that contains music files and a folder that contains photo files, the TV plays the music files and displays the photos at the same time.

To select (for example) a music folder, follow these steps:

1. Select the music field. The music screen appears.
2. If you have no folders in the USB drive and all your music files are in the root directory, highlight, and then select the **Select** button. The USB drive is selected and the On Timer screen reappears displaying the name of the USB drive in the music field.
3. If you have folders with music on the USB drive, press the button. The TV displays all the folders on the drive.
4. Scroll the list of folders until the folder you want appears. Move the highlight to the **Select** button to the right of the folder. Press the button. The **On Timer** screen reappears displaying the folder name in the music field.

   If the folder you choose has sub-folders, you can select a sub-folder in the same fashion.

5. If you want, select a photo folder in the same way. Start by selecting the photo field.

This feature will not function properly if the selected USB device does not contain media files or a folder has not been specified.

The slideshow will not start if there is only one image file on the USB device.

Folders with long names cannot be selected.

Always use different folder names for multiple USB devices.

Use a USB memory stick or multi-card reader. The **On Timer** may not work with certain battery-powered USB devices, MP3 players, or PMPs because the TV may take too long to recognize the device.

Turning Off the TV Using the Off Timer

MENU > **System** > **Time** > **Off Timer** Try Now

Set the **Off Timer** to turn the TV off automatically at a specific time. You can set up three separate Off Timer configurations concurrently: **Off Timer 1**, **Off Timer 2**, and **Off Timer 3**. The Off Timer is available only if the **Clock** has been set.

- **Setup**

  Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Sat~Sun**, or **Manual**. If you select **Manual**, you can select the days you want the **Off Timer** to turn off the TV by highlighting each day, and then selecting it.

- **Time**

  Set the time that the TV turns off automatically.

Using the Screen Burn Protection and Energy Saving Features

Preventing Screen Burn

MENU > System > Auto Protection Time Try Now

Still images can leave burned-in after-images on the screen if left on the screen for a long period of time. Use Screen Burn Protection to protect the screen. Select System > Auto Protection Time and then choose a time setting from the list. If a still image is shown on the screen for longer than the time you selected, the TV will automatically activate the Screen Burn Protection function to prevent burnt-in after-images.

Using Energy Saving Features

MENU > System > Eco Solution Try Now

Eco Solution adjusts the TV's brightness level and prevents overheating to reduce overall power consumption.

- Energy Saving Try Now

  Select a brightness setting from the list to reduce the TV's power consumption.

- Eco Sensor Try Now

  Automatically adjusts the TV's brightness level based on the ambient light level to reduce the TV's power consumption. If the Eco Sensor has adjusted the screen's brightness level, you can manually adjust the screen's minimum brightness level by adjusting the Min. Backlight or Min Cell Light (in applicable models). Changing the Backlight or Min Cell Light setting (in applicable models) while Eco Sensor is running automatically disables Eco Sensor.

  This function is not available for the LED 4500 series models.

- No Signal Power Off Try Now

  Select a time from the list. If no signal is received for the specified duration, the TV will automatically cut off the power to reduce power consumption.

- Auto Power Off Try Now

  If the TV remains on for four hours without any user input, the TV will automatically turn off to prevent overheating.

Using the e-Manual

Launching the e-Manual

MENU > Support > e-Manual

The embedded e-manual contains information about your TV's key features.

- Alternatively, you can download a copy of the e-manual from Samsung's website, and read it on your computer or print it out.
- Words in yellow (e.g., Picture Mode) indicate a menu item and bold words in white (e.g., Smart Hub) indicate remote control buttons.
- Arrows are used to indicate the menu path. (Example: MENU > Picture > Picture Mode)

1. Press the E-MANUAL button on the remote. You can also select Support > e-Manual in the TV's menu.
2. Select a category from the left side of the screen. Once a selection has been made, the contents of the selected category appears on the right side of the screen.
3. Select an item from the list. This opens the e-manual on the corresponding page.

If a description doesn't fit on a single screen...

- Position the focus on the page to display ⌃ / ⌄ on the screen. Press the ⌃ or ⌄ buttons to scroll the page up and down.

Additional e-Manual Features

Loading Pages using Keywords

Select Search to bring up the search screen. Enter a search term, and then select Done. Select an item from the search results to load the corresponding page.

Loading Pages from the Index Page

Select Index to bring up the index screen. Select a topic from the list to navigate to the relevant page.

Using History to Load Previously Read Pages

Select **Opened page**. A list of previously read pages is shown. Select a page. The e-Manual jumps to the selected page.

Accessing the Menu from the e-Manual

Select (Try Now) from the right side of a feature-description page to access the corresponding menu item and try out the feature right away. If you want to read the e-Manual entry on a specific screen menu feature:

– Press the **e-Manual** button on the remote to load the corresponding e-Manual page.

The e-Manual cannot be accessed from some menu screens.

Loading Reference Pages

Select (Link) from the right side of a feature-description page to access the corresponding reference page.

Updating the e-Manual to the Latest Version

You can update the e-Manual in the same way you update apps.

1. Press the button to open the **First Screen**, and then select the Panel icon. The Panel screen appears.
2. Go to the **SAMSUNG APPS** screen and the highlight the **e-Manual**.
3. Press and hold the button. The Tools menu appears.
4. Select **Update Apps** from the Tools menu. A popup window appears.
5. Select **e-Manual** in the popup window, and then select **Update**.

Configuring Auto Update

MENU > Smart Hub > Apps Settings

To update the e-Manual automatically, navigate to the **Smart Hub > Apps Settings** menu, and then set the **Auto Update** option to **On**. The e-manual is updated automatically when an update becomes available.

Updating the TV's Software

MENU > Support > Software Update Try Now

View your TV's software version and update it if necessary.

The TV is set to update software automatically via the internet by default. If you don't want to update it automatically, set Auto Update (Support > Software Update > Auto Update) to Off.

⚠ **DO NOT turn off the TV's power until the update is complete. The TV will turn off and on automatically after completing the software update. All video and audio settings return to the default settings after a software update.**

Update now

MENU > Support > Software Update > Update now Try Now

Update now lets you update your TV's software in three ways:

- Online, by downloading the update from the Internet directly to your TV.
- Manually, using a USB flash drive.
- Automatically (Auto Update), while the TV is in Standby Mode.

Each method is explained below.

Online

To update your TV using the Online method, follow these steps:

1. Make sure that your TV is connected to your local network and the Internet. The connection can be wired or wireless.
2. All video and audio settings return to their default settings after a software update. We recommend you record your current settings now so you can easily re-establish your settings when the update is complete.
3. Press the MENU button, and then select Support > Software Update > Update now. The Update now pop-up appears.
4. The TV searches on line for the latest software version for your TV.
5. If it does not find an update, the "No new updates" pop-up appears. Press the EXIT button to exit.
6. If the TV finds a new version, the Update Request pop-up appears.
7. Select OK. The TV updates the software, turns off, and then turns on automatically.

   Do not turn off the TV during the Software Update. It may cause the TV to malfunction.

Manually, Using a USB Flash Drive

To update your TV using the Manual method, follow these steps:

1. All video and audio settings return to their default settings after a software update. We recommend you record your current settings so you can easily re-establish these settings when the update is complete.
2. On a computer, visit www.samsung.com.
3. Select GET SUPPORT > Get Downloads.
4. Enter the product's model number into the search field. As you enter the model number, a drop down will display products that match the model number.
5. Click your product's model number in the drop down list.
6. On the page that appears, scroll down to and then click Downloads.
7. Click Firmware in the center of the page.
8. Click the ZIP button in the File column.
9. Click Send in the first pop-up that appears.
10. Click Save in the second pop-up to download, and then save the firmware file to your computer.
11. Unzip the zip archive to your computer. You should have a single folder with the same name as the zip file.
12. Copy the folder to a USB flash drive.
13. Insert the USB flash drive into a USB port of the TV.
14. In the TV's menu, go to Support > Software Update > Update now. The TV searches for the software on the USB drive. When it finds the software, the Update Request pop-up appears.
15. Select OK. The TV updates the software, turns off, and then turns back on automatically.

Do not turn off the TV during the Software Update. It may cause the TV to malfunction.

Enabling Automatic Software Updates

MENU > Support > Software Update > Auto Update Try Now

If the TV is connected to the Internet, it can be updated via Auto Update while watching the TV. When the Background upgrade completed, the update will be applied the next time the TV is used.

This option requires an Internet connection.

If you agree to the Smart Hub terms and conditions, Auto Update will be set to On automatically. If you don't want the TV's software updated automatically, set Auto Update (Support > Software Update > Auto Update) to Off.

Protecting the TV from Hacking and malicious code

MENU > System > Smart Security

When the TV is connected to the Internet, it is vulnerable to hacks and malicious code. Smart Security protects the TV and storage media connected to the TV from such threats.

Navigate to System > Smart Security and set Smart Security to On.

Checking the TV and Connected Storage Media

MENU > System > Smart Security > Scan

Navigate to System > Smart Security and select Scan. This scans the TV and connected media for the presence of malicious code. If no malicious code is detected, a notification window appears on the screen.

If malicious code is detected...

If malicious code is found, the results of the scan will appear on the screen. This result window displays all malicious code found, and provides options to either quarantine the code or allow it to function.

1. Select all the malicious code you want to quarantine or allow.
2. Select **Block** or **Allow**. This moves the selected malicious code to the **Isolated List** or **Allowed List**.

   The **Isolated List** displays all quarantined and blocked malicious code. You can also relocate codes from this list to the Allowed List.

   The **Allowed List** displays all allowed malicious code. You can also relocate codes from this list to the Isolated List.

Automatically Scanning when the TV is Powered On

MENU > **System** > **Smart Security** > **Settings** > **Auto Scan**

Navigate to **System** > **Smart Security** > **Settings** and then set **Auto Scan** to **On**. This automatically scans the TV and connected storage media when the TV is powered on.

Automatically Adding malicious code to the Blocked List

MENU > **System** > **Smart Security** > **Settings** > **Move to Isolated List automatically**

Navigate to **System** > **Smart Security** > **Settings** and set **Move to Isolated List automatically** to **On**. Malicious code found during the scanning process is automatically added to the Blocked List.

Using Other Functions

Setting Up a Password

MENU > System > Change PIN Try Now

Set a PIN (Personal Identification Number) to lock channels, reset the TV, and change the TV settings.

1. Select System > Change PIN. The PIN input window appears.
2. Enter a PIN. The default PIN is 0000.
3. Enter a new PIN and then enter it again to confirm it. The PIN change is complete.

If you forget your PIN, you can reset it using your remote control. With the TV turned on, press the following buttons on the remote to reset the PIN to 0000: MUTE → + → RETURN → − → RETURN → + → RETURN. "+" is the Volume Up button. "-" is the Volume Down button.

Changing the Menu Language

MENU > System > Menu Language Try Now

Use this option to change the menu language. Select System > Menu Language, and then choose a language from the list.

Checking Notifications

MENU > System > Notifications

Select Notifications from the System menu to view the list of event messages generated by the TV. Notifications appear on the screen when events such as an update release for an app or Samsung Account login/logout occurs.

Select Delete All to delete all notifications.

Select Service Notice to check the SMART TV service notifications in a web browser.

Adjusting the Menu Transparency

MENU > System > Accessibility > Menu Transparency Try Now

Navigate to System > Accessibility and adjust the opacity level and the menu's transparency.

When the High Contrast (System > Accessibility > High Contrast) setting is set to On, the menu display is automatically set to opaque and you cannot change the Menu Transparency settings.

White Text on Black Background (High Contrast)

MENU > System > Accessibility > High Contrast

Navigate to System > Accessibility and set High Contrast to On. This option changes major service screens to white text on a black background or changes the transparent TV menus to opaque so that text can be read more easily.

Expanding the Smart Hub's Focus Area

MENU > System > Accessibility > Enlarge Try Now

Navigate to System > Accessibility and set Enlarge to On. This zooms in the focused item when you use Smart Hub and makes the item larger.

Locking/Unlocking the Panel Keys

MENU > System > General > Panel Lock Try Now

Use to lock and unlock the TV's front panel buttons (menu, channel, and volume) and the control stick on the back of the TV. Select System > General > Panel Lock and lock/unlock the keys.

Showing/Hiding the Samsung Logo while Booting

MENU > System > General > Boot Logo Try Now

Use to enable or disable the Samsung logo display that appears when the TV starts up.

Enabling Game Mode

MENU > System > General > Game Mode Try Now

Game Mode optimizes the TV's settings for playing video games on a gaming console such as PlayStation™ or Xbox™.

- Game Mode cannot be used for normal TV viewing.
- Connect the gaming console before enabling Game Mode. Otherwise, the picture quality may suffer.
- The screen may shake a little.
- Enabling Game Mode automatically sets the Picture Mode to Standard and the Sound Mode to Movie.
- To use a different external device, first disconnect the game console and disable Game Mode.

Enjoying Rich Colors and Superior Picture Quality (BD Wise)

MENU > System > General > BD Wise

This function is only available for the LED 6200 series models.

Connecting a Samsung DVD player, Blu-ray player, or home theater system that supports BD Wise enables the richest colors and best possible picture quality. Enabling BD Wise automatically optimizes the TV's resolution.

- This feature is only available when the external device is connected via an HDMI cable.

Registering the TV as a DivX-Certified Device (To Watch For Pay DivX Movies)

MENU > System > DivX® Video On Demand Try Now

To watch DivX DRM protected movies on the TV, you must register the TV as a DivX certified device.

- DRM stands for Digital Rights Management and is a technical security mechanism to protect the copyright of the content provider.
- You can watch movies that you have free DivX movies without registration.
- Visit the DivX website (http://www.divx.com) and log into your user account before registering the TV as a DivX-certified device. If you do not have an account, please create one.

1. Select System > DivX® Video On Demand. A window with a registration code appears on the screen.
2. Visit the DivX website on a computer, and then click [Register Your Device] under [Support] in the top menu.
3. Enter the registration code shown on the TV's screen in the [Enter your registration code] field.
4. Enter the TV's name in the [Name your device] field, and then click [NEXT].
5. Click [DOWNLOAD], and then save the [device_name.divx] file.
6. Transfer the [device_name.divx] file from the computer onto a USB device, and then plug the USB device into the TV.
7. Run the [device_name.divx] file on the TV to register the TV as a DivX-certified device.

Restoring the TV to the Factory Settings

MENU > Support > Self Diagnosis > Reset Try Now

This option restores all TV settings (excluding the Internet and network settings) to the factory defaults.

1. Select Support > Self Diagnosis > Reset. The Security PIN entry window appears on the screen.
2. Enter the Security PIN, and then select Yes. All settings are then reset. The TV turns off and on again automatically, and then displays the Setup screen.

For more information on Setup, refer to the user manual that came with the TV.

Using the TV as a Display Model (exclusively for retail stores)

MENU > Support > Use Mode Try Now

Select Support > Use Mode > Store Demo. This turns the TV into a display model for use in a retail environment.

For all other uses, select Home Use.

Store Demo should be used in retail environments only. With Store Demo, certain functions are disabled and the TV automatically resets itself after a certain amount of time.

Getting Support

The TV has several built-in systems designed for user and TV system support.

Support through Remote Management

MENU > Support > Remote Management Try Now

If you need assistance with your TV, you can use this feature to let Samsung Electronics diagnose your TV remotely. You will need to read and agree to the service agreement before using this feature. A Samsung Electronics technician will then diagnose, repair, and update your TV remotely. These features are only available when your TV is connected to the Internet.

Getting Remote Support

Samsung Remote Support service offers you one-on-one support with a Samsung Technician who can remotely.

- **Diagnose** your TV
- **Adjust the TV settings** for you
- Reset your TV to its factory settings.
- Install recommended **firmware updates**

How Does it Work?

Having a Samsung Tech service your TV remotely is easy.

Call the Samsung Contact Center and ask for remote support.

Open the menu on your TV and go to the **Support section**.

Select **Remote Management**, and then read and agree to the service agreements. When the PIN screen appears, provide the PIN number to the agent.

The agent **accesses your TV**.

Finding the Information You Need for Service

MENU > **Support** > **Contact Samsung** Try Now

Use this option to display the address of the Samsung website, the call center phone number, your TV's model number, your TV's software version, the Smart Hub info, and other information you may need to get service support from a Samsung call agent or the Samsung website.

There is a problem with the picture

Testing the Picture

MENU > Support > Self Diagnosis > Picture Test Try Now

Before you review the list of problems and solutions below, use Picture Test to determine if the problem is caused by the TV. The Picture Test displays a high definition picture you can examine for flaws or faults. If the test picture does not appear or there is noise or distortion, the TV may have a problem. Contact Samsung's Call Center for assistance. If the test picture is displayed properly, there may be a problem with an external device. Please check the connections. If the problem persists, check the signal strength or refer to the external device's user manual.

The Problem	Try this!
Flickering and Dimming	If your Samsung Television is flickering or dimming sporadically, you may need to disable some of the energy efficiency features. Disable Energy Saving (System > Eco Solution > Energy Saving) or Eco Sensor (System > Eco Solution > Eco Sensor).
Component Connections/Screen Color	If the color on your Samsung television screen is not correct or the black and white colors are off, run Picture Test (Support > Self Diagnosis > Picture Test). If the test results indicate that the problem is not caused by the TV, do the following: • Confirm that the TV's video input connectors are connected to the correct external device video output connectors. • Check the other connections as well. If the TV is connected to an external device via a component cable, confirm that the Pb, Pr, and Y jacks are plugged into their proper connectors.
Screen Brightness	If the colors on your Samsung TV are correct but just a little too dark or bright, try adjusting the following settings first. • Go to the Picture menu and adjust the Backlight/Cell Light (available on different models) Contrast, Brightness, Sharpness, Color, and Tint (G/R) settings.
Ghosting, Blurring, or Juddering	If you notice ghosting or blurring on the screen, use the Auto Motion Plus option (Picture > Picture Options > Auto Motion Plus) to resolve the issue. For the LED 5200, 5300, 4300 and 4200 series models, you can resolve this issue by using LED Clear Motion (Picture > Picture Options > LED Clear Motion).
Unwanted Powering Off	If your Samsung TV appears to turn off by itself, try disabling some of the TV's energy efficiency features. See if Sleep Timer (System > Time > Sleep Timer) has been enabled. The Sleep Timer automatically turns the TV off after a specified period of time. If the Sleep Timer has not been enabled, see if No Signal Power Off (System > Eco Solution > No Signal Power Off) or Auto Power Off (System > Eco Solution > Auto Power Off) has been enabled and disable them.

The Problem	Try this!
Problems Powering On	When the TV is turned on, the remote control receiver flashes 5 times before the screen turns on. If you are having problems powering on your Samsung television, there are a number of things to check before calling the service department. Confirm that the TV's power cord is connected correctly at both ends and that the remote control is operating normally. Make sure that the antenna cable or cable TV cable is firmly connected. If you have a cable/satellite box confirm that it is plugged in and turned on.
Unable to find a Channel	If your TV is not connected to a cable box or satellite box, run Setup (System > Setup) or Auto Program (Broadcasting > Auto Program).
The TV image does not look as good as it did in the store.	Store displays are all tuned to digital, HD (high definition) channels. If you have an analog cable/set top box, upgrade to a digital set top box. Use HDMI or Component cables to deliver HD (high definition) picture quality. Many HD channels are upscaled from SD (Standard Definition) content. Look for a channel that is broadcasting true HD content. • Cable/Satellite Subscribers: Try HD channels from the channel lineup. • Air/Cable Antenna Connection: Try HD channels after running the Auto Program function. Adjust the cable/satellite box's video output resolution to 1080i or 720p.
The picture is distorted.	The compression of video content may cause picture distortions, especially in fast moving pictures from sports programs and action movies. A weak or bad quality signal can cause picture distortions. This is not an issue with the TV. Mobile phones used close to the TV (within 3.2 ft) may cause noise in analog and digital channels.
The color is wrong or missing.	If you're using a Component connection, make sure that the Component cables are connected to the correct jacks. Incorrect or loose connections may cause color problems or a blank screen.
The color is poor or the picture is not bright enough.	Go to the Picture menu and then adjust the Picture Mode, Brightness, Sharpness, and Color settings. See if Energy Saving (System > Eco Solution > Energy Saving) has been enabled. Try resetting the picture. (Picture > Picture Reset)
There is a dotted line on the edge of the screen.	If the Picture Size has been set to Screen Fit, change the setting to 16:9. Change the cable/satellite box resolution.
The picture is black and white.	If you are using AV composite input, connect the video cable (yellow) to the TV's green component jack.

I can't hear the sound clearly

Testing the Sound

MENU > Support > Self Diagnosis > Sound Test Try Now

Before you review the list of problems and solutions below, make sure that the TV Sound Output menu item is set to TV Speaker, and then listen to the speakers again. If the TV still does not play audio, run the Sound Test. The Sound Test uses a built-in melody to check for sound problems. If the TV does not play sound during the Sound Test, or the sound is distorted, there may be a problem with the TV. Contact Samsung's Call Center for assistance. If the TV plays the Sound Test melody without distortion, there may be a problem with an external device. Please check the connections. If the problem persists, refer to the external device's user manual.

The Problem	Try this!
There is no sound or the sound is too low at maximum volume.	Check the volume control of the device (cable/satellite box, DVD, Blu-ray, etc.) connected to your TV.
The picture is good but there is no sound.	Set Sound > Speaker Settings > TV Sound Output to TV Speaker. If you are using an external device, check the device's audio output option. (For example, you may need to change your cable box's audio option to HDMI if the box connected to your TV is using an HDMI cable.) To listen to the computer sound, connect the external speaker to the computer's audio output connector. If your TV has a headphone jack, make sure there is nothing plugged into it. Reboot the connected device by disconnecting and then reconnecting the device's power cable.
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 low signal level may cause sound distortions. Run Sound Test (Support > Self Diagnosis > Sound Test).

I can't see 3D images clearly.

Testing 3D Picture Quality

MENU > Support > Self Diagnosis > 3D Picture Test

To test 3D picture quality, you must be wearing 3D glasses and the glasses and the TV must be paired.

3D is not available in the U.S.A. and Canada and is only available on LED 6200 series TVs or higher.

Before you review the list of problems and solutions below, use 3D Picture Test to determine if the problem is caused by the TV. The 3D Picture Test displays a high definition picture you can examine for flaws or faults. If the test picture does not appear or there is noise or distortion, the TV may have a problem. Contact Samsung's Call Center for assistance. If the test picture is displayed properly, there may be a problem with an external device. Please check the connections. If the problem persists, check the signal strength or refer to the external device's user manual.

The Problem	Try this!
The 3D glasses are not working correctly.	Make sure the glasses are powered on. The 3D feature may not work properly if there is another 3D product or an electronic device running nearby. If there is a problem, keep other electronic devices as far away as possible from the 3D Active Glasses.
I can't see 3D images clearly.	The ideal viewing distance is three times or more the height of the screen. We also recommend watching 3D content with your eyes level with the screen.
The batteries in the 3D glasses are flat.	Turn off the 3D glasses when they are not in use. If you leave the 3D glasses on, the battery lifespan is shortened.

There is a problem with the broadcast.

The Problem	Try this!
The TV is not receiving all channels.	If your TV is not connected to a cable box or satellite box: • Confirm that the coaxial cable is securely connected to the TV. • If you are using an antenna, verify it is positioned correctly and the all the connections are secure. • Run Setup (System > Setup) or Auto Program (Broadcasting > Auto Program).
There are no captions with digital channels.	Go to Caption (System > Accessibility > Caption) and change the Caption Mode. Some channels may not have caption data.
The picture is distorted.	The compression of the video content may cause picture distortions. This is especially true with fast moving pictures from sports programs and action movies. A weak signal can cause picture distortions. This is not a problem with the TV.

My computer won't connect.

The Problem	Try this!
The "Mode Not Supported" message appears.	Set your PC's output resolution so it matches a resolution supported by the TV.
The video is OK but there is no audio.	If you are using an HDMI connection, check the audio output setting on your PC. If you are using a DVI to HDMI cable, a separate audio cable is required.

I can't connect to the Internet.

The Problem	Try this!
The wireless network connection failed.	Confirm your wireless modem/router is on and connected to the Internet. Reset your wireless modem/router by turning it off, waiting for 15 seconds, and then turning it on again. Run Network Setup (MENU > Network > Network Settings).
The software update over the Internet has failed.	Check the network connection status (MENU > Network > Network Status). If the TV is not connected to a network, connect to a network. The upgrade stops if you already have the latest software version.

I am having trouble launching/using apps.

The Problem	Try this!
I launched an app, but it's in English. How can I change the language?	Languages supported by the app may be different from the user interface language. The ability to change the language depends on the service provider.
My application is not working.	Check with the service provider. Refer to the help section on the application service provider's website.

My file won't play.

The Problem	Try this!
Some files can't be played.	This problem may occur with high-bitrate files. Most files can be played back, but you might experience problems with high-bitrate files.

I want to reset the TV.

Reset	Path	Description
Reset Settings	MENU > Support > Self Diagnosis > Reset	Reset Picture, Sound, Channel, Smart Hub, and all other settings, except for the network settings, default settings.
Resetting Smart Hub	MENU > Smart Hub > Smart Hub Reset	Resets all Smart Hub settings to their factory defaults and deletes all information related to Samsung accounts, linked service accounts, Smart Hub service agreements, and Smart Hub applications.

Other Issues

The Problem	Try this!
The TV is hot.	Watching TV for an extended period of time causes the panel to generate heat. The heat from the panel is dissipated through internal vents running along the top of the TV. The bottom, however, may feel hot to the touch after extended use. Children watching TV need constant adult supervision to prevent them from touching the TV. This heat, however, is not a defect and does not affect the TV's functionality.
The picture won't display in full screen.	HD channels will have black bars on either side of the screen when displaying upscaled SD (4:3) content. Black bars will appear at the top and bottom of the screen when you watch movies that have aspect ratios different from your TV. Adjust the picture size options on your external device or set the TV to full screen.
The "Mode Not Supported" message appears.	The output resolution of the attached device is not supported by the TV. Check the TV's supported resolutions and adjust the external device's output resolution accordingly.
The Captions item in the TV menu is grayed out.	You cannot select the Caption menu if you have selected a source connected to the TV via HDMI or Component. To view captions, turn on the external device's caption function.
The TV smells of plastic.	This smell is normal and will dissipate over time.
The Signal Information option under Self Diagnosis isn't activated.	Verify that the current channel is a digital channel. The Signal Information is only available for digital channels.
The TV is tilted to the side.	Remove the base stand from the TV and reassemble it.

The Problem	Try this!
The Broadcasting option has been deactivated.	Broadcasting is only available when the Source is set to TV. The Broadcasting menu cannot be accessed while you watch TV using a cable box or satellite receiver.
The settings are lost after 5 minutes or every time the TV is turned off.	If the Use Mode is set to Store Demo, the TV's audio and video settings are automatically reset every 5 minutes. Change the Use Mode (Support > Use Mode) to Home Use.
There is an 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 you are mounting the TV to a wall, we recommend using cables with 90-degree connectors.
There are small particles on the TV's bezel.	This is part of the product's design and is not a defect.
The PIP menu is not available.	PIP functionality is only available when you are viewing video from an HDMI or Component source on the main screen.
A POP (TV's internal banner ad) appears on the screen.	Change the Use Mode (Support > Use Mode) to Home Use.
The TV is making a popping noise.	The expansion and contraction of the TV's outer casing may cause a popping noise. This does not indicate a product malfunction. The TV is safe to use.
The TV is making a humming noise.	Your TV utilizes high-speed switching circuits and high levels of electrical current. Depending on the TV's brightness level, the TV may seem slightly noisier than a conventional TV. Your TV has undergone strict quality control procedures that meet our demanding performance and reliability requirements. Some noise coming from the TV is considered normal and is not an acceptable cause for an exchange or refund.

Read Before Using 3D Viewing Mode

3D is not available in the U.S.A. and Canada and is only available on LED 6200 series TVs or higher.

3D Precautions

⚠ **Warning**

- When viewing a 3D video under a fluorescent lamp (50 Hz - 60 Hz) or 3-wavelength lamp, you may notice a small amount of screen flickering.

  If this occurs, dim or turn off the light.

- Switching the input mode while watching a 3D movie may disable the 3D function on the TV.

  As a result, the 3D glasses may not function and the movie may not be displayed properly.

- Ensure you are within the working distance of the glasses when you view a 3D video.

  The images may not be viewable in 3D if you move outside of the working distance for 3 seconds.

  If the 3D glasses are moved outside of their working distance, the signal from the TV will disconnect and the glasses' 3D function will turn off after several seconds. When this happens, the red LED will turn on for 3 seconds.

- If you lie on your side while watching TV with 3D active glasses, the picture may appear dark or may not be visible. The actual 3D effect may be experienced differently depending on the viewer. The 3D effect may not be visible if the visual ability of your left eye differs greatly from the visual ability of your right eye.

- If a part of the 3D glasses or lenses is defective or damaged, it cannot be repaired and the glasses should be replaced. If the glasses stop working within the warranty period, the glasses can be repaired or replaced for free. If the glasses have been damaged due to the fault of the customer or the warranty period has expired, a new pair of glasses will have to be purchased.

- The 3D glasses may not work properly due to interference from other 3D products or electronic devices that operate on the 2.4GHz frequency such as a microwave oven or Internet AP. If the 3D function malfunctions due to interference, please move all other electronic or wireless communication devices as far away from the glasses and the TV as possible.

- The vividness of the image may appear degraded if you view 3D video in a place that is exposed to direct sunlight or illumination.

- The 3D glasses may malfunction if there is an electric field or metallic object such as a steel plate nearby. Keep the glasses as far away as possible from electric fields and metallic objects.

- With SSG-3570 model glasses, the glasses may power off if you remain stationary while viewing 3D video for an extended period of time.

- With SSG-3570 model glasses, if the 3D glasses do not function immediately after you put them on when the TV is in 3D mode, take them off and then put them back on.

⚠ Caution

IMPORTANT HEALTH AND SAFETY INFORMATION FOR 3D IMAGES. READ THE FOLLOWING CAUTIONS BEFORE YOU OR YOUR CHILD USE THE 3D FUNCTION.

- Adults should frequently check on children who are using the 3D function. If there are any complaints of tired eyes, headaches, dizziness, or nausea, stop the child from viewing the 3D TV and ensure that they rest.
- Do not use the 3D glasses for other purposes such as general wear, sunglasses, protective goggles, etc.
- Some viewers may experience discomfort such as dizziness, nausea, and headaches while viewing 3D TV. If you experience any of these symptoms, stop viewing the 3D TV, remove the 3D glasses, and rest for awhile.
- Watching 3D pictures for an extended period of time may cause eye strain. If you experience any eye strain, stop viewing the 3D TV, remove the 3D glasses, and rest for awhile.
- Do not use the 3D function or 3D glasses while walking or moving around. Using the 3D function or 3D Active Glasses while moving around may result in injury from running into objects, tripping, and/or falling.
- Do not sleep with the 3D glasses on. You can damage or break the temples.
- The temples on your 3D glasses are not foldable. Forcing the temples to fold will damage the 3D glasses.
- If you have SSG-3570 model 3D glasses, do not shake them repeatedly. Shaking the glasses will power them on and can cause the battery to discharge faster than it would normally.
- If you have SSG-5100GB or SSG-5150GB model glasses, there is a danger of explosion if the battery is replaced with the wrong type of battery.
- If you have SSG-5100GB or SSG-5150GB model glasses, make sure to replace the battery with the same type of battery.

⚠ Safety Precautions

Please read the following safety instructions to ensure your personal safety, prevent property damage, and ensure the proper use of the product.

- Do not place the product in a location exposed to direct sunlight, heat, fire, or water. Exposure may result in a product malfunction or fire.
- Do not apply force to the lenses of the 3D glasses. Do not drop or bend the product. Applying force, dropping, or bending may result in a 3D glasses malfunction.
- Keep the components of the 3D glasses out of reach of children. Especially, ensure children do not swallow any of the components. If your child swallows a component, consult your doctor immediately.
- When cleaning the product, do not spray water or cleaner directly onto the surface of the product. Spraying water or cleaner directly onto the glasses may result in fire or electric shock, damage to the product's surface, or cause the indicator labels on the product's surface to come loose.
- Do not apply chemicals containing alcohol, solvent, or surfactant such as wax, benzene, thinner, pesticide, air freshener, lubricant, or cleaner to the product. These chemicals may cause the product's exterior to be discolored or cracked, or labels or instructions to be removed. Use only a soft cloth such as superfine fibers or cotton flannels for cleaning the product as the surface or the lenses easily crack. Because the product can be easily scratched with foreign substances, make sure to dust off the cloth before using.
- Do not disassemble, or attempt to repair or modify your 3D active glasses by yourself.
- Be careful not to let the temple ends of the 3D active glasses harm your eye.
- Do not sleep with the 3D glasses on. You can break the arms.
- Use your hands to put on or remove the 3D glasses.
- For SSG-5100 and SSG-5150GB model glasses, use only the specified standard batteries. When replacing the battery, insert the battery so that its polarity (+, -) is correct. Failing to do so may damage the battery or result in fire, personal injury, or environmental damage caused by liquid leaking from the battery.
- For SSG-5100 and SSG-5150GB model glasses, keep used batteries out of the reach of children so that they do not accidently swallow them. If your child swallows a battery, consult your doctor immediately.
- Swallowing the cylindrical (button type) battery can cause serious damage to your internal organs. If a button type battery is swallowed, contact a doctor immediately.

Supported Resolutions for 3D Modes

3D is not available in the U.S.A. and Canada and is only available on LED 6200 series TVs or higher.
These specifications apply to the 16:9 display ratio only.

HDMI

- 3D Mode: (L/R), (T/B)

Resolution	Frequency (Hz)
1280 x 720p	59.94 / 60
1920 x 1080i	59.94 / 60
1920 x 1080p	23.98 / 24 / 29.97 / 30 / 59.94 / 60

Component

Resolution	Frequency (Hz)
1280 x 720p	59.94 / 60
1920 x 1080i	59.94 / 60
1920 x 1080p	23.98 / 24 / 29.97 / 30 / 59.94 / 60

Digital Channel

Resolution	Frequency (Hz)
1280 x 720p	59.94 / 60
1920 x 1080i	59.94 / 60

Videos/Photos

Refer to the "Read Before Playing Photo, Video, or Music Files" section.

Computer via HDMI Cable.

The optimal resolution for computers connected to the TV via an HDMI cable is 1920 x 1080. If you select another resolution, the TV may not display 3D images correctly and may not be able to display the computer video in full screen.

Read Before Using Apps

- Due to the product characteristics featured on the Samsung Smart Hub, as well as limitations in available content, certain features, applications, and services may not be available on all devices or in all territories. Some Smart Hub features may also require additional peripheral devices or membership fees. Visit http://www.samsung.com for more information on specific device information and content availability. Services and content availability are subject to change without prior notice.
- Samsung Electronics takes no legal responsibility whatsoever for any interruption of app services caused by the service provider for any reason.
- Application services may be provided in English only and available content may vary depending on the area.
- For more information about applications, visit the applicable service provider's website.
- An unstable Internet connection may cause delays or interruptions. In addition, applications may terminate automatically depending on the network environment. If this occurs, check your Internet connection and try again.
- Application services and updates may become unavailable.
- Application content is subject to change by the service provider without prior notice.
- Specific services may vary depending on the version of the application installed on the TV.
- An application's functionality may change in future versions of the application. If this occurs, run the application's tutorial or visit the service provider's website.
- Depending on the service provider's policies, certain applications may not support multitasking.

Read Before Using the Web Browser

- Select **Web Browser**. The browsing screen may differ from the one on your computer.
- The web browser is not compatible with Java applications.
- You cannot download files. If you attempt to download a file, you will receive an error message instead.
- The web browser may not be able to access certain websites.
- Playing Flash videos may be restricted.
- E-commerce for online purchases is not supported.
- With websites that have scrollable windows, scrolling a window can result in corrupted characters.
- ActiveX is not supported.
- Certain options are not accessible in Link Browsing mode. (Switch to Pointer Browsing to activate those options.)
- Only a limited number of fonts are supported. Certain symbols and characters may not be displayed properly.
- The response to remote commands and the resulting on-screen display may be delayed while a webpage is loading.
- Loading a webpage may be delayed or suspended completely with certain operating systems.
- The copy and paste operations are not supported.
- When composing an email or a simple message, certain functions such as the font size and color selection may not be available.

- There is a limit to the number of bookmarks and the size of the log file that can be saved.
- The number of windows that can be opened concurrently varies depending on the search conditions and the TV model.
- The web browsing speed will vary depending on the network environment.
- Embedded videos can play with a picture-in-picture (PIP) at the same time.
- The web browser supports .mp3 audio files only.
- The web browser supports a specific file format for importing and exporting bookmarks. (Compatible Format: Netscape-bookmarkfile- 1)
- The folder tree information is not included when importing and exporting bookmarks.
- Exporting bookmarks to a USB device connected to the TV saves the bookmarks under a folder named "Samsung SmartTV Bookmark".
- If the **Clock** (**System** > **Time** > **Clock**) has not been set, the browsing history will not be saved.
- The browsing history is saved from latest to oldest, with the oldest entries being overwritten first.
- Depending on the types of video/audio codecs supported, it might not be possible to play certain video and audio files while playing Flash content.
- Video sources from PC-optimized streaming service providers may not play properly on our proprietary web browser.
- Using the on-screen QWERTY keyboard automatically disables PIP. (Except when entering a URL.)

Read Before Playing Photo, Video, or Music Files

Photo, Video, and Music File Use Limitations

- The TV supports MSC (Mass Storage Class) USB devices only. MSC is a class designation for mass storage devices. Types of MSC devices include flash card readers, and digital cameras. (USB hubs are not supported.) These kinds of devices must be connected directly to the TV's USB port. The TV may not be able to recognize the USB device or read the files on the device if it is connected to the TV via a USB extension cable. Do not disconnect the USB device while transferring files.
- Certain digital cameras and audio devices may not be compatible with the TV.
- A USB device that requires high power (more than 500mA or 5V) may not be supported. The TV does not support HDDs (Hard Disk Drives) connected to the USB port.
- The TV supports the FAT, exFAT, and NTFS file systems.
- After sorting files in the Folder view mode, the TV can display up to 1000 files per folder. If the USB device contains more than 8,000 files and folders, however, some files and folders might not be accessible.
- The PTP (pier to pier) connection mode is available only for digital cameras. If you connect a smartphone or tablet to the TV using PTP mode, the TV will not recognize it.

Compatible Storage Devices for File Transfers

Storage device containing media content	Target device
USB Device	DLNA Device, SugarSync, Dropbox, SkyDrive, Mobile Device
Camera	DLNA Device
DLNA Device	USB Device
SugarSync, Dropbox, SkyDrive	USB Device
Mobile Device	USB Device

Supported External Subtitles

Certain files, depending on how they were encoded, may not play on the TV.

Name	Format
MPEG-4 Timed text	.ttxt
SAMI	.smi
SubRip	.srt
SubViewer	.sub
Micro DVD	.sub or .txt
SubStation Alpha	.ssa
Advanced SubStation Alpha	.ass
Powerdivx	.psb
SMPTE-TT Text	.xml

Supported Internal Subtitles

Certain files, depending on how they were encoded, may not play on the TV.

Name	Format
Xsub	AVI
SubStation Alpha	MKV
Advanced SubStation Alpha	MKV
SubRip	MKV
VobSub	MKV
MPEG-4 Timed text	MP4
TTML in smooth streaming	MP4
SMPTE-TT Text	MP4
SMPTE-TT PNG	MP4

Supported Image Formats and Resolutions

Certain files, depending on how they were encoded, may not play on the TV.

File Extension	Format	Resoltuion
*.jpg *.jpeg	JPEG	15360x8640
*.png	PNG	4096x4096
*.bmp	BMP	4096x4096
*.mpo	MPO	15360x8640

Supported Music Formats and Codecs

Certain files, depending on how they were encoded, may not play on the TV.

File Extension	Format	Codec	Note
*.mp3	MPEG	MPEG1 Audio Layer 3	
*.m4a *.mpa *.aac	MPEG4	AAC	
*.flac	FLAC	FLAC	Supports up to 2 channels.
*.ogg	OGG	Vorbis	Supports up to 2 channels.
*.wma	WMA	WMA	Supports up to 10 Pro 5.1 channels. WMA lossless audio is not supported. Supports up to the M2 profile.
*.wav	wav	wav	
*.mid *.midi	midi	midi	Supports type 0 and type 1. Seek is not supported. Supports USB only.
*.ape	ape	ape	NonSmart is not supported.
"*.aif *.aiff"	AIFF	AIFF	
*.m4a	ALAC	ALAC	

Supported Video Codecs

Certain files, depending on how they were encoded, may not play on the TV.

File Format	Container	Video Codecs	Resolution	Frame Rate (fps)	Bitrate (Mbps)	Audio Codec
*.avi *.mkv *.asf *.wmv *.mp4 *.mov *.3gp *.vro *.mpg *.mpeg *.ts *.tp *.trp *.mov *.flv *.vob *.svi *.divx	AVI MKV ASF MP4 3GP MOV FLV VRO VOB PS TS	Motion JPEG	640x480	MAX 30	8	AC3 LPCM ADPCM(IMA, MS) AAC HE-AAC WMA DD+ MPEG(MP3) DTS(Core, LBR) G.711(A-Law, μ-Law)
		H.264 BP / MP / HP	1920x1080		30	
		DivX 3.11 / 4 / 5 / 6				
		MPEG4 SP/ASP				
		Window Media Video v9(VC1)				
		MPEG2				
		MPEG1				
*.webm	WebM	VP8	1920x1080	6~30	20	Vorbis

Other Restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- The menu display is delayed when transmitting at or higher than 10Mbps.

Video Decoders

- Supports up to H.264, Level 4.1 (does not support FMO/ASO/RS)
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio Decoders

- WMA 10 Pro supports up to 5.1 channels. Supports up to the M2 profile. WMA lossless audio is not supported.
- WMA 10 pro M3 is not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 2 channels.
- DD+ is supported for up to 5.1 channels.
- The DTS LBR codec is only available for MKV / MP4 / TS containers.

Read After Installing the TV

Picture Sizes and Input Signals

Input Signal	Picture Size
Analog Channel/External Input	16:9, Zoom1, Zoom2, 4:3
Component (480i, 480p)	16:9, Zoom1, Zoom2, 4:3
Component (720p)	16:9, Wide Fit, 4:3
Component (1080i, 1080p)	16:9, Wide Fit, 4:3, Screen Fit
Digital Channel (720p)	16:9, Wide Fit, 4:3, Smart View 2
Digital Channel (1080i, 1080p)	16:9, Wide Fit, 4:3, Screen Fit, Smart View 2
HDMI (720p, 1080i, 1080p)	16:9, Wide Fit, 4:3, Screen Fit, Smart View 1, Smart View 2

The **Picture Size** setting is applied to the current source. The applied **Picture Size** will remain in effect whenever you select that source unless you change it.

Installing an Anti-Theft Lock

An anti-theft lock is a physical device that can be used to protect the TV against theft. Look for the lock slot on the back of the TV. The slot has a icon next to it. To use the lock, wrap the lock cable around an object that is too heavy to carry and then thread it through the TV's lock slot. The lock is sold separately.

The method of using an anti-theft lock may differ for each TV model. Refer to the lock's user manual for more information.

Availability depends on the model.

Read Before Setting Up a Wireless Internet Connection

Wireless Internet Precautions

- This TV supports the IEEE 802.11a/b/g /n communication protocols. Samsung recommends using IEEE 802.11n. Video files stored on a device connected to the TV via DLNA may not play back smoothly.
- To use wireless Internet, the TV must be connected to a wireless router or modem. If the wireless router supports DHCP, the TV can use a DHCP or static IP address to connect to the wireless network.
- Select a channel that is not currently in use for the wireless router. If the channel set for the wireless router is currently being used by another device, the result is usually interference and/or a communications failure.
- Most wireless networks have an optional security system. To enable a wireless network's security system, you need to create a password using characters and numbers. This password is then needed to connect to a security-enabled AP.

Wireless Security Protocols

The TV only supports the following wireless network security protocols.

- Authentication Modes: WEP, WPAPSK, WPA2PSK
- Encryption Types: WEP, TKIP, AES

In compliance with the newest Wi-Fi certification specifications, Samsung TVs do not support WEP or TKIP security encryption in networks running in the 802.11n mode.

If the wireless router supports WPS (Wi-Fi Protected Setup), you can connect the TV to your network using PBC (Push Button Configuration) or a PIN (Personal Identification Number). WPS automatically configures the SSID and WPA key settings.

The TV cannot connect to non-certified wireless routers.

Read Before Connecting a Computer (Supported Resolutions)

LED 5200, 5300 and 6200 series

When you connect your TV to a computer, set the computer's video card to one of the standard resolutions listed in the tables below or on the next page. The TV will automatically adjust to the resolution you choose. Note that the optimal and recommended resolution is 1920 x1080.

Choosing a resolution not included in the tables can result in a blank screen or just the power indicator turning on.

Refer to the user manual of your graphics card for compatible resolutions.

IBM

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/ Vertical)
720x400	70Hz	31.469	70.087	28.322	-/+

MAC

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/ Vertical)
640x480	67Hz	35.000	66.667	30.240	-/-
832x624	75Hz	49.726	74.551	57.284	-/-
1152x870	75Hz	68.681	75.062	100.000	-/-

VESA DMT

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/ Vertical)
640x480	60Hz	31.469	59.940	25.175	-/-
640x480	72Hz	37.861	72.809	31.500	-/-
640x480	75Hz	37.500	75.000	31.500	-/-
800x600	60Hz	37.879	60.317	40.000	+/+
800x600	72Hz	48.077	72.188	50.000	+/+
800x600	75Hz	46.875	75.000	49.500	+/+
1024x768	60Hz	48.363	60.004	65.000	-/-
1024x768	70Hz	56.476	70.069	75.000	-/-
1024x768	75Hz	60.023	75.029	78.750	+/+
1152x864	75Hz	67.500	75.000	108.000	+/+
1280x720	60Hz	45.000	60.000	74.250	+/+
1280x800	60Hz	49.702	59.810	83.500	-/+
1280x1024	60Hz	63.981	60.020	108.000	+/+
1280x1024	75Hz	79.976	75.025	135.000	+/+
1366x768	60Hz	47.712	59.790	85.500	+/+
1440x900	60Hz	55.935	59.887	106.500	-/+
1600x900RB	60Hz	60.000	60.000	108.000	+/+
1680x1050	60Hz	65.290	59.954	146.250	-/+
1920x1080	60Hz	67.500	60.000	148.500	+/+

LED 4500, 4300 and 4200 series

After connecting a computer to the TV, set the screen resolution for the TV on the computer. The optimal resolution is 1366 x 768 @ 60 Hz. If it is set to any other than in the table below, the TV may display nothing. Set the resolution properly, referring to the user guide of the computer or its graphic card.

IBM

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/ Vertical)
720x400	70Hz	31.469	70.087	28.322	-/+

MAC

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/ Vertical)
640x480	67Hz	35.000	66.667	30.240	-/-
832x624	75Hz	49.726	74.551	57.284	-/-

VESA DMT

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/ Vertical)
640x480	60Hz	31.469	59.940	25.175	-/-
640x480	72Hz	37.861	72.809	31.500	-/-
640x480	75Hz	37.500	75.000	31.500	-/-
800x600	60Hz	37.879	60.317	40.000	+/+
800x600	72Hz	48.077	72.188	50.000	+/+
800x600	75Hz	46.875	75.000	49.500	+/+
1024x768	60Hz	48.363	60.004	65.000	-/-
1024x768	70Hz	56.476	70.069	75.000	-/-
1024x768	75Hz	60.023	75.029	78.750	+/+
1280x720	60Hz	45.000	60.000	74.250	+/+
1366x768	60Hz	47.712	59.790	85.500	+/+

Supported Resolutions for Video Signals

CEA-861

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/ Vertical)
720(1440)x480i	60Hz	15.734	59.940	27.000	-/-
720(1440)x576i	50Hz	15.625	50.000	27.000	-/-
720x480	60Hz	31.469	59.940	27.000	-/-
720x576	50Hz	31.250	50.000	27.000	-/-
1280x720	60Hz	45.000	60.000	74.250	+/+
1280x720	50Hz	37.500	50.000	74.250	+/+
1920x1080i	60Hz	33.750	60.000	74.250	+/+
1920x1080i	50Hz	28.125	50.000	74.250	+/+
1920x1080	60Hz	67.500	60.000	148.500	+/+
1920x1080	50Hz	56.250	50.000	148.500	+/+
1920x1080	30Hz	33.750	30.000	74.250	+/+
1920x1080	25Hz	28.125	25.000	74.250	+/+
1920x1080	24Hz	27.000	24.000	74.250	+/+

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Glossary

- **480i/480p/720p/1080i/1080p**

  Generally refers to the number of effective scanning lines that determines the screen's resolution. There are two scanning methods: interlaced and progressive.

  – Scanning

    Sequential projection of pixels to form images. The higher the number of pixels, the clearer and more vivid the images.

  – Progressive

    A sequential scanning method that scans every line, one after another.

  – Interlaced

    A staggered scanning method that scans every other line until the end of the screen and then fills in the remaining lines.

  Example) If the number of horizontal scan lines is 480i

  Scans 240 lines from start to finish and then scans the remaining 240 lines for a total of 480 lines.

  * General differences between 480i and 480p are as follows:

	480i	480p
Horizontal Frequency	15.75Khz	31.5Khz
FPS	30	60
Lines on Screen	480	480

- **DVI (Digital Visual Interface)**

  Connecting the TV's DVI connector to a computer's DVI connector via an HDMI-to-DVI cable lets you use the TV as a computer monitor. However, HDMI-to-DVI cables deliver video signals only. You must connect a set of speakers to the computer using a separate cable to hear the computer's audio.

- **HDMI (High Definition Multimedia Interface)**

  HDMI is a method of transmitting both video and audio signals via a single cable.

- **Dynamic versus Static IP Addresses**

  If the network requires a dynamic IP address, use an ADSL modem or router that supports the Dynamic Host Configuration Protocol (DHCP). Modems and routers that support DHCP automatically provide the IP address, subnet mask, gateway and DNS values the TV needs to access the Internet, so they do not have to be entered manually. Most home networks use a dynamic IP address.

  If the network requires a static IP address, enter the IP address, subnet mask, gateway, and DNS values manually when setting up the network connection. To get the IP address, subnet mask, gateway and DNS values, contact your Internet Service Provider (ISP).

  If the network requires a static IP address, use an ADSL modem that supports DHCP. ADSL modems that support DHCP also allow static IP addresses.

- **Ethernet**

  Ethernet is a LAN (Local Area Network) that uses coaxial cables standardized by the IEEE.

- **Component Connection**

  Component connections are mostly used for game consoles and transmit the video signal by splitting it into a luminance signal (Y) and two color signals (Pb and Pr). The connector is marked as [Component IN]_(Pr, Pb, Y) on the back of the TV. On some devices, it is sometimes marked as Cr, Cb, Y. Cb and Cr are the digital conversions of the Pb and Pr signals.

  The connectors are normally color-coded red (R), blue (B), and green (G) and offer the best picture quality possible for an analog connection.