

SERIES  TD390S

T24D390SW  
T27D390SW

# LED TV

## user manual


Thank you for purchasing this Samsung product.  
To receive more complete service, please register  
your product at

[www.samsung.com/register](http://www.samsung.com/register)

Model \_\_\_\_\_ Serial No. \_\_\_\_\_



## Digital TV notice

1. Functionalities related to Digital TV (DVB) are only available in countries/areas where DVB-T (MPEG2 and MPEG4 AVC) digital terrestrial signals are broadcasted or where you are able to access to a compatible DVB-C (MPEG2 and MPEG4 AAC) cable-TV service. Please check with your local dealer the possibility to receive DVB-T or DVB-C signal.
  2. DVB-T is the DVB European consortium standard for the broadcast transmission of digital terrestrial television and DVB-C is that for the broadcast transmission of digital TV over cable. However, some differentiated features like EPG (Electric Programme Guide), VOD (Video On Demand) and so on, are not included in this specification. So, they cannot be workable at this moment.
  3. Although this TV set meets the latest DVB-T and DVB-C standards, as of [August, 2008], the compatibility with future DVB-T digital terrestrial and DVB-C digital cable broadcasts cannot be guaranteed.
  4. Depending on the countries/areas where this TV set is used some cable-TV providers may charge an additional fee for such a service and you may be required to agree to terms and conditions of their business.
  5. Some Digital TV functions might be unavailable in some countries or regions and DVB-C might not work correctly with some cable service providers.
  6. For more information, please contact your local Samsung customer care centre.
-  The reception quality of TV may be affected due to differences in broadcasting method between the countries. Please check the TV performance in the local SAMSUNG Authorised Dealer, or the Samsung Call Centre whether it can be improved by reconfiguring TV setting or not.

## Still image warning

Avoid displaying still images (like jpeg picture files) or still image element (like TV programme logo, panorama or 4:3 image format, stock or news bar at screen bottom etc.) on the screen. Constant displaying of still picture can cause ghosting of LED screen, which will affect image quality. To reduce risk of this effect, please follow below recommendations:

- Avoid displaying the same TV channel for long periods.
- Always try to display any image on full screen, use TV set picture format menu for best possible match.
- Reduce brightness and contrast values to minimum required to achieve desired picture quality, exceeded values may speed up the burnout process.

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### Note

Indicates additional information.

## Check the Symbol!



### Step by Step Guide

Check here for instructions on how to open the relevant submenu within the OSD (on screen display).

# Getting Started

## Safety Precautions

- ! Before using this product, read the Safety Precautions for your model.

### Icons used for safety precautions



#### WARNING

Failing to follow the precautions marked with this sign may result in a serious injury or even a fatality.



#### CAUTION

Failing to follow the precautions marked with this sign may result in a personal injury or property damage.



Do not perform.



Must be followed.

#### CAUTION

##### RISK OF ELECTRIC SHOCK DO NOT OPEN

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



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

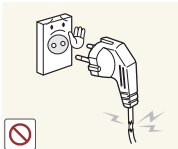


This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

## Power Related

The following images are for your reference and may differ depending on models and countries.

### Warning



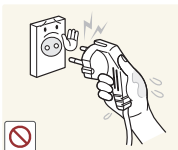
Avoid using a damaged power cord or plug or a loose power outlet.

- Otherwise, it may result in electric shock or fire.



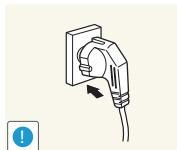
Avoid connecting multiple electric appliances to a single wall outlet.

- Otherwise, it may result in fire due to overheating of the wall outlet.



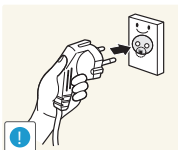
Avoid plugging in or unplugging the power supply with wet hands.

- Otherwise, it may result in electric shock.



Plug the power plug in firmly.

- Otherwise, it may result in fire.



Make sure to connect the power cord to a grounded wall outlet (for insulation class 1 equipment only).

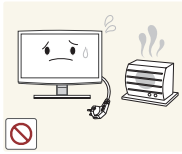
- Otherwise, it may result in electric shock or injury.



Avoid bending or twisting the power cord excessively and avoid placing heavy objects on the cord.

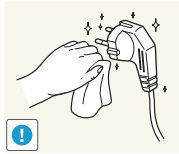
- Otherwise, it may result in electric shock or fire due to a damaged power cord.

# Getting Started



Keep the power cord and the product away from a heater.

- Otherwise, it may result in electric shock or fire.



If the pins of the power plug or the wall outlet are covered in dust, clean it using a dry cloth.

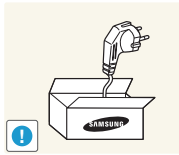
- Otherwise, it may result in fire.

## ⚠ Caution



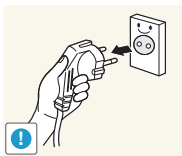
Avoid unplugging the power plug while the product is operating.

- Otherwise, it may damage the product due to electric shock.



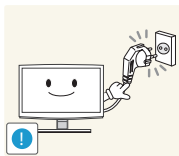
Make sure to use only the power cord supplied by our company. In addition, do not use the power cord of another electric appliance.

- Otherwise, it may result in electric shock or fire.



When unplugging the power plug from the wall outlet, make sure to hold it by the plug and not by the cord.

- Otherwise, it may result in electric shock or fire.



Connect the power plug to a wall outlet that can be easily reached.

- When a problem occurs with the product, you must unplug the power plug to cut the power off completely. You cannot cut the power off completely using only the power button on the product.

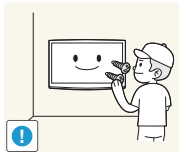
## Installation Related

### ⚠ Warning



Avoid placing burning candles, mosquito coil, cigarettes on the product.

- Otherwise, it may result in fire.



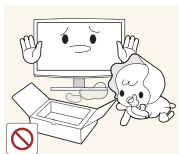
Ask an installation engineer or relevant company to install the product onto the wall.

- Otherwise, it may result in injury.



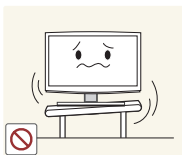
Avoid installing the product in a badly-ventilated location such as inside a bookshelf or closet.

- Otherwise, it may result in fire due to internal over-heating.



Keep the plastic bags used to pack the product away from children.

- If children place the plastic bags over their heads, they may suffocate.



Avoid installing the product in a location that is unstable or exposed to excessive vibration such as on an unstable or slanted shelf.

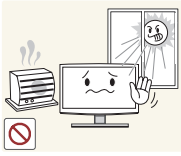
- The product may fall and this may result in damage to the product or injury.
- If you use the product in a location exposed to excessive vibrations, it may result in a problem with the product or fire.



Avoid installing the product in a location exposed to dust, moisture (sauna), oil, smoke or water (rain drops) and installing it within a vehicle.

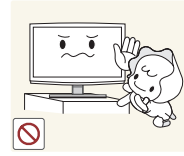
- This may result in electric shock or fire.

# Getting Started



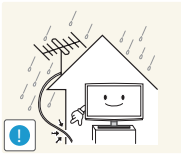
Avoid installing the product in a location exposed to direct sunlight and installing the product near a heat source such as a fireplace or heater.

- This may shorten the product life cycle or cause fire.



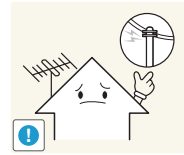
Avoid installing the product where children may reach it.

- If a child touches the product, the product may fall and this may result in injury.
- Since the front part is heavier, install the product on a flat and stable surface.



Bend the outdoor aerial cable downwards at the location where it comes in the house so that rainwater does not flow in.

- If rainwater enters the product, it may result in electric shock or fire.



Install the aerial far away from any high voltage cables.

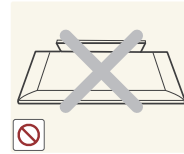
- If the aerial touches or falls onto a high voltage cable, it may result in electric shock or fire.

## Caution



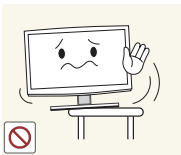
Do not let the product drop while moving it.

- This may result in a problem with the product or injury.



Do not place the product face down on the floor.

- This may damage the panel of the product.



When installing the product on a console or shelf, make sure that the front of the product does not protrude out of the console or shelf.

- Otherwise, this may cause the product to fall off and result in a malfunction or injury.
- Make sure to use a cabinet or shelf suitable to the size of the product.



When putting the product down, handle it gently.

- Otherwise, it may result in a problem with the product or injury.



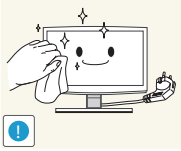
If the product is installed in a location where the operating conditions vary considerably, a serious quality problem may occur due to the surrounding environment. In this case, install the product only after consulting one of our service engineers about the matter.

- Places exposed to microscopic dust, chemicals, too high or low temperature, high humidity, airports or stations where the product is continuously used.

# Getting Started

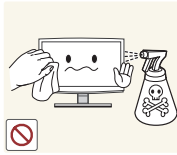
## Cleaning Related

### Warning



Before cleaning the product, unplug the power cord.

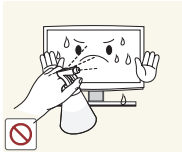
- Otherwise, it may result in electric shock or fire.



When cleaning the product, do not spray water directly over the product parts.

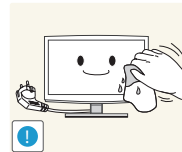
- Make sure that water does not enter the product.
- Otherwise, it may result in fire, electric shock or a problem with the product.

### Caution



Avoid spraying cleansing agent directly onto the product.

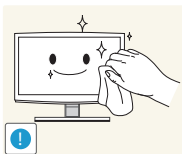
- This may result in discolouration or cracking of the exterior of the product or the panel coming off.



When cleaning the product, disconnect the power cord and clean the product with a soft cloth.

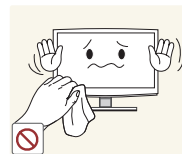
- Avoid using chemicals such as wax, benzene, alcohol, thinner, mosquito coil, fragrance, lubrication or cleansing agent when cleaning the product.

This may result in the exterior being deformed or the print being removed.



If you can't get the product clean with just the supplied cloth, use a soft, damp cloth with a "monitor-exclusive cleansing agent" and wipe the product with it.

- If no monitor-exclusive cleansing agent is available, dilute a cleansing agent with water at a ratio of 1:10 before cleaning the product.



Since the exterior of the product is easily scratched, be sure to use a soft cloth.

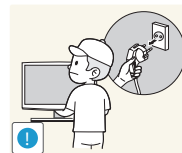
## Usage Related

### Warning



Since a high voltage runs through the product, never disassemble, repair or modify the product yourself.

- Otherwise, it may result in fire or electric shock.
- If the product needs to be fixed, contact a service centre.



To move the product, turn the power off and unplug the power cord, the aerial cable and any other wires connected to the product.

- Otherwise, it may result in electric shock or fire due to the damaged power cord.

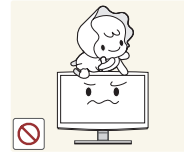


# Getting Started



If the product generates a strange noise, a burning smell, or smoke, unplug the power plug immediately and contact a service centre.

- Otherwise, it may result in electric shock or fire.



Avoid letting children hang or climb onto the product.

- Otherwise, it may result in the product falling and this may result in injury or death.



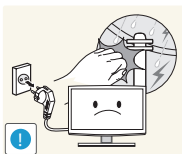
If you drop the product or the case is damaged, turn the power off and unplug the power cord. Contact a service centre.

- Otherwise, it may result in fire or electric shock.



Avoid placing objects such as toys and cookies on top of the product.

- If a child hangs over the product to grab an object, the object or the product may fall and this may result in injury or even death.



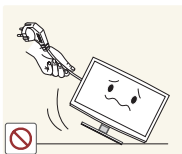
When thunder or lightning occurs, unplug the power cord and under no circumstance touch the aerial cable as this is dangerous.

- Otherwise, it may result in electric shock or fire.



Avoid dropping an object over the product or cause impact to the product.

- Otherwise, it may result in electric shock or fire.



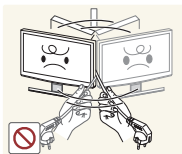
Avoid moving the product by pulling the power cord or aerial cable.

- Otherwise, it may result in electric shock, fire or a problem with the product due to damage to the cable.



When a gas leak occurs, do not touch the product or the power plug and ventilate immediately.

- A spark may result in an explosion or fire.
- During a thunder or lighting storm, do not touch the power cord or aerial cable.



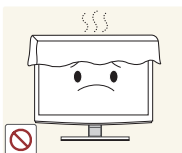
Avoid lifting up or moving the product by holding only the power cord or signal cable.

- Otherwise, it may result in electric shock, fire or a problem with the product due to damage to the cable.



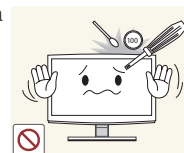
Avoid using or placing inflammable spray or objects near the product.

- This may result in an explosion or fire.



Take care not to block the vent by a table cloth or curtain.

- Otherwise, it may result in fire due to internal overheating.



Avoid inserting metal objects such as a chopsticks, coins or hairpins, or inflammable objects into the product (the vents, ports, etc).

- If water or substances enters the product, turn the power off, unplug the power cord and contact a service centre.
- Otherwise, it may result in a problem with the product, electric shock or fire.

# Getting Started



Avoid placing a liquid container such as a vase, flowerpot, beverage, cosmetics or drugs, or a metal object over the product.

- If water or substances enter the product, turn the power off, unplug the power cord and contact a service centre.
- Otherwise, it may result in a problem with the product, electric shock or fire.



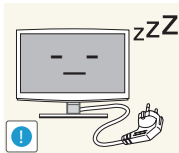
Do not press down hard on the product. The product may become deformed or damaged.

## ! Caution



Displaying a still image for a long time may create a persistent image or stain on the screen.

- If you do not use the product for a long time, use the power-saving mode or set the screensaver to the moving picture mode.



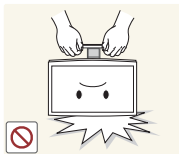
When not using the product for a long time such as leaving your home, unplug the power cord from the wall outlet.

- Otherwise, it may cause dust accumulation and result in fire caused by overheating or short circuit or result in an electric shock.



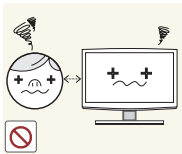
Set the appropriate resolution and frequency for the product.

- Otherwise, it may result in eye strain.



Avoid turning the product upside down or move the product holding only the stand.

- This may cause the product to fall, resulting in damage to the product or injury.

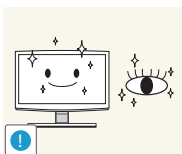


Watching the product from too close a distance continuously may damage your eyesight.



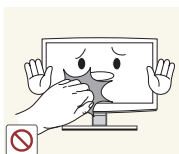
Avoid using a humidifier or cooker near the product.

- Otherwise, it may result in electric shock or fire.

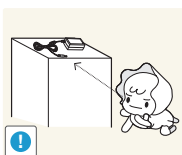


It is important to give your eyes some rest (5 minutes every hour) when viewing the product screen for long periods of time.

- This will alleviate any eye strain.



Since the display panel is hot after using it for a long time, do not touch the product.



Keep the small accessories in a location out of the reach of children.



Take care when adjusting the angle of the product or the height of the stand.

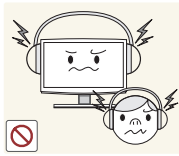
- If your hand or finger is caught, you may be injured.
- If the product is tilted excessively, the product may fall and this may result in injury.

# Getting Started



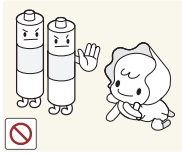
Avoid placing a heavy object over the product.

- Otherwise, it may result in a problem with the product or injury.



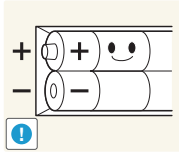
When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



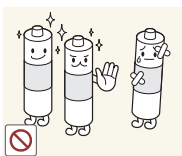
Be careful that children do not place the batteries in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



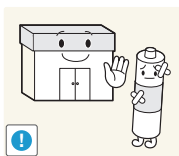
When replacing the batteries, insert them with right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.



Use only specified standard batteries. Do not use new and used batteries together.

- This may cause a battery to break or leak and may cause fire, injury, or contamination (damage).



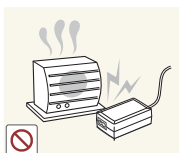
The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

- The customer can return used or rechargeable batteries to a nearby public recycling centre or to a store selling the same type of the battery or rechargeable battery.



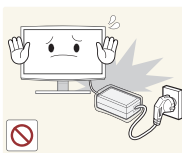
Do not place the adapter on top of another adapter.

- Otherwise, it may result in fire.



Keep power adaptor away from any other heat source.

- Otherwise, it may result in fire.



Remove the vinyl cover of the adapter before using the adaptor.

- Otherwise, it may result in fire.



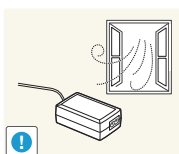
Do not let water enter the DC power device or get the device wet.

- An electric shock or fire may result.
- Avoid using the product outdoors where it can be exposed to rain or snow.
- Be careful not to get the DC power adapter wet when you wash the floor.



Be careful that adaptor should not be in contact with water and therefore not be wet.

- This may cause a malfunction, electric shock or fire. Do not use adaptor by the waterside or outside particularly when it rains or snows. Be careful that adaptor should not be wet while cleaning floor with water.



Always keep power adaptor in well-ventilated area.

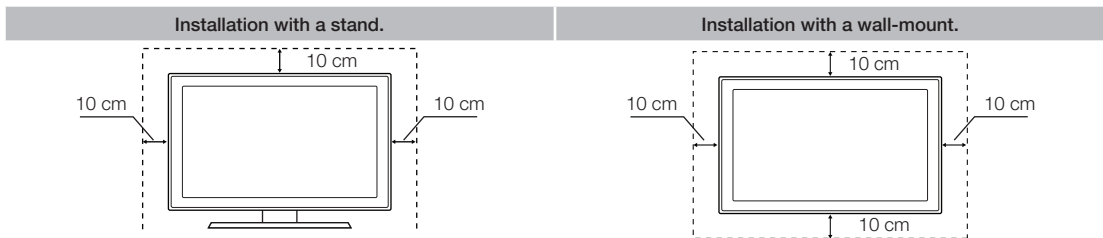
# Getting Started

## Providing Proper Ventilation for Your TV

When you install your TV, maintain a distance of at least 10 cm between the TV and other objects (walls, cabinet sides, etc.) to ensure proper ventilation. Failing to maintain proper ventilation may result in a fire or a problem with the product caused by an increase in its internal temperature.

If you use parts provided by another manufacturer, it may cause difficulties with the product or result in injury caused by the product falling.

- Whether you install your TV using a stand or a wall-mount, we strongly recommend you use parts provided by Samsung Electronics only.



### Other Cautions

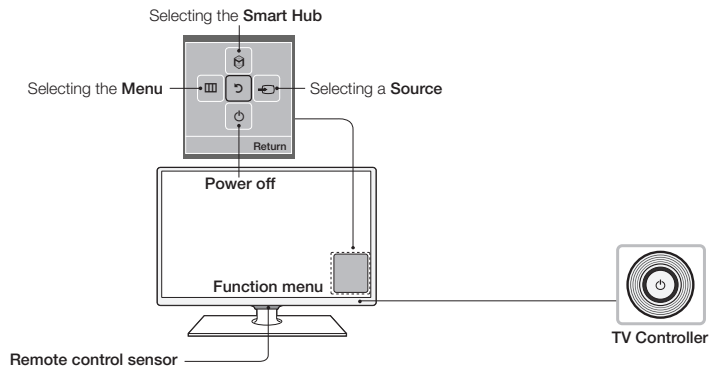
- The actual appearance of the TV may differ from the images in this manual, depending on the model.
- Be careful when you touch the TV. Some parts can be somewhat hot.

# Getting Started

## Turning on the TV

Turn on the TV using the  button on the remote control or TV panel.

- The product colour and shape may vary depending on the model.
- The TV's Controller, a small joystick-like button at the right back of the TV, lets you control the TV without the remote control.



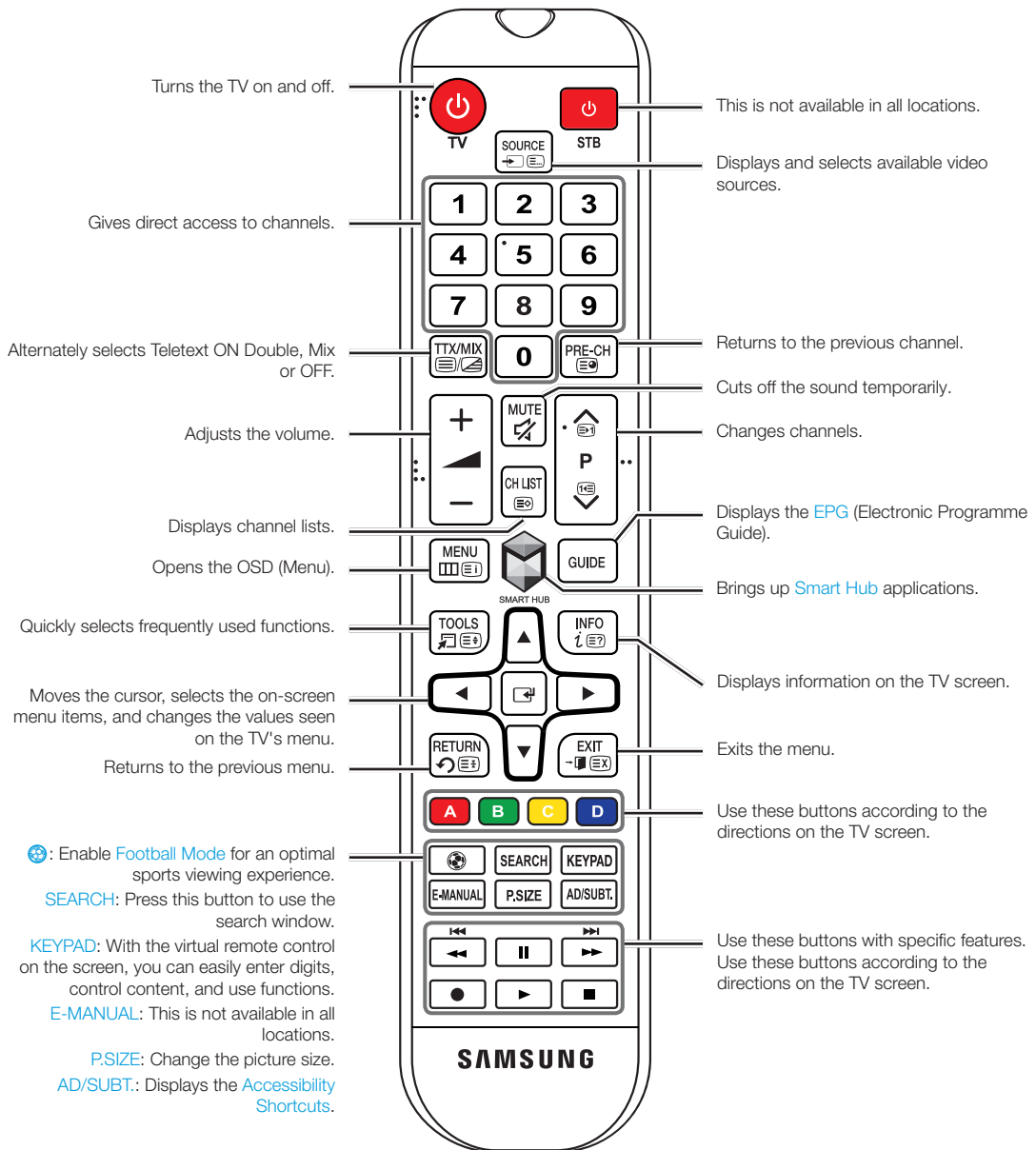
## Standby mode

Your product enters Standby mode when you turn it off and continues to consume a small amount of electric power. To be safe and to decrease power consumption, do not leave your product in standby mode for long periods of time (when you are away on vacation, for example). It is best to unplug the power cord.

# Getting Started

## The Standard Remote Control Buttons

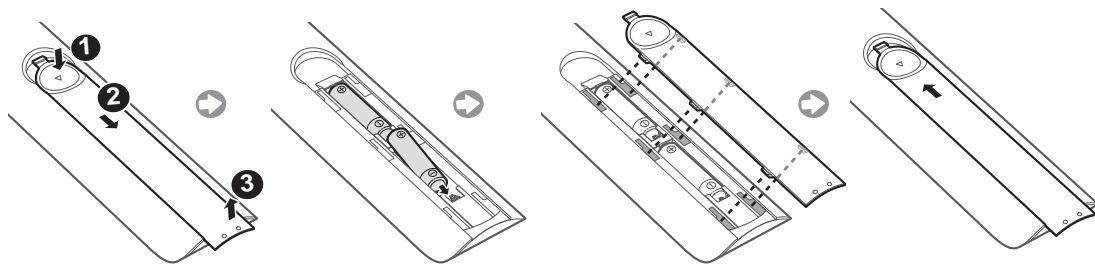
This remote control has Braille points on the Power, Channel, and Volume buttons and can be used by visually impaired persons.



# Getting Started

## **Installing batteries (Battery size: AAA)**

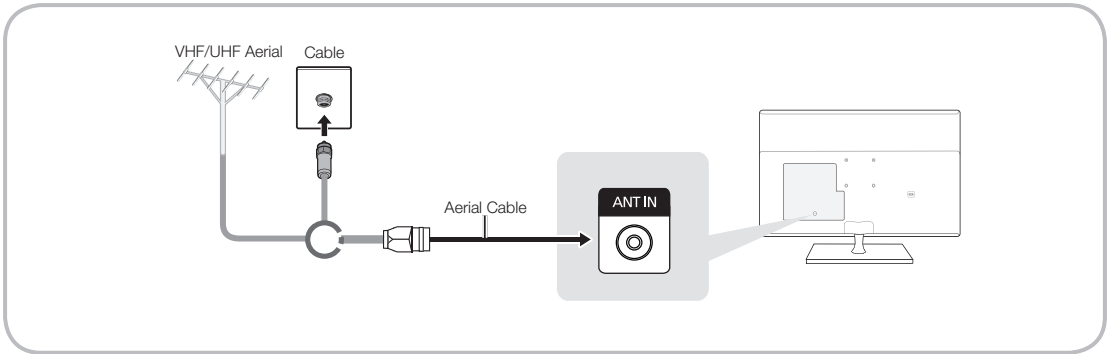
Match the polarities of the batteries to the symbols in the battery compartment.



- 🔌 Use the remote control within 7m of the TV.
- 🔌 Bright lights may affect the performance of the remote control. Avoid using the remote control near special fluorescent lights or neon signs.
- 🔌 The colour and shape may vary depending on the model.

# Getting Started

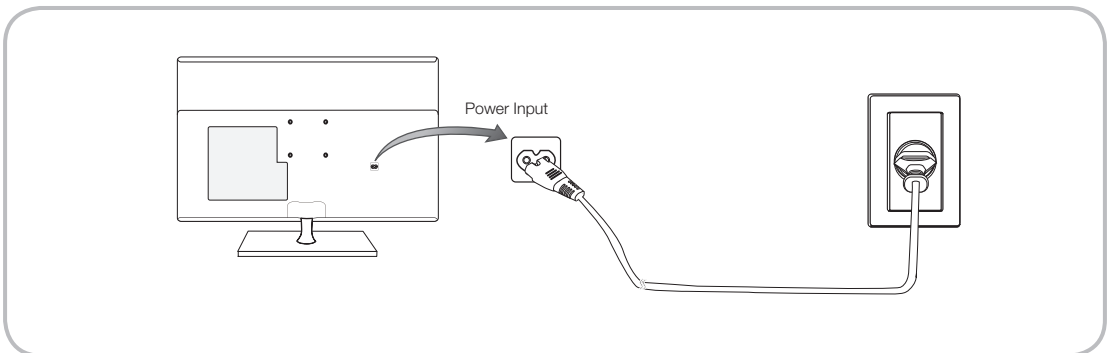
## Connecting the Power Cord and the Aerial or Cable Connection



- ✎ Plug the power cord into a wall outlet only after you have made all other connections.
- ✎ If you are connecting your product to a cable or satellite box using HDMI, Component, or Composite connections, you do not need to connect the ANT IN jack to an aerial or a cable connection.
- ✎ Use caution when you move or swivel the product if the aerial cable is tightly connected. You could break the aerial jack off the product.

## Connecting the Power

- ✎ The picture may vary depending on the model.





# Getting Started

## Setup

### Initial setup

The initial setup dialogue box appears when the TV is first activated. Follow the on-screen instructions to finish the initial setup process, including the selecting the menu language, scanning channels, connecting to the network, and more. During each step, either make a choice or skip the step. You can manually perform this process at a later time in the [System](#) → [Setup](#) menu.

- If you connect any device to [HDMI1](#) before starting the installation, the [Channel Source](#) will be changed to [Set-top box](#) automatically.
- If you do not want to select [Set-top box](#), please select [Aerial](#).

### Password Change

[System](#) → [Change PIN](#)

#### Changing the TV's password

1. Run [Change PIN](#) and then enter the current password in the password field. The default password is "0-0-0-0".
  2. Enter a new password and then enter it again to confirm it. The password change is complete.
- If you forgot your PIN code, press the buttons in the following sequence to reset the PIN to "0-0-0-0":  
In Standby mode: [MUTE](#) → 8 → 2 → 4 → [POWER](#) (On)

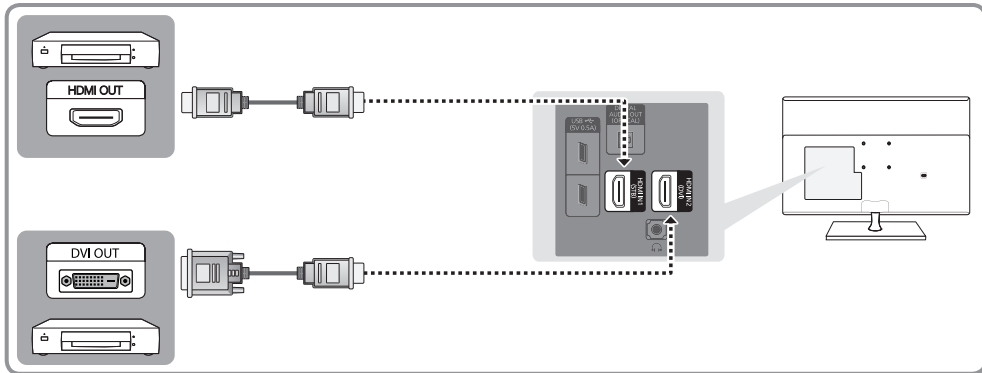
# Connections

## Connecting to AV Devices (Blu-ray Players, DVD Players, etc.)

### Using an HDMI Cable for an HD connection (up to 1080p, HD digital signals)

For the best quality HD picture, we recommend using an HDMI connection.

Use with DVD players, Blu-ray players, HD cable boxes, and HD Set-Top-Box satellite receivers.



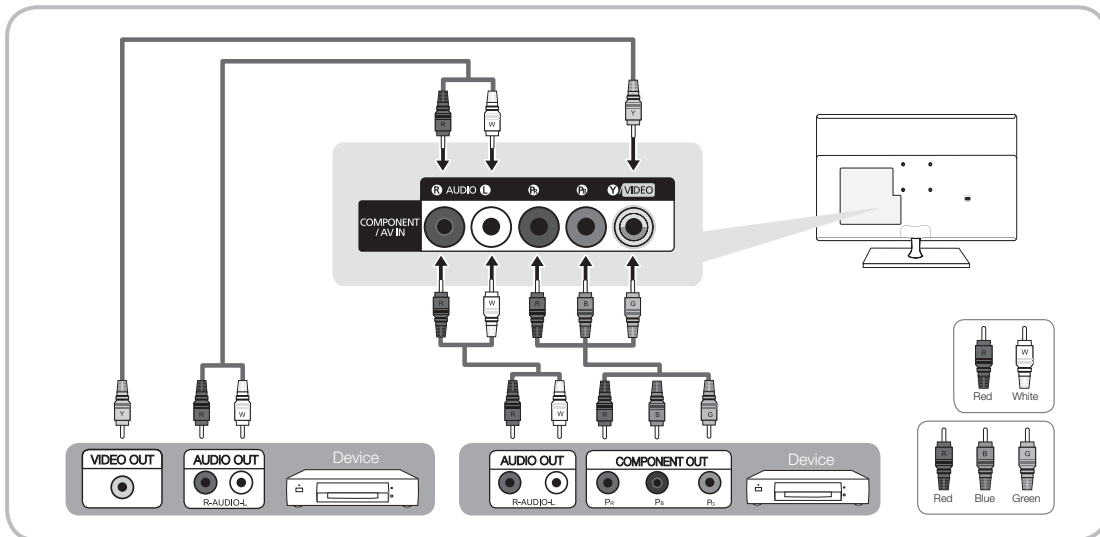
#### **HDMI IN 1 (STB) / HDMI IN 2 (DVI)**

- For the best picture and audio quality, connect digital devices to the product using HDMI cables.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
  - To connect the product to a digital device that does not support HDMI output, use an HDMI to DVI cable and audio cables.
- If you connect an external device to the product that uses an older version of HDMI, the video and audio may not work. If this occurs, ask the manufacturer of the device about the HDMI version and, if it is out of date, request an upgrade.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- We recommend using a basic high-speed HDMI cable or an HDMI cable that is Ethernet compatible. Note that this product does not support the Ethernet function via HDMI.

# Connections

## Using a Component Cable (up to 1080p HD signals) or an Audio/Video Cable (480i analogue signals only)

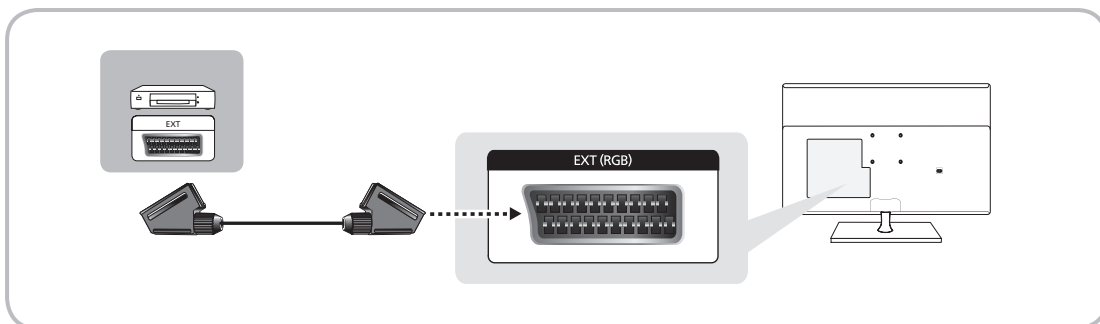
Use with DVD players, Blu-ray players, cable boxes, STB satellite receivers, VCRs.



🔗 For better picture quality, we recommend the Component connection over the A/V connection.

## Using a Scart Cable

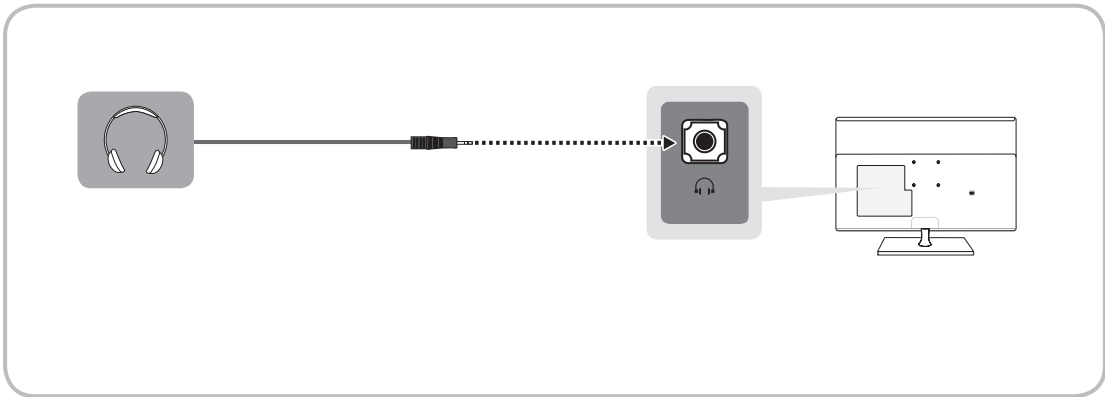
Available devices: DVD, VCR



🔗 In [Ext.](#) mode, DTV Out supports MPEG SD Video and Audio only.

# Connections

## Using a Headphone Cable Connection



**Headphones** 🎧: You can connect your headphones to the headphone output jack on your product. While the headphones are connected, the sound from the built-in speakers will be disabled.

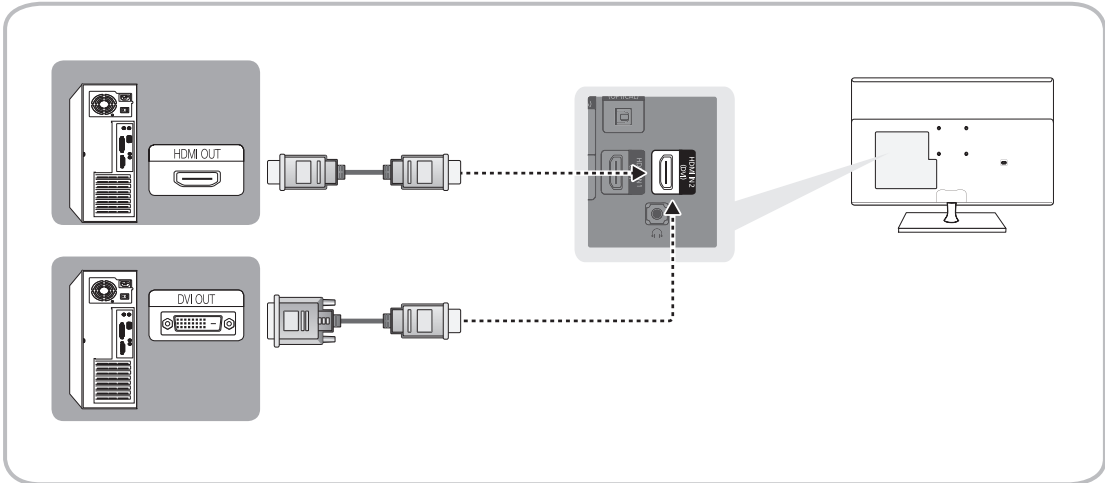
- The sound function may be restricted when you connect headphones to the product.
- Headphone volume and product volume are adjusted separately.
- The earphone jack supports only the 3 conductor tip-ring-sleeve (TRS) type.

# Connections

## Connecting to a PC

### Using an HDMI Cable or an HDMI to DVI Cable

 Your PC may not support an HDMI connection.



#### NOTE

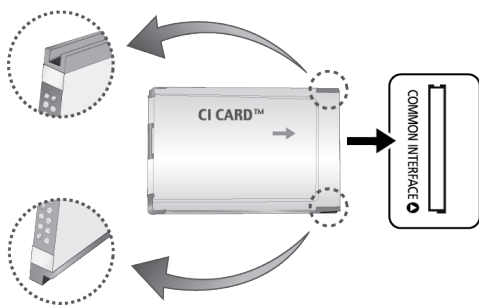
- For an HDMI to DVI cable connection, you must use the **HDMI IN 2 (DVI)** jack.
- For PC's with DVI video out jacks, use an HDMI to DVI cable to connect the DVI out on the PC to the **HDMI IN 2 (DVI)** jack on the product. Use the PC's speakers for audio.

# Connections

## Connecting to a TV Viewing Card slot

**To connect the CI CARD, follow these steps:**

### Using the “CI or CI+ CARD”



**To watch paid channels, the “CI or CI+ CARD” must be inserted.**

🔌 Turn the TV off to connect or disconnect a CI card.

- If you don't insert the “CI or CI+ CARD”, some channels will display the message “Scrambled Signal”.
- The pairing information containing a telephone number, the “CI or CI+ CARD” ID the Host ID and other information will be displayed in about 2~3 minutes. If an error message appears please contact your service provider.
- When the configuration of channel information has finished, the message “Updating Completed” appears indicating the channel list is updated.

#### **Requirements:**

- You must obtain a “CI or CI+ CARD” from a local cable service provider.
- When removing the “CI or CI+ CARD”, carefully pull it out with your hands since dropping the “CI or CI+ CARD” may cause damage to it.
- Insert the “CI or CI+ CARD” in the direction marked on the card.
- The location of the **COMMON INTERFACE** slot may be different depending on the model.
- “CI or CI+ CARD” is not supported in some countries and regions; check with your authorised dealer.
- If you have any problems, please contact a service provider.
- Insert the “CI or CI+ CARD” that supports the current aerial settings. The screen will be distorted or will not be seen.

# Connections

## Changing the Input Source

### Selecting the video source

You can select a connected external device using the **SOURCE** button.

For example, to switch to a gaming console connected to the second HDMI connector, press **SOURCE**. From the Source list, select HDMI2/DVI to change the input signal to HDMI mode. Connector names may vary depending on the model.

The following options are available in the Source screen:

### TOOLS Button

Select a port connected to an external device, and press and hold the Enter button. The following functions are available:

- Available options for each connector may vary.

#### **Edit Name**

Rename devices connected to the TV for easier identification of external sources.

For example, you can designate a computer connected to the TV via an HDMI-DVI cable as DVI PC.

Alternatively, simply designate a computer connected to the TV via an HDMI cable as PC.

You can also designate an AV device connected to the TV via an HDMI-DVI cable as DVI Devices.

#### **Information**

View detailed information about the connected devices.

#### **Disconnect USB Device**

Used to safely remove a USB device connected to the TV. This option is only available when a USB device has been selected.

# Connections

## Computer Connection Precautions

- 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)
720 x 400	70Hz	31.469	70.087	28.322	-/+

### MAC

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/Vertical)
640 x 480	67Hz	35.000	66.667	30.240	-/-
832 x 624	75Hz	49.726	74.551	57.284	-/-
1152 x 870	75Hz	68.681	75.062	100.000	-/-



# Connections

## VESA DMT

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/Vertical)
640 x 480	60Hz	31.469	59.940	25.175	-/-
640 x 480	72Hz	37.861	72.809	31.500	-/-
640 x 480	75Hz	37.500	75.000	31.500	-/-
800 x 600	60Hz	37.879	60.317	40.000	+/+
800 x 600	72Hz	48.077	72.188	50.000	+/+
800 x 600	75Hz	46.875	75.000	49.500	+/+
1024 x 768	60Hz	48.363	60.004	65.000	-/-
1024 x 768	70Hz	56.476	70.069	75.000	-/-
1024 x 768	75Hz	60.023	75.029	78.750	+/+
1152 x 864	75Hz	67.500	75.000	108.000	+/+
1280 x 720	60Hz	45.000	60.000	74.250	+/+
1280 x 800	60Hz	49.702	59.810	83.500	-/+
1280 x 1024	60Hz	63.981	60.020	108.000	+/+
1280 x 1024	75Hz	79.976	75.025	135.000	+/+
1366 x 768	60Hz	47.712	59.790	85.500	+/+
1440 x 900	60Hz	55.935	59.887	106.500	-/+
1600 x 900RB	60Hz	60.000	60.000	108.000	+/+
1680 x 1050	60Hz	65.290	59.954	146.250	-/+
1920 x 1080	60Hz	67.500	60.000	148.500	+/+


# Connections

## Connecting with a Mobile Device

Connect mobile device such as a smartphone or tablet to the TV directly or indirectly over a shared network and display the mobile device screen or content on the TV screen. Connect the mobile device to the TV as follows.

- **Mobile Device Screen on TV (Screen Mirroring)**

Wirelessly connect the TV to the mobile device with the mirroring function to view the mobile device's screen on the TV.

 This option is available only with mobile devices that support mirroring.

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

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

 This option is available only with mobile devices that support Wi-Fi Direct.

- **Connecting via Samsung Link**


Samsung Link enables you to play photo, video and music files from a Samsung Link-enabled mobile device without having to manually connect the device to the TV.

- **Connecting via Home Network (DLNA)**

View/play on the TV photo, video and music files from a mobile device connected to the same router or AP as the TV.


# Connections


## Mobile Device Screen on TV (Screen Mirroring)

 Availability depends on the specific model and area.

[Network](#) → [Screen Mirroring](#)


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. From the search result list, select TV. The TV displays a pop-up window.
3. In the pop-up window, select [Allow](#) to connect the mobile device.

 All previously allowed mobile devices will automatically connect without needing approval.

 If you select Deny, the device won't appear and can't be activated in this way. Navigate to [Network](#) → [Screen Mirroring](#) → [Device Manager](#) to allow the previously denied mobile device.

### Not searching for the TV on mobile devices...

1. Navigate to [Network](#) → [Screen Mirroring](#) to run [Screen Mirroring](#). Also, you can select [Screen Mirroring](#) on a list by pressing SOURCE.
2. Run mirroring on the mobile device. Display a list while automatically searching for mobile devices.
3. Select the TV and it connects automatically.

 When the mobile devices cannot connect, try turning the TV off and on.

### Allow/Reject the connection via mobile devices

 This is only available for watching when mobile devices allow the connection.


1. Navigate to [Network](#) → [Screen Mirroring](#) → [Device Manager](#) to activate [Device Manager](#). This displays a list of required mobile devices connection.
2. You can allow access or deny connections with mobile devices.

# Connections

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



[Network](#) → [Wi-Fi Direct](#)

Wi-Fi Direct lets you connect mobile devices directly to your TV using wireless technology. After connecting a device to the TV using Wi-Fi Direct, it will be possible to view/play video, photo, and music files from the device on the TV.

-  The mobile device must support Wi-Fi Direct. Make sure the mobile device you intend to use supports Wi-Fi Direct.
- 1. Enable Wi-Fi Direct on the mobile device and then launch [Wi-Fi Direct](#). 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. This completes the connection process.

## Connecting - Samsung Link



Samsung Link enables you to view/play photo, video and music files from a Samsung Link-enabled mobile device with ease. Also use Samsung Link to play and view the content of a mobile device that has been registered to Samsung Link under 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 with your Samsung account.
  -  To use Samsung Link, you have to sign in with a Samsung account. If you don't have a Samsung account, create one first.
2. Quickly access and play photo, video and music files from the mobile device running Samsung Link app under your Samsung account.
  -  For more information on using the Samsung Link app, refer to the Help section of the manual.

# Connections

## Connecting - Home Network (DLNA)

View/play photo, video and music files from a mobile device on the TV.

1. Connect both the TV and the mobile device to the same router or AP. A home network will be configured once the connections are established.
  -  Home Network (DLNA) enables content-sharing between the TV, computers and mobile devices connected to the same wired or wireless router.
2. Enable File Sharing on the mobile device. The mobile device's shared content can be viewed/played on the TV.
  -  As long as File Sharing is activated, unauthorised access may be allowed. Disable File Sharing if data access is not required.

# Connections

## Name of TV on Network

[Network](#) → [Device Name](#)


Choose or enter a TV name to be displayed on the network.

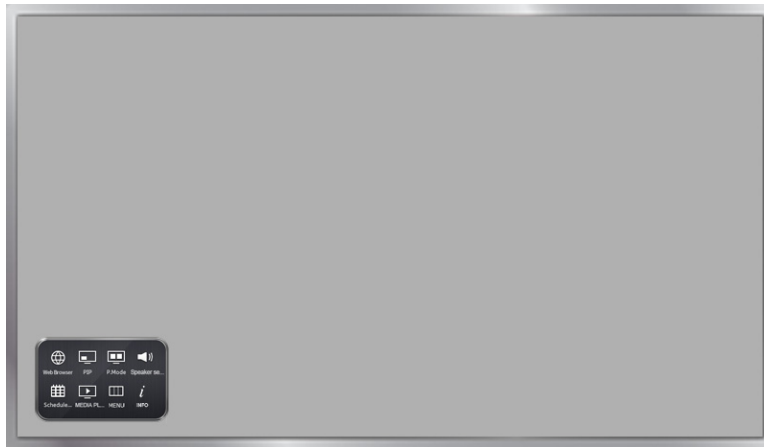
1. Select [Device Name](#) from the [Network](#) menu. A list will appear.
2. Choose a name from the list. Alternatively, select [User Input](#) to enter a name manually. You can view the specified TV name on the network.



# Basic Features

## Displaying the Remote Control on the Screen

1. Press the **KEYPAD** button to display the virtual remote control on the screen. You can easily enter digits, control content, and use TV buttons with the virtual remote control.

 The virtual remote control buttons may vary depending on the TV's current status.



Button	Description
<a href="#">Web Browser</a>	Launch the Web Browser.
<a href="#">PIP</a>	Display the video from an external device or computer on the main screen and the TV as a picture-in-picture.
<a href="#">P.Mode</a>	Lets you select the Picture Mode.  Availability depends on the specific model and area.
<a href="#">Speaker Settings</a>	Select the speakers which you want to use to listen to the TV's sound. To set this option, external speakers must be connected to the TV.
<a href="#">Schedule Manager</a>	Move to the Schedule Manager screen.  Availability depends on the specific model and area.
<a href="#">Media Play</a>	Run the Media Play. Lets you play media content saved on USB devices.
<a href="#">MENU</a>	Displays the menu on the screen.
<a href="#">INFO</a>	Shows the information about the current digital broadcast programme or content.

# Basic Features

## Controlling the TV with a Keyboard

[System](#) → [Device Manager](#) → [Keyboard Settings](#)

You can use a keyboard to control 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 (**E**), F6 (**SOURCE** Button), F7 (**CH.LIST** Button), F8 (**MUTE** Button), F9/F10 (Volume Buttons), F11 / F12 (Channel Buttons)
- Page Up/Page Down: Scroll web browser pages up/down.
- **Holding down the Enter key:** On the Smart Hub screen, navigate to an item and hold down the Enter key to display the Options menu.

 The Options menu depends on the context.




# Basic Features

## Changing Keyboards

 Availability depends on the specific model and area.

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:

- [Keyboard Language](#)

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

- [Keyboard type](#)

Specify the type of language selected under [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 from the list which key to use to switch between languages.

# Basic Features

## Controlling the TV with a Mouse

[System](#) → [Device Manager](#) → [Mouse Settings](#)

This TV can be operated with ease using a mouse instead of a remote control.

 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.

# Basic Features

## Using the Mouse

Once a USB mouse is connected to the TV, a pointer will appear on the TV's screen. You can use this pointer to control the TV as you would a computer.

- **Selecting and Running an Item**

Left-click on the mouse.


- **Displaying the Volume, Mute, and Channel Buttons**

Select the volume/channel icon on the screen while watching TV. Use the onscreen buttons to adjust the volume or switch the channel.

 Select the volume/channel icon again to hide the buttons.


- **Showing shortcut icons**

Right-clicking shows the shortcut icons on the screen so that you can easily use the TV functions.

 The shortcut icons may vary depending on the function.

- **Displaying the Context-sensitive Menu on Smart Hub**

On the Smart Hub screen, navigate to an item, and hold down the left mouse button for 1 second. The Options menu available to the selected item appears.


 The Options menu depends on the context.

- **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 on the X button. This closes the menu.

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

## Changing Mice

Select [System](#) → [Device Manager](#) → [Mouse Settings](#) → [Select Mouse](#). Designate which mouse to use.

 Only one mouse may be used at a time.

## Changing Mouse Buttons and Pointer Speed

Select [System](#) → [Device Manager](#) → [Mouse Settings](#) → [Mouse Options](#). The following options are available:

- [Primary Button](#)

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

- [Pointer Speed](#)

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

# Basic Features

## Entering Text Using QWERTY

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:

- [Language](#)

Select a language from the list.

- [Recommend text](#)

Enable/disable the Recommended Text feature. Enabling the [Recommend 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 memorised so that you can enter the same text again more easily.

- [Reset recommended text data](#)

Delete both the recommended words and the memorised 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.

# Basic Features

## Establishing a Wired Internet Connection

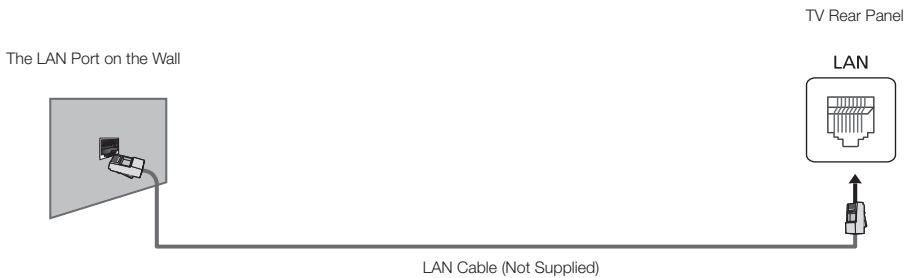
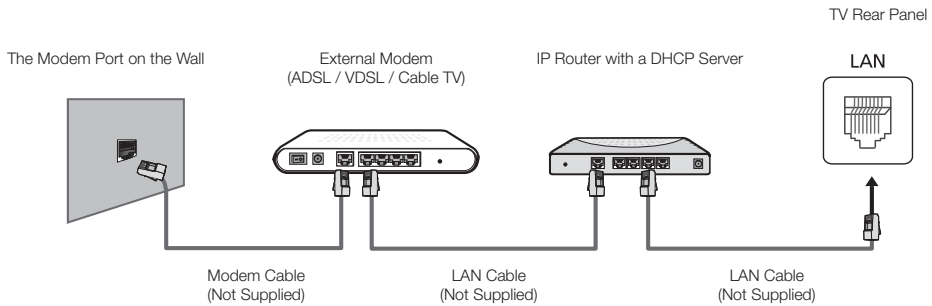
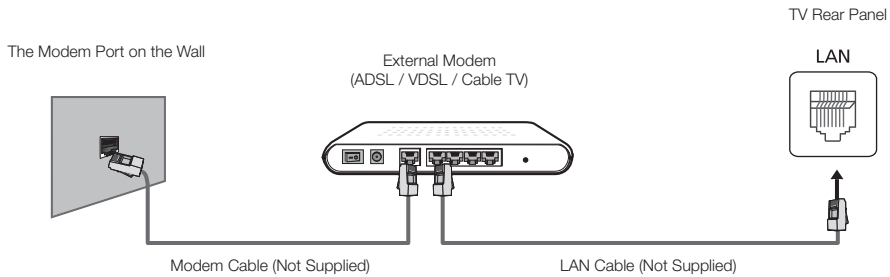
Connecting the TV to the Internet gives you access to online services and SMART features, and lets you update the TV's software quickly and easily through the Internet.

### Connecting a LAN Cable

Use a LAN cable.

- 📎 The TV will not be able to connect to the Internet if the network speed is below 10Mbps.
- 📎 Use Cat 7 LAN cables to link your TV to the Internet Access Points.

There are three ways to connect the TV to the Internet. Refer to the diagrams and connect the LAN cable to the LAN connector on the back of the TV.



# Basic Features

## Connecting to a Wired Internet Network Automatically

[Network](#) → [Network Settings](#)


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 successful, you will see a confirmation message. Select [OK](#). If the attempt fails, try again, or connect manually.

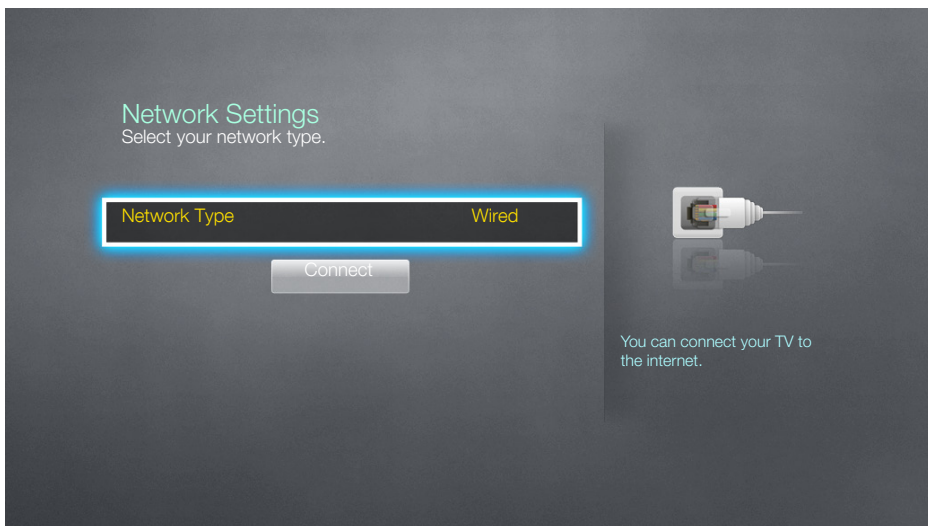
## Connecting to a Wired Internet Network Manually

[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).

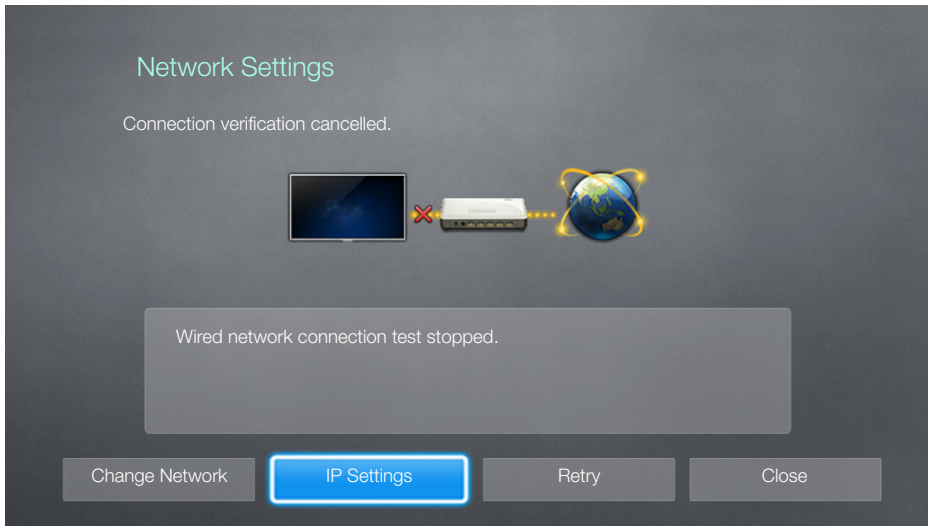
 Refer to the "Dynamic versus Static IP Addresses" section for more information on dynamic IP and static IP addresses.

1. Set the [Network Type](#) to [Wired](#), and then select [Connect](#).

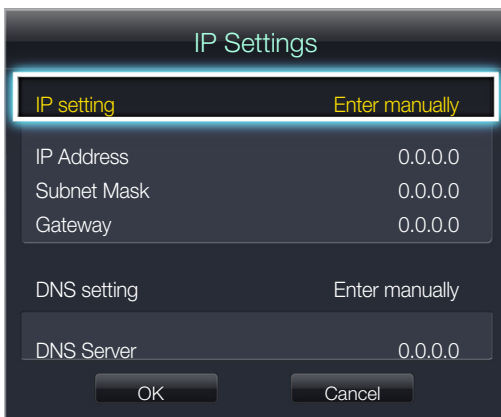


# Basic Features

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 the **IP setting** to **Enter manually**, enter the **IP Address**, **Subnet Mask**, **Gateway**, and **DNS Server** values, and then select **OK**.
  - Use one of the following methods to enter the numerical values.
    - Set the numbers using the ▲ and ▼ buttons.
    - Enter the numbers directly using numerical button.

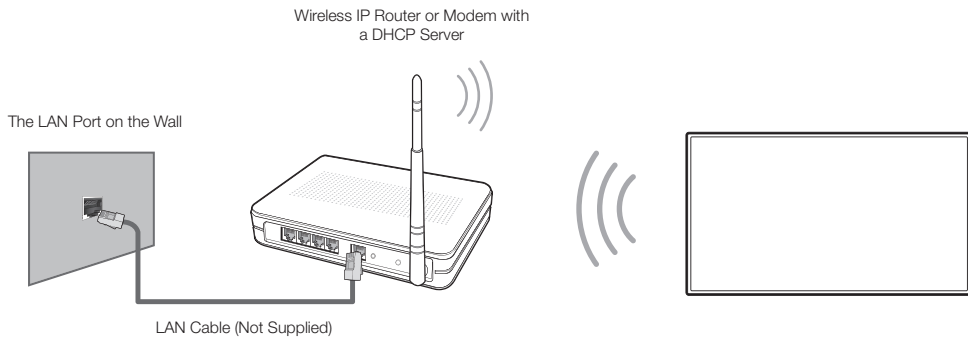


4. The TV attempts to connect to the network again using the specified settings. A confirmation message appears once a connection is established. Select **OK**.
  - 🔧 The network connection speed may differ depending on the DNS server settings.
  - 🔧 For details on the DNS server settings, contact your Internet service provider (ISP).

# Basic Features

## 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

[Network](#) → [Network Settings](#)

Connect the TV to the Internet via a wireless router. Make sure you have the wireless router's SSID (name) and security key settings before attempting to connect. The security key 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 (SSID). If the network you want doesn't appear in the list, select [Add Network](#), and enter the network's SSID manually.
3. Enter the security key and select [Done](#). If the selected network is not security-enabled, the TV attempts to connect right away.
4. A network connection will be attempted. Once a connection is established, the TV displays a confirmation message. Select [OK](#). If the attempt fails, try again, or connect manually.



# Basic Features

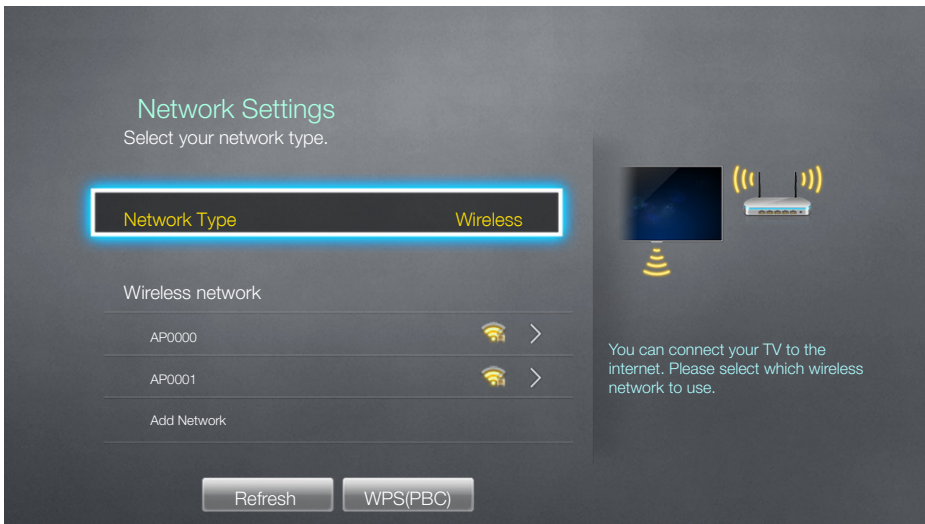
## Connecting to a Wireless Internet Network Manually

[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).

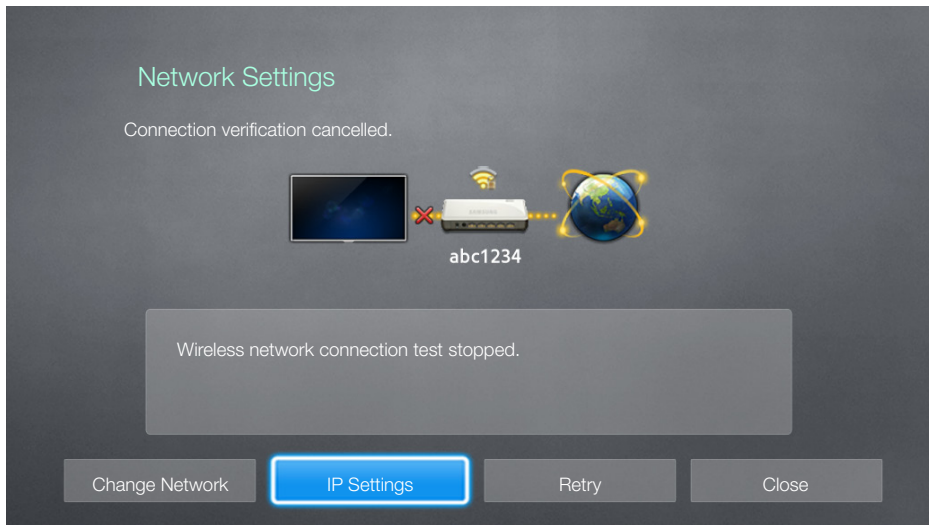
📎 Refer to the "Dynamic versus Static IP Addresses" section for more information on dynamic IP and static IP addresses.

1. Setting the [Network Type](#) to [Wireless](#) automatically displays a list of available wireless networks.



2. Select the network (SSID) you want to connect to. If the wireless router doesn't appear in the list, select [Add Network](#), and enter the network's SSID manually.
3. Enter the security key and select [OK](#). If the selected network is not security-enabled, the TV attempts to connect right away.
4. Select [Stop](#) when the TV attempts to connect to the network. Once the network connection has been interrupted, select [IP Settings](#).

# Basic Features

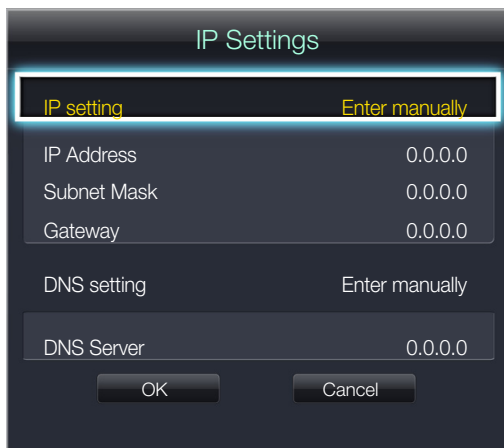


5. In the **IP Settings** screen, set the **IP setting** to **Enter manually**, enter the **IP Address**, **Subnet Mask**, **Gateway**, and **DNS Server** values, and then select **OK**.

- Use one of the following methods to enter the numerical values.


Set the numbers using the ▲ and ▼ buttons.

Enter the numbers directly using numerical button.



6. The TV attempts to connect to the network again using the specified settings. A confirmation message appears once a connection is established. Select **OK**.

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


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

# Basic Features

## Connecting to a Wireless Internet Network with WPS

[Network](#) → [Network Settings](#)

With wireless routers that support WPS (Wi-Fi Protected Setup) or PBC (Push Button Configuration), it's possible to press a button on the router to connect the TV to the Internet.

 This functionality is not available with wireless routers that do not support WPS. Check to see if your wireless router supports WPS.

1. Setting the [Network Type](#) to [Wireless](#) automatically displays a list of available wireless networks.
2. Select [WPS\(PBC\)](#) and then press the WPS or PBC button located on the wireless router within two minutes.
3. The TV exchanges the network name (SSID) and security key automatically and then attempts to connect to the Internet. A confirmation message appears once a connection is established. 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

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 it off and on again.

### IP auto setting failed

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

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

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

### Network setup is complete, but unable to connect to the Internet

If the problem persists, contact your Internet Service Provider.

# Basic Features

## Troubleshooting Wireless Internet Connectivity Issues

### Wireless network connection failed

Selected wireless router not found. Go to [Network Settings](#) and select the correct router.

### Unable to connect to a wireless router

Check the following:

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

### IP auto setting failed

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 security key if required.
3. If this does not work, contact your Internet Service Provider for more information.

### Unable to connect to the network

Do the following:

1. Check all [IP Settings](#).
2. Enter the correct security key 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

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

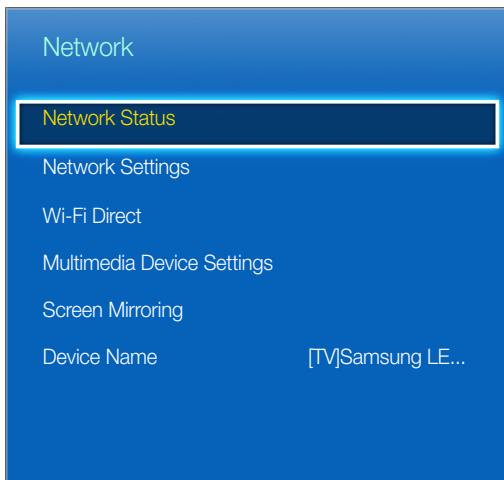
### Network setup is complete, but unable to connect to the Internet

If the problem persists, contact your Internet Service Provider.

# Basic Features

## Checking the Internet Connection Status

Network → Network Status



 Actual menu screen may differ depending on the TV model.

View the current network and Internet status.

# Preference Features

## Smart Hub

[Smart Hub](#) → [Open Smart Hub](#)

With Smart Hub, you can surf the web, download apps. In addition, you can use photo, video, and music files stored on external storage devices.

- 📎 Some Smart Hub services are paid services. To purchase such a service, the service provider account or Samsung Apps TV account (Samsung account) is required.
- 📎 Make sure the TV is connected to the Internet. The TV must be connected to the Internet in order to use Smart Hub.
- 📎 Some features of Smart Hub require an Internet connection and 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 related to them. You can view the entire content of the [Terms & Policy](#) by navigating to [Smart Hub](#) → [Terms & Policy](#). If you don't wish to use Smart Hub anymore, you can withdraw the agreement.
- 📎 Smart Hub service outages can be caused by disruptions in your Internet service.

## Testing Smart Hub connections

[Support](#) → [Self Diagnosis](#) → [Smart Hub Connection Test](#)

- 📎 Availability depends on the specific model and area.

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 Centre.



# Preference Features

## Opening the Home Screen




Press  while watching TV to open the [Home Screen](#).

On the [Home Screen](#), search through favourites apps, channels or sources and access previously run or frequently used functions.

## Setting your favourite item


1. Press  while watching TV to open the [Home Screen](#), and move to a desired item.
2. Press and hold the Enter button. The Options menu appears.
3. In the Options menu, select [Add to Favourites](#) to add the selected item to the favourite list, which will move top of the list.
  -  To delete a favourite item, select it and press and hold the Enter button to display the context menu. Then, select [Remove from Favourites](#).


## Deleting browsing history

1. Press  while watching TV to open the [Home Screen](#), and select [Clear All](#). You will be asked to confirm your selection.
2. Select [Yes](#) on the screen. Your browsing history is deleted completely.
  -  However, the Favourites list items will not be deleted.
  -  You can also delete your browsing history by selecting [Clear All](#) in the [Smart Hub](#) → [Home Screen Settings](#) menu.

# Preference Features

## Moving to the Panel Screen

Press the  button to open the [Home Screen](#), and select the Panel icon. On the Panel screen for each service panel, the following are available:

 Usability depends on the specific model and local region.

-  [SAMSUNG APPS](#)

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

-  [On TV](#)

You can view the current programmes on TV at a glance and view the Programme Recommendations by Channel and Programme Recommendations by Time from the programmes that will be broadcasted.

## Using the Smart Hub Tutorial

[Support](#) → [Smart Hub Tutorial](#)

From the [Support](#) menu, select [Smart Hub Tutorial](#). This will familiarise yourself with the basics of Smart Hub and panels.

## Resetting Smart Hub

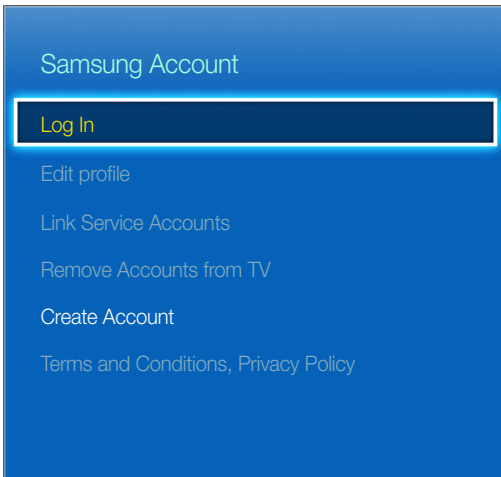
[Smart Hub](#) → [Reset Smart Hub](#)

Reset all saved information relating to Samsung accounts and linked service accounts, as well as Smart Hub service agreements and applications.



# Preference Features

## Using Smart Hub with Samsung Account





 Actual menu screen may differ depending on the TV model.

## Creating a Samsung Account

[Smart Hub](#) → [Samsung Account](#)

Some Smart Hub services are paid services. To purchase such a service, the service provider account or Samsung Apps TV account (Samsung account) is required.

You can create a Samsung Account using your email address.

-  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](#).
-  Alternatively, you can create a Samsung Account at <http://content.samsung.com>. You can use one ID for both the TV and the website.

# Preference Features

## **Creating a Samsung Account using Sign Up Samsung Account Menu**

1. Navigate to [Smart Hub](#) → [Samsung Account](#) → [Create Account](#) and select [Create a Samsung account](#).
2. Agree to use a Samsung Account and select [Next](#).
3. Create a Samsung Account according to the instructions on the [Create Account](#) screen. Once a Samsung Account is created, you will be automatically logged in to [Smart Hub](#).

## **Creating a Samsung Account using a Facebook Account**

A Facebook user can easily obtain necessary information from Facebook and create a Samsung Account.

1. Navigate to [Smart Hub](#) → [Samsung Account](#) and select [Log In](#).
2. Select [+](#) and select the [Create with Facebook](#).
3. Enter your Facebook ID and password and select [Sign In](#).
4. Agree to use a Samsung Account and select [Next](#).
5. Create a Samsung Account according to the instructions on the [Create Account](#) screen. Once a Samsung Account is created, you will be automatically signed in.

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




# Preference Features

## Signing into Samsung Account

[Smart Hub](#) → [Samsung Account](#) → [Log In](#)

### Logging into and Saving a Samsung Account

If you haven't logged into your Samsung Account on the TV, you must save your Samsung Account on the TV.

1. Navigate to [Smart Hub](#) → [Samsung Account](#) and select [Log In](#).
2. Select  and select [Sign In](#).
3. Enter your ID and password and then select [Sign In](#).
  -  Check the [Sign me in automatically](#) option if you wish to log into [Smart Hub](#) automatically.
  -  If you forgot your password, select [Reset password](#) to receive password reset instructions via email.
4. Select an image to be used as the profile picture. The [Samsung Account](#) has been saved on the TV.
5. Select [Done](#) to log into your Samsung Account.

### Easily Logging Into Your Samsung Account Saved on the TV


1. Navigate to [Smart Hub](#) → [Samsung Account](#) and select [Log In](#).
2. Choose your Samsung Account and select [Sign In](#).
3. Using the login method configured for the selected Samsung Account, log into your Samsung Account.

# Preference Features

## Linking My Samsung and App Accounts

[Smart Hub](#) → [Samsung Account](#) → [Link Service Accounts](#)

Linking your Samsung Account to accounts of apps installed on the TV lets you automatically log into your linked app accounts when you log into your [Samsung Account](#). For example, you can download the Facebook app and link your Facebook account to your [Samsung Account](#). In this case, logging into your [Samsung Account](#) then automatically logs you into your Facebook account as well.

 To use [Link Service Accounts](#), you must first log into your Samsung Account.

### Linking an App Account

1. Navigate to [Smart Hub](#) → [Samsung Account](#) and select [Link Service Accounts](#). A list of apps that can be linked to your Samsung Account is shown.
2. Select an app from the list. The Link to other accounts window appears on the screen.
3. Enter the current ID and password of the app to log in. When the login is complete, the app account is linked to the Samsung Account.

### Disconnecting a Linked Account


1. Navigate to [Smart Hub](#) → [Samsung Account](#), select [Link Service Accounts](#). Select an app to unlink.
2. A confirmation dialog box appears. Select [Yes](#) to unlink the app.

# Preference Features

## Changing and Adding Information to Samsung Account

[Smart Hub](#) → [Samsung Account](#)

Using the [Samsung Account](#) menu, you can manage your [Samsung Account](#).

 To change the account information, you must be logged into your Samsung Account.

1. Navigate to [Smart Hub](#) → [Samsung Account](#) and select [Edit profile](#).
2. Enter the password and then select [Done](#). The edit profile screen appears.


The profile editing screen provides the following features.

- **Changing Profile Image**  
If you select [Edit Profile Picture](#) on the login screen, you can change the profile image.
- **Choosing a Samsung Account Login Method for TV**  
Select [Sign-in Method](#) on the login screen and choose a login method. You can determine how to log into the TV with the saved Samsung Account.
- **Setting Auto Login**  
Check the [Sign me in automatically](#) option if you wish to log into [Smart Hub](#) automatically.
- **Entering Basic User Information**  
You can enter your given name, surname, and date of birth.
- **Receiving e-mail about Samsung services**  
You can determine whether to receive e-mail about Samsung services. Containing the latest information.

## Deleting All Samsung Accounts from the TV

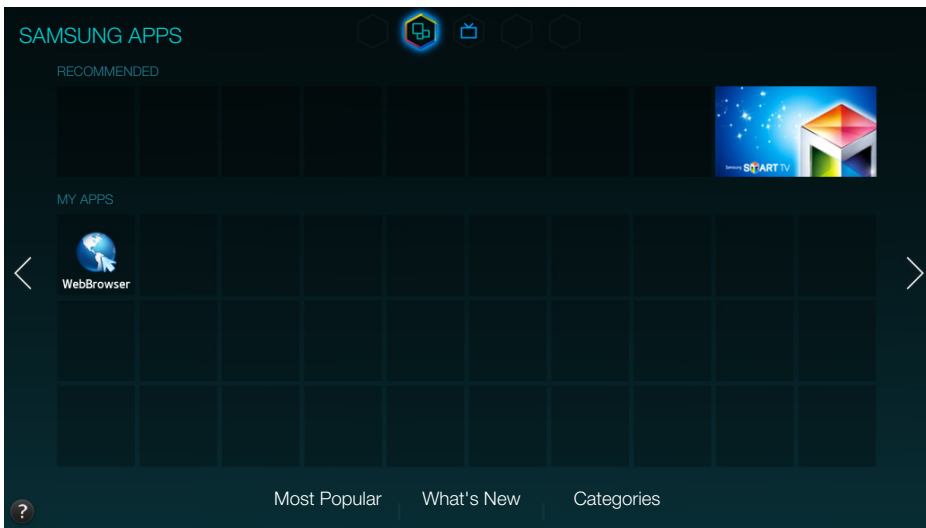
[Smart Hub](#) → [Samsung Account](#) → [Remove Accounts from TV](#)

Navigate to [Smart Hub](#) → [Samsung Account](#) and select [Remove Accounts from TV](#). The account and password information saved on the TV is deleted, and the account information of any linked apps are also deleted.

 To delete your account information, you must be signed in with your Samsung Account.

# Preference Features

## Using SAMSUNG APPS Panel



Actual menu screen may differ depending on the TV model.

This service or some of functions of it may be not available in some countries or region.

[Smart Hub](#) offers a variety of free news, sports, weather, and gaming content you can install directly on your TV the same way as you would on a smartphone or tablet.

Before you use [SAMSUNG APPS](#), make sure the TV is connected to the Internet. Your TV must be connected to the Internet in order to use [SAMSUNG APPS](#).

Launching [Smart Hub](#) for the first time installs the default apps automatically. The default apps may differ depending on the region.

# Preference Features

## Using Pop-Up Menu Functions

Move the focus to an app and press and hold the Enter button. You can use the following functions:

- **Move**  
Relocates the selected app.
- **Delete**  
Removes the selected app.
- **Delete Multiple**  
Removes multiple apps at once.
- **View Details**  
Move to the detailed information of the selected app.
- **Change view**  
You can change view mode sort by [Custom view](#) or [Most Played](#).
- **Lock/Unlock**  
You can lock or unlock a selected app from the screen.
- **Update apps**  
You can update the selected app.

# Preference Features

## Installing an App

- ✎ When the TV's internal memory is insufficient, you can install an app on a USB device.
- ✎ Only when the USB device is connected are the app icons installed on the USB viewable on the [SAMSUNG APPS](#) screen. 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.
- ✎ The app installed on the USB device is not available on a different TV, or a PC.

## Quick Installation

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 newest Samsung Apps. To view the entire app list, select [Categories](#). You can view all Samsung Apps classified by genre.
2. Move the focus to an app and press and hold the Enter button. A pop-up menu appears.
3. On the pop-up menu on the screen, select [Download](#).
  - ✎ While an app is being installed, the progress bar appears at the bottom of the app icon so that you can easily figure out the installation progress.
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 the newest Samsung apps. To view the entire app list, select [Categories](#). You can view all Samsung Apps by category.
2. Select an app from the list. Detailed information about your selection appears on the screen.
3. Select [Download](#) on the detailed information screen to install the selected app on the TV.
  - ✎ When an app is being installed, a progress bar appears underneath the app icon.
4. When the installation is complete, the [Download](#) button turns to [Open](#).
  - ✎ You can view installed apps on the [SAMSUNG APPS](#) screen.



# Preference Features

## Launching an App

Select an app on the [SAMSUNG APPS](#) screen to launch it.



The icons indicate the following:

-  : The app is installed on a USB device.



## **Default Apps**

## **Using Web Browser**

Web Browser is an Internet browsing app.

-  Use a keyboard and mouse for a more convenient web browsing experience.
-  The browsing screen may differ from that on a PC.

## Browsing Methods







Web Browser provides two browsing methods:  [Pointer Browsing](#) and  [Link Browsing](#). [Pointer Browsing](#) enables you to move the pointer for selection while [Link Browsing](#) allows using the direction arrows to move the focus.

The default browsing method of Web Browser is [Pointer Browsing](#). To enable [Link Browsing](#), select the [Link Browsing](#) icon.









# Preference Features

## Command and Status Bar at a Glance


Open the Web Browser to display the command and status bar at the top of the screen. The following items are available:

-  [Back](#)  
Move to the previous page.
-  [Forward](#)  
Move to the next page.
-  [Bookmarks & History](#)  
Move to the [Bookmarks & History](#) screen. On this screen, add the current page to Bookmarks, or move, edit, or delete a bookmarked page. Easily access visited pages by navigating the History screen.
-  [Home Page](#)  
Move to the main screen.
- **Address Bar**  
Check the address of the current page, or enter a web page address to move to the page.
-  [Refresh](#) /  [Stop](#)  
Reload the current page or stop reloading the current page.



# Preference Features

-  [Add to Bookmark](#)  
Add the current page to Bookmarks.
- [Search](#)  
Make a keyword search using the user-specified search engine.  
 To change the search engine, select the  icon and then select a search engine in the [Set Search Engine](#) menu.
-  [100% Zoom](#)  
Zoom in or out of the current web page.
-  [Link Browsing](#) /  [Pointer Browsing](#)  
Select one from two browsing methods supported by [Web Browser](#).
-  [Settings](#)  
Configure the [Web Browser](#) settings.
-  [Close](#)  
Exit [Web Browser](#).
- [New Tab](#)  
Open a new tab.

## Browsing Preferences

Select the  item on the screen. Configure the browsing settings to your needs or convenience.

 Some items may not be available depending on the web page. Unavailable items are grayed out.

- [Enable Grabbing / Disable Grabbing](#)  
Press Enter and then the arrow keys on your remote to enable Grabbing. Press Enter again to disable Grabbing after you have moved the items on screen to the position you want.
- [Approved Sites](#)  
To prevent children from accessing inappropriate web pages, limit access to pre-registered web pages.  
 You will be asked to enter a password when selecting [Approved Sites](#). Enter the password. The default password is 0000.  
[Approved Sites feature](#): Enable/disable the [Approved Sites feature](#).  
[Reset password for Approved Sites](#): Change the password.  
[Add current site](#): Add the current web page to [Approved Sites](#).  
[Manage Approved Sites](#): Enter the address of the web page that you want to add to [Approved Sites](#), or select one from the list and delete it.  
 Enabling the [Approved Sites feature](#) with no web page listed will restrict access to any web page.

# Preference Features

- [Private browsing on / Private browsing off](#)

Enable/disable the [Private Browsing](#) feature. Enabling [Private Browsing](#) will not save the browsing history.

 When enabling [Private Browsing](#), the  icon appears at the start of the address bar.

- [Set Search Engine](#)

Set the default search engine from the list.

- [Web Browser Settings](#)

Configure the [Web Browser Settings](#), such as browsing behaviors or security.

[Set as homepage](#): Select a web page and set it as the homepage.

[Pop-up Block](#): Block or unblock pop-up windows.

[Page Block](#): Block or unblock pages such as commercial pages. Manage a list of pages to block by entering the address of a web page.

[General](#): Delete browsing history or Internet usage information, or reset [Web Browser](#). Set [Security Mode](#) to [On](#) to restrict access by malicious codes or phishing sites.

[Encoding](#): Set the [Auto select](#) to [On](#), or select an encoding method from the list.

[Pointer](#): Adjust the pointer speed in [Pointer Browsing](#) mode, or change the link access method.

[Browser Information](#): Check the current version of [Web Browser](#).

- [Help](#)


This will familiarise yourself with the basics of [Web Browser](#).

## Rearranging Apps on the SAMSUNG APPS Screen

1. On the SAMSUNG APPS screen, move to the app you wish to change the order.
2. Press and hold the Enter button. A pop-up menu appears.
3. On the pop-up menu, select [Move](#).
4. Move an app to a desired location and select the app again.

# Preference Features

## Removing an App from the TV

 Note that if an app is removed, the data related to the app is also deleted.

### Removing an App


1. On the [SAMSUNG APPS](#) screen, move to the app you wish to remove.
2. Press and hold the Enter button. A pop-up menu appears.
3. On the pop-up menu on the screen, select [Delete](#). A removal confirmation window appears. Select [Yes](#). The selected app is removed.

### Removing Multiple Apps

1. On the [SAMSUNG APPS](#) screen, move to the app you wish to remove.
2. Press and hold the Enter button. A pop-up menu appears.
3. On the pop-up menu on the screen, select [Delete Multiple](#). A check box appears on the app icons.
4. Select all the apps you wish to remove and then select [Delete](#). A removal confirmation window appears. Select [Yes](#). Selected apps are removed.

## Rating/Reviewing an App

On the detailed app information screen, you can rate the 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.

# Preference Features

## Updating an App

1. On the [SAMSUNG APPS](#) screen, move to the app you wish to update.
2. Press and hold the Enter button. A pop-up menu appears.
3. On the pop-up menu on the screen, select [Update apps](#). A pop-up window appears.
4. Select all the apps you wish to update and then select [Update](#). All the selected apps are updated to the latest versions.

## Setting Auto App Update

[Smart Hub](#) → [Apps Settings](#)

To update apps automatically, navigate to [Smart Hub](#) → [Apps Settings](#) and set [Auto update](#) to [On](#). The apps installed on the TV are automatically updated as updates become available.

## SAMSUNG APPS Features

[Smart Hub](#) → [Apps Settings](#)

You can configure the features related to the apps installed on your TV.

# Preference Features

## Setting Push Notification

Push notification function enables apps installed on the TV to send alerts and messages to the user.

1. Navigate to [Smart Hub](#) → [Apps Settings](#) → [Push Notification Settings](#) and set the [Push Notification](#) to [On](#).
2. Set the [Push Notification](#) setting of apps you wish to receive push notifications from to [On](#). Push notification function of the selected apps is activated.

 The [Push Notification](#) app list only shows installed apps that support [Push Notification Settings](#).

## Using an App while Watching TV

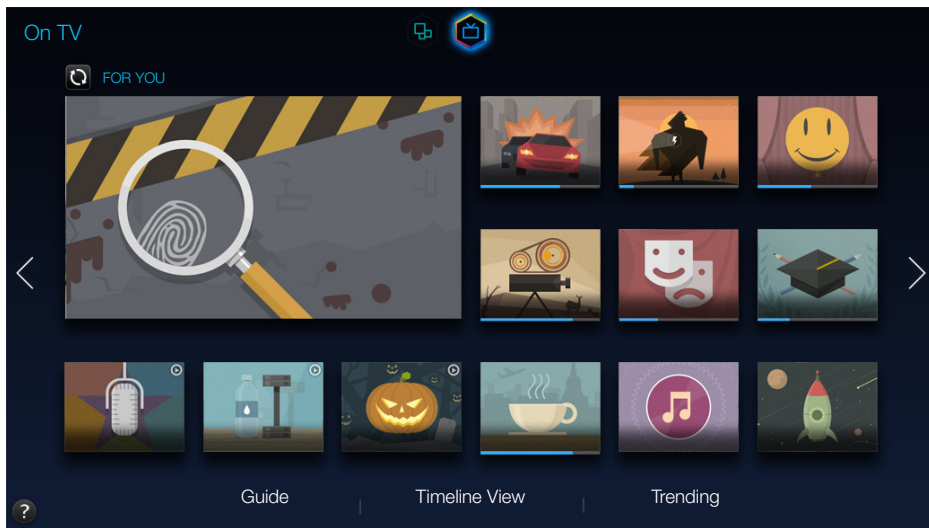
If an app linked to a channel is installed on the TV, you can view programme information and use related services offered by the app while watching TV.

Navigate to [Smart Hub](#) → [Apps Settings](#) and set [Channel-Bound Apps](#) to [On](#).

 This feature is only available with apps supporting [Channel-Bound Apps](#) installed on the TV.

# Preference Features

## Using On TV Panel




- Actual menu screen may differ depending on the TV model.
- This service or some of functions of it may be not available in some countries or region.
- Availability of recommended content depends on the specific model and area.

Smart Hub's **On TV** panel lets you view programme lists for recommended channels while watching TV. You can then switch to a programme in the recommendation list or set up [Schedule Viewing](#) for an upcoming programme.

- Before you use **On TV**, check if the TV is connected to the Internet. The TV must be connected to the Internet in order to use **On TV**.
- The channels or programmes recommended by **On TV** may differ from the actual ones depending on the broadcast information provider.

Select a desired programme from the recommendation list. You can watch the selected programme immediately if it is currently on air or move to the detailed programme information screen if it hasn't aired yet.

- Select  from the screen to change the recommended content list.
- For a programme being broadcasted, a progress bar appears. For an upcoming programme, the remaining time to broadcast appears.



# Preference Features

Move to the navigation bar at the bottom of the screen to access the following options:

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

Select [Guide](#) at the bottom of the screen to view the programme schedule of each digital channel at a glance. You can check the programme schedule and even set up a [Schedule Viewing](#).

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

- **Programme Recommendations by Time**

Select [Timeline View](#) at the bottom of the screen to view programme recommendations for different times of the day.

- **Popular Videos**

Select [Trending](#) at the bottom of the screen to view the most trendy or popular content.

# Preference Features

## Using Pop-Up Menu Functions

Move the focus to a desired programme and press and hold the Enter button. The following options are available:

 Available functions may differ depending on the selected programme.

- **Viewing Detailed Information**

You can move to the detail information screen about the selected programme.

- **Reserving**

You can set up a [Schedule Viewing](#) for the programme.

## Viewing Detailed Programme Information

1. Move the focus to a desired programme and press and hold the Enter button. The Options menu appears.
2. From the Options menu on the screen, select [View details](#). The detailed information about the selected programme screen appears.

You can find more information about the selected programme in the detailed information screen and you can easily use the following functions:

- **Moving to a Channel**

Jump to the selected programme's channel.

- **Reserving**

Set up a Schedule Viewing for the programme.

 This function is only available for programmes that is being broadcasted.

# Preference Features


- **Viewing Related Content**

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

- **Rate**

You can rate the programme.

## Configuring On TV Settings

 Availability depends on the specific model and area.

[Smart Hub](#) → [On TV Settings](#)

You can set up the signal reception method, cable company, and other broadcast viewing environment settings for On TV.

Navigate to [Smart Hub](#) → [On TV Settings](#), select [Set Up Service Provider](#) settings and set up the broadcast viewing environment settings according to the onscreen instructions.

## Receiving Automatic Notifications

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

Navigate to [Smart Hub](#) → [On TV Settings](#) and set [Automatic Notifications](#) to [On](#).

## Changing Recommendation Type

You can choose between personally preferred programmes and programmes preferred by the general public as the type of recommendations you wish to receive.

Navigate to [Smart Hub](#) → [On TV Settings](#), select [Recommendation Type](#) and set it to a desired type.

## Removing Adult Content from the Recommended List

You can configure this setting so that recommended programmes that are rated for adults are blocked automatically.

Navigate to [Smart Hub](#) → [On TV Settings](#) and set [Block Adult Content](#) to [On](#).

# Preference Features

## Playing Photos, Videos, and Music (MULTIMEDIA)

- ✎ You cannot play media content if the content or the storage device are not supported by the TV. For more information, refer to "Photo, Video, and Music File Limitations".
- ✎ Backup important files before connecting a USB device. Samsung shall not be held responsible for damaged or lost files.

### Playing Media Content from a USB Device

1. To use multimedia function, press the **KEYPAD** button, and then select **Media Play**. The USB devices connected to the TV are listed.
  2. Select the device you wish to access. Folders and files of the selected USB device are listed.
  3. Select the media content you wish to play. This plays the selected content.
    - ✎ Alternatively, move to the media content to play and press the **▶** button to play the content.
- ✎ If you connect a USB device to the TV while watching the TV, a pop-up window appears on the screen so that you can easily navigate the folders and files of the USB device.
  - ✎ Alternatively, if you select a USB device on the **Source** screen, a pop-up window appears on the screen so that you can easily navigate the folders and files of the USB device.

### Safely Removing a USB Device

1. Press the **SOURCE** button. The Source screen appears.
2. Navigate the USB device you wish to remove, and press and hold the Enter button. An options window appears.
3. Select **Disconnect USB Device** from the list.

# Preference Features

## Playing Multimedia Content Saved in a Computer/Mobile Device

### Allowing Connection with a Computer/Mobile Device

To play multimedia content in a computer or mobile device on the TV, you need to allow the connection with the computer on the TV.

- 📎 You can connect to a computer or mobile device on any DLNA DMC device. DLNA DMC function enables users to connect a mobile device to the TV, search for multimedia content and control play operations on the TV.
- 1. Navigate to [Network](#) → [Multimedia Device Settings](#). Devices connected to the TV are listed.
- 2. Allow connection with the desired device you wish to connect to the TV. You can only play media files from devices that have been allowed to connect to the TV.
  - 📎 If a computer or mobile device requests the multimedia content play, the connection allowance confirmation window appears on the TV so that you can easily connect the computer or mobile device.

# Preference Features

## When Connected through Home Network (DLNA)

- 🔗 To connect a computer through home network (DLNA).
  - 🔗 To connect a mobile device through home network (DLNA).
  - 🔗 You may experience compatibility issues when attempting to play media files via a third-party DLNA server.
  - 🔗 However, the content shared by a computer or a mobile device may not play depending on the encoding type and file format of the content. In addition, some functions may not be available.
  - 🔗 The multimedia content may not smoothly play depending on the network status. If this is the case, use a USB storage device.
1. Navigate to [Network](#) → [Multimedia Device Settings](#). Devices connected to the TV are listed.
  2. Select a device connected via the home network (DLNA). Folders and files shared by the selected device will be listed.
  3. Select a media content you wish to play from the list. This plays the selected content.
    - 🔗 Alternatively, move to the media content and press ▶ to play.

## When Connected through Samsung Link

- 🔗 To connect a computer through Samsung Link.
  - 🔗 To connect a mobile device through Samsung Link.
  - 🔗 However, the content shared by a computer or a mobile device may not play depending on the encoding type and file format of the content. In addition, some functions may not be available.
  - 🔗 The multimedia content may not smoothly play depending on the network status. If this is the case, use a USB storage device.
1. Navigate to [Smart Hub](#) → [Samsung Account](#) menu and select [Log In](#) to sign in with your Samsung Account.
  2. Select [Multimedia Device Settings](#) from the [Network](#) menu. Devices connected to the TV are listed.
  3. Select a device connected via Samsung Link. Folders and files shared by the selected device will be listed.
  4. Select a media content you wish to play from the list. This plays the selected content.
    - 🔗 Alternatively, move to the media content and press ▶ to play.

# Preference Features

## Playing Photos

You can play photos.

### Buttons and Functions Available while Viewing Photos

Press enter to access the following buttons. Pressing **RETURN** hides the playback buttons.

- [Pause / Play](#)  
Start or stop the slide show. The slide show feature displays all the photos contained in the selected folder, one photo at a time.
- [Previous / Next](#)  
View the previous/next photo in the queue.
- [Settings](#)

Function	Description
<a href="#">Slideshow Settings</a>	<a href="#">Speed</a> : Set the slide show speed. <a href="#">Effects</a> : Apply transition effects to the slide show.
<a href="#">Rotate</a>	Rotate the photo.
<a href="#">Zoom</a>	Zoom in by up to a factor of 4.
<a href="#">Picture Mode</a>	Change Picture Mode.
<a href="#">Background Music</a>	Listen to background music while viewing photos. The music file must be located on the same device as the photo files. A mini player appears on the screen when background music is played. Use the mini player to pause the music or play a different music file.
<a href="#">Sound Mode</a>	Change Sound Mode. This option is supported only when background music is playing.
<a href="#">Select Speakers</a>	Choose speakers for the background music.
<a href="#">Send</a>	This function is the same as the "Copy" function of a computer. Use this function to send the current photo to another storage device. For information on storage devices supported by this feature, refer to "Storage Device File Transfers".
<a href="#">Information</a>	View detailed information about the current photo.

# Preference Features

## Playing Videos

You can play Videos.

### Buttons and Functions Available while Watching Video

Press enter to access the following buttons. Pressing **RETURN** hides the playback buttons.

- **Pause / Play**

Pause or play the video.

When the video is paused, you can use the following functions. However, audio will not be heard while the video is paused.

- **Step:** Press **II** to scan the paused video one frame at a time.
- **Slow Motion:** Select the **▶▶** button to play the video at reduced speed (1/8, 1/4, 1/2).

- **Rewind / Fast Forward**

Rewind or Fast Forward the video. Repeatedly select the button to make the rewind/fast forward speed faster by up to 3 times. To restore normal playback speed, select **▶**.

- **Previous / Next**

Select **◀◀** twice to play the previous video. Selecting **◀◀** once reloads the current video from the beginning.

To play the next video, select the **▶▶** button.



# Preference Features

- [Settings](#)

Function	Description
<a href="#">Select Scene</a>	<p><a href="#">Chapter Titles</a>: Select and play another video in the same folder.</p> <p><a href="#">Time Bar</a>: You can use the &lt; , &gt; buttons to scan through the video in 10 seconds intervals or enter a specific time value to jump to that point in the video.</p>
<a href="#">Subtitles</a>	<p>Control the subtitle of the video.</p> <p><a href="#">Language</a>: Turn the subtitles on or off.</p> <p><a href="#">Sync</a>: When the video and the subtitles are not synchronised, you can adjust the synchronisation.</p> <p><a href="#">Reset Sync</a>: Reset the subtitle synchronisation adjustment to 0.</p> <p><a href="#">Size</a>: Choose the font size for the subtitles.</p> <p><a href="#">Encoding</a>: If the subtitles are broken, you can change the encoding language.</p>
<a href="#">Repeat</a>	<p>Set the repeat mode. <a href="#">Repeat One</a> repeats the current programme only. <a href="#">Repeat All</a> repeats all programmes contained in the folder.</p>
<a href="#">Picture Size</a>	<p>Change the picture size. However, the supported picture size is determined by the video content.</p>
<a href="#">Picture Mode</a>	<p>Change the Picture Mode setting.</p>
<a href="#">Sound Mode</a>	<p>Change the Sound Mode setting.</p>
<a href="#">Select Speakers</a>	<p>Choose a speaker to play the audio.</p>
<a href="#">Audio Language</a>	<p>Choose a desired audio language. This option works only when the video supports multi-track sound.</p>
<a href="#">Information</a>	<p>View detailed information about the video.</p>

# Preference Features

## Playing Music

You can play Music.

### Buttons and Functions Available while Playing Music


Press enter to access the following buttons. Pressing **RETURN** hides the playback buttons.

- **Pause / Play**  
Pause or resume the music.
- **Rewind / Fast Forward**  
Rewind or fast forward the music. To restore normal playback speed, select **▶**.
- **Previous / Next**  
Select **◀◀** twice to play the previous music file. Selecting **◀◀** once reloads 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 order or randomly.
- **Select Speakers**  
Choose a speaker to play the audio.
- **Sound Mode**  
Change the Sound Mode setting.

# Preference Features

## Functions on the Media Content List Screen

The media content screen for the selected storage device includes the following functions.

- [Filter](#)  
Use this option to filter the list to see only the photo, video, or music files contained in the storage device.
- [Options](#)  
 This function is not available when [Filter](#) is set to [All](#).

Function	Description
<a href="#">Slide Show</a>	Start the slide show. This option is available for photo files.
<a href="#">Play Selected</a>	Play only the selected content.
<a href="#">Send</a>	This function is the same as the "Copy" function of a computer. Use this function to send the media content to another storage device. For information on storage devices supported by this feature, refer to "Storage Device File Transfers".
<a href="#">Encoding</a>	If the media content's title is being displayed incorrectly, you can change the encoding method. This function is available only for music files.
<a href="#">Rename Playlist</a>	Rename your playlist. This function is available only when the media content is music.
<a href="#">Delete Playlist</a>	Delete a playlist that you have created. This function is available only for music files.
<a href="#">Add to Playlist</a>	Add a file to an existing playlist or create a new playlist. This function is available only for music files.


# Preference Features

## Digital Broadcast Information at a Glance

[Broadcasting](#) → [Guide](#)

The Guide provides an overview of each digital channel's programme lineup. You can check the programme schedules and set up a [Schedule Viewing](#).

Press **GUIDE** to launch the guide.

 The information in the [Guide](#) is for digital channels only. Analogue channels are not supported.

## Using the Guide

Move to the programme schedule and then press and hold the Enter button. The following options are available:

- **Changing the Channel List**

If you select [Channel Filter](#), you can change the channels displayed in the channel lists.

- **Navigating the Programme Schedule**

Press to the [◀](#), [▶](#) button to navigate the programme schedule by 24 hours. You can only view the future programme schedule.

It is available for moving the page using the [▲](#), [▼](#) button.

- **Moving to the Schedule Manager**

You can move to the [Schedule Manager](#) screen.

- **Adding Favourites**

Click [Edit Favourite Channels](#) to add the selected programme to the Favourites.

- **Viewing Detailed Information**

View detailed information about the selected programme. The programme information may vary depending on the type of incoming signal and may not be available at all for certain programmes.

- Select a current programme on another channel and select [View Details](#) to [Watch](#) the programme.
- Select an upcoming programme and select [View Details](#) for [Schedule Viewing](#).

# Preference Features

## Checking the Current Programme Info

While watching TV, select [INFO](#) to view information about the current programme.

- 🔑 In order to view the programme info, you must first set the TV's clock. Set the [Clock](#) ([System](#) → [Time](#) → [Clock](#)).
- 🔑 The programme information may vary depending on the type of incoming signal and may not be available at all for certain programmes.

In addition, select right button to view information about the next programme, and press enter, to set up a [Schedule Viewing](#) for the upcoming programme.

## Change the Broadcast Signal

[Broadcasting](#) → [Aerial](#)

Choose your preferred method of receiving digital broadcasts.

## Digital Signal Info and Strength


[Support](#) → [Self Diagnosis](#) → [Signal Information](#)


Select [Support](#) → [Self Diagnosis](#) → [Signal Information](#). 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.
- 🔑 This is only available for digital channels.

# Preference Features

## Setting Up a Schedule Viewing

Configure the TV to show a specific channel or programme at a specific time and date. The  icon appears next to programmes 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](#)).

## Setting Up Schedule Viewing

### Digital Channel Schedule Viewing

You can set up [Schedule Viewing](#) for programmes on digital channels on the following screens:

- **The Guide Screen**

Select an upcoming programme from the [Guide](#) to set up a [Schedule Viewing](#) for it.

- **The Programme Info Screen**

Select [INFO](#) to display information about the current programme. From the programme information screen, select right button to view information about the next programme, and press enter, to set up a [Schedule Viewing](#) for the upcoming programme.

### Analogue Channel Schedule Viewing

[Broadcasting](#) → [Schedule Manager](#)

The [Schedule Viewing](#) function for programmes on analogue channels can be set up by specifying the time and date.

1. Select [Broadcasting](#) → [Schedule Manager](#).
2. Select [Schedule](#) from the [Schedule Manager](#) to bring up a pop-up menu. Select [Schedule Viewing](#).
3. Specify the [Aerial](#), [Channel](#), [Repeat](#), and [Start Time](#) options for the programme you want to watch and then select [OK](#) to finish.

# Preference Features

## Managing the Schedule Viewing List

[Broadcasting](#) → [Schedule Manager](#)

You can change the settings of [Schedule Viewing](#) sessions or cancel scheduled sessions altogether.

### Deleting Schedule Viewing Sessions

You can delete [Schedule Viewing](#) sessions.

1. Select [Broadcasting](#) → [Schedule Manager](#).
2. Select a session from the [Schedule Manager](#). A pop-up window appears.
3. Select [Delete](#). This cancels the selected viewing session.

### Editing Schedule Viewing Sessions

1. You can change the settings of [Schedule Viewing](#) sessions. Select [Broadcasting](#) → [Schedule Manager](#).
2. Select a session from the [Schedule Manager](#). A pop-up window appears.
3. Select [Edit](#) and change the settings of the selected session.
4. Once finished, select [OK](#). This applies the changes you made to the selected viewing session.

# Preference Features




## Using the Channel List

### Broadcasting → Channel List

Launch the [Channel List](#) while watching TV to change channels or to see what's on other 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:


-  : An analogue channel
-  : A favourites channel
-  : A locked channel

#### • Using Options

Press  button to select [Options](#). The following options are available:

Function	Description
<a href="#">Aerial</a>	Choose between <a href="#">Terrestrial</a> and <a href="#">Cable</a> .  Availability depends on the specific model and area.
<a href="#">Category</a>	If you select a <a href="#">Category</a> , its channels appear in the list among the TV's channels.
<a href="#">Sorting</a>	Sort the list by <a href="#">Channel Number</a> or by <a href="#">Name</a> (Digital channels only).
<a href="#">Genre</a>	Sort the list to include channels of the selected genre only. However, <a href="#">Genre</a> can only be used if channels contain the genre information. Check the network and make sure the TV is connected to the Internet. Your TV needs to be connected to the Internet in order to receive the channel's genre information.
<a href="#">Edit Favourites</a>	Designate favourites channels.

#### • Changing to Favourites

Press  button to select [Favourites 1](#) through [Favourites 5](#). This shows the selected list's channels. However, a Favourites list can only be selected if it contains at least one favourites channel. If you haven't created a Favourites list yet, you need to create one first.






# Preference Features

## Registering, Removing, and Editing Channels

[Broadcasting](#) → [Edit Channel](#)

Remove channels from the index of channel restore removed channels, and rename analogue channels. The [Edit Channel](#) screen icons indicate the following:

-  : An analogue channel
-  : A favourites channel
-  : A locked channel

## Registering and Removing Channels

[Broadcasting](#) → [Edit Channel](#)

### Removing Registered Channels


Remove registered channels from the index.

1. Select the channels you want to remove. Unselect channels by choosing them again. To select all the channels, select [Options](#) from the bottom of the screen and then select [Select All](#) from the list.
2. Once you have made your selection, select [Delete](#) from the bottom of the screen to remove the selected channels.

## Editing Registered Channels

[Broadcasting](#) → [Edit Channel](#)

Select [Options](#) at the bottom of the screen to access the following options. However, the available options may vary depending on the broadcast signal.

- [Select All](#)  
Selects all channels displayed in the [Edit Channel](#) screen.
- [Sorting](#)  
(Digital channels only)  
Change the list ordered by Channel [Name](#) or [Number](#).
- [Aerial](#)  
Choose between [Terrestrial](#) and [Cable](#).  
 Availability depends on the specific model and area.
- [Category](#)  
If you select a [Category](#), its channels appear in the list among the TV's channels.
- [Edit Favourites](#)  
Organise favourites lists to find favourite channels and switch between channels more easily.

# Preference Features

- [Rename channel](#)

Rename Analogue Channels. The new name can be up to 5 characters long.

- [Channel Info](#)

Check the information of the channel.

- [Information](#)

View detailed information about the current programme.

## Enabling/ Disabling Password Protection on Channels

[Broadcasting](#) → [Edit Channel](#)

You can lock channels you don't want your children to view.

 To enable password protection, set [Channel Lock](#) to **On**. First, navigate to [Broadcasting](#) → [Channel Lock](#) and set it to **On**.


## Changing Numbers

Change the number of the channels in edit channels List. Select channels from the [Edit Channel](#) screen and then select [Change Number](#) at the bottom of the screen.

## Locking/ Unlocking Channels

Select channels from the [Edit Channel](#) screen and then select [Lock](#) or [Unlock](#) at the bottom of the screen. When the password entry window appears, enter the password. This locks or unlocks the selected channels.

## Edit Channel Number

 Availability depends on the specific model and area.


[Broadcasting](#) → [Edit Channel Number](#)

Use this to change channel number. When channel number is changed, channel information is not updated automatically.

# Preference Features

## Creating a Personal Favourites List

[Broadcasting](#) → [Edit Favourites](#)

You can designate frequently watched channels as favourites. Favourites channels are highlighted in the [Edit Channel](#) and [Channel List](#) screens with the  symbol. You can create up to 5 favourites channel lists.

## Registering a Channel as Favourites

[Broadcasting](#) → [Edit Favourites](#)

### Registering the Current Channel as a Favourites

Add the current channel to a Favourites list.

1. Select **TOOLS** while watching TV to display a list of options. Select [Edit Favourites](#) from the list.
2. From the pop-up window, select all the Favourites lists you want to add the current channel to and then select **OK**.
3. This adds the current channel to the selected Favourites list(s). Select **OK**.

### Registering Multiple Channels as Favourites


It's possible to register multiple channels as favourites at the same time.

1. Select [Broadcasting](#) → [Edit Favourites](#).
2. Select [Category](#) from the bottom of the screen to change the channel list to the one containing that channels you want to register.
3. Select the channels from the list in the middle of the screen.
4. Select [Change Fav.](#) and then change the [Favourites 1](#) to the [Favourites 5](#) you want to use.
5. Select [Add](#).

# Preference Features

## Viewing Favourites List Channels Only

It's possible to flip through Favourites list channels using only the channel up/down buttons.

 A Favourites list can only be selected if it contains at least one favourites channel.

1. Run [Channel List](#). ([Broadcasting](#) → [Channel List](#)).
2. Press [>](#) button to select [Favourites 1](#) through [Favourites 5](#).
3. Choose a channel from the selected Favourites list. This changes the channels and [Channel List](#) changes to the selected Favourites channel.




## Editing a Favourites List

[Broadcasting](#) → [Edit Favourites](#)

You can rename and edit Favourites lists.

### Edit Favourites Features

Select [Options](#) from the bottom of the [Edit Favourites](#) screen to access the following options:

- [Copy to Favourites](#)  
Copy channels from one favourites channels list to another.  
 This can only be used when the focus has selected a channel registered to a Favourites list.
- [Rename Favourites](#)  
Rename an existing favourites channels list.  
 This can only be used when the focus has selected a channel registered to a Favourites list.
- [Sorting](#)  
Change the list ordered by Channel [Name](#) or [Number](#). This function is not available on analogue channel.
- [Aerial](#)  
Choose between [Terrestrial](#) and [Cable](#).  
 Availability depends on the specific model and area.
- [Edit Channel](#)  
You can manage the channels saved on the TV.
- [Information](#)  
View detailed information about the current programme.

# Preference Features

## Removing Registered Channels from a Favourites List

Remove channels from a favourites channels list.

1. Select [Change Fav.](#) at the bottom of the screen and then change the Favourites list to the Favourites list you want to use.
2. Select the channels you want to remove from the selected Favourites list.
3. Select [Delete](#).

## Rearranging a Favourites List

Rearrange the order of the channels in a Favourites Channels List.

1. Select [Change Fav.](#) at the bottom of the screen and then change the Favourites list to the Favourites list you want to use.
2. From the selected Favourites list, select the channels you want to rearrange.
3. Select [Change order](#) from the bottom of the screen and then rearrange the selected channels. Press enter to finish.

# Preference Features

## **Renaming a Favourites List**

Rename an existing favourites channels list.

1. Select [Change Fav.](#) at the bottom of the screen and then change the Favourites list to the Favourites list you want to use.
2. Select [Options](#). A list appears.
3. Select [Rename Favourites](#) from the list. A pop-up window appears. Rename the list in the pop-up window. The new name can be up to 20 characters long.

## **Copying a Favourites List to a Different Favourites List**


Copy channels from one favourites channels list to another.

1. Select [Change Fav.](#) and then change the Favourites list on the side of the screen to the Favourites list you want to use.
2. From the Favourites list displayed on the side of the screen, select all the channels you want to copy.
3. Select [Options](#). A list appears.
4. Select [Copy to Favourites](#) from the list. A pop-up window appears.
5. From the pop-up window that appears on the screen, select the Favourites lists you want to copy the selected channels to. This copies the selected channels to the selected Favourites lists.

 [Copy to Favourites](#) is only available when there are channels in the Favourites list.

# Preference Features

## Adding Realism to Sports

 Availability depends on the specific model and area.

[System](#) → [Football Mode](#)





[Football Mode](#) enables optimal picture and sound settings for sports events, making them appear and sound as if you were actually there.

 Whether [Football Mode](#) or [Soccer Mode](#) is displayed depends on the area.

## Enabling Football Mode

[System](#) → [Football Mode](#) → [Football Mode](#)

Select [System](#) → [Football Mode](#) and then set [Football Mode](#) to [On](#). Picture and sound settings of the TV are automatically optimised for sports events.





-  Enabling [Football Mode](#) changes the [Picture Mode](#) to [Stadium](#) and the [Sound Mode](#) to [Stadium](#), and disables some [Picture](#) and [Sound](#) menus.
-  Press  while watching TV to activate/deactivate [Football Mode](#). If  is not available, then use [TOOLS](#) to activate/deactivate [Football Mode](#).


# Preference Features

## Functions Available in Football Mode

Press enter. The following buttons will appear.

- [Zoom](#)

You can pause the current video and zoom in on one of 9 different sections of the screen. Pan the zoomed-in image using , , ,  buttons.

 You cannot use this function when [PIP](#) is active.

- [Information](#)

Displays detailed information about the current programme.



# Preference Features

## TV-Viewing Support Features

### Showing Subtitles

[System](#) → [Accessibility](#) → [Subtitle](#)

Show subtitles. Subtitles will be displayed when watching a broadcast that supports subtitles. Switches subtitles **On** or **Off**.


 DVD subtitles are only available if the DVD player is connected to an external input connector.

- [Subtitle Mode](#)

Set the subtitle mode.

- [Subtitle Language](#)

Set the subtitle language.

 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.

### Subtitle Options

[System](#) → [Accessibility](#) → [Subtitle](#)

Select a subtitle mode. The list of modes may vary depending on the broadcast.

- [Primary Subtitle](#)

Set the primary subtitle language.


- [Secondary Subtitle](#)

Set the secondary subtitle language.

# Preference Features

## Changing Teletext Language

[Broadcasting](#) → [Channel Settings](#) → [Teletext Language](#)

 Availability depends on the specific model and area.


Use this to set the teletext language.

- [Primary Teletext](#)  
Set the primary teletext language.
- [Secondary Teletext](#)  
Set the secondary teletext language.


## Digital Text

This function is only available in UK.

[Broadcasting](#) → [Channel Settings](#) → [Digital Text](#)

 Availability depends on the specific model and area.

If the programme broadcasts with digital text, this feature is enabled.

-  MHEG (Multimedia and Hypermedia Information Coding Experts Group) An International standard for data encoding systems used in multimedia and hypermedia. This is at a higher level than the MPEG system which includes data-linking hypermedia such as still images, character service, animation, graphic and video files as well as multimedia data. MHEG is user runtime interaction technology and is being applied to various fields including VOD (Video-On-Demand), ITV (Interactive TV), EC (Electronic Commerce), tele education, teleconferencing, digital libraries and network games.

# Preference Features

## PIP Broadcast Viewing

[Picture](#) → [PIP](#)


Use the [PIP](#) (Picture-In-Picture) function to watch TV in a small window while also watching images from an external source such as a DVD player, a Blu-ray player, or a computer in the background.

Select [Picture](#) → [PIP](#) to display the PIP settings window. This settings window contains the following options:

- [PIP](#)  
Activates/deactivates [PIP](#).
- [Aerial](#)  
Select the [PIP](#) sub-picture broadcast signal.
- [Channel](#)  
Select the [PIP](#) sub-picture channel.
- [Size](#)  
Select the [PIP](#) sub-picture size.
- [Position](#)  
Select the [PIP](#) sub-picture position.
- [Sound Select](#)  
Select the audio source.


# Preference Features

## Scanning for Available Channels

 Availability depends on the specific model and area.

[Broadcasting](#) → [Auto Tuning](#)

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

 If there are saved channels, this feature deletes the existing list and then saves the newly scanned channels.


If the TV is connected to a cable box or satellite receiver, you do not need to do this.

1. Select [Broadcasting](#) → [Auto Tuning](#).
2. Select [Start](#) when prompted. This initiates the Auto Programme function. The process can take up to 30 minutes to complete.

- [Auto Tuning](#)


Scans for channels automatically and stores them in the TV's memory.

- [Cable Search Option](#) (when the aerial was set to [Cable](#))

 Availability depends on the specific model and area.


Sets additional search options such as the frequency and symbol rate for a cable network search.

- [Standby Auto Tuning](#)

 Availability depends on the specific model and area.

Auto-tune channels while your TV is in standby mode.

- [Wake-up Timer](#)

 Availability depends on the specific model and area.

Schedule timer to turn the TV on and scan channels automatically.

# Preference Features

## Selecting the Broadcast Audio Options

[Broadcasting](#) → [Audio Options](#)


- [Audio Language](#)

(Digital channels only)

Change the default value for audio languages.

[Primary Audio](#): Set the primary audio language.

[Secondary Audio](#): Set the secondary audio language.

 The available language may differ depending on the broadcast.

- [Audio Format](#)

(Digital channels only)


Change a desired audio format. The supported audio format may vary depending on the broadcast programme.

## Audio Description

[System](#) → [Accessibility](#) → [Audio Description](#)

(Digital channels only)

This function handles the Audio Stream for the AD (Audio Description) which is sent along with the Main audio from the broadcaster.

 [Audio Description](#): Turn the audio description function on or off.

 [Volume](#): Adjust the audio description volume.

# Preference Features

## Using the Channel Settings

[Broadcasting](#) → [Channel Settings](#)

### Country (Area)

[Broadcasting](#) → [Channel Settings](#) → [Country \(Area\)](#)

Select your country so that the TV can correctly auto-tune the broadcasting channels. This depends on the country or region.

When the PIN input screen appears, enter your 4 digit PIN number.

- [Digital Channel](#)  
Change the country for digital channels.
- [Analogue Channel](#)  
Change the country for analogue channels.

### Manual Tuning

[Broadcasting](#) → [Channel Settings](#) → [Manual Tuning](#)

Scans for a channel manually and stores in the TV.

If a channel is locked using the Channel Lock function, the PIN input window appears.

This function depends on the country and region.

# Preference Features

## When Aerial Source is set to Terrestrial or Cable

- [Digital Channel Tuning](#)

Scans for a digital channel.

1. Select the [New](#).

 When selecting [Aerial](#) → [Terrestrial: Channel, Frequency, Bandwidth](#)

 When selecting [Aerial](#) → [Cable: Frequency, Modulation, Symbol Rate](#)

2. Select the [Search](#). When scanning has finished, a channel is updated in the channel list.

- [Analogue Channel Tuning](#)

Scans for an analogue channel.

1. Select the [New](#).

2. Set the [Programme](#), [Colour System](#), [Sound System](#), [Channel](#) and [Search](#).

3. Select the [Store](#). When scanning has finished, a channel is updated in the channel list.

## Channel mode

- [P](#) (programme mode)

When tuning is complete, the broadcasting stations in your area have been assigned to position numbers from P0 to P99. You can select a channel by entering the position number in this mode.

- [C](#) (aerial channel mode) / [S](#) (cable channel mode)

These two modes allow you to select a channel by entering the assigned number for each aerial broadcasting station or cable channel.

## Fine-Tuning the Screen

[Broadcasting](#) → [Channel Settings](#) → [Fine Tune](#)

 Available for analogue broadcasts only.

Analogue 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 [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.

# Preference Features

## Transfer Channel List


[Broadcasting](#) → [Channel Settings](#) → [Transfer Channel List](#)

Imports or exports the channel map. When the PIN input screen appears, enter the PIN.

You should connect a USB storage device to use this function.

- [Import from USB](#): Import channel list from USB.
- [Export to USB](#): Export channel list to USB. This function is available when USB is connected.

## Delete CAM Operator Profile

 Availability depends on the specific model and area.


[Broadcasting](#) → [Channel Settings](#) → [Delete CAM Operator Profile](#)

Select the CAM operator to delete.



# Preference Features

## Common Interface

 Availability depends on the specific model and area.

[Broadcasting](#) → [Common Interface](#)

- [CI Menu](#)

Enables the user to select from the CAM-provided menu. Select the CI menu based on the menu PC Card.

- [CAM video transcoding](#)

You can configure the setting to transcode the video codec from the CAM automatically. Turn it [Off](#) if you do not want to use it.

 You must use a CAM that supports video codec transcoding.

- [Application Info](#)

View information about the CAM inserted into the CI slot and about the "CI or CI+ CARD" inserted into the CAM. You can install the CAM any time, with or without the TV turned on.

1. Purchase a CI CAM module at your nearest dealer or by phone.
2. Firmly insert the "CI or CI+ CARD" into the CAM in the direction of the arrow.
3. Insert the CAM with the "CI or CI+ CARD" into the common interface slot, in the direction of the arrow so that it aligns parallel with the slot.
4. Check if you can see a picture on a scrambled signal channel.


# Preference Features

## Changing the Picture Mode and Adjusting the Picture Quality

### Choosing the Right Picture Mode for the Viewing Environment

[Picture](#) → [Picture Mode](#)

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

 When connected to a PC via an HDMI-to-DVI cable, only the [Standard](#) and [Entertain](#) modes can be chosen.

- [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.

 Availability depends on the specific model and area.

- [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 connected to a computer via an HDMI-to-DVI cable.

- [Stadium](#)

Setting [Football Mode \(System → Football Mode\)](#) to [On](#) automatically configures [Picture Mode](#) to [Stadium](#) for a more realistic viewing experience.


 [Stadium](#) cannot be selected by the user.

# Preference Features

## Adjusting the Picture Quality for Each Picture Mode

Picture → [Backlight](#), [Contrast](#), [Brightness](#), [Sharpness](#), [Colour](#) or [Tint \(G/R\)](#)

Select one of the settings to display its slide bar. Change the adjustment value using [◀](#), [▶](#). Change the item using [▲](#), [▼](#). Adjusted values are applied to the current source and picture mode.

 The [Colour](#) 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](#) and then adjust the settings.

- [Backlight](#)

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

- [Contrast](#)

Adjusts the screen contrast.

- [Brightness](#)

Adjusts the overall brightness.

- [Sharpness](#)


Sharpens or dulls the edges of objects.

- [Colour](#)

Adjusts the overall colour saturation.

- [Tint \(G/R\)](#)

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 are selected. Consequently, the TV can have different picture settings for each external source.

## Applying the Current Picture Settings to Other Input Sources

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](#).

# Preference Features

## Fine-Tuning Each Picture Mode (Advanced Settings)

[Picture](#) → [Advanced Settings](#)

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](#)

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

- [Black Tone](#)

Adjusts the black colour depth.

- [Flesh Tone](#)

Darkens or lightens skin tones.

- [RGB Only Mode](#)

Adjusts the red, green, and blue levels individually.

- [Colour Space](#)


Adjusts the range of colours that can be displayed on screen. [Auto](#) automatically adjusts the colour space depending on the input signal. [Native](#) applies a range that is wider than the input signal. [Custom](#) allows you to adjust the colour space manually.

-  The availability of [Custom](#) depends on the specific model and area.

# Preference Features

- **White Balance**

Adjusts the colour temperature of the picture to make white objects look white and the overall picture appear natural.


 Availability depends on the specific model and area.

**2 Point:** Adjust each of the 3 colour's luminosity with the offset menu and the brightness with the gain menu. To restore the default values, select **Reset**.

**10 Point:** Adjust the white balance by adjusting the brightness of each of the 10 sections of red, green, and blue colours of the input signal. To choose a section, select a desired section in **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.

Adjust each colour's luminosity with the offset menu and the brightness with the gain menu. To restore the default values, select **Reset**.

 Availability depends on the specific model and area.

**R-Offset / G-Offset / B-Offset:** Adjust each colour's (red, green, blue) darkness.


**R-Gain / G-Gain / B-Gain:** Adjust each colour's (red, green, blue) brightness.

- **Gamma**

Adjusts the primary colour intensity.

- **Motion Lighting**

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

 Availability depends on the specific model and area.

 This feature is only available when the **Picture Mode** is set to **Standard**.


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

# Preference Features

## Adjusting the Picture for Easier Viewing (Picture Options)

[Picture](#) → [Picture Options](#)


Select [Picture](#) → [Picture Options](#) to make additional adjustments for an easier viewing experience.

 When the TV is connected to a computer via an HDMI-DVI cable, only [Colour Tone](#) can be adjusted.

Choose a [Picture Mode](#) and then adjust the settings.

- [Colour Tone](#)

Adjusts the colour tone. The setting is applied on an individual [Picture Mode](#) basis. When a [Picture Mode](#) is changed, the corresponding setting will be applied automatically.

 If the [Picture Mode](#) is set to [Dynamic](#), you will only be able to choose [Cool](#) or [Standard](#).

- [Digital Clean View](#)

Reduces static and ghosting caused by a weak signal. Selecting [Auto Visualisation](#) displays the signal strength at the bottom the screen. Green indicates the best possible signal.

 Available for analogue channels only.

- [MPEG Noise Filter](#)

Reduces MPEG noise and improves video quality.

- [HDMI Black Level](#)


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

 This is only available when the Input Signal, connected to the TV via an HDMI connector, is set to RGB444.


# Preference Features

- **Film Mode**


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

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


- **Motion Plus**

 Availability depends on the specific model and area.

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.

 The Info screen on your TV displays the resolution and frequency of the incoming signal (60Hz), but not the frequency the TV is generating for the image it is displaying by using **Motion Plus** function.

 If noise occurs on the screen, please set up the **Motion Plus** to **Off**. If **Motion Plus** is **Custom**, you can set up the **Blur Reduction**, **Judder Reduction**, **LED Clear Motion** and **Reset** manually.


 If **LED Clear Motion** is **On** at 60Hz video signal, the screen may flicker.

**Blur Reduction:** Adjusts the blur reduction level from video sources.


**Judder Reduction:** Adjusts the judder reduction level from video sources when playing films.

**LED Clear Motion:** Removes drag from fast scenes with a lot of movement to provide a clear picture.


**Reset:** Reset the custom settings to the factory defaults.

 If you have 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 Motion Plus is on.

- **LED Clear Motion**

 Availability depends on the specific model and area.

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

 If **LED Clear Motion** is **On** at 60Hz video signal, the screen may flicker.

# Advanced Features

## Picture Support Functions

### PIP Broadcast Viewing

[Picture](#) → [PIP](#)

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

Select [Picture](#) → [PIP](#) to display the PIP settings window. This settings window contains the following options:

- [PIP](#)  
Activates/deactivates [PIP](#).
- [Aerial](#)  
Select the [PIP](#) sub-picture broadcast signal.
- [Channel](#)  
Select the [PIP](#) sub-picture channel.
- [Size](#)  
Select the [PIP](#) sub-picture size.
- [Position](#)  
Select the [PIP](#) sub-picture position.
- [Sound Select](#)  
Select the audio source.



# Advanced Features

## Changing the Picture Size and Position

### Choosing the Right Screen Size

[Picture](#) → [Picture Size](#) → [Picture Size](#)

Most TV programmes and videos are displayed in full screen, but some programmes and videos are larger or smaller. Change the screen size for such programmes 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.

- [Auto Wide](#)

Automatically adjusts the picture size to the 16:9 aspect ratios.

- [16:9](#)

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

- [Wide Zoom](#)

Magnifies the picture size more than 4:3. A magnified picture can be moved up and down.

- [Zoom](#)

Magnifies the 16:9 wide pictures vertically to fit the screen size. A magnified picture can be moved up and down.

 [Zoom](#) is not available when [Picture Size](#) set to [Wide Zoom](#).

- [4:3](#)

Sets the picture to basic 4:3 mode.



Do not leave the TV in 4:3 mode for an extended period. The dark borders displayed on the left and right / top and bottom of the screen may cause image retention. This phenomenon can appear on LED and PDP TVs. (Screen burn - this phenomenon can appear on PDP TVs.) This is not covered by the warranty.

- [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%.

# Advanced Features

## **Adjusting the Screen Position**

[Picture](#) → [Picture Size](#) → [Zoom/Position](#)

Adjusts the screen position.

This option is only available with [Picture Size](#) set to [Wide Zoom](#), [Zoom](#), 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](#) → [Zoom/Position](#). A pop-up window appears.
2. Select [Zoom](#) or [Position](#) again from the pop-up window.
3. Adjust the screen. Once done, select [Zoom](#) or [Position](#) and then [Close](#). Select [Reset](#) to reset the screen position.

## **Adjusting the 4:3 Screen Size**

[Picture](#) → [Picture Size](#) → [4:3 Screen Size](#)

Available only when picture size is set to [Auto Wide](#). You can determine the desired picture size at the [4:3 WSS](#) (Wide Screen Service) size or the original size. Each European country requires different picture size.

 Not available in Component or HDMI mode.

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

[Picture](#) → [Picture Off](#)

Turns off the screen and plays audio through the speakers only. To turn the screen back on, press any button other than the [TV](#) and [VOLUME](#) buttons.

## **Resetting the Picture Mode Settings**

[Picture](#) → [Reset Picture](#)

Use this option to reset the current [Picture Mode](#) to its factory settings. This does not affect the settings of other Picture Modes.


# Advanced Features

## Changing the Sound Mode and Using Sound Effects

### Choosing the Right Sound Mode for the Environment

[Sound](#) → [Sound Mode](#)

Sound modes apply preset adjustments to the sound output, optimised 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 emphasises normal music instead of voice.

- [Movie](#)

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

- [Clear Voice](#)

This mode emphasises voice.

- [Amplify](#)

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

- [Stadium](#)

Setting [Football Mode](#) ([System](#) → [Football Mode](#)) to [On](#) automatically configures [Sound Mode](#) to [Stadium](#) for a more realistic viewing experience.

 [Stadium](#) cannot be selected by the user.

# Advanced Features

## Using Sound Effects

[Sound](#) → [Sound Effect](#)

Use sound effects to alter how the TV projects sound.

### Restrictions:

- Sound effects can only be used with the [Sound Mode](#) set to [Standard](#).
- 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](#)  
Produces sound that will make you feel like you are sitting in a movie theatre or concert hall.
- [DTS TruDialog](#)  
Increases voice intensity to make dialog clearer.
- [Equaliser](#)  
Lets you adjust the speaker balance and make bandwidth adjustments. Select [Reset](#) to reset the settings.


# Advanced Features

## Sound Support Functions

### Selecting Speakers

[Sound](#) → [Speaker Settings](#) → [TV Sound Output](#)

This lets you choose which speakers the TV uses for audio output. To listen to the audio through the speakers of a connected receiver or home theatre only, select [Receiver](#) or [Audio Out](#). To listen to audio through the TV's speakers and the speakers of a connected AV receiver or home theatre 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 theatre.

 Using external speakers alone disables the volume button and the mute function. In addition, certain [Sound](#) options will also be disabled.

### Designating the TV's Installation Type

[Sound](#) → [Speaker Settings](#) → [TV Speaker](#) → [TV Installation Type](#)

Specify the TV's installation type. Choose between [Wall Mount](#) and [Stand](#) to optimise the TV's sound automatically.

### Enabling the Sound (Additional Settings)

[Sound](#) → [Additional Settings](#)

Configure additional settings for optimum audio output.

- [DTV Audio Level](#)

(Digital channels only)

The TV cannot freely control the volume of the digital audio that it sends to the AV receiver. Use this to set the digital audio volume at a comfortable level.

 According to the type of broadcast signal, MPEG / HE-AAC can be adjusted between -10dB and 0dB.

 To increase or decrease the volume, adjust between the range 0 and -10 respectively.

- [Audio Format, Audio Delay](#)

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 theatres.

#### [Audio Format](#)

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

# Advanced Features

## Audio Delay

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**

Some digital TV programmes provide 5.1-channel Dolby audio. This TV converts Dolby audio to stereo audio so that it can play the sound through the TV's speakers. There are two methods to choose from. **RF** is for better sound at lower volumes, and **Line** is for higher volumes.

- **Auto Volume**

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 favourite TV channel, Auto Volume can modify the volume up to 12db to equalise 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.

## Resetting All Sound Settings

[Sound](#) > [Reset Sound](#)

Use to reset all sound settings to the factory defaults.

# Advanced Features

## Setting the Time and Using the Timer

### Setting the Current Time

[System](#) → [Time](#) → [Clock](#)


Set the clock manually or automatically. Once the clock has been set, you can select the [INFO](#) button to check the current time.

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

### Setting the Clock using Digital Broadcast Info

[System](#) → [Time](#) → [Clock](#) → [Clock Mode](#)


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.


 Availability depends on the specific model and area.

### If the Clock is Wrong in Auto Mode...

[System](#) → [Time](#) → [Clock](#) → [Time Offset](#)

If the time set 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 offset the clock to the correct time.

 [Time Offset](#) adjusts the time through network connections and is only available if the [Clock Mode](#) is set to [Auto](#) and the TV is connected to the Internet through a local area network.


 [Time Offset](#) will adjust the time if the TV fails to receive time information through normal digital broadcast signals.

### Setting the Clock Manually


Manually enter the time. Set [Clock Mode](#) to [Manual](#) and then select [Clock Set](#) to enter the current time and date.

[Clock Set](#): Set the current [Date](#) and [Time](#).

[Time Zone](#): Select your time zone.

 This function is only available when the [Clock Mode](#) is set to [Auto](#).

[DST](#): Switches the DST (Daylight Saving Time) function on or off.

 This function is only available when the [Clock Mode](#) is set to [Auto](#).

[GMT](#): Selects your time zone.

 When [Country](#) is set to others, you can use this function.

# Advanced Features

## Using the Timers

### Using the Sleep Timer

[System](#) → [Time](#) → [Sleep Timer](#)

This 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

[System](#) → [Time](#) → [On Timer](#)

Set the On Timer so that the TV turns on automatically at a chosen time. Select [System](#) → [Time](#) → [On Timer](#). The timer configuration window appears. Configure the following settings:

 The [On Timer](#) is only available if the [Clock](#) has been set.

- [Setup](#)

Specify the dates and the duration. Use [Manual](#) to specify the days of the week.

- [Time](#)

Set the time that the TV turns on automatically.

- [Volume](#)

Specify the volume when the TV turns on.

- [Source](#)

Select the signal source from the list. Specify the channel or source to be displayed when the TV turns on. To specify a USB device, a USB device must first be connected to the TV. To play media from an HDMI or Component source such as a DVD player or Blu-ray player, the device must already be turned on, and playing the media when the TV is turned on.



# Advanced Features

- [Aerial](#)

Set the [Source](#) to [TV](#) to select a broadcast signal.

- [Channel](#)

Set the [Source](#) to [TV](#) to select a channel.

- [Music / Photo](#)

Set the [Source](#) to [USB](#) to choose a USB folder that contains music or photo files. Selecting both music and image files plays the music files and displays the images at the same time.

## Restrictions:

- 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 recognise the device.

## Turning Off the TV Using Off Timer

[System](#) → [Time](#) → [Off Timer](#)

Set the Off Timer to turn the TV off automatically at a specific time. Select [System](#) → [Time](#) → [Off Timer](#). The timer configuration window appears. Configure the following settings:

 The [Off Timer](#) is only available if the [Clock](#) has been set.

- [Setup](#)

Specify the dates and the duration. Use [Manual](#) to specify the days of the week.

- [Time](#)

Set the time that the TV turns off automatically.

# Advanced Features

## Using the Screen Burn Protection and Energy Saving Features

### Preventing Screen Burn

[System](#) → [Auto Protection Time](#)

Still images can leave burned-in after-images on the screen if left for a long 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 Screen Burn Protection to prevent burned-in after- images that may damage the screen.

### Using Energy Saving Features

[System](#) → [Eco Solution](#)

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

- [Energy Saving](#)  
Select a brightness setting from the list to reduce the TV's power consumption.
- [No Signal Power Off](#)  
Select a time from the list. If no signal is received for the specified duration, the TV automatically cuts off the power to reduce power consumption.
- [Auto Power Off](#)  
If the TV remains turned on for four hours without any user input, the TV will automatically turn off to prevent overheating.

# Advanced Features

## Updating the Software

[Support](#) → [Software Update](#)


Check your TV's software version and upgrade it if necessary.

If the TV is connected to the Internet, TV is set to update software automatically. If you don't want to update it automatically, set [Auto update](#) ([Software Update](#) → [Auto update](#)) to [Off](#).

### Updating Software over the Internet

[Support](#) → [Software Update](#) → [Update now](#)

Select [Support](#) → [Software Update](#) → [Update now](#). An online upgrade downloads and installs the upgrade software directly from the Internet.


 This option requires an Internet connection.



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

### Updating Software using a USB connection

[Support](#) → [Software Update](#) → [Update now](#)

1. Visit Samsung's website on a computer and download the update package to a USB device.
  -  Save the update package in the USB device's top-level folder. Otherwise, the TV will not be able to locate the update package.
2. Connect the USB device with the update package to the TV.
3. Select [Support](#) → [Software Update](#) → [Update now](#). The software is updated using the update package on the USB device.




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

# Advanced Features

## Enabling Automatic Software Updates

[Support](#) → [Software Update](#) → [Auto update](#)

If the TV is connected to the Internet, the [Auto update](#) option upgrades the TV's software while it is in Standby Mode. In Standby Mode, the TV appears to be turned off, but still has access to the Internet. This allows the TV to upgrade itself automatically while it is not in use.

 This option requires an Internet connection.

Because the TV's internal processes are operating, the screen may emit a faint glow, and this may continue for more than 1 hour until the software download is complete.

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

1. Select [Support](#) → [Software Update](#) → [Auto update](#).
2. Specify when you want the upgrade to take place. The TV will connect to the server at the specified time, download the update package, and upgrade its own software.

# Advanced Features

## Protecting the TV from Hacking and malicious code

[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

[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 was 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 them to continue.

1. Select all malicious code 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 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

[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

[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](#).

# Advanced Features

## Using Other Functions

### Enabling the High Contrast

[System](#) → [Accessibility](#) → [High Contrast](#)

Navigate to [System](#) → [Accessibility](#) and set the [High Contrast](#) option to [On](#). This option changes major service screens to white text on black background or change the transparent TV menus to opaque so that text can be more easily read.

### Adjusting the Menu Transparency

[System](#) → [Accessibility](#) → [Menu Transparency](#)

Navigate to [System](#) → [Accessibility](#) and adjust the opacity level. Adjust the menu's transparency.

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

### Expanding the Smart Hub's Focus Area

[System](#) → [Accessibility](#) → [Enlarge](#)

Navigate to [System](#) → [Accessibility](#) and set [Enlarge](#) to [On](#). This zooms in the focused item when you use Smart Hub.

### Changing the Menu Language

[System](#) → [Menu Language](#)


Select [System](#) → [Menu Language](#) and then choose a language from the list. Use this option to change the menu language.

# Advanced Features

## Checking Notifications

[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.


## Setting Up a Password

[System](#) → [Change PIN](#)

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 the PIN code, press the buttons in the following sequence which resets the PIN to "0-0-0-0":

In Standby mode, press the following buttons on the remote to reset the PIN to 0000:  → 8 → 2 → 4 → [POWER](#) (on).

# Advanced Features

## Programme Rating Lock

[Broadcasting](#) → [Programme Rating Lock](#)

 Availability depends on the specific model and area.

The [Programme Rating Lock](#) blocks programmes with ratings higher than those desired. This is useful for controlling what children watch on TV. This will not function for programmes originating from external sources, such as DVD players or USB files.

This PIN is required to watch a blocked programme.

The [Programme Rating Lock](#) is not available in HDMI or Component mode.

## Enabling Game Mode


[System](#) → [General](#) → [Game Mode](#)

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

### Requirements:

- 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 Colours and Superior Picture Quality (BD Wise)

 Availability depends on the specific model and area.

[System](#) → [General](#) → [BD Wise](#)

Connecting a Samsung DVD player, Blu-ray player, or home theatre system that supports [BD Wise](#) enables the richest colours and best possible picture quality. Enabling BD Wise automatically optimises the TV's resolution.

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

## Locking/ Unlocking the Panel Keys

[System](#) → [General](#) → [Panel Lock](#)

Use to lock and unlock the TV's panel buttons.



# Advanced Features

## Showing/ Hiding the Samsung Logo while Booting




[System](#) → [General](#) → [Boot Logo](#)

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

## Registering the TV as a DivX-Certified Device (Watching Paid DivX Movies)

[System](#) → [DivX® Video On Demand](#)

Viewing DivX® DRM-protected DivX movies on the TV first requires registration of the TV as a DivX-certified device.

-  DRM ("Digital rights management") Digital Rights Management is a digital security measure designed to protect copyright.
  -  You can watch personally-created and free DivX content without registering the TV.
  -  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 click [Register Your Device] under [Support] from 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 select [NEXT].
  5. Click [DOWNLOAD] and 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. Play the [device\_name.divx] file on the TV to register the TV as a DivX-certified device.


# Advanced Features

## Restoring the TV to the Factory Settings

[Support](#) → [Self Diagnosis](#) → [Reset](#)

This option restores all TV settings (excluding the Internet) 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.

## Turning the TV into a Display Model (for retail stores)

[Support](#) → [Use Mode](#)

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.

# Other Information


## Getting Support

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

### Support through Remote Management

[Support](#) → [Remote Management](#)

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.

 This option requires an Internet connection.

### What Does Remote Service Do?

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
- **Perform a factory reset** your TV
- Install recommended **firmware updates**

# Other Information

## How Does it Work?

Having a Samsung Tech remotely service your TV is easy.



Call the Samsung Contact Centre 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.

# Other Information

## Finding the Information You Need for Service

[Support](#) → [Contact Samsung](#)

Use this option to find the support service website's address and contact number, your TV's model number, your TV's software version, the Smart Hub info, and other information you need to receive the service support.



 Press **A** to view the open source licence.

## There is a problem with the screen

### Testing the Picture

[Support](#) → [Self Diagnosis](#) → [Picture Test](#)

Before you review the list of problems and solutions below, run the 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 Centre 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.

-  If the test picture does not appear or there is noise or distortion, the TV may have a problem. Contact Samsung's Call Centre for assistance.
-  If the test picture is displayed properly, there may be a problem with the external device. Please check the connections. If the problem persists, check the signal strength or refer to the external device's user manual.

# Other Information

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 <a href="#">Energy Saving</a> ( <a href="#">System</a> → <a href="#">Eco Solution</a> → <a href="#">Energy Saving</a> ).
Component Connections/ Screen Colour	<p>If the colour on your Samsung television screen is not correct or the black and white colours are off, run <a href="#">Picture Test</a> (<a href="#">Support</a> → <a href="#">Self Diagnosis</a> → <a href="#">Picture Test</a>).</p> <p>If the test results indicate that the problem is not caused by the TV, do the following:</p> <ul style="list-style-type: none"> <li>• Confirm that the TV's video input connectors are connected to the correct external device video output connectors.</li> <li>• 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.</li> </ul>
Screen Brightness	<p>If the colours on your Samsung TV are correct but just a little too dark or bright, try adjusting the following settings first.</p> <ul style="list-style-type: none"> <li>• Go to the <a href="#">Picture</a> menu and adjust the <a href="#">Contrast</a>, <a href="#">Brightness</a>, <a href="#">Sharpness</a>, <a href="#">Colour</a>, and <a href="#">Tint (G/R)</a> settings.</li> </ul>
Motion Plus/Blur	If you notice ghosting or blurring on the screen, use the <a href="#">Motion Plus</a> option ( <a href="#">Picture</a> → <a href="#">Picture Options</a> → <a href="#">Motion Plus</a> ) to resolve the issue.
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 <a href="#">Sleep Timer</a> ( <a href="#">System</a> → <a href="#">Time</a> → <a href="#">Sleep Timer</a> ) has been enabled. The <a href="#">Sleep Timer</a> automatically turns the TV off after a specified period of time. If the Sleep Timer has not been enabled, see if <a href="#">No Signal Power Off</a> ( <a href="#">System</a> → <a href="#">Eco Solution</a> → <a href="#">No Signal Power Off</a> ) or <a href="#">Auto Power Off</a> ( <a href="#">System</a> → <a href="#">Eco Solution</a> → <a href="#">Auto Power Off</a> ) has been enabled and disable them.
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	<p>Launch <a href="#">Setup</a> (<a href="#">System</a> → <a href="#">Setup</a>) or <a href="#">Auto Tuning</a> (<a href="#">Broadcasting</a> → <a href="#">Auto Tuning</a>).</p> <p>If your TV is not connected to a cable box or satellite box, run <a href="#">Setup</a> (<a href="#">System</a> → <a href="#">Setup</a>) or <a href="#">Auto Tuning</a> (<a href="#">Broadcasting</a> → <a href="#">Auto Tuning</a>).</p>
The TV image does not look as good as it did in the store.	<p>Store displays are all tuned to digital, HD (high definition) channels.</p> <p>If you have an analogue cable/set top box, upgrade to a digital set top box. Use HDMI or Component cables to deliver HD (high definition) picture quality.</p> <p>Many HD channels are upscaled from SD (Standard Definition) content. Look for a channel that is broadcasting true HD content.</p> <ul style="list-style-type: none"> <li>• Terrestrial/Cable Aerial Connection: Try HD channels after running the Auto Tuning function.</li> </ul> <p>Adjust the cable/satellite box's video output resolution to 1080i or 720p.</p>
The picture is distorted.	<p>The compression of video content may cause picture distortions, especially in fast moving pictures from sports programmes and action movies.</p> <p>A weak or bad quality signal can cause picture distortions. This is not an issue with the TV.</p> <p>Mobile phones used close to the TV (within 1 m) may cause noise in analogue and digital channels.</p>
The colour 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 colour problems or a blank screen.

# Other Information

The Problem	Try this!
The colour is poor or the picture is not bright enough.	Go to the <a href="#">Picture</a> menu and then adjust the <a href="#">Picture Mode</a> , <a href="#">Brightness</a> , <a href="#">Sharpness</a> , and <a href="#">Colour</a> settings. Try resetting the picture. ( <a href="#">Picture</a> → <a href="#">Reset Picture</a> )
There is a dotted line on the edge of the screen.	If the <a href="#">Picture Size</a> has been set to <a href="#">Screen Fit</a> , change the setting to <a href="#">16:9</a> . 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.
The colour is wrong or missing.	If you are using a Component connection, make sure that the Component cables are connected to the correct jacks. Incorrect or loose connections may cause colour problems or a blank screen.
When changing channels, the picture freezes or is distorted or delayed.	If the TV is connected to a cable box, try to reset the box. (Disconnect and then reconnect the AC cord and wait until the cable box reboots. It may take up to 20 minutes.) Set the output resolution of the cable box to 1080i or 720p.

# Other Information

## I can't hear the sound clearly

### Testing the Sound

[Support](#) → [Self Diagnosis](#) → [Sound Test](#)

Before you review the list of problems and solutions below, make sure that the [Speaker Select](#) 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 Centre 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.

- 🔧 If you can't hear the melody or there is a problem, make sure [Sound](#) → [Speaker Settings](#) → [TV Sound Output](#) is set to [TV Speaker](#) and then try again. If the problem persists, there may be a problem with the TV. Contact Samsung's Call Centre for assistance.
- 🔧 If the melody is played, there may be a problem with the 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.	<p>Set <a href="#">Sound</a> → <a href="#">Speaker Settings</a> → <a href="#">TV Sound Output</a> to <a href="#">TV Speaker</a>.</p> <p>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.)</p> <p>To listen to the computer sound, connect the external speaker to the computer's audio output connector.</p> <p>If your TV has a headphone jack, make sure there is nothing plugged into it.</p> <p>Reboot the connected device by disconnecting and then reconnecting the device's power cable.</p>
The speakers are making an odd sound.	<p>Make sure that the audio cable is connected to the correct audio output connector on the external device.</p> <p>For antenna or cable connections, check the signal information. A low signal level may cause sound distortions.</p> <p>Run <a href="#">Sound Test</a> (<a href="#">Support</a> → <a href="#">Self Diagnosis</a> → <a href="#">Sound Test</a>).</p>



# Other Information

## 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: <ul style="list-style-type: none"><li>• Confirm that the coaxial cable is securely connected to the TV.</li><li>• If you are using an antenna, verify it is positioned correctly and the all the connections are secure.</li><li>• Run Setup (<a href="#">System</a> → <a href="#">Setup</a>) or <a href="#">Auto Tuning</a> (<a href="#">Broadcasting</a> → <a href="#">Auto Tuning</a>).</li></ul>
There are no captions with digital channels.	Go to <a href="#">Subtitle</a> ( <a href="#">System</a> → <a href="#">Accessibility</a> → <a href="#">Subtitle</a> ) and change the <a href="#">Subtitle Mode</a> . 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 programmes and action movies. A weak signal can cause picture distortions. This is not a problem with the TV.

## The 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.	Make sure the TV is connected to a wireless IP router.
The software update over the Internet has failed.	Check the network connection 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.

# Other Information

## 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	<a href="#">Support</a> → <a href="#">Self Diagnosis</a> → <a href="#">Reset</a>	Reset <a href="#">Picture</a> , <a href="#">Sound</a> , <a href="#">Channel</a> , <a href="#">Smart Hub</a> , and all other settings except for the network settings to their factory default settings.
Resetting Smart Hub	<a href="#">Smart Hub</a> → <a href="#">Reset Smart Hub</a>	Reset all saved information relating to Samsung accounts and linked service accounts, as well as Smart Hub service agreements and applications.

# Other Information

## 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 supported resolutions of the TV and adjust the external device's output resolution accordingly.
The Subtitle item in the TV menu is grayed out.	You cannot select the <a href="#">Subtitle</a> menu if you have selected a source connected to the TV via HDMI or Component connections. To view subtitle, turn on the external device's subtitle function.
The TV smells of plastic.	This smell is normal and will dissipate over time.
The <a href="#">Signal Information</a> option under <a href="#">Self Diagnosis</a> isn't activated.	Verify that the current channel is a digital channel. The <a href="#">Signal Information</a> is only available for digital channels.
The TV is tilted to the side.	Remove the base stand from the TV and reassemble it.
The <a href="#">Broadcasting</a> option has been deactivated.	<a href="#">Broadcasting</a> is only available when the <a href="#">Source</a> is set to <a href="#">TV</a> . The <a href="#">Broadcasting</a> menu cannot be accessed while watching 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 <a href="#">Use Mode</a> is set to <a href="#">Store Demo</a> , the TV's audio and video settings are automatically reset every 5 minutes. Change the <a href="#">Use Mode</a> ( <a href="#">Support</a> → <a href="#">Use Mode</a> ) to <a href="#">Home Use</a> .
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.	<a href="#">PIP</a> functionality is only available when you are using an HDMI or Component source.

# Other Information

The Problem	Try this!
A POP (TV's internal banner ad) appears on the screen.	Change the <a href="#">Use Mode (Support → Use Mode)</a> to <a href="#">Home Use</a> .
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 utilises 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.

# Other Information

## Read Before Using SAMSUNG 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.

# Other Information

## Web Browser Restrictions

- 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 colour 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.

# Other Information

- The web browsing speed will vary depending on the network environment.
- Playing embedded video automatically disables PIP. Video playback may not commence after PIP is disabled. In this case, you will have to reload the page.
- The web browser supports .mp3 audio files only.
- The web browser supports a specific file format for importing and exporting bookmarks. (Compatible Format: Netscape-bookmark file- 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-optimised 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.)

# Other Information

## Photo, Video, and Music File Limitations

- The TV supports MSC (Mass Storage Class) USB devices only. MSC is a class designation for mass USB Drives. Types of MSC devices include external hard drives, 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 recognise 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.
- 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.
- Certain digital cameras and audio devices may not be compatible with the TV.
- If there are multiple USB devices connected to the TV, the TV might not be able to recognise some or all the devices.
- 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 recognise it.


## Storage Device 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



# Other Information

## Supported External Subtitles

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

Name	Format
MPEG-4 Timed text	.txt
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	Container
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

# Other Information

## Supported Image Formats and Resolutions

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

File Extension	Format	Resolution
*.jpg *.jpeg	JPEG	15360 x 8640
*.png	PNG	4096 x 4096
*.bmp	BMP	4096 x 4096
*.mpo	MPO	15360 x 8640

## 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" not supported Available only on USB storage devices
*.ape	ape	ape	NonSmart not supported
*.aif *.aiff	AIFF	AIFF	
*.m4a	ALAC	ALAC	

# Other Information

## 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	640 x 480	MAX 30	8	Dolby Digital LPCM ADPCM(IMA, MS) AAC HE-AAC WMA Dolby Digital Plus MPEG(MP3) DTS(Core, LBR) G.711(A-Law, $\mu$ -Law)
		H.264 BP / MP / HP	1920 x 1080		30	
		DivX 3.11 / 4 / 5 / 6				
		MPEG4 SP/ASP				
		Window Media Video v9(VC1)				
		MPEG2				
		MPEG1				
*.webm	WebM	VP8	1920 x 1080	6-30	20	Vorbis

# Other Information

## Other Restrictions

- Codecs may not function properly if there is a problem with the content data.
- 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 wrong, the Seek (Jump) function does 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 player.
- 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 is supported up to 10 Pro 5.1 channels. Supports up to the M2 profile.
- WMA lossless audio is not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 2 channels.
- Dolby Digital Plus is supported for up to 5.1 channels.
- The DTS LBR codec is only available for MKV / MP4 /TS containers.

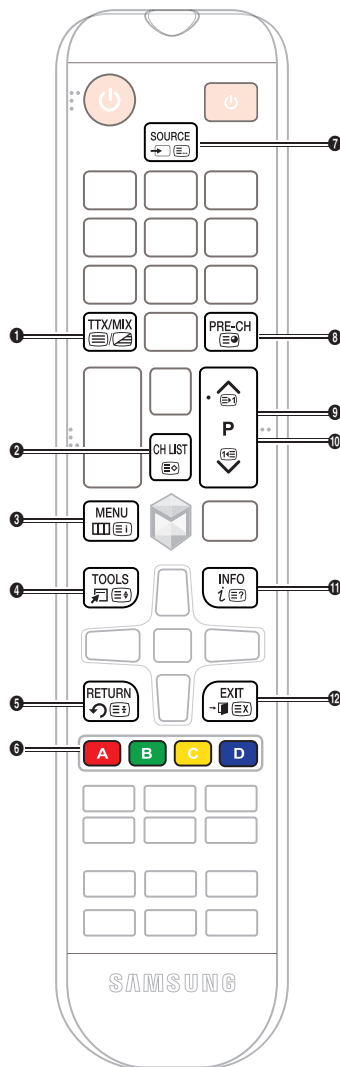
# Other Information







## Analogue Channel Teletext Feature

The index page of the Teletext service gives you information on how to use the service. For Teletext information to be displayed correctly, channel reception must be stable. Otherwise, information may be missing or some pages may not be displayed.

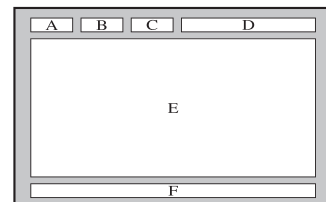
 You can change Teletext pages by pressing the numeric buttons on the remote control.

- 1  (Teletext on/mix/off): Activates the Teletext mode for the current channel. Press the button twice to overlap the Teletext mode with the current broadcasting screen. Press it one more time to exit teletext.
- 2  (store): Stores the Teletext pages.
- 3  (index): Displays the index (contents) page at any time while you are viewing Teletext.
- 4  (size): Displays the teletext on the upper half of the screen in double-size. To move the text to the lower half of the screen, press it again. For normal display, press it once again.
- 5  (hold): Holds the display at the current page, in the case that there are several secondary pages that follow automatically. To undo, press it again.
- 6 Colour buttons (red, green, yellow, blue): If the FASTEXT system is used by the broadcasting company, the different topics on a Teletext page are colour-coded and can be selected by pressing the coloured buttons. Press the colour corresponding to the topic of your choice. A new colour-coded page is displayed. Items can be selected in the same way. To display the previous or next page, press the corresponding coloured button.



- 7  (mode): Selects the Teletext mode (LIST/ FLOF). If pressed during LIST mode, switches the mode to List save mode. In List save mode, you can save a Teletext page into a list using the 8(store) button.
- 8  (sub-page): Displays the available sub-page.
- 9  (page up): Displays the next Teletext page.
- 10  (page down): Displays the previous Teletext page.
- 11  (reveal): Displays the hidden text (answers to quiz games, for example). To display the normal screen, press it again.
- 12  (cancel): Shrinks the Teletext display to overlap with the current broadcast.

### Typical Teletext page



Part	Contents
A	Selected page number.
B	Broadcasting channel identity.
C	Current page number or search indications.
D	Date and time.
E	Text.
F	Status information. FASTEXT information.

# Other Information

## Restrictions

### Restrictions to PIP (Picture-in-Picture)

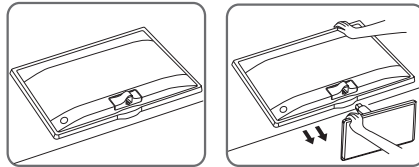
- PIP cannot be used while [Smart Hub](#) is active.
  - 📎 Availability depends on the specific model and area.
- Turning off the TV automatically disables PIP.
- Playing a game or using the karaoke feature on the main screen can result in lower PIP picture quality.
- To watch TV as a picture-in-picture, the main screen's source must be set to Component or HDMI. The PIP window supports TV signals only.
  - 📎 Availability depends on the specific model and area.

# Other Information

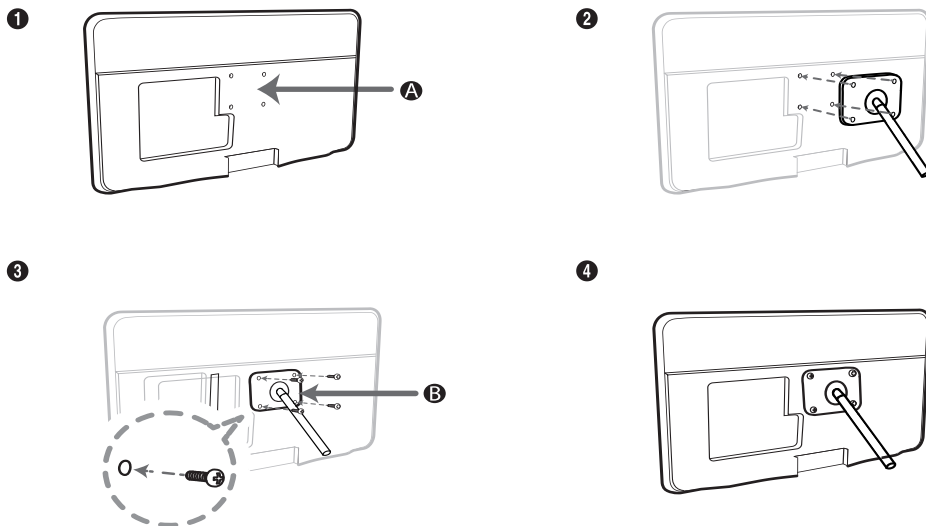
## Attaching a Wall Mount/Desktop Stand

### Preparing before installing Wall-Mount / Desktop Stand

1. Turn the product off and unplug the power cord from the wall outlet.
2. Place a soft cloth or cushion on a flat surface to protect the panel and place the product face down.
3. Hold the main body of the product with your hand. Pull the stand in the direction of the arrow as shown in the figure to separate it.



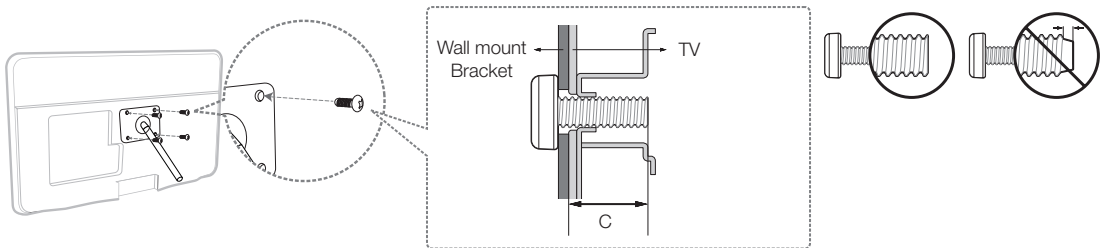
### Attaching a Wall Mount / Desktop Stand



- A Wall/Desktop Stand Mount
- B Wall mount kit/desktop stand (not supplied)

# Other Information

## ⚠ Caution



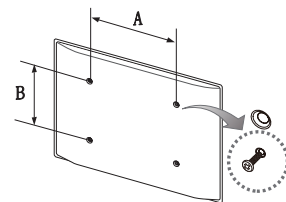
- ✎ Align wall mount/desktop stand to the product and firmly fix the wall mount/desktop stand by fastening the screw.
- ✎ Align the groove of the part of the product that is to be connected to the stand with the groove in the stand (desk-top stand, wall mount stand or another stand) and firmly fix the stand by fastening the screw.

## Wall Mount Kit Specifications (VESA)

The wall mount kit is not supplied, but is sold separately. Install your wall mount on a solid wall perpendicular to the floor. When attaching the wall mount to other building materials, please contact your nearest dealer. If the product is installed on a ceiling or slanted wall, it may fall and result in severe personal injury.


- Standard dimensions for wall mount kits are shown in the table below.
- When purchasing our wall mount kit, a detailed installation manual and all parts necessary for assembly are provided.
- Do not use screws that do not comply with the VESA standard screw specifications.
- Do not use screws that are longer than the standard dimension or do not comply with the VESA standard screw specifications. Screws that are too long may cause damage to the inside of the TV set.
- For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on the wall mount specifications.
- Do not fasten the screws that are too strongly; this may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.

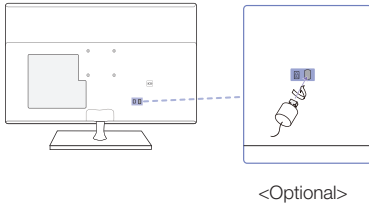
Product Family	inches	VESA Spec. (A * B)	C (mm)	Standard Screw	Quantity
MFM	23.5	75 x 75	9.0	M4	4
	27				






# Other Information

- A Kensington Lock is a physical device that can be used to protect the TV against theft. Look for the Kensington 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 Kensington slot. The lock is sold separately.
- The method of using a Kensington Lock may differ for each TV model. Refer to the Kensington Lock manual for more information.

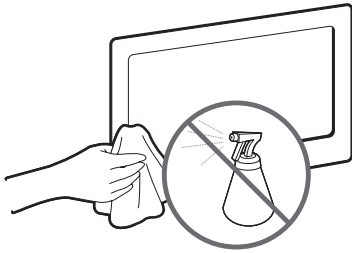


 The displayed image may differ depending on the model.

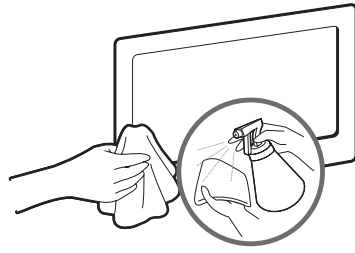
# Other Information

## Storage and Maintenance

- If a sticker was attached to the TV screen, some debris may remain after you remove the sticker. Please clean the debris off before watching TV.
- The exterior and screen of the product can get scratched while cleaning it. Be sure to wipe the exterior and screen carefully using a soft cloth to prevent scratches.



Do not spray water directly onto the product. Any liquid that enters the product may result in product failure, fire, or electric shock.



Clean the product with a soft damp cloth using a small amount of water. Do not use a flammable liquid (e.g. benzene, thinners) or a cleaning agent.

# Other Information

## Licence



DivX Certified® to play DivX® video up to HD 1080p, including premium content.

ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX, LLC, a subsidiary of Rovi Corporation. This is an official DivX Certified® device that has passed rigorous testing to verify that it plays DivX video. Visit [divx.com](http://divx.com) for more information and software tools to convert your files into DivX videos.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to [vod.divx.com](http://vod.divx.com) for more information on how to complete your registration.

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# Other Information

## HDMI

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### Open Source Licence Notice

Open Source used in this product can be found on the following webpage. (<http://opensource.samsung.com>)

Open Source Licence Notice is written only English.



### Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

#### (Applicable in countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



### Correct disposal of the batteries in this product

#### (Applicable in countries with separate collection systems)

This marking on battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

# Other Information

## Specifications

Display Resolution	1920 x 1080	
Environmental Considerations	50°F to 104°F (10°C to 40°C)	
Operating Temperature	10% to 80%, non-condensing	
Operating Humidity	-4°F to 113°F (-20°C to 45°C)	
Storage Temperature	5% to 95%, non-condensing	
Storage Humidity		
Stand Swivel (Left / Right)	0°	
Tilt	-1° (±2.0°) ~ 20° (±2.0°)	
Sound (Output)	5 W x 2	
Model Name	T24D390SW	T27D390SW
Screen Size (Diagonal)	23.5 inches (59 cm)	27 inches (68 cm)
Dimensions (W x H x D)	625.4 x 52.9 x 378.9 mm	
Body	625.4 x 209.8 x 467.1 mm	
With stand	547.8 x 209.8 x 422.9 mm	625.4 x 209.8 x 467.1 mm
Weight	5.1 kg	
Without Stand	4.2 kg	5.1 kg
With Stand	4.6 kg	5.5 kg

- 📎 Design and specifications are subject to change without prior notice.
- 📎 For information about power supply, and more about power consumption, refer to the label attached to the product.
- 📎 Some models may not be available for purchase depending on the region.
- 📎 If there is no power cut-off switch, the power consumption is "0" only when the power cord is disconnected.
- 📎 DPM(Display Power Management) Function does not work if you used in conjunction with the **HDMI IN 2 (DVI)** port of this product.

# Other Information

## Read After Installing the TV

### Picture Sizes and Input Signals

Picture Size	Input Signal
Auto Wide	ATV, EXT, AV, DTV (576i/p, 720p), DTV (1080i, 1080p)
16:9	ATV, EXT, AV, DTV (576i/p, 720p, 1080i, 1080p), Component (480i/p, 576i/p, 720p, 1080i, 1080p), HDMI (480i/p, 576i/p, 720p, 1080i, 1080p)
Wide Zoom, Zoom	ATV, EXT, AV, DTV (576i/p, 720p, 1080i, 1080p), Component (480i/p, 576i/p, 720p, 1080i, 1080p), HDMI (480i/p, 576i/p, 720p, 1080i, 1080p)
4:3	ATV, EXT, AV, DTV (576i/p, 720p, 1080i, 1080p), Component (480i/p, 576i/p, 720p, 1080i, 1080p), HDMI (480i/p, 576i/p, 720p, 1080i, 1080p)
Smart View 1	HDMI (480i/p, 576i/p, 720p, 1080i, 1080p)
Smart View 2	DTV (576i/p, 720p, 1080i, 1080p), HDMI (480i/p, 576i/p, 720p, 1080i, 1080p)
Screen Fit	DTV (1080i, 1080p), Component (1080i, 1080p), HDMI (720p, 1080i, 1080p)

- 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.

# Other Information

## 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 security key using characters and numbers. This security key is then needed to connect to a security-enabled AP.

### Wireless Security Protocols

- The TV only supports the following wireless network security protocols and is unable to connect to non-certified wireless routers:
- 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.

# Other Information

## Supported Video Resolutions

Resolution (DotsxLines)	Display Format	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Polarity (Horizontal/Vertical)
720(1440) x 480i	60Hz	15.734	59.940	27.000	-/-
720(1440) x 576i	50Hz	15.625	50.000	27.000	-/-
720 x 480	60Hz	31.469	59.940	27.000	-/-
720 x 576	50Hz	31.250	50.000	27.000	-/-
1280 x 720	60Hz	45.000	60.000	74.250	+/+
1280 x 720	50Hz	37.500	50.000	74.250	+/+
1920 x 1080i	60Hz	33.750	60.000	74.250	+/+
1920 x 1080i	50Hz	28.125	50.000	74.250	+/+
1920 x 1080	60Hz	67.500	60.000	148.500	+/+
1920 x 1080	50Hz	56.250	50.000	148.500	+/+
1920 x 1080	30Hz	33.750	30.000	74.250	+/+
1920 x 1080	25Hz	28.125	25.000	74.250	+/+
1920 x 1080	24Hz	27.000	24.000	74.250	+/+



# Other Information

## 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.

# Other Information

- **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 standardised 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 colour 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 colour-coded red (R), blue (B), and green (G) and offer the best picture quality possible for an analogue connection.

# Other Information

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