

SERIES **46**

450

460

470/477/478

670/677/678

LED TV

Installation manual

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

www.samsung.com/register

Model _____ Serial No. _____

SAMSUNG

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

Introduction

This TV B2B (Business to Business) model is designed for hotels or the other hospitality businesses, supports a variety of special functions, and lets you limit some user (guest) controls.

Operational Modes

This TV has two modes : Interactive and Stand-alone mode.

- Interactive mode : In this mode, the TV communicates with and is fully or partially controlled by a connected Set Back Box (SBB) or Set Top Box (STB) provided by a hospitality SI (System Integration) vendor. When the TV is initially plugged in, it sends a command that attempts to identify the SSB or STB connected to it. If the TV identifies the SBB or STB and the SBB or STB identifies the TV, the TV gives full control to the SBB or STB.
- Stand-alone mode : In this mode, this TV works alone without an external SBB or the STB.

The TV has a Hotel (Hospitality) Menu that lets you easily set its various hospitality functions. Please see pages 28 to 33.

The Menu also lets you activate or de-activate some TV and hospitality functions so you can create your optimal hospitality configuration.

Still image warning

Avoid displaying still images (such as jpeg picture files) or still image elements (such as TV channel logos, panorama or 4:3 format images, stock or news bars etc) on the screen. Displaying still pictures continually can cause uneven screen wear, which will affect image quality. To reduce the chance that this effect will occur, please follow the recommendations below:

- Avoid displaying the same TV channel for long periods.
- Always try to display a full screen image.
- Reduce brightness and contrast to help to prevent the occurrence of after-images.
- Frequently use all TV features designed to reduce image retention and screen burn-in. Refer to the proper user manual section for details.

Ensuring Proper Ventilation

When you install the TV, maintain a distances of at least 4 inches between the TV and other object (walls, cabinet sides, etc.) to ensure proper ventilation.

Failing to maintain proper ventilation may result in a fire or problems with the product caused by an increase in its internal temperature.

- 🔧 When using a stand or wall-mount, use parts provided by Samsung Electronics only.
- 🔧 Using parts provided by another manufacturer may cause difficulties with the product or result in injury caused by the product falling.



Additional Information

- 🔧 The appearance of the TV and its accessories may differ from the illustrations in this manual, depending on the TV.
- 🔧 Be careful when the you touch the TV. Some parts can be hot.

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Accessories

- ✎ Please make sure the following items are included with your LED TV. If any items are missing, contact your dealer.
- ✎ The items' color and shape may vary, depending on the model.
- ✎ The parts for the stand are listed under Stand Components on the following page.

List of Parts



Remote Control & Batteries (AAA x 2)



Power Cord



Safety Guide / Quick Setup Guide
(Not available in all locations)



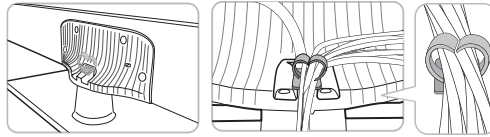
Data Cable (depending on the model)
(BN39-00865B, BN39-01011E)



Hotel Mount Kit
(Depending on the Model)



Holder-Wire stand 1(EA)



Assembling the Holder Wire Stand

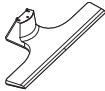
Installing the LED TV Stand

Components

When installing the stand, use the provided components and parts.

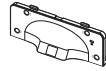
◆ HG40ND450

A



Stand

B



Guide Stand

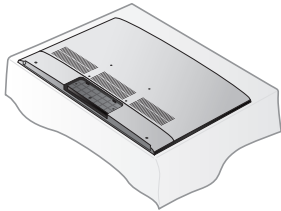
C



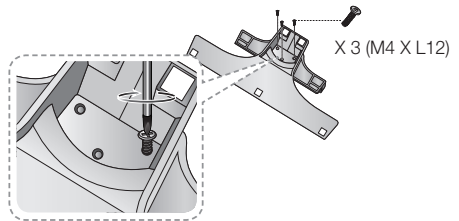
X 7 (M4 X L12)

Screws

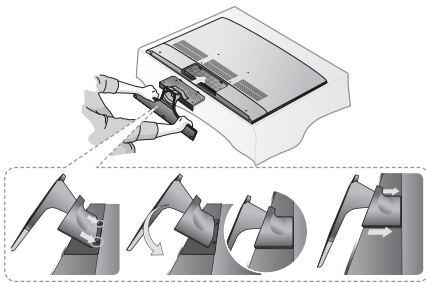
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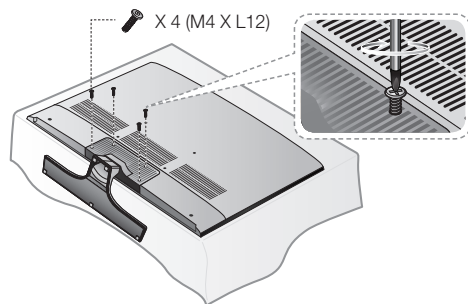
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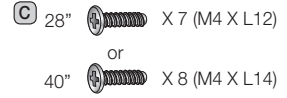
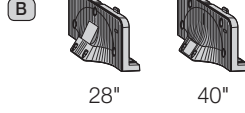
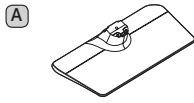
3



4



◆ HG28ND460 / HG40ND460

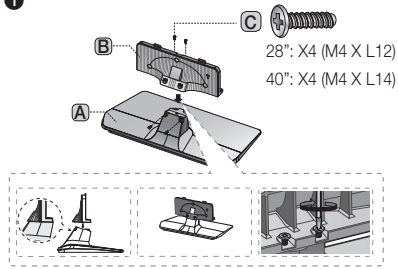


Stand

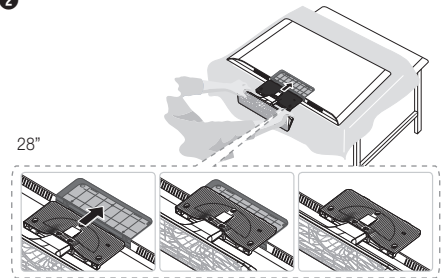
Guide Stand

Screws

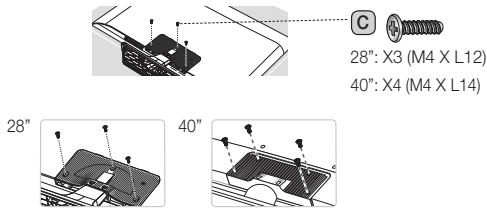
1



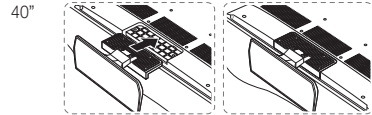
2



3



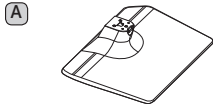
- ☞ Tight the bottom of the screw first, and stow the upper side of screw last.
- ☞ Progress the assembly of screw in the manual's order.





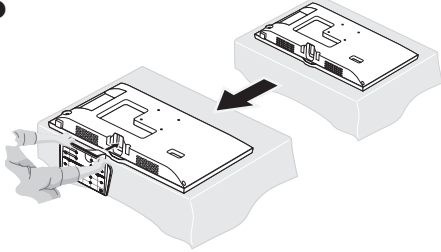
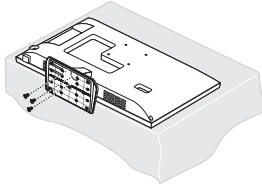
- ☞ Place a soft cloth over the table to protect the TV, and then place the TV on the cloth screen-side down.
- ☞ Insert the Stand Guide into the slot on the bottom of the TV.
- ☞ Slide and assemble it to the end line in the direction of arrow.

◆ HG24ND470 / HG32ND470 / HG40ND470 / HG32ND477 / HG40ND477/ HG32ND478 / HG40ND478

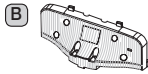
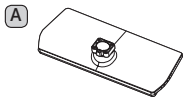
(for 24" models)




B  X 3 (M4 x L12, for 24" models)

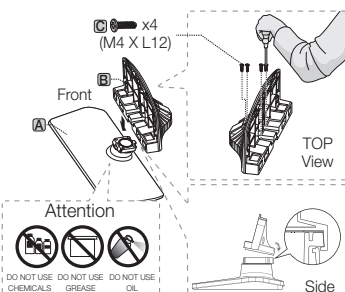
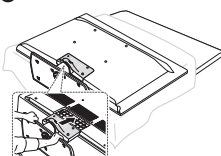
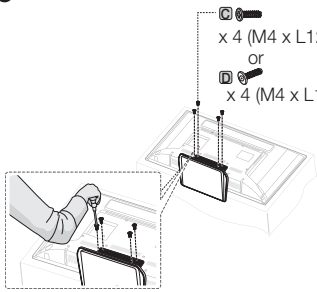


Stand	Screws	
<p>1</p>  <p> X 3 (M4 x L12)</p>	<p>2</p>  <ul style="list-style-type: none"> Place a soft cloth over the table to protect the TV, and then place the TV on the cloth screen-side down. Insert the Stand Guide into the slot on the bottom of the TV. 	<p>3</p> 

(for 32" and above models)

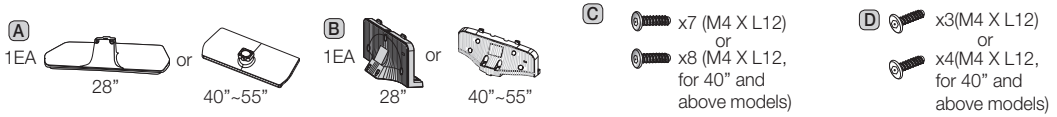


C  x8 (M4 x L12)

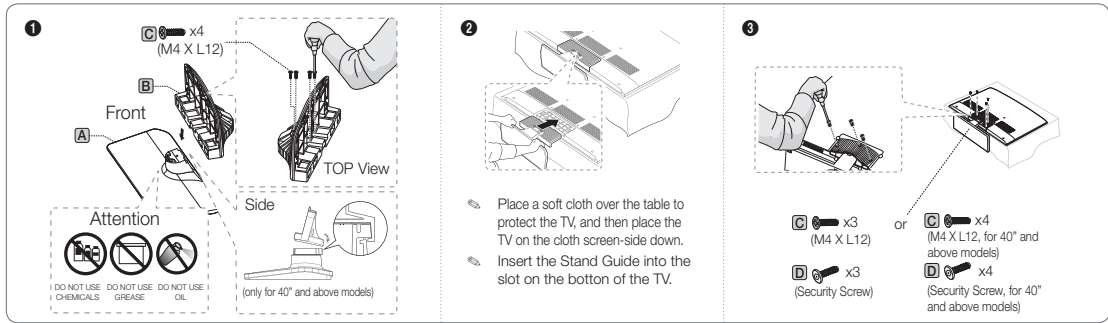
D  x 4 (M4 x L12)

Stand	Guide Stand	Screws	Security Screws
<p>1</p>  <p>Front</p> <p>TOP View</p> <p>Side</p> <p>Attention</p> <p>DO NOT USE CHEMICALS DO NOT USE GREASE DO NOT USE OIL</p>	<p>2</p>  <ul style="list-style-type: none"> Place a soft cloth over the table to protect the TV, and then place the TV on the cloth screen-side down. Insert the Stand Guide into the slot on the bottom of the TV. 		<p>3</p>  <p> x 4 (M4 x L12) or  x 4 (M4 x L12)</p>

◆ HG28ND670 / HG40ND670 / HG48ND670 / HG28ND677 / HG40ND677 / HG48ND677 / HG55ND677 / HG40ND678 / HG48ND678 / HG55ND678



Stand	Guide Stand	Screws	Security Screws
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NOTE

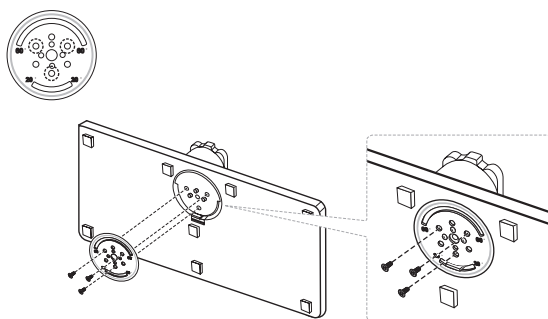
- Make sure to distinguish between the front and back of the Stand and Stand Guide when connecting them.
- Make sure that at least two people lift and move the LED TV.
- The number of screws may differ depending on the model.

Assembling the swivel stand (470 and above models with 32" or larger TVs)

The 470 and above models with 32" or larger TVs have swivel stands. You can configure these stands so that the TVs swivel 20 degrees left and right, 60 degrees left and right, or 90 degrees left and right using the BRACKET HOLDER SWIVEL.

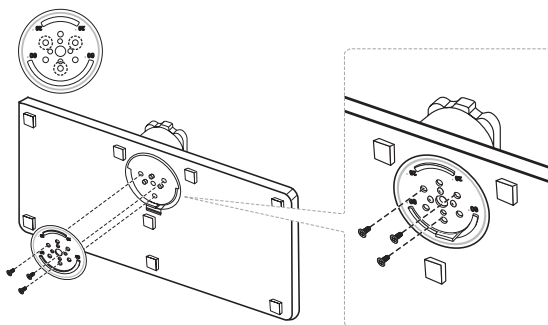
20° swivel

To configure the TV so that it swivels 20° left and right, insert the prong on the bottom of the stand through the curved hole in the Bracket Holder Swivel marked 20°. Then, fix the Bracket Holder Swivel to the stand using the three supplied screws as shown to the left.



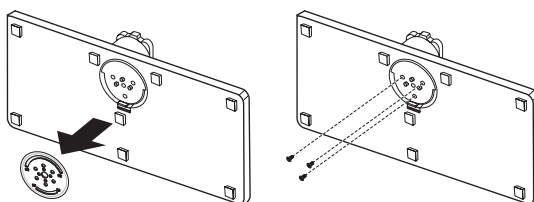
60° swivel

To configure the TV so that it swivels 60° left and right, insert the prong on the bottom of the stand through the curved hole in the Bracket Holder Swivel marked 60°. Then, fix the Bracket Holder Swivel to the stand using the three supplied screws as shown to the left.

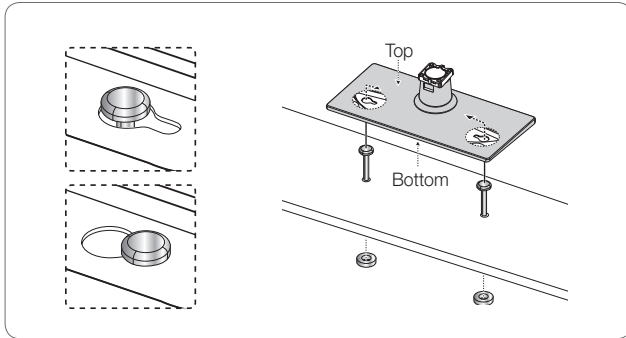
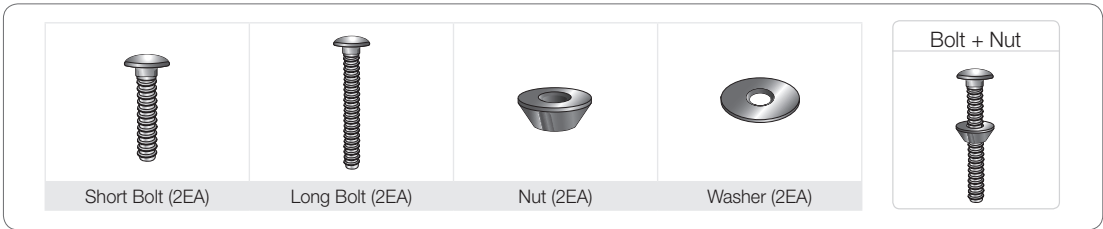


90° swivel

To configure the TV so that it swivels 90° left and right, remove the Bracket Holder Swivel, and then screw the three supplied screws into the stand as shown to the left.



Hotel Mount Kit (not necessary for all models)



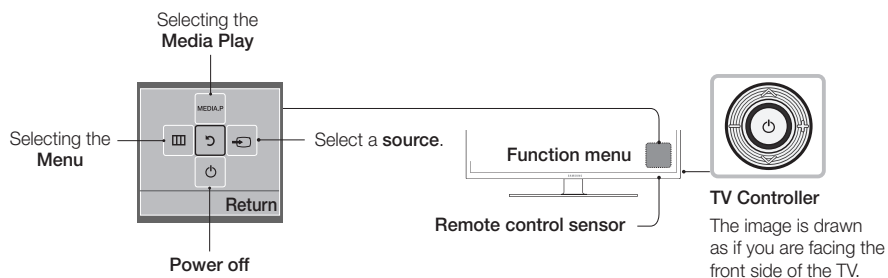
Affix the stand to a flat surface such as a dresser top, desk top, or entertainment center as shown.



WARNING: To prevent injury, you must attach this TV securely to the floor, a table, a dresser top, etc. with the Hotel Mount Kit as described in these instructions.

Using the TV's Controller

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



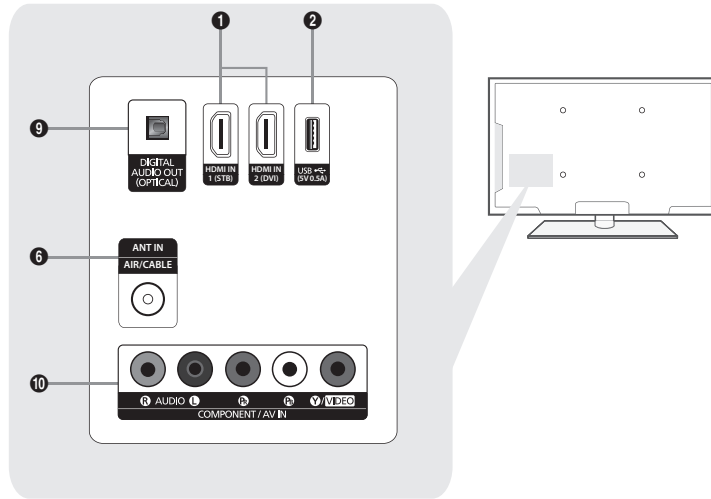
- ✎ The product color and shape may vary depending on the model.
- ✎ To exit the menu, press the Controller for more than 1 second.
- ✎ When selecting a function by moving the controller up/down/left/right, be sure not to press up on the controller. If you press up first, it will not operate correctly.

Standby mode

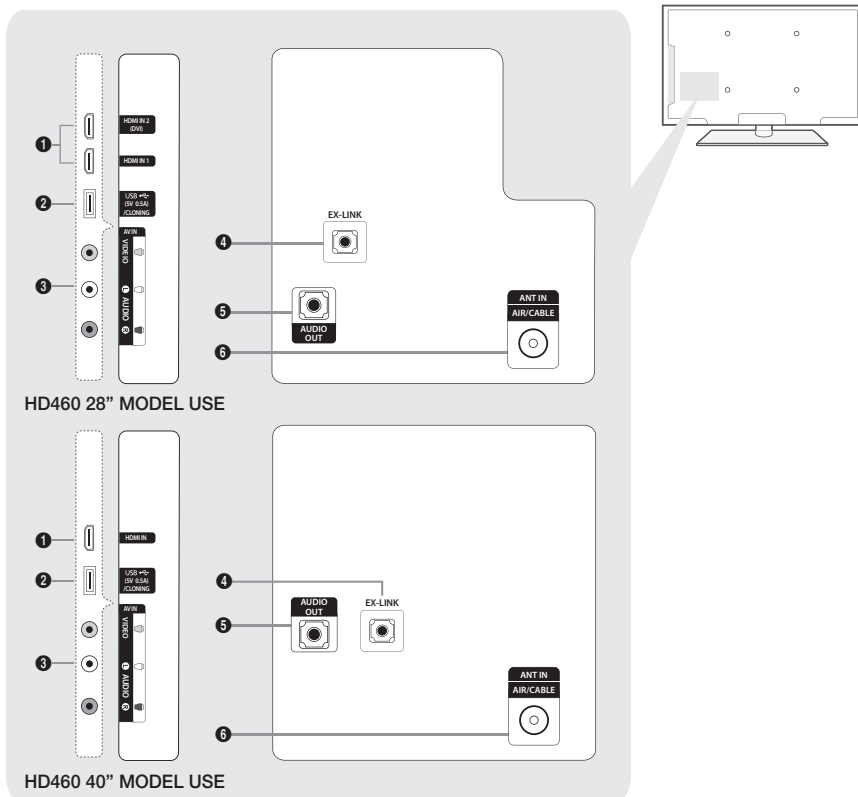
Your TV enters Standby mode when you turn it off and continues to consume a small amount of electric power. To be safe and to decrease power consumption, do not leave your TV in standby mode for long periods of time (when you are away on vacation, for example). It is best to unplug the power cord.

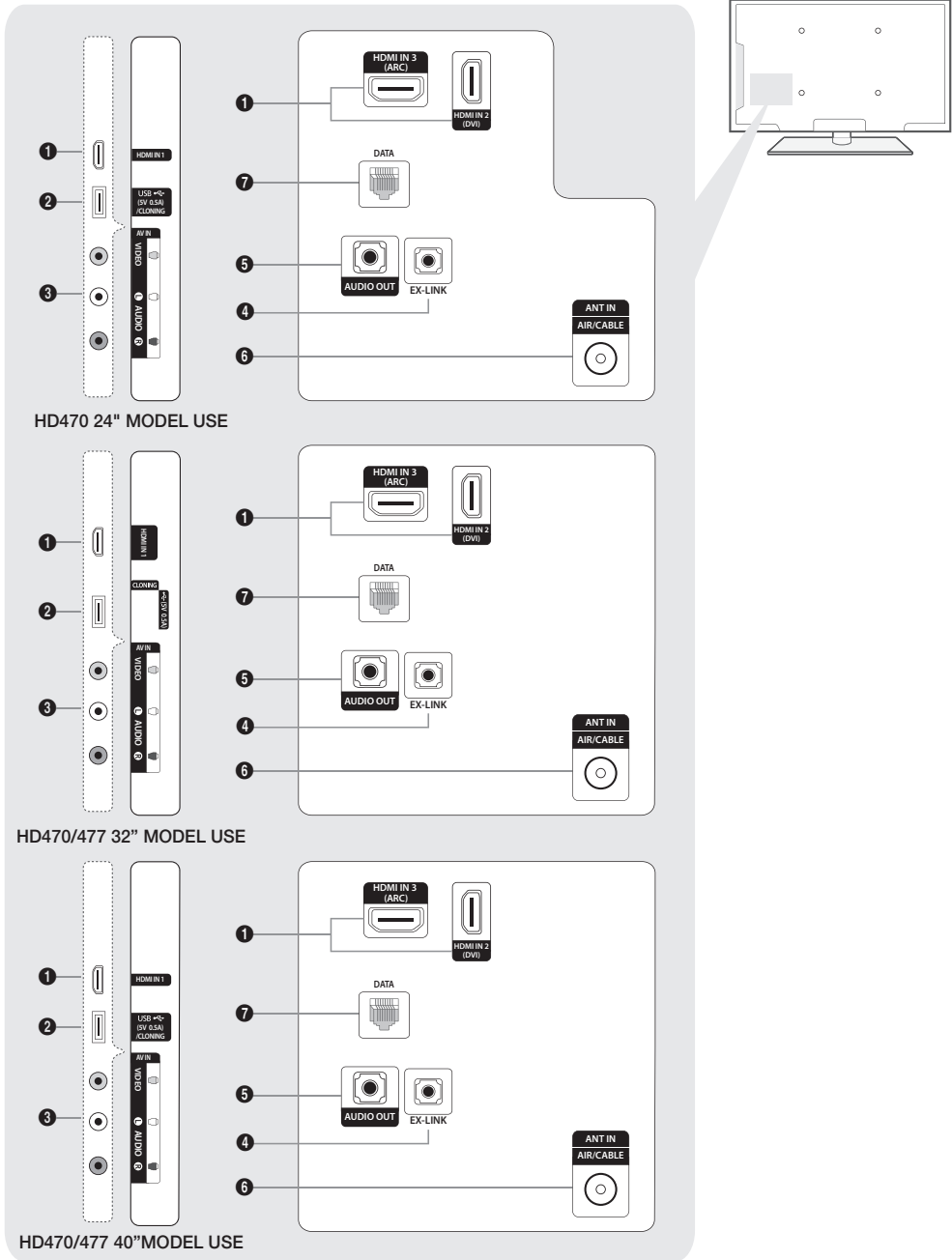
The Connection Panel

HG40ND450

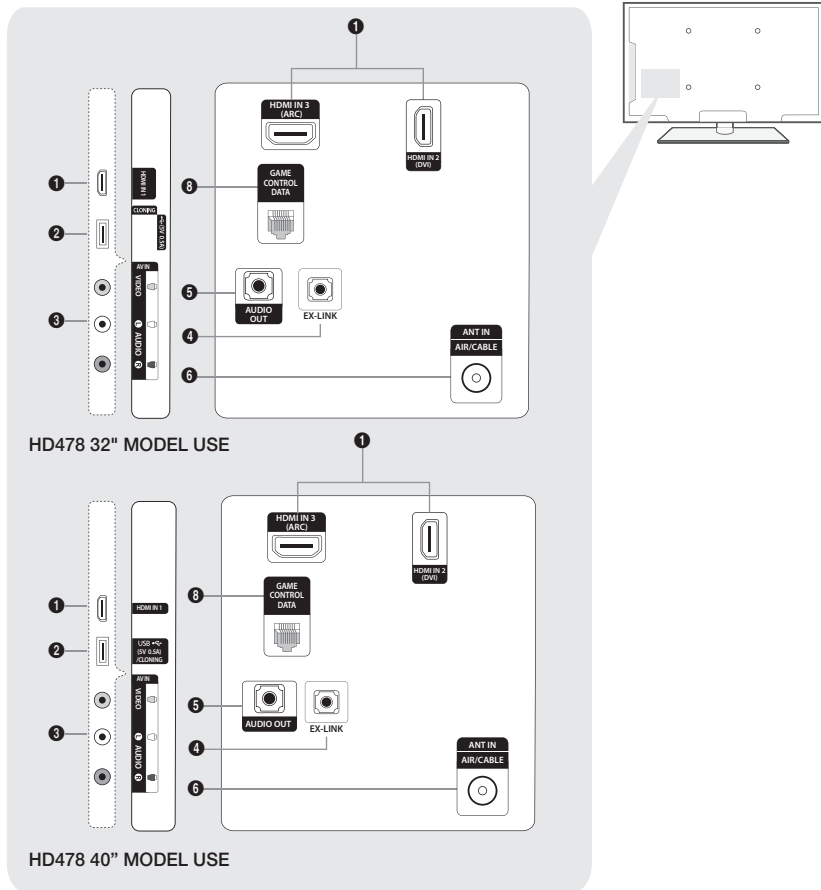


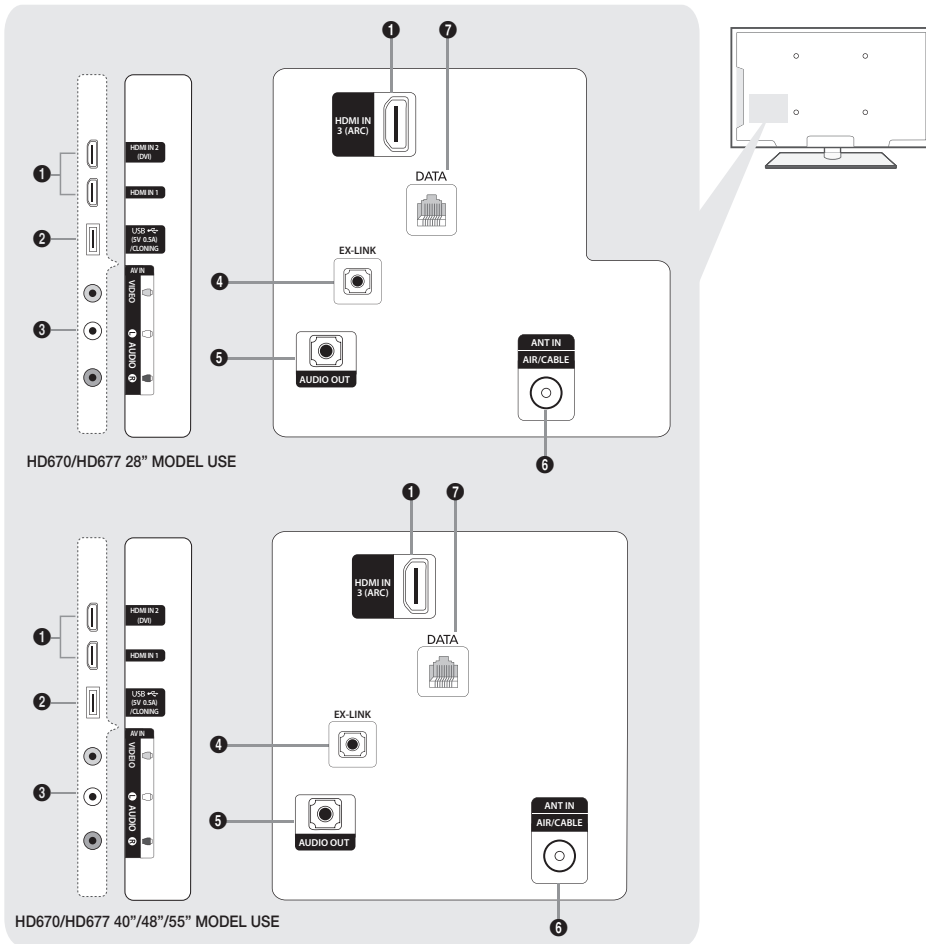
HG28ND460 / HG40ND460



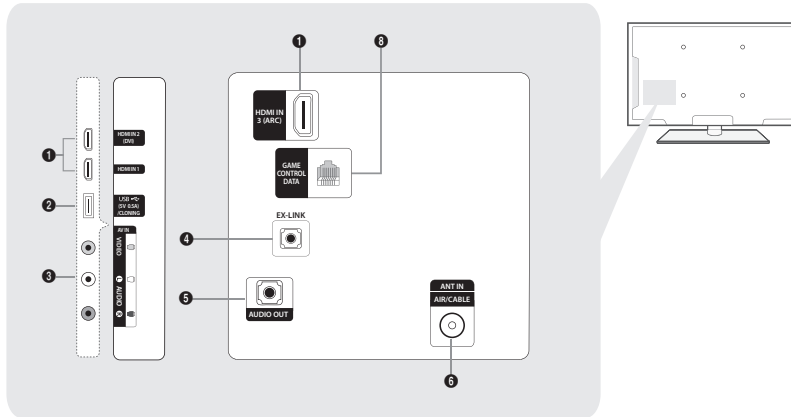


HG32ND478 / HG40ND478





HG40ND678 / HG48ND678 / HG55ND678



- ✎ Connect an external device to your TV, make sure that the TV and the device are turned off.
- ✎ When connecting an external device, match the color of the connection terminal to the cable.

1 HDMI IN

- Connects to the HDMI jack of a device with an HDMI output.
- ✎ No separate sound connection is needed for an HDMI to HDMI connection. HDMI connections carry both audio and video.

2 USB / CLONING

- Connector for software upgrades and Media Play, etc.
- Service connection.

3 VIDEO / L-AUDIO-R

- Connect a VIDEO cable to an appropriate external A/V device such a VCR, DVD, or Camcorder.
- Connect audio cables to "L-AUDIO-R" on your TV and the other ends to corresponding audio out jacks on the A/V device.

4 EX-LINK

- Connect this jack to the jack on the optional RJP (Remote Jack Pack). The RJP allows you to connect external devices (Camcoders, PCs, DVD players, etc) easily.

5 AUDIO OUT

- Connects to the audio input jacks on an Amplifier/Home Theater.

6 ANT IN or AIR/CABLE

- To view television channels correctly, the TV must receive a signal from one of the following sources:
- An outdoor antenna / A cable television system / A satellite receiver.

7 DATA

- Used to support data communication between the TV and the external SBB or STB.
- Connects using an RJ-12 type of plug.

8 GAME CONTROL DATA

- Used to connect the Lodgenet game controller in the Lodgenet system or support data communication between the TV and the external SBB or STB.
- Connects using an RJ-12 type of plug.

9 DIGITAL AUDIO OUT(OPTICAL)

- Use the optical cable to make audio connection.

10 COMPONENT/AV IN

- Used to connect 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.
- 🔧 When you connect a Video cable to COMPONENT / AV IN, the color of the COMPONENT / AV IN [VIDEO] jack (green) will not match the video cable (yellow).

Display Modes

You can also select one of the standard resolutions listed in the Resolution column. The TV will automatically adjust to the resolution you choose.

After connecting a computer to the TV, set the screen resolution for the TV on the computer. The optimal resolution is 1920 x 1080 @ 60 Hz. If it is set to any other than in the table below, the TV may display nothing. Set the resolution properly, referring to the user guide of the computer or its graphic card.

The resolutions in the table are recommended.

🔧 Optimal resolution is 1366 X 768 @ 60 Hz.

Display Mode		Display Format	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM	720 x 400	70Hz	31.469	70.087	28.322	-/+
MAC	640 x 480	67Hz	35.000	66.667	30.240	-/-
	832 x 624	75Hz	49.726	74.551	57.284	-/-
VESA DMT	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	+/+
	1280 x 720	60Hz	45.000	60.000	74.250	+/+
1366 x 768	60Hz	47.712	59.790	85.500	+/+	

🔗 Optimal resolution is 1920 X 1080 @ 60 Hz.

	Display Mode	Display Format	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM	720 x 400	70Hz	31.469	70.087	28.322	-/+
MAC	640 x 480	67Hz	35.000	66.667	30.240	-/-
	832 x 624	75Hz	49.726	74.551	57.284	-/-
VESA DMT	1152 x 870	75Hz	68.681	75.062	100.000	-/-
	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	+/+	

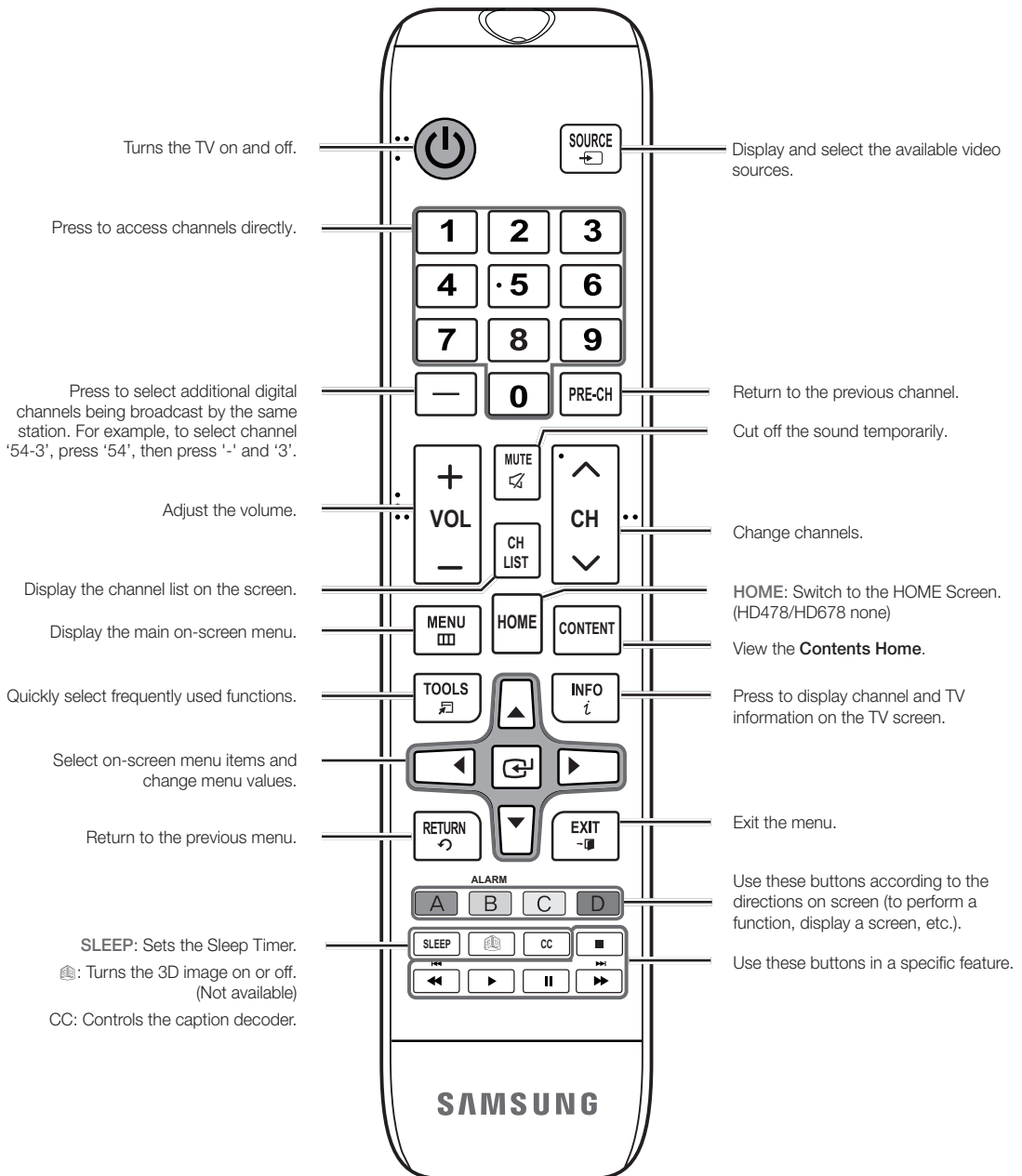
🔗 When using an HDMI/DVI cable connection, you must use the **HDMI IN (DVI)** jack.

🔗 The interlace mode is not supported.

🔗 The set might operate abnormally if a non-standard video format is selected.

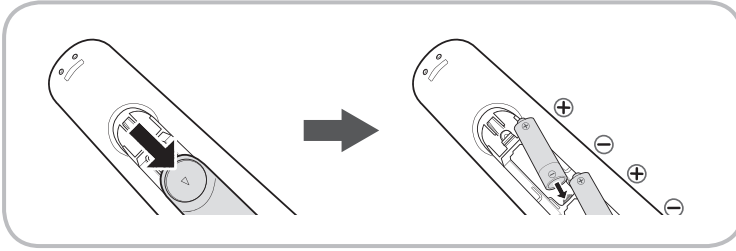
🔗 Separate and Composite modes are supported. SOG is not supported.

Using the TV's remote Controller



Installing the batteries (Battery size: AAA)

Rear of the Remote



✎ After you have installed the batteries, use a screwdriver to screw in the screw that holds the battery cover closed.

Installing Batteries into the Remote (battery size: AAA)

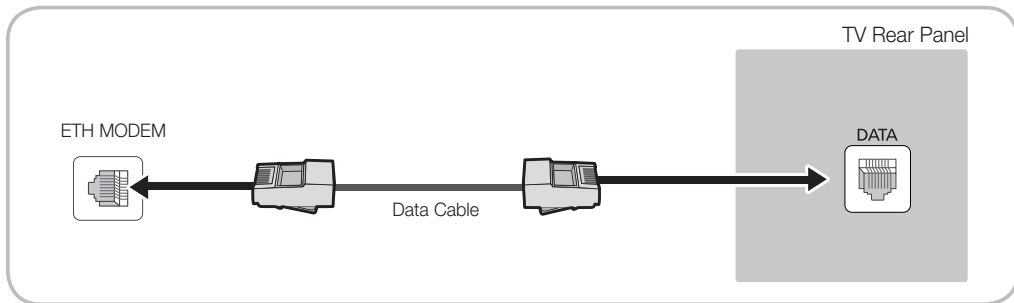
Match the polarity of the batteries to the symbol in the batter compartment.

✎ NOTE

- Use the remote control within 23~33 feet of the TV.
- Bright light may affect the performance of the remote control. Avoid using near fluorescent lights or neon signs.
- The color and shape of the remote may vary depending on the model.

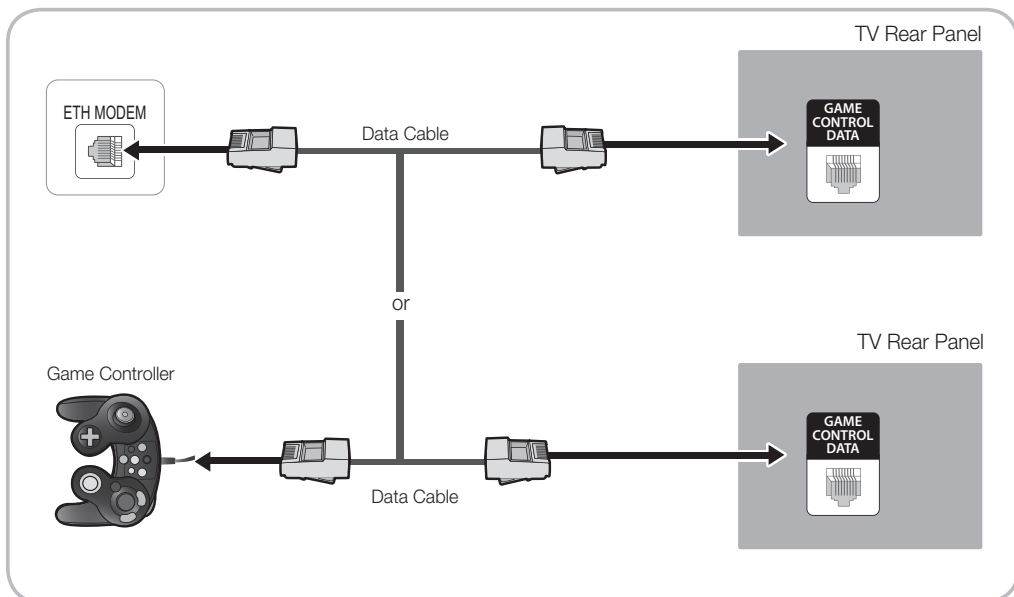
Connecting the TV to the Lodgenet game controller or a STB of a SI vendor

HD470 / HD477 / HD670 / HD677



1. Connect the **DATA** jack of the TV to the **ETH MODEM** jack of the STB (SBB) with the Data cable.
 - 🔗 The "ETH MODEM" jack name that you connect the Data Cable to may differ depending on the SBB or STB type.

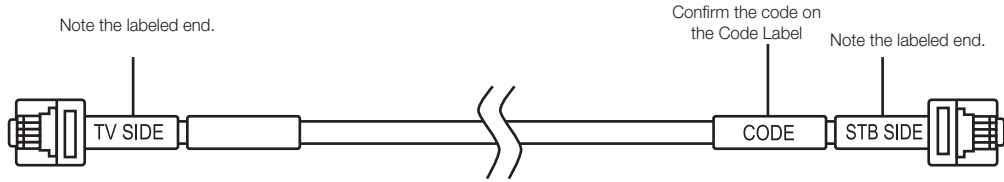
HD478 / HD678



1. Connect the LodeNet game controller to the TV's **GAME CONTROLLER/DATA** jack of the TV.
2. Connect the **GAME CONTROL DATA** jack of the TV to the **ETH MODEM** jack of the STB (SBB) with the data cable.
 - 🔗 The "ETH MODEM" jack name that you connect the Data Cable to may differ depending on the SBB or STB type.

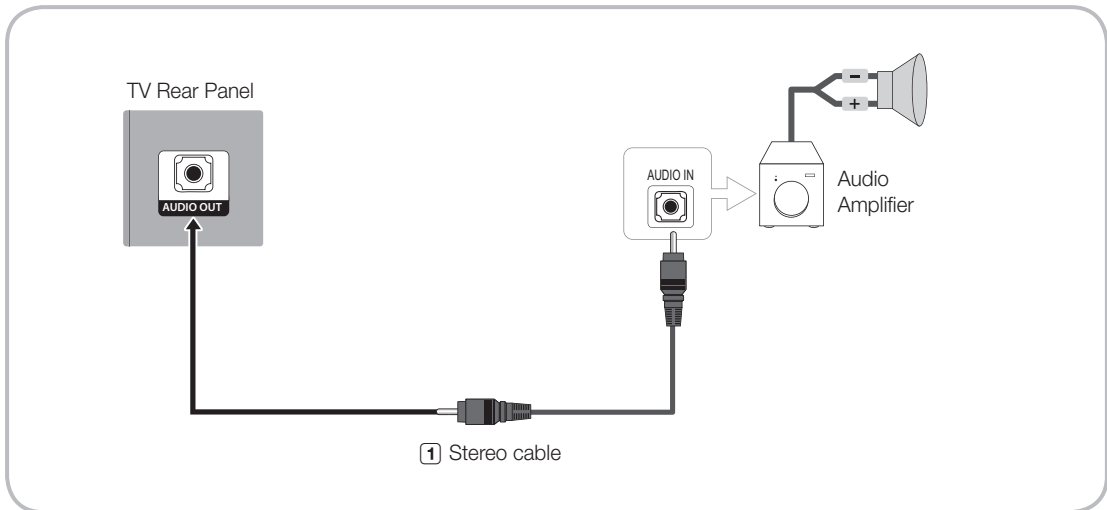
List of SI Vendors and Compatible Data Cables Supplied with the TV

- Confirm you are using the correct data cable for your SI vendor. Refer to the code label on the data cables.
- Contact your nearest dealer or your SI Vendor to buy the data cable not included in the TV.



SI Vendor	Cable code	Pin assign	Remark
Samsung OCC Enseo Guest-Tek	BN39-00865B	<p>Pin assignment for BN39-00865B:</p> <ul style="list-style-type: none"> CON A: 6: IR, 5: GND, 4: Tx, 3: NC, 2: Rx, 1: NC CON B: 6: 1, 5: 2, 4: 5, 3: 6 CON B (STB): 1: IR, 2: GND, 3: NC, 4: NC, 5: Tx, 6: Rx 	
NXTV	BN39-01011B	<p>Pin assignment for BN39-01011B:</p> <ul style="list-style-type: none"> CON A: 6: IR, 5: GND, 4: Tx, 3: NC, 2: Rx, 1: NC CON B: 6: 6, 5: 5, 4: 2, 3: 4 CON B (STB): 1: NC, 2: Tx, 3: NC, 4: Rx, 5: GND, 6: IR 	
nStreams	BN39-01110A	<p>Pin assignment for BN39-01110A:</p> <ul style="list-style-type: none"> CON A: 6: IR, 5: GND, 4: Tx, 3: NC, 2: Rx, 1: NC CON B: 6: 3, 5: 4, 4: 1, 3: 2 CON B (STB): 1: Tx, 2: NC, 3: IR, 4: GND, 5: Rx, 6: NC, 7: NC 	
MTI	BN39-01011C	<p>Pin assignment for BN39-01011C:</p> <ul style="list-style-type: none"> CON A: 6: IR, 5: GND, 4: Tx, 3: NC, 2: Rx, 1: CLK CON B: 6: 1, 5: 2, 4: 3, 3: 4, 2: 5, 1: 6 CON B (STB): 1: IR, 2: GND, 3: Rx, 4: NC, 5: Tx, 6: CLK 	

Connecting the Audio Output to an Audio Amplifier

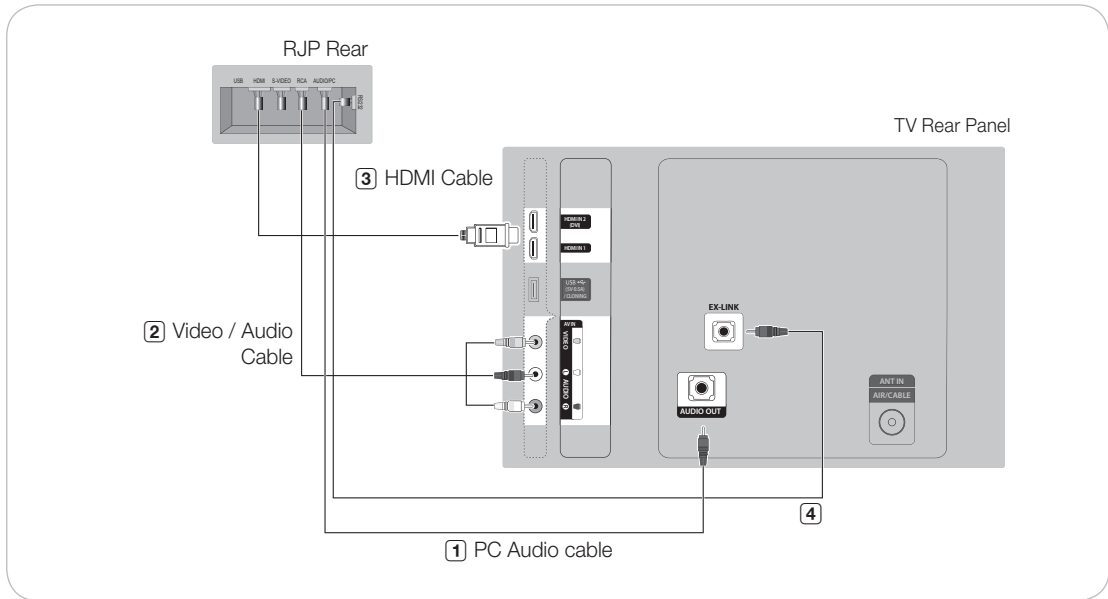


1. Connect the **AUDIO OUT** port of the TV to the Audio In port of an audio amplifier with a stereo cable. (Stereo cable not provide)

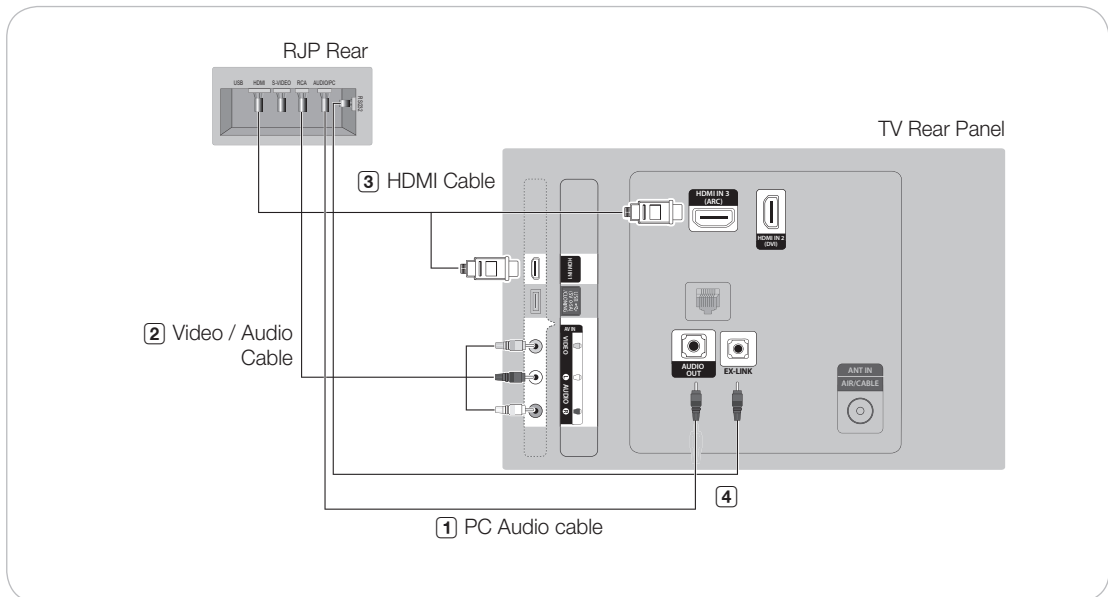
Connecting the RJP (Remote Jack Pack)

Connect the input jacks on the TV to the RJP. The RJP lets guests connect audio and video sources to the TV.

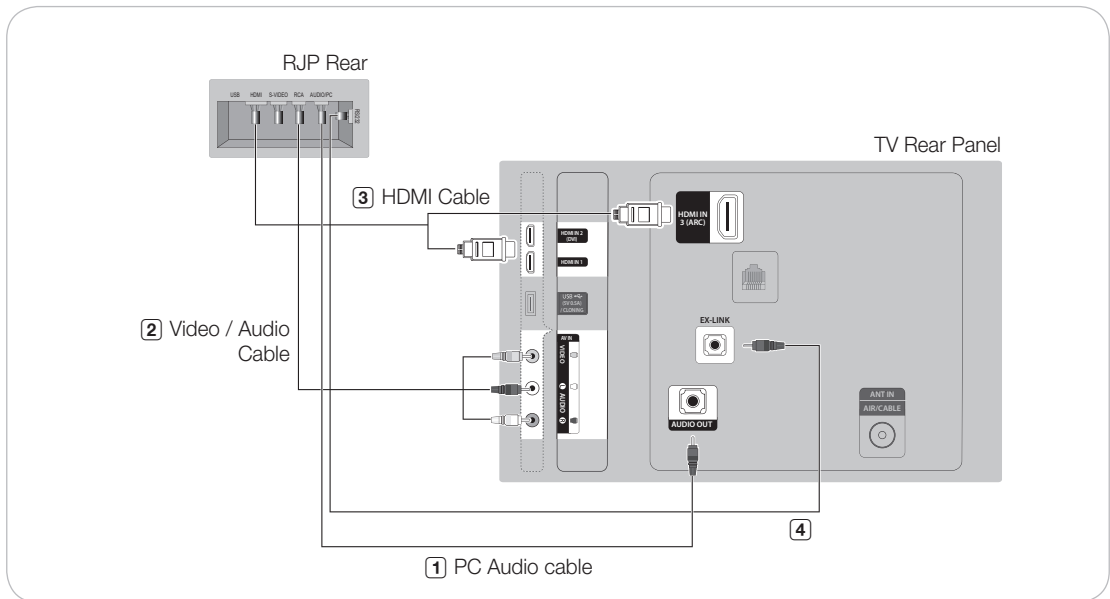
HD460



HD47x



HD67x



1. Connect the **AUDIO OUT** port of the TV to the PC/AUDIO port of the RJP.
2. Connect the **AV IN VIDEO/L-AUDIO-R** ports of the TV to the RCA port of the RJP.
3. Connect one of the **HDMI IN** ports of the TV to the HDMI port of the RJP.
4. Connect the **EX-LINK** port of the TV to the RS/232 port of the RJP.
 - 🔗 This Samsung TV is compatible with the Tele Adapt TA-7610 RJP only.

- **RJP (Remote Jack Pack):** The RJP is a hardware module that has different Audio Video inputs (A/V, Audio, PC and HDMI) and corresponding outputs. The corresponding outputs are connected from the RJP to the TV. The RJP communicates with the TV via RS232. The RJP communicates with the TV by sending messages regarding Active/Inactive sources.
 - A group of hotel menu items let you assign numbered priorities to the jacks of the RJP. (See page 29). 1 is the highest priority and 3 is the lowest. When a guest connects external sources to the RJP jacks, the TV will automatically switch between sources based on the priority you have assigned them in the Menu. For example, lets say AV is set to 1 and HDMI to 2. If a guest has attached a device to the HDMI jack, and then plugs a device into the AV jack, the TV automatically switches to the device plugged into the AV jack (the jack with the higher priority). Note that a guest can also switch between devices manually by pushing a button on the RJP.
- When you set up the RJP, connect the RJP to HDMI 1, 2, or 3 or AV.
- To reset the RJP to its factory default state, press the AV and HDMI buttons simultaneously for 10 seconds. When all button LEDs blink 5 times, the RJP reset is complete.
- The RJP will automatically turn off any LEDs after 5 minutes to avoid unnecessary light pollution in the hotel room. The LEDs that were turned off will turn on again if the guest touches any of the buttons and the 5 minute timer will restart. If the guest then touches another source button, the TV will change to the selected source and the corresponding LED will be lit.
- After an RJP Reset or a TV Power OFF/ON, it takes approximately 10 seconds to establish communications between the TV and the RJP.
- The following table shows the approximate time in seconds it takes to switch from the TV to an input source, based on assigned or default priorities.

☞ Scenario 1 : When no inputs are connected.

Source	To Connect
AV	2 Sec
PC	0.7 Sec
HDMI	3.9 Sec

☞ Scenario 2: When two or more inputs are connected to the RJP and one of the input sources is disconnected and then reconnected.

Source	Disconnect	To Connect	Total
AV	4.5 Sec	2 Sec	6.5 Sec
PC	0.7 Sec	0.7 Sec	1.4 Sec
HDMI	3.9 Sec	3.9 Sec	7.8 Sec

☞ An example: If the RJP has all its live sources (AV, PC, and HDMI) connected, AV has been assigned the highest priority, the RJP is in HDMI mode, and a guest removes and reconnects the AV source, the minimum time required to switch to the AV source is 6.5 seconds.

- To play audio devices (Ipods, MP3 devices, etc.) through the RJP, you must turn Music Mode AV in the menu on. (See page 29)
- Music mode in the TA-7610 RJP is supported by the AV jack only. HDMI Music mode is available for the Guestlink RJP only.

Setting the Hotel Option Data

To let you control how the TV functions when in Hotel mode, the TV has two Hotel mode menus, the Stand-alone mode menu and the Interactive mode menu. The menu items that differ between the menus are listed below.


Menu items in the Stand-alone mode only:

- SI Vendor : OFF / Smoovie / SSCP
- REACH Server and its submenus.

Menu items in the Interactive mode only:

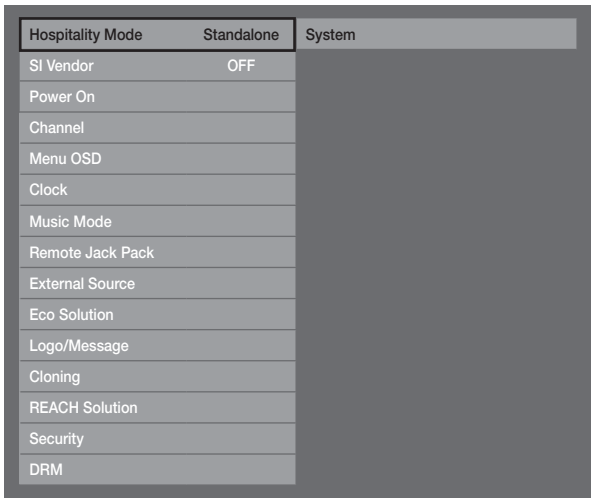
- SI Vendor: Samsung and other vendors.

All other items appear in both menus

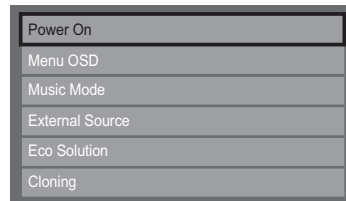
To access the menus, press **MUTE** → **1** → **1** → **9** → **ENTER**  on your Samsung remote.

After a menu appears, follow these general directions to navigate and change values:

- Use the Up and Down arrow buttons on the Samsung remote to move from menu item to menu item.
- Press the **ENTER** or Left or Right arrow buttons to select a menu item. The screen displays that menu item only.
- Press the Left or Right arrow button to change a value. The Right arrow button increases numerical values. The Left arrow button decreases numerical values.
- When the screen is displaying one menu item, you can press the Up or Down arrow button to display the next or previous menu item.
- Press the **RETURN** or **MENU** button to exit the current menu item and go to a higher menu level or the Main menu.
- To exit a Hotel mode menu, turn off the TV, and then turn it on again. Any changes you made are saved except changes to SI Vendor. For changes to SI Vendor, you must turn the TV off, wait until the Standby light glows steadily, then unplug the TV, wait for the Standby light to go off, and then plug the TV in again.




HD460 / HD47x / HD67x



HD450

<Depending on model and region, some menu items may not exist.>

To change menus, follow these steps:

1. Highlight the Hospitality Mode menu item in the top left corner of the menu.
 2. Press the left or right arrow button on the Samsung remote. Only the Hospitality Mode menu item is displayed.
 3. Press the left or right arrow button to change the Hospitality Mode item from Standalone to Interactive or from Interactive to Standalone.
 4. Press the Return or Menu button on the remote. The entire menu re-appears with your selection displayed in the Hospitality Mode field.
-  After you have set the values in one TV, you can clone those values to multiple TVs. See USB Cloning on page 36.

Menu Items

To Enter this menu: Press the **MUTE** → **1** → **1** → **9** → **ENTER** (↵) buttons in order.

To exit from this menu : Power Off (or Power Off and unplug if you have changed SI Vendor), and then turn on again. Any changes you made are saved.


HD460 / HD47x / HD67x

Menu	Item	initial Value	Description
Hospitality Mode	Hospitality Mode	Standalone (Interactive for 478/678 models)	Select the Hospitality mode. <ul style="list-style-type: none"> Standalone mode: TV works alone, without an SI STB or SBB Interactive mode: TV works with an SI STB or SBB
	SI Vendor	OFF (Samsung for 478/678 models)	<ul style="list-style-type: none"> Interactive mode : Samsung / OCC / MTI / Nstreams / Enseo / Cardinal / Guestek / Seachange / EBL / MDC / Innvue Stand-alone mode : OFF / Smoovie / SSCP
Power On	Power On Channel	Last Saved	Set the default values that will be applied when the TV is turned on. <ul style="list-style-type: none"> User Defined : Lets you set Power On Channel and Channel Type manually. See Power On Channel and Channel Type below. Last Saved : If you select this item, when the TV is turned on, it displays the channel it was displaying when it was turned off.
	Power On Channel Num	...	When the TV is turned on, it switches automatically to this channel.
	Power On Channel Type	...	<ul style="list-style-type: none"> Select channel band : AIR (analog air band), DTV (digital air band), CATV (analog cable band), CDTV (digital cable band)
	Power On Volume	Last Saved	<ul style="list-style-type: none"> User Defined : Lets you set the Power On Volume manually. See Power On Volume below. Last Saved : When the TV is turned on, it returns to the volume that had been set when the power had been turned off.
	Power On Volume Num	...	The TV turns on with this Volume Level in Stand Alone Hospitality mode.
	Min Volume	0	The minimum Volume Level the user can set in Stand Alone Hospitality mode.
	Max Volume	100	The maximum Volume Level the user in Stand Alone Hospitality mode.
	Power On Source	TV	Select the input source the TV displays when turns on.
	Power On Option	Last Option	Determines the TV's state when power returns after a power failure or after you have unplugged the TV and then plugged it in again. <ul style="list-style-type: none"> Last Option : Returns to its last Power state. If it was in Stand-by, it returns to Stand-by. If it was on, it turns on. Power On : When the power returns, the TV turns on. Standby : When the power returns, the TV enters the Standby mode.
Channel	Channel Setup		Gives you direct, immediate access to some of the Channel menu functions on the user Channel menu such as Auto Program, Antenna selection, etc.
	Channel Editor		The Channel Editor lets you edit the channels stored in the TV's memory. Using Channel Editor you can: <ul style="list-style-type: none"> Change the channel numbers and names, and sort the channels in your desired channel number order. Apply the video mute to channels you select. The video mute blanks out the video from a channel and outputs only the sound while displaying a speaker icon on the screen. The Channel Editor also lets you view information about each channel easily, without your having to display each channel directly.
	Channel Bank Editor		The Channel Bank Editor in conjunction with the SMOOVIE remote lets you control the channels guests have access to the channels a guest can access depend on the Bank Card installed in their SMOOVIE remote. <ul style="list-style-type: none"> ON : Display the cable program channels with air program channels on the channel list at the same time. OFF : Display the cable program channels or air program channels on the channel list one time. (can't display them both at the same time)
	Mixed Channel Map	OFF	<ul style="list-style-type: none"> ON : Check the DTV Program channel number. (If Dynamic SI is On, it is not available to edit DTV channels in Channel Editor.) OFF : Does not check the DTV Program channel number. (If Dynamic SI is Off, it is available to edit DTV channels in Channel Editor, but additional DTV channel program number update is not supported.)
	Dynamic SI	ON	

Menu	Item	initial Value	Description
Menu OSD	Picture Menu Lock	OFF	Enable or disable the Picture Menu.
	Menu Display	ON	<ul style="list-style-type: none"> • ON : The Main Menu is displayed. • OFF : The Main Menu is not displayed.
	Tools Display	OFF	<ul style="list-style-type: none"> • ON : The tools quick access is displayed. • OFF : The tools quick access is not displayed.
	Channel Menu Display	OFF	<ul style="list-style-type: none"> • ON : The auto program is displayed. • OFF : The auto program is not displayed.
	Panel Button Lock	Unlock	Turning the front panel (local key) operations on/off. <ul style="list-style-type: none"> • Unlock : Unlocks all panel keys. • Lock : Locks all panel keys. • OnlyPower : Locks all panel keys except the Power panel key. • Menu/Source : Locks the Menu and Source panel keys.
	Home Menu Display	ON	OFF : The Home Menu is not displayed. ON : The Home Menu is displayed. (HD678 model not have)
	Home Menu Editor		Home Menu is displayed. (HD678 model not have)
	Home Menu Auto Start	ON	ON : The Home Menu is Auto Start. OFF : The Home Menu is not Auto Start. (HD678 model not have)
Clock	Clock Type	OFF	OFF : Close SW Clock. SW Clock : Open SW Clock . (460 none)
	Local Time	Manual	Select the way to update clock data. Use clock data from a DTV channel to set the clock automatically or set the clock manually when the TV is in stand-alone mode.
	Timer Type	Wake Up	WakeUp : you can set a specific time for the TV to turn on automatically. OnOff : Have you TV turn itself on/off automatically at a specified time. you can set three Times the most at the same time.
	Time Channel Type	...	Use clock data from which DTV channel to set the clock
	Time Channel Num	...	DTV channel Number
Music Mode	Music Mode AV	OFF	Allows music output from an mp3/audio player connected to an AV Input Source on the TV. When on, you can hear sound from the player through the TV whether there is a video signal or not. Also mutes the video so the TV does not display a picture when a guest is playing music. The TV's backlight, however, remains on.
	Music Mode Backlight	OFF	When set to Off, the TV's backlight is turned off entirely when a guest uses the Music mode. To save energy, set to Off.
Remote Jack Pack	Priority AV	1	If the jack priority is set, the corresponding source is automatically set when a jack is inserted according to the jack priority.
	Priority HDMI	2	If the jack priority is set, the corresponding source is automatically set when a jack is inserted according to the jack priority.
	AV Option	AV	Select RJP AV Source (Source selection depends on Model).
	HDMI Option	HDMI 1 (460:HDMI)	Select which HDMI source of the TV is connected to the RJP jack. (HDMI1/HDMI2/HDMI3)
	HDMI Music Mode	OFF	Allows music output from an mp3/audio player connected to an HDMI Input Source. When on, you can hear sound from the player through an HDMI input of the RJP whether there is a video signal or not. (This option is only compatible with the Guest link RJP)
External Source	USB Pop-up Screen	Default	When a USB device is connected to the TV : <ul style="list-style-type: none"> • Default : A popup window appears. • Automatic : Opens the USB contents menu automatically. • Disable : Neither the popup window nor the menu appears.
	External Source Banner	ON	If set to On, the TV displays the External Source Banner (information) when you change the TV source to another external input, press the Info key, or turn the TV on. <ul style="list-style-type: none"> • ON : The External Source information is displayed on the TV screen. • OFF : The External Source information is not displayed on the TV screen.
	Auto Source	OFF	<ul style="list-style-type: none"> • ON : When an external input source is connected to the TV, the TV identifies the input source, and then automatically switches to that input source. • OFF : Auto Source function is Off.
	Anynet+Return Source	Power On Src	Select the return TV source after stopping an Anynet+(HDMI-CEC) connection. (This fuction is especially useful for the Guestlink RJP.)

Menu	Item	initial Value	Description	
Eco Solution	Energy Saving	Off	Adjusts the brightness of the TV to reduce power consumption. <ul style="list-style-type: none"> • Off : Turns off the energy saving function. • Low : Sets the TV to low energy saving mode. • Medium : Sets the TV to medium energy saving mode. • High : Sets the TV to high energy saving mode. 	
	Welcome Message	OFF	Displays a the Welcome Message for 5 seconds when the TV turns On.	
Logo/ Message	Edit Welcome Message		Edits the Welcome Message.	
	Hospitality Logo	OFF	Turns the Hospitality logo feature On or Off, If On, when the TV is turned on, the Logo is displayed, before the signal from the initial source, for the amount of time set in "Logo Display Time".	
	Hospitality Logo DL	...	Downloads the Hospitality logo. Hospitality logo file requirements: <ul style="list-style-type: none"> • BMP or AVI files only. • Max file size : BMP - 960 X 540. AVI - 30MB. • The file can only be named samsung.bmp or samsung.avi. 	
	Logo Display Time	...	Hospitality Logo Display Time (3/5/7 seconds).	
	Clone TV to USB		Clone the current TV options to a USB memory device.	
Cloning	Clone USB to TV		Clone the saved TV options on a USB memory device to the TV.	
	Setting Auto Intialize	OFF	If you set Setting Auto Initialize to On, and the TV's power is turned off and on, the guest side menu items are restored to their cloned values. See page 36.	
	REACH 3.0	OFF	OFF : Close REACH 3.0 ON : Open REACH 3.0	
REACH Solution	REACH Channel	...	87 : Assign a DTV channel number to carry the update REACH data. This channel number must be the same as the number set on the Reach server.	
	Group ID	...	All : Select the group ID of the REACH server. (Refer to the REACH server manual for more details)	
	IPG Room Type	...	You can receive up to 3 EPG information headed to the Americas according to Room Type from SI, and it displays the appropriate channel list and EPG information according to the value set on TV. For IPG Room Type, there are Default / Public / Roomtype 3 within the hotel Factory Install menu, and its default value is Default.	
	Ticker	OFF	<ul style="list-style-type: none"> • ON : The TICKER content is displayed. • OFF : The TICKER content is not displayed. 	
	REACH Update Time	...	Lets you set when data such as updated SW, cloning files, and S-LYNC REACH contents is downloaded from the REACH server to the TV : <ul style="list-style-type: none"> • 1hour : Every hour • 2hour : Every 2 hours • 12:00 am : every 12:00 a.m. • 2:00 am : every 2:00 a.m. • 12:00 pm : every 12:00 p.m. • 2:00 pm : every 2:00 p.m. 	
	REACH Update Immediate	...	<ul style="list-style-type: none"> • ON : Whenever the TV enters standby mode (the power cord is plugged in and the power is off), the REACH data is updated on the TV. • OFF : The REACH data is only updated on the TV at the REACH server update time. 	
	Room Number	...	Setting Room Number.	
	REACH Server Version	0000	0000 : Displays the current REACH data version.	
	Security	Password Input		Input Password 00000000.
		Password Setting	...	Set new Password.
Password Reset		...	Reset Password to 00000000.	
Security Mode		...	Security Mode ON or OFF.	
USB		...	USB Disable or Enable.	
HDMI		...	HDMI Disable or Enable.	

Menu	Item	initial Value	Description
DRM	DRM Mode	OFF 477 / 478 / 677 / 678 :pro:idiom	Configures CAS support. OFF : Turns off CAS support. LYNK DRM : Select to turn on S-LYNK DRM CAS support only. Pro:idiom : Select to turn on Pro:Idiom CAS support only. (only for 477/677 and above models) LYNK DRM,PI : Select to have the TV support S-LYNK DRM CAS and Pro:Idiom CAS. (only for 477/677 and above models)
	PI AES Data	0x0000	Displays the current state of Pro:idiom AES. (only for 477/677 and above models)
	PI AES Log	OFF	PI AES Log consists of Pro:idiom AES diagnostic register, here after referred as AESD, values. These register log will help us diagnose PI key loss issue in the field and provide solution for it. (only for 477/677 and above models)
	View PI AES Log	...	Displays Pro:idiom AES Log OSD (only for 477/677 and above models)
System	Self Diagnosis for TV		Lets you check the state of the TV picture and sound. <ul style="list-style-type: none"> Picture Test : Use to check for picture problems. If the problem appears in the test picture, select YES, and then follow the directions on the screen. Sound Test : Use to check for sound problems. If the problem occurs during the test, select YES, and then follow the directions on the screen.
	Self Diagnosis for HTV		Lets you check the state of Pro:Idiom and its communication with the SI STB or SBB. If you have any problems with the Pro:idiom encryption channel or the communications with the SI STB or SBB, use this diagnosis function. If Pro:Idiom DTV Channel Key Loss appears to have failed and the Pro:Idiom encryption channel has failed to play content, first check the broadcasting systems related to Pro:Idiom encryption. If your broadcasting system does not have a problem, contact Samsung Service. If STB SI Vendor Setting appears to have failed and communication with the SI STB or SBB has failed, first check your SI STB or SBB. If your SI STB or SBB does not have a problem, contact to Samsung Service.
	SW Upgrade		Lets you upgrade the TV SW with a USB memory stick. See Page 45.
	Service Pattern	OFF	Lets you check the state of the TV picture by displaying picture test patterns. Press the Menu button to turn off the test patterns and exit.
	ATV Cable AGC Gain	Default	Lets you control the AGC gain of the analog cable channels. Don't change the default value unless problems occur.
	DTV OpenCable AGC Gain	Default	Lets you control the AGC gain of the digital cable channels. Don't change the default value unless problems occur.
	Sound Bar Out	OFF	ON : TV speaker sound will be mute. Sound will come out through HDMI. You must connect the Sound Bar to hear the sound. OFF : Sound will come out through TV speakers normally. (460 none)
	Contact Samsung		Samsung Contact information
Standby LED	ON	ON : The LED light in fuction will be in red light. OFF : The LED light in fuction will be light off.	
TV reset		Returns all settings on the TV to their factory defaults.	

 REACH (Remote Enhanced Active Control for Hospitality) is a professional, interactive remote controller that lets you deliver TV firmware updates, cloning data, channel mapping changes, S-LYNK REACH contents, and TICKER contents through RF DTV to several hundred hospitality TVs simultaneously. The REACH functions are available only in stand-alone mode. The REACH Server is sold separately. Refer to the REACH server manual enclosed with the REACH server product for more operating information.

HD450

Menu	Item	initial Value	Description
Power On	Power On Channel	Last Saved	Set the default values that will be applied when the TV is turned on. <ul style="list-style-type: none"> • User Defied : Lets you set Power On Channel and Channel Type manually. See Power On Channel and Channel Type below. • Last Saved : If you select this item, when the TV is turned on, it displays the channel it was displaying when it was turned off.
	Power On Channel Num	...	When the TV is turned on, it switches automatically to this channel.
	Power On Channel Type	...	<ul style="list-style-type: none"> • Select channel band : AIR (analog air band), DTV (digital air band), CATV (analog cable band), CDTV (digital cable band)
	Power On Volume	Last Saved	<ul style="list-style-type: none"> • User Defied : Lets you set the Power On Volume manually. See Power On Volume below. • Last Saved : When the TV is turned on, it returns to the volume that had been set when the power had been turned off.
	Power On Volume Num	...	The TV turns on with this Volume Level in Stand Alone Hospitality mode.
	Min Volume	0	The minimum Volume Level the user can set in Stand Alone Hospitality mode.
	Max Volume	100	The maximum Volume Level the user in Stand Alone Hospitality mode.
	Power On Source	TV	Select the input source the TV displays when turns on.
Menu OSD	Power On Option	Last Option	Determines the TV's state when power returns after a power failure or after you have unplugged the TV and then plugged it in again. <ul style="list-style-type: none"> • Last Option : Returns to its last Power state. If it was in Stand-by, it returns to Stand-by. If it was on, it turns on. • Power On : When the power returns, the TV turns on. • Standby : When the power returns, the TV enters the Standby mode.
	Picture Menu Lock	OFF	Enable or disable the Picture Menu.
	Menu Display	ON	<ul style="list-style-type: none"> • ON : The Main Menu is displayed. • OFF : The Main Menu is not displayed.
	Channel Menu Display	OFF	<ul style="list-style-type: none"> • ON : The auto program is displayed. • OFF : The auto program is not displayed.
	Panel Button Lock	Unlock	Turning the front panel (local key) operations on/off. <ul style="list-style-type: none"> • Unlock : Unlocks all panel keys. • Lock : Locks all panel keys. • OnlyPower : Locks all panel keys except the Power panel key. • Menu/Source : Locks the Menu and Source panel keys.
	Home Menu Display	ON	OFF : The Home Menu is not displayed. ON : The Home Menu is displayed.
	Home Menu Editor		Home Menu is displayed.
	Home Menu Auto Start	ON	ON : The Home Menu is Auto Start. OFF : The Home Menu is not Auto Start.

Menu	Item	initial Value	Description
Music Mode	Music Mode AV	OFF	Allows music output from an mp3/audio player connected to an AV Input Source on the TV. When on, you can hear sound from the player through the TV whether there is a video signal or not. Also mutes the video so the TV does not display a picture when a guest is playing music. The TV's backlight, however, remains on.
	Music Mode PC	...	Allows music output from an mp3/audio player connected to an PC Input Source on the TV. When on, you can hear sound from the player through the TV whether there is a video signal or not. Also mutes the video so the TV does not display a picture when a guest is playing music. The TV's backlight, however, remains on.
	Music Mode Comp	OFF	Allows music output from an mp3/audio player connected to an component Input Source on the TV. When on, you can hear sound from the player through the TV whether there is a video signal or not. Also mutes the video so the TV does not display a picture when a guest is playing music. The TV's backlight, however, remains on.
	Music Mode Backlight	OFF	When set to Off, the TV's backlight is turned off entirely when a guest uses the Music mode. To save energy, set to Off.
External Source	Auto Source	OFF	<ul style="list-style-type: none"> • ON : When an external input source is connected to the TV, the TV identifies the input source, and then automatically switches to that input source. • OFF : Auto Source function is Off.
Eco Solution	Energy Saving	OFF	<p>Adjusts the brightness of the TV to reduce power consumption.</p> <ul style="list-style-type: none"> • Off: Turns off the energy saving function. • Low : Sets the TV to low energy saving mode. • Medium : Sets the TV to medium energy saving mode. • High : Sets the TV to high energy saving mode.
Cloning	Clone TV to USB		Clone the current TV options to a USB memory device.
	Clone USB to TV		Clone the saved TV options on a USB memory device to the TV.
	Setting Auto Initialize	OFF	If you set Setting Auto Initialize to On, and the TV's power is turned off and on, the guest side menu items are restored to their cloned values. See page 36.

Using the Sports(or Soccer) Mode

Sports(or Soccer) Mode **TOOLS**

MENU → **Applications** → **Sports(or Soccer) Mode** → **ENTER**

This mode provides optimized condition for watching sports games.

- **A (Zoom)**: Pause playback and divide the picture into 9 parts. Select a part to zoom it in. Press this button again to resume.
 - If you turn the TV off while watching **Sports(or Soccer) Mode**, the **Sports(or Soccer) Mode** will be disable.

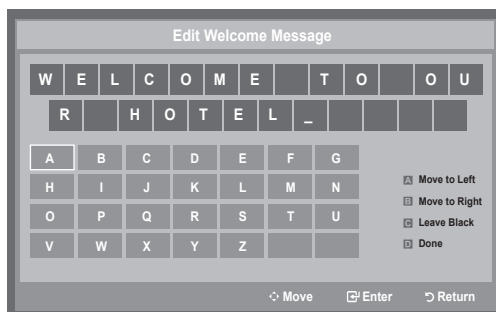
Welcome Message (not available for 450)

The Welcome Message feature displays a custom message on the TV every time it is turned on.

- Welcome message settings are in the Hotel Option Menu.
- Set Welcome Message to ON to display the message when the TV is powered on.

Welcome Message	OFF
Edit Welcome Message	
Hospitality Logo	OFF
Hospitality Logo DL	--
Logo Display Time	--

- You can make the Welcome Message up to 25 characters long and edit it in the Hotel Service menu.
- Welcome Message supports the following characters:
 - Capital Letters from A to Z.
- You can edit the Welcome Message by using the remote's navigation, color, and Enter buttons in the "**Edit Welcome Message**" OSD (See the illustration below.)



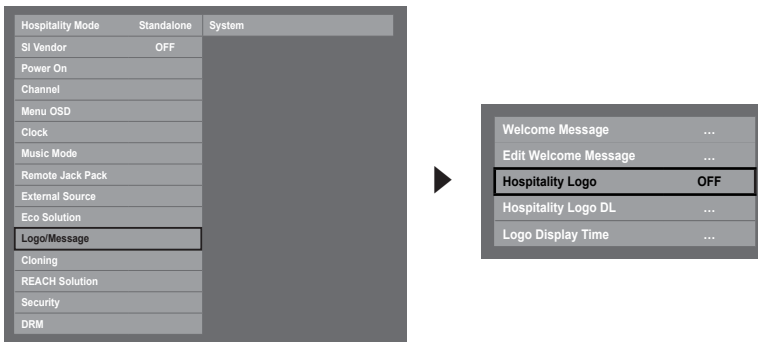
Below are the general directions for navigating and changing letters on the Edit Welcome Message screen:

- Press the **A** button on the remote to move to the left in the message.
- Press the **B** button to move to the right.
- After you have selected a position in the message, use the arrow buttons on your remote to select a letter in the alphabet below the message.
- Press **Enter** to place a letter into the position you selected.
- Press the **C** button to erase a letter in a position or enter a blank.
- Press **Return** or the **D** button to exit.

Hotel Logo (not available for 450)

The Hospitality Logo function displays the Hotel's picture image when the TV is powered on.

- Hospitality Logo settings are the Hotel mode menus.
- The Logo Download and Logo Display Menu items are enabled when you turn the Hospitality Logo option on.
- If there is a logo image stored in memory and the Hospitality Logo option is on, the Hospitality logo is displayed when the TV is turned on.
- The Hospitality logo is not displayed when the Hospitality found Logo option is off, even if the logo image has been loaded into the TV.



<Depending on model and region, some menu items may not exist.>

• Hospitality Logo

- This option lets you choose whether the Hospitality Logo image is displayed or not.
- Initial value is OFF.
- Can be set to OFF or ON.
- When set to ON, the Logo Download and Logo Time Display menu items become accessible.

• Hospitality Logo DL

- This option lets you download the logo image to the TV's memory from a USB device.
- A wait message appears while the image is being copied to the TV.
- A "completed" message appears when the copy operation finishes successfully.
- The word "failed" appears if the copy operation was unsuccessful.
- **No USB** appears if no USB device is connected.
- **No File** appears if there is no file to copy on the USB device or the file is in the wrong format (must be a BMP or AVI file). If No File appears and there is a logo file on the USB device, check the file format.



• Logo File Format

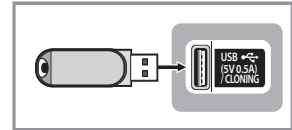
- The TV supports only BMP and AVI format.
- The file name must be samsung.bmp or samsung.avi.
- The maximum resolution of the BMP format is 960 x 540.
- The maximum file size for AVI format is 30MB.
- The TV does not change the size or scale of the image.

USB Cloning

The USB Cloning function lets you download user-configured settings (**Picture, Sound, Input, Channel, Setup, and Hotel Setup**) from one TV to a USB device, and then upload these settings from the USB device to other TV sets. This lets you create a standard array of settings and distribute that standard array to all the TVs in your facility.

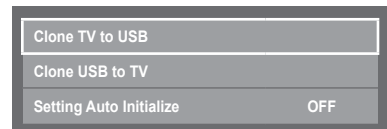
- **Cloning from TV to USB:** Copies stored menu settings from a TV to a USB device.

1. Insert a USB drive into the **USB** port on the rear or side of the TV
2. Enter the hotel option menu by pressing these buttons in order. **MUTE** → 1 → 1 → 9 → **ENTER** 
3. Press the **▲** or **▼** button to select Clone TV to USB, and then press the **ENTER** button.
4. The message **Clone TV to USB** is displayed. Press the **ENTER**  button.
5. The TV displays one of the following messages:
 - **In Progress:** Copying data to USB.
 - **Completed:** Copy operation was successful.
 - **Failed:** Copy operation was not successful.
 - **No USB:** USB is not connected.



The clone folder will be labeled T-NT14LJAKUCB. (T-NMEGAIBRCH for 450)




- ☞ The cloned values include the values on the Guest side menu (brightness, picture size, contrast, etc.) and the Hotel side menu.

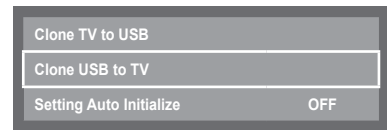


- **Cloning from USB to TV:** Copies menu settings from a USB device to a TV.

- ☞ **Shortcut:** Turn the TV off, insert the USB device, turn the TV on, and then press the **ENTER**  button for 5 seconds.

To clone data to the TV using the Hotel menu, follow these steps:

1. Turn the TV off.
 2. Insert the USB drive into the USB port on the rear or side of the TV.
 3. Turn the TV on.
 4. Enter the Interactive menu by pressing these buttons in order. **MUTE** → 1 → 1 → 9 → **ENTER** 
 5. Press the **▲** or **▼** button to select “Clone USB to TV”, and then press the **ENTER**  button.
 6. The message **Clone USB to TV** is displayed. Press the **ENTER**  button.
 7. The TV displays one of the following messages:
 - **In Progress:** Copying data to TV.
 - **Completed:** Copy operation was successful.
 - **Failed:** Copy operation was not successful.
 - **No USB:** USB is not connected
 - **No File:** There is no file to copy on the USB device. If you get a No File message, check the folder on your **USB device**. The folder name should be T-NT14LJAKUCB. (T-NMEGAIBRCH for 450)
- ☞ Tables that list the settings that are cloned in the Interactive and Standalone Hotel Menus begin on the next page.



- Settings Cloned in the Hotel Menu

Menu Item	Cloning Support
Hospitality Mode	Yes
SI Vendor	Yes
Power On Channel	Yes
Power On Channel Num	Yes
Power On Channel Type	Yes
Power On Volume	Yes
Power On Volume Num	Yes
Min Volume	Yes
Max Volume	Yes
Power On Source	Yes
Power On Option	Yes
Channel Setup	No
Channel Editor	No
Mixed Channel Map	No
Dynamic SI	No
Picture Menu Lock	Yes
Menu Display	Yes
Tools Display	Yes
Channel Menu Display	Yes
Panel Button Lock	Yes
Home Menu Display	Yes
Home Menu Editor	Yes
Home Menu Auto Start	Yes
Clock Type	Yes
Local Time	Yes
Timer Type	Yes
Time Channel Type	Yes
Time Channel Num	Yes
Music Mode AV	Yes
Music Mode Backlight	Yes
Priority AV	Yes
Priority HDMI	Yes
AV Option	Yes
HDMI Option	Yes
HDMI Music Mode	Yes
USB Pop-up Screen	Yes
External Source Banner	Yes
Auto source	Yes
Anynet+Return Source	Yes
Energy saving	Yes
Welcome Message	Yes

Menu Item	Cloning Support
Edit Welcome Message	Yes
Hospitality Logo	No
Hospitality Logo DL	Yes
Logo Display Time	Yes
Clone TV to USB	Yes
Clone USB to TV	Yes
Setting Auto Intialize	Yes
REACH 3.0	Yes
REACH Channel	Yes
Group ID	No
IPG Room Type	No
Ticker	Yes
REACH Update Time	Yes
REACH Update Immediate	Yes
Room Number	Yes
REACH Server Version	Yes
Password Input	Yes
Password Setting	No
Password Reset	Yes
Security Mode	Yes
USB	Yes
HDMI	Yes
DRM Mode	No
PI AES Data	No
PI AES Log	Yes
View PI AES Log	No
Self Diagnosis for TV	No
Self Diagnosis for HTV	No
SW Upgrade	No
Service Pattern	Yes
ATV Cable AGC Gain	Yes
DTV OpenCable AGC Gain	Yes
Sound Bar Out	Yes
Contact Samsung	No
Standby LED	Yes
TV reset	No

Multi Code Remocon (not available for 450)

A Multi Code Remocon is a special remote which is designed to control multiple TVs.

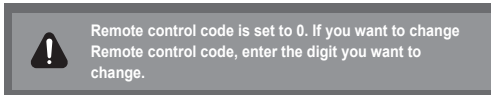
This function is useful where there is more than one TV in a location.

You can control up to 10 TVs with a different ID code of each remote with no conflicts between the TVs. ID numbers are displayed on each TV's OSD.

The Initial ID code for each TV is "0".

- You can set and reset the ID code in Analog TV mode or PC mode. (Not available in DTV mode.)
- You can set the ID code to any digit from 0 to 9.
- To set a TV's ID code, follow these steps:
 1. Aim the remote at the TV, and then press the **MUTE** button and the **RETURN** button simultaneously for more than 7 seconds. When you stop pressing the buttons, the TV displays the current ID in the middle of the screen and the words, "Remote control code is set to x. If you want to change the Remote control code, enter the digit you want to change."
 2. Press the number on the remote you want to assign to the TV. The TV displays the following words:
"Remote control code is changed to x."
 - ☞ The TV will display the OSD until you press the Exit button.

See the example below.



Example: After you see the message above, if you press 1, the TV and Remote will be set to ID code 1. The TV then displays the following message: "Remote control code is changed to 1" The TV can then only be controlled by a remote which has the same ID code (1).

- To reset the ID code, press the **MUTE** button and the **EXIT** button simultaneously for more than 7 seconds. When you stop pressing the buttons, the ID codes of the TV and Remote are reset to "0". "Remote control code is set to 0." appears on the TV.

Setting Auto Initialize

When you clone settings from one TV to another, you clone both the guest side menu and hotel side menu settings: Picture, Sound, Input, Channel, Setup, and Hotel Setup. This lets you set nearly all of the menu values on your hospitality TVs to the same, standard settings. If you allow guests access to the guest side menus, for example the Picture menu, they can change the settings in those menus so they are no longer standard. If you set the Setting Auto Initialize function to on the TV automatically restores (initializes) any guest-side menu values to the cloned, standard values when the TV is turned off and then turned on again. Note that Setting Auto Initialize works on cloned guest side menu values only. Settings which have not been cloned are ignored.

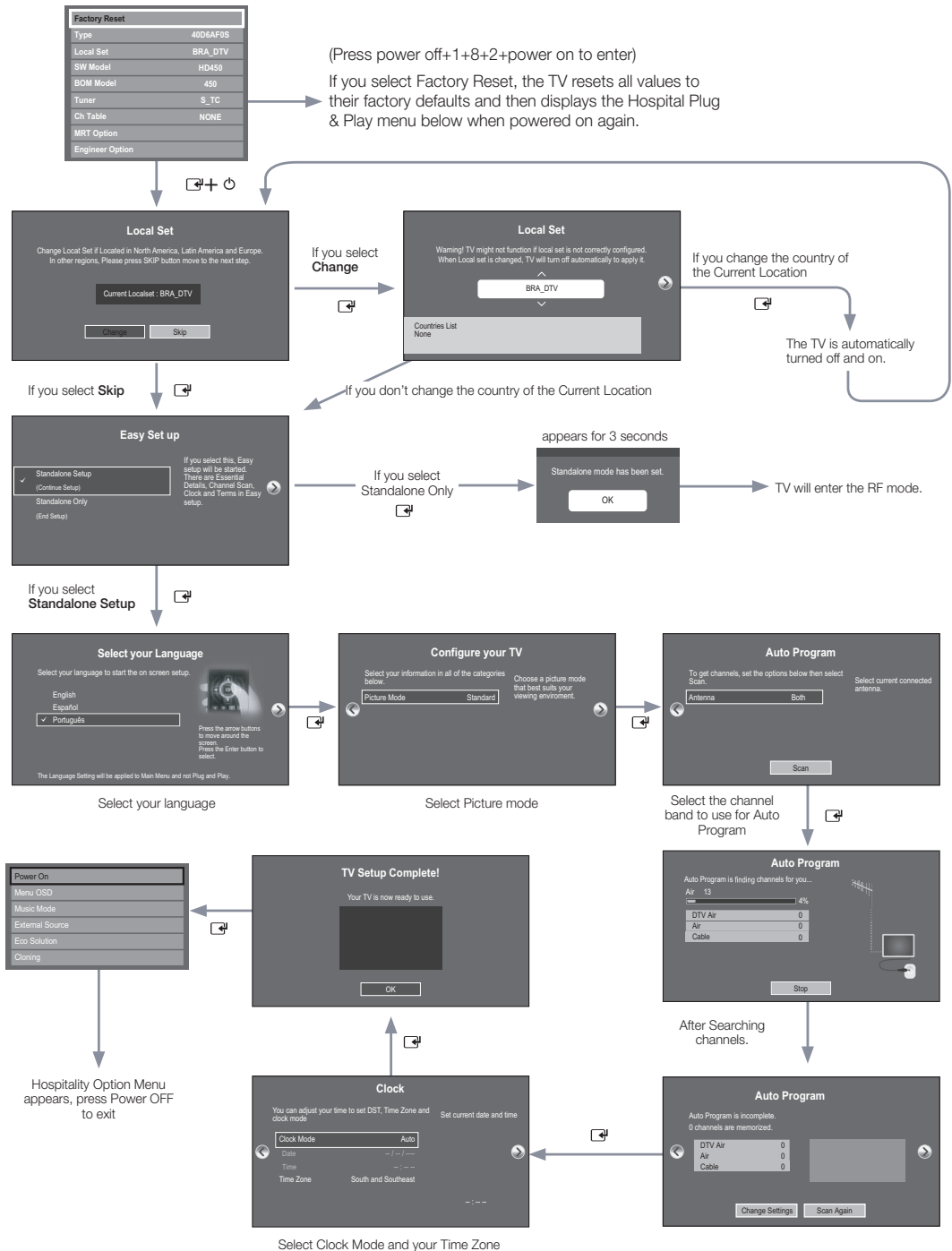
The table below lists the settings that are restored to their cloned values when you set the Setting Auto Initialize function to on.

Menu	Menu Item	Menu	Menu Item
Picture Menu	Picture Mode	Sound Menu	Sound Mode
	Backlight		Sound Effect
	Contrast		DTS TruSurround
	Brightness		DTS TruDialog
	Sharpness		Equalizer
	Color		Speaker Settings
	Tint (G/R)		Speaker Select
	Picture Size		Auto Volume
	Picture Size		TV Installation Type
	Position		Reset Sound
	PIP	System Menu	Menu Language
	Advanced Settings		Time
	Dynamic Contrast		Clock
	Black Tone		Sleep Timer
	Flesh Tone		Wake-up Timer
	RGB Only Mode		Eco Solution
	Color Space		Energy Saving
	White Balance		Eco Sensor (only for 40" and above models)
	Gamma		No Signal Power Off
	Motion Lighting		Auto Power Off
	Picture Option		Auto Protection Time
	Color Tone		Change PIN
	Digital Clean View		General
	MPEG Noise Filter		Game Mode
	HDMI Black Level		Boot Logo
	Film Mode		Anynet+ (HDMI-CEC)
	Picture Off		Anynet+ (HDMI-CEC)
Reset Picture	Auto Turn Off		
	DivX® Video On Demand		

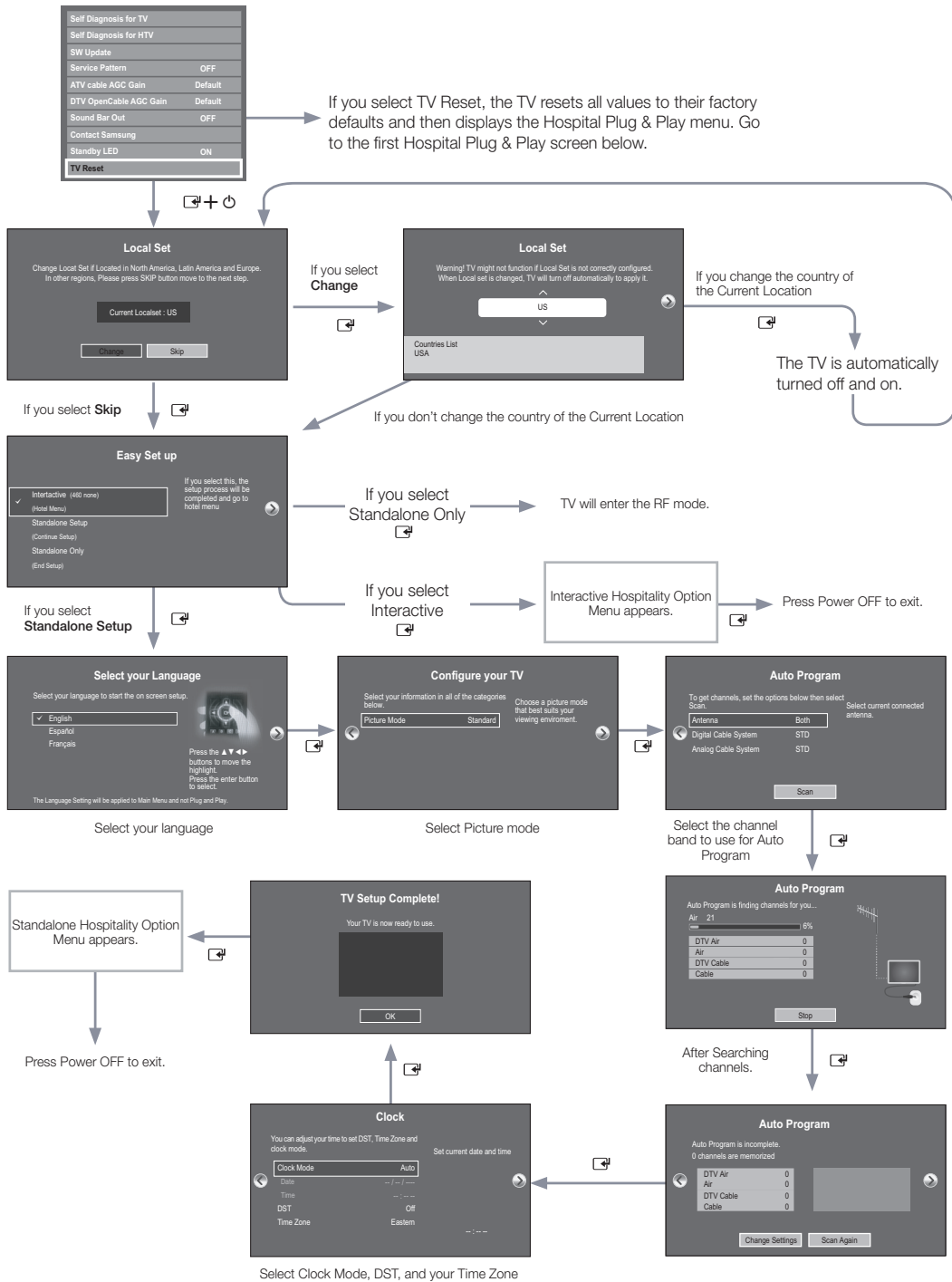
Hotel Plug & Play

The Hotel Plug & Play function, which automatically performs the Hotel mode selection, Country Setup, Clock Setup, and Picture mode Setup, runs once when power is first turned ON. Setup also runs automatically after you have executed a Service Reset. (HD478/HD678 model none)

HD450



HD460 / HD47x / HD67x



HD450

- **Local Set OSD**

- Initially highlighted: **BRA_DTV**
- If you press the Enter key after selecting Change, you can change the country. If the country is changed, the TV automatically turns off and on.
- If you select the incorrect country, execute Factory Reset again after entering the Factory menu.
- If you don't want to change the country, select skip.

- **Easy Set Up OSD**

- Initially highlighted: **Standalone Setup**
- If you select the Standalone Only button, Standalone hospital mode is set by default and the "Standalone mode has been set" OSD appears for 3 seconds.
- TV enters into RF mode automatically after displaying the "Standalone mode has been set" OSD for 3 seconds.
- If you select Standalone Setup mode, the "Select your Language" OSD appears.

- **Select your Language OSD**

- Initially highlighted: **Português**
- Display time: OSD time out and operation are the same as Samsung's consumer TV models.
- If you press the Enter key, the "Configure your TV" OSD appears.

- **Configure your TV OSD**

- Initially highlighted: **Standard**.
- The TV displays the Picture Mode OSD where you can choose Dynamic or Standard Picture mode.

- **Auto Program Mode OSD**

- If you press the Enter key, the TV automatically searches for channels.

- **Set Clock Mode and Time Zone OSD**

- Initially highlighted: Clock Mode : Auto, Time Zone :South and Southeast
- If the TV will be tuned to digital broadcast channels, and these channels transmit date and time information, set the Clock Mode to Auto. The TV will set the date and time automatically.
- If the TV will not be tuned to digital broadcast channels, set the Clock Mode to Manual, and then set the date and time on the TV manually.
- Select your time zone on the map appears.

HD460 / HD47x / HD67x

- **Local Set**

- Initially highlighted: **US**
- If you press the Enter key after selecting Change, you can change the country.
- If the country is changed, the TV automatically turns off and on.
- If you select the incorrect country, execute TV Reset again after entering the Service section of the Hospital Menu.

- **Easy Set Up OSD**

- Initially highlighted: **Interactive**
- If you select the Standalone Only button, Standalone hospital mode is set by default and the “Standalone mode has been set” OSD appears for 3 seconds.
- TV enters into RF mode automatically after displaying the “Standalone mode has been set” OSD for 3 seconds.
- If you select Interactive mode, the Interactive Setup Menu is displayed. Press the power off key to exit the Interactive menu.
- If you select Standalone setup mode, the “Select your Language” OSD appears.

- **Select Menu Language OSD**

- If you select Standalone setup from the “Select Hospital TV Mode” OSD, the “Select Menu Language” OSD appears.
- Initially highlighted: **English**
- Display time: OSD time out and operation are the same as Samsung’s consumer TV models.
- If you press the Enter key, the “Picture Mode” OSD appears.

- **Configure your TV OSD**

- Initially highlighted: **Standard**
- The TV displays the Picture Mode OSD where you can choose Dynamic or Standard Picture mode.

- **Auto Program OSD**

- If you press the Enter key, the TV automatically searches for channels.
- After the automatically searches for channels complete, press the next button to continue.

- **Set Clock Mode, DST (Daylight saving time), and TimeZone OSD**




- Initially highlighted: Clock Mode : Auto, DST : Off, TimeZone : Eastern
- If the TV will be tuned to digital broadcast channels, and these channels transmit date and time information, set the Clock Mode to Auto. The TV will set the date and time automatically.
- If the TV will not be tuned to digital broadcast channels, set the Clock Mode to Manual, and then set the date and time on the TV manually.
- Set DST On or Off to apply or not apply daylight saving time to the TV.
- Select your time zone on the map appears.

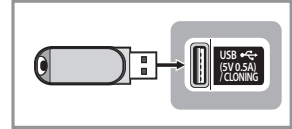
USB Software Upgrade Method

Samsung may offer upgrades to the TV's SW in the future. Please contact the Samsung Hospitality Hot line at the last page to receive information about downloading upgrades and using a USB drive to update the SW by connecting the USB drive containing the upgrade to the USB port located on the TV.

When the software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you clone the hotel settings so that you can easily reset them after the upgrade.

To upgrade the TV's software, follow these steps:

1. Insert a USB drive containing the SW upgrade into the **USB** port on the side of the TV.
2. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select Support, and then press the **ENTER**  button.
3. Press the **▲** or **▼** button to select SW Upgrade, and then press the **ENTER**  button. The message "**Scanning for USB. This may take more than 1min.**" is displayed.
4. The message "**Upgrade version XXXX to version XXXX? The system will be reset after upgrade.**" is displayed.
Press the **◀** or **▶** to select the OK, and then press the **ENTER**  button.



Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the SW upgrade. Please check the SW version after the upgrades are complete.

Sound Bar (not available for HD450/460 model)

• Samsung Sound-Bars and Hospitality TVs in 2015

- Samsung Sound-Bars and hospitality TVs support the ARC feature in HDMI 1.4. If you connect a compatible Samsung Sound-Bar to a compatible Samsung hospitality TV using a single HDMI cable, guests can listen to the TV's sound through the Sound-Bar.
- The item of Sound bar Out in Hospitality Option Menu makes you control to where the TV sound is outputted when the TV is turned on.
- If Sound bar Out is On, the TV sound is automatically outputted in the Sound Bar device only whenever TV is turned on.
- If Sound bar Out is Off, the TV sound is automatically outputted in the TV speaker only whenever TV is turned on.
- Models supporting the ARC function are listed below:
 - Sound-Bars: HW-E350/E450/E550
HW-F350/F355/FM35/F450/FM45/FM45C/F550/F551/FM55/FM55C/F750/F751

• Setting the Sound-Bars to Hotel Mode

1. Set the following Hotel menu options:
 - **Hotel option > External Device > Sound Bar Out** = On.
 - **Hotel option > Power On > Power On Volume** = User Defined.
 - **Hotel option > Power On > Power On Volume Num** > Set greater than 0.
 - **Hotel option > Power On > Max Volume** > Set greater than 0.
2. Connect an HDMI cable from the HDMI OUT jack on the back of the Sound-Bar to the HDMI3 port (supporting ARC) on the hospitality TV.
3. After the Sound-Bar is connected to the hospitality TV, when the TV turns on, the Sound-Bar automatically detects the TV, and then automatically switches to Hotel Mode.


Sound Bar Hotel mode functional characteristics:

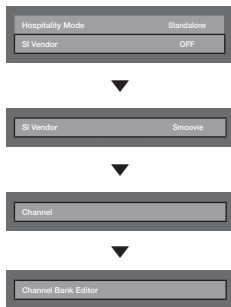
- Power On/Off is synchronized with the TV
- HDMI_CEC defaults set to On
- Functions through the "HDMI OUT" port only
- Disables the "Input mode" key on the VFD to prevent unexpected audio-source changes.
- Acquires adjustable Power On and Max Volume settings from the TV's Hotel option menu. The Sound-Bar's Power On Volume and Max Volume values, however, are ½ of the Power On Volume and Max Volume settings in the TV's Hotel option menu. Example: If the TV's Power On Volume=20 and Max Volume=90, then the Sound Bar's Power On Volume=10 and Max Volume=45.

Channel Bank Editor (Smovie TV Only)

The Channel Bank Editor in conjunction with the SMOOVIE remote lets you control the channels guests have access to. The Channel Bank Editor provides three Banks of channels and lets you select which channels will be available from each bank. SMOOVIE remotes have instalable Bank Cards which correspond to the channel banks in the Channel Bank Editor. The remotes only allow access to channels in the channel bank that correspond to the installed card. Consequently, the channels a guest can access depend on the Bank Card installed in their SMOOVIE remote.

Setting the Channel Bank Editor under Stand-alone Mode

1. Press **MUTE + 1 + 1 + 9 + ENTER**  on the remote to enter the Hotel Standalone menu.
2. Go to SI vendor, and then select : **“Smovie”**
3. Find the new menu option, **“Channel”**.
4. Enter the **“Channel Bank Editor”**.



5. Edit the Channel Bank. An example is below.
 - a. Bank1 (Free channel): Select the channels that will be accessible when a remote doesn't have a card.
 - b. Bank2 (Family Card - Green): Select the channels that will be accessible when a remote has a GREEN CARD.
 - c. Bank3 (Adult Card - Red): Select the channels that will be accessible when a remote has a RED CARD.

Information About SMOOVIE Remote Controls

Channel Bank Editor			
Registered	Bank1 (0)	Bank2 (0)	Bank3 (0)
A 3 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 4 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 6 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9-1 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 11 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 13 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 14 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 15 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 28 ---- (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63-1 SY5000			

Select All Items On Column Deselect All Items On Column Select Return

- If you select SMOOVIE as the SI vendor, you should also use SMOOVIE remotes in your facility.
- Guests with remotes that do not have a card can only view channels from Bank 1.
- Guests using the Numeric keys on the remote to change channels can only view channels from Bank 1.
- Guests with remotes that have Green or Red cards must use the channel up/down keys to change channels.
- Guests can only see channels from the Bank1 channel list In the Channel Guide or the Channel List.

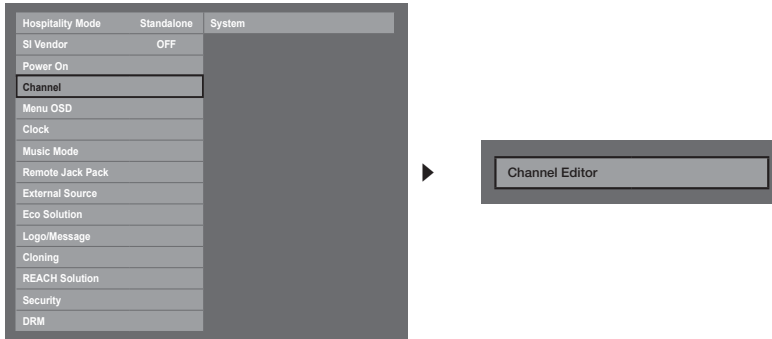
Smovie Set Up Sequence

Step	Smovie TV Setup (Air/ Cable)	
	Only Air or Cable used	Only Air or Cable used
	If the TV starts with Hotel Plug&Play	If Hotel Plug&Play already done
1	Do a complete P&P (including Air or Cable auto tune)	Enter the Hotel menu
2	After P&P, the TV displays the Hotel menu	Select the channel type - ATV or ADTV for Air - CATV or CDTV for cable
3	Select the channel type - ATV or ADTV for Air - CATV or CDTV for cable	Select Smovie TV in the Hotel menu
4	Select Smovie TV in the Hotel menu	Select Channel Setup
5	Select Channel Setup (Can be skipped)	Select "Air" or "Cable" to auto tune
6	Select "Air" or "Cable" to auto tune. (Can be skipped,)	Set up channels in the CH Bank Editor
7	Set up channels in the CH Bank Editor	After power off & on, guests can use the TV
8	After power off & on, guests can use the TV	
9		
10		

Channel Editor (not available for 450 model)

The Channel Editor lets you edit the channels stored in the TV's memory. Using Channel Editor you can:

- Change the channel numbers and names, and sort the channels in your desired channel number order.
- Apply the video mute to channels you select. The video mute blanks out the video from a channel and outputs only the sound while displaying a speaker icon on the screen.
- The Channel Editor also lets you view information about each channel easily, without your having to display each channel directly.



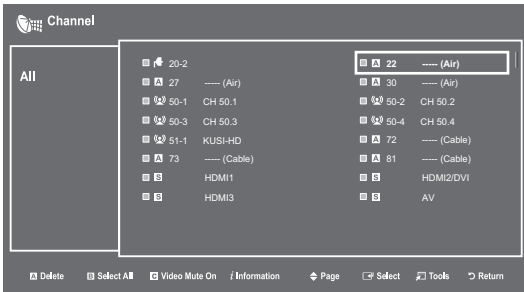
<Depending on model and region, some menu items may not exist.>

General Steps for Using the Channel Editor in Stand-alone Mode

Step	Broad Outline
1	Run 'Channel' in the Hotel Option Menu.
2	Enter 'Channel Editor' in the Hotel Option Menu.
3	On a piece of paper, compile a list of channels you want to have, arranged in the order you want.
4	Rearrange channels and edit channel names with the TOOLS Button based on the list you compiled.
5	Press the EXIT or RETURN Button to exit.

<For a detailed explanation of how Channel Editor works, see pages 50 through 52.>

The picture below shows a sample Channel Editor screen.

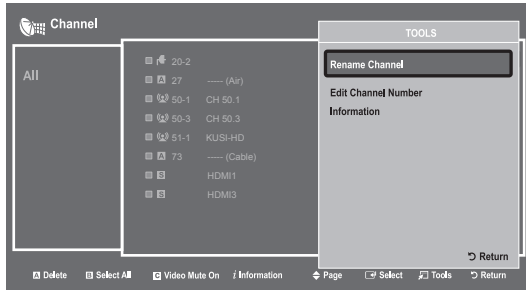


- **A** Indicates an analog channel.
- Channels without an **A** are digital channels.
 - ☞ If Dynamic SI in the Hospitality Option Menu is On, Channel Editor will display no digital channels. You must set Dynamic SI to Off before you can edit digital channels in Channel Editor.
- The guide at the bottom of the Channel Editor menu displays the remote buttons you need to press to apply Channel Editor functions.
 - 1 Using the remote's up or down arrow key, highlight the channel that you want to edit.
 - To edit more than one channel, move the highlight to a channel, and then press the **ENTER** key. A check will appear in the check box next to the channel. Repeat for each channel you want to edit.
 - 2 To delete the channel or channels you selected from the channel list, press the red button on the remote.
 - To delete two or more channels simultaneously, select multiple channels in Step 1, and then press the red button on the remote.
 - ☞ If you want to delete the scrambled channels, you should run the process below Hotel option > Channel > Channel Setup > Channel Settings > Clear Scrambled Channel.
 - 3 Press the green button on the remote to select all channels.
 - 4 To apply the video mute, press the yellow button on the remote.
 - To apply the video mute to two or more channels simultaneously, select multiple channels in Step 1, and then press the yellow button on the remote.
 - 5 To view information about a channel, press the **INFO** button on the remote.
 - 6 Press the **TOOLS** button on the remote to rename a channel or change the channel number.

Channel Editor Functions and Remote Button

- A** Red (**Delete**): Deletes a channel from the channel list.
- G** Green (**Select All**): Selects all channels at once.
- Y** Yellow (**Video Mute On/Off**): You can set the **Video Mute On/Off**.
- ◀▶** (**Page**): Moves to next or previous page.
- i** (**Information**): Display details of the selected channel.
- ⚙** (**Tools**): Displays the option menu.
- ↩** (**Return**): Returns to the previous step or exits.

When you press the TOOLS button, the following menu is available

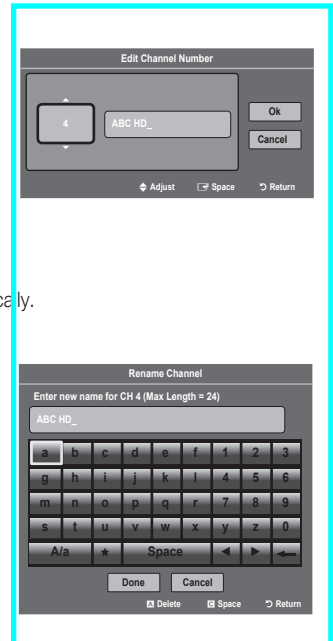


- **Edit Channel Number**

Use Edit Channel Number to change the channel number of a channel you select. To change a channel number, follow these steps:

1. Select a channel on the **Channel Edit** screen.
2. Press the **TOOLS** button on your remote.
3. Select **Edit Channel Number** in the Tools menu.
4. Use the up or down arrow keys to change the channel number.
5. Select **OK** when done, and then press the **ENTER** button.

When you change the channel number, the channel information is not updated automatically.



- **Rename Channel**

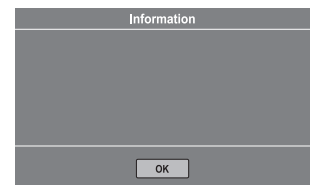
Use **Rename Channel** to change the name of a channel you select. To change the name of a channel, follow these steps:

1. Select a channel on the **Channel Edit** screen.
2. Press the **TOOLS** button on your remote.
3. Select **Rename Channel** in the Tools menu.
4. Use the on-screen keyboard that appears to enter the new name for the channel. Use the arrow buttons on your remote to select a letter or number, and then press Enter. Repeat for each letter or number you want to select.
5. When finished, select Done on the bottom of the screen, and then press the **ENTER** button.

- **Information**

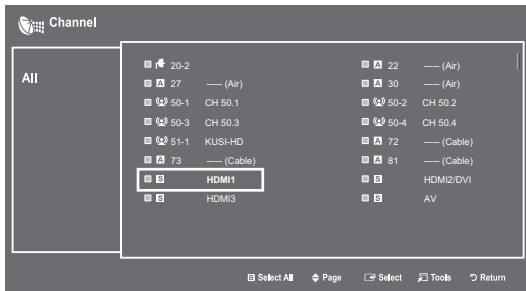
Use Information to view information about a channel you select. To view information about a channel, follow these steps:

1. Select a channel on the **Channel Edit** screen.
2. Press the **TOOLS** button on your remote.
3. Select Information in the Tools menu.
4. Select **OK**, and then press the **ENTER** button to close the Information screen.

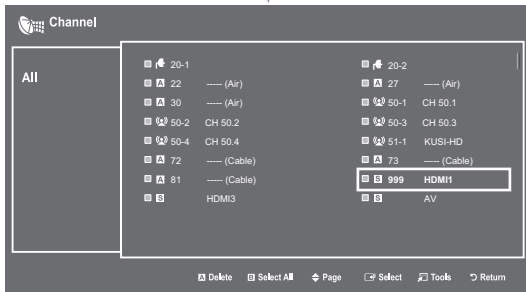


The external sources of this TV are displayed in the last page of the Channel Editor menu as shown in the example below. In the example, there are four external sources connected to the TV, **HDMI1**, **HDMI2(DVI)**, **HDMI3** and **AV**.

- You can assign a new analog channel to an external source by selecting the source on the last page, pressing the **TOOLS** button, selecting **Edit Channel Number**, and then using the up or down arrow button on the remote to select the channel number of the analog channel.
- If you tune to a channel after assigning the channel to an external source, you can enter the external source without opening the TV source menu.



↓ After assigning channel number 999 to HDMI1 source.



Installing the Wall Mount



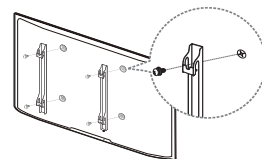
Wall or Ceiling Mounting

If you mount this product on a wall, it should be mounted only as recommended by the manufacturer. Unless it is correctly mounted, the product may slide or fall, causing serious injury to a child or adult, and serious damage to the product.

Preparing before installing Wall-Mount

To install a wall-mount from another manufacturer, use the Holder-Ring.

The product shape may differ depending on the model.



Installing the Wall Mount Kit

The wall mount kit (sold separately) lets you mount the TV on the wall. For detailed information about installing the wall mount, see the instructions provided with the wall mount. Contact a technician for assistance when installing the wall mount bracket. Samsung Electronics is not responsible for any damage to the product or injury to yourself or others if you elect to install the wall mount on your own.

To order the wall mount, contact Samsung Customer Care at 1-800-SAMSUNG (1-800-726-7864).

Wall Mount Kit Specifications (VESA)

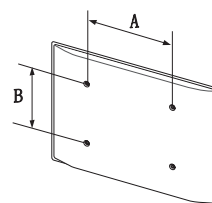
The wall mount kit is not supplied, but sold separately.

Install your wall mount on a solid wall perpendicular to the floor. When attaching to building materials other than plaster board, please contact your nearest dealer. If you install the wall mount on a ceiling or slanted wall, TV may fall and cause severe personal injury.

NOTE

- Standard dimensions for wall mount kits are shown in the table below.
- Samsung wall mount kits contain a detailed installation manual. 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 too firmly. This may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.
- Samsung is not liable for product damage or personal injury when a non-VESA or non-specified wall mount is used or the consumer fails to follow the product installation instructions.
- Do not mount the TV at more than a 15 degree tilt.
- Always have two people mount the TV onto a wall.

Product Family	TV size in inches	VESA screw hole specs (A * B) in millimeters	Standard Screw (Length* Pitch in mm)	Quantity
LED-TV	24	75 X 75	M4	4
	28	100 X 100		
	32	200 X 200	M8	
	40			
	48	400 X 400		
	55			



Do not install your Wall Mount Kit while your TV is turned on. It may result in personal injury due to electric shock.

Securing the TV to the Wall

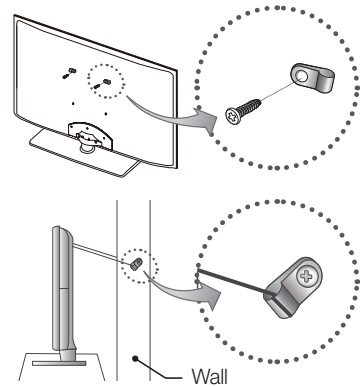


Caution

Pulling, pushing, or climbing onto the TV may cause the TV to fall. In particular, ensure that your children do not hang over or destabilize the TV; doing so may cause the TV to tip over, resulting in serious injuries or death. Follow all safety precautions provided on the included Safety Flyer. For added stability, install the anti-fall device for safety purposes, as follows.

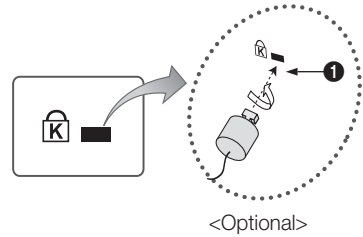
To Avoid the TV from Falling

1. Put the screws into the clamps and firmly fasten them onto the wall.
Confirm that the screws have been firmly installed onto the wall.
 - ☞ You may need additional material such as an anchor depending on the type of wall.
 - ☞ Since the necessary clamps, screws, and string are not supplied, please purchase these additionally.
2. Remove the screws from the back center of the TV, put the screws into the clamps, and then fasten the screws onto the TV again.
 - ☞ Screws may not be supplied with the product. In this case, please purchase the screws.
3. Connect the clamps fixed onto the TV and the clamps fixed onto the wall with a strong string and then tie the string tightly.
 - ☞ **NOTE**
 - Install the TV near to the wall so that it does not fall backwards.
 - It is safe to connect the string so that the clamps fixed on the wall are equal to or lower than the clamps fixed on the TV.
 - Untie the string before moving the TV.
4. Verify all connections are properly secured. Periodically check connections for any sign of fatigue for failure. If you have any doubt about the security of your connections, contact a professional installer.




Anti-theft Kensington Lock

The Kensington Lock is a device you can use to physically fix a TV to a location when you use it in a public place. The appearance and locking method may differ from the illustration at right, depending on the manufacturer. Refer to the manual provided with the Kensington Lock for additional information on proper use.



The Kensington Lock is not supplied by Samsung.

✎ Please find a “

To lock the product, follow these steps:

1. Wrap the Kensington lock cable around a large, stationary object such as desk or chair.
2. Slide the end of the cable with the lock attached through the looped end of the Kensington lock cable.
3. Insert the locking device into the Kensington slot on the product **1**.
4. Lock the lock.

✎ These are general instructions. For exact instructions, see the User manual supplied with the locking device.

✎ The locking device has to be purchased separately.

✎ The location of the Kensington slot may be different depending on the TV model.

Specifications

Environmental Considerations			
Operating Temperature	50°F to 104°F (10°C to 40°C)		
Operating Humidity	10% to 80%, non-condensing		
Storage Temperature	-4°F to 113°F (-20°C to 45°C)		
Storage Humidity	5% to 95%, non-condensing		
Model Name	HG24ND470	HG28ND460 / HG28ND670 / HG28ND677	
Display Resolution	1366 x 768		
Screen Size (Diagonal)	24" Class (23.6" measured diagonally)	28" Class (27.5" measured diagonally)	
Sound (Output)	5W x 2		
Dimensions (WxDxH)			
Body	561.8 x 65.2 x 349.1 mm	643.4 x 62.9 x 396.5 mm	
With stand	561.8 x 163.8 x 384.2 mm	643.4 x 163.4 x 435.0 mm	
Weight			
Without Stand	3.90 kg	3.80 kg	
With Stand	4.10 kg	4.20 kg	
Stand Swivel (Left / Right)	0°		
Model Name	HG32ND470 / HG32ND477 / HG32ND478	HG40ND450 (ZD)	HG40ND460
Display Resolution	1920 x 1080		
Screen Size (Diagonal)	32" Class (31.5" measured diagonally)	40" Class (39.5" measured diagonally)	
Sound (Output)	5W x 2	10W x 2	
Dimensions (WxDxH)			
Body	737.4 x 93.1 x 441.7 mm	905.2 x 91.1 x 525.4 mm	905.2 x 91.1 x 525.4 mm
With stand	737.4 x 191.7 x 500.1 mm	905.2 x 169.0 x 561.8 mm	905.2 x 196.4 x 562.3 mm
Weight			
Without Stand	5.16 kg	6.40 kg	6.40 kg
With Stand	7.18 kg	6.90 kg	7.30 kg
Stand Swivel (Left / Right)	20° / 60° / 90°	0°	

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		
Model Name	HG40ND470 / HG40ND477 / HG40ND478	HG40ND670 / HG40ND677 / HG40ND678
Display Resolution	1920 x 1080	
Screen Size (Diagonal)	40" Class (39.5" measured diagonally)	40" Class (40.0" measured diagonally)
Sound (Output)	10W x 2	
Dimensions (WxDxH)		
Body	905.2 x 91.1 x 525.4 mm	906.6 x 65.1 x 532.9 mm
With stand	905.2 x 226.5 x 562.7 mm	906.6 x 226.5 x 577.6 mm
Weight		
Without Stand	6.40 kg	7.60 kg
With Stand	9.40 kg	10.50 kg
Stand Swivel (Left / Right)	20° / 60° / 90°	
Model Name	HG48ND670 / HG48ND677 / HG48ND678	HG55ND677 / HG55ND678
Display Resolution	1920 x 1080	
Screen Size (Diagonal)	48" Class (47.6" measured diagonally)	55" Class (54.6" measured diagonally)
Sound (Output)	10W x 2	
Dimensions (WxDxH)		
Body	1075.1 x 65.5 x 627.5 mm	1231.6 x 68.6x 708.6 mm
With stand	1075.1 x 226.5 x 673.5 mm	1231.6 x 226.4x 763.5 mm
Weight		
Without Stand	10.90 kg	13.60 kg
With Stand	13.90 kg	16.50 kg
Stand Swivel (Left / Right)	20° / 60° / 90°	

🔧 Design and specifications are subject to change without prior notice.

🔧 This device is a Class B digital apparatus.

Supported Video Formats

File Extension	Container	Video Codec	Resolution	Frame rate(fps)	Bit rate(Mbps)	Audio Codec
*.avi / *.mkv *.asf / *.wmv *.mp4 / *.3gp *.vro / *.mpg *.mpeg / *.ts *.tp / *.trp *.mov / *.flv *.vob / *.svi *.divx	AVI	DivX 3.11/4.x/5.x/6.x	1920 x 1080	6-30	30	Dolby Digital LPCM ADPCM (IMA, MS) AAC HE-AAC WMA Dolby Digital Plus MPEG (MP3) DTS (Core) G.711(A-Law, μ-Law) Vorbis
	MKV	MPEG4 SP/ASP				
	ASF	H.264 BP/MP/HP	640 x 480		8	
	MP4	Motion JPEG	1920 x 1080		30	
	3GP	Window Media Video v9				
	MOV	MPEG2				
	FLV	MPEG1				
	VRO					
	VOB					
	PS					
TS						
WebM	WebM	VP8		20		

Other Restrictions

- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- Some USB/digital camera devices may not be compatible with the player.
- The menu can be displayed late if the video is over 10Mbps(bit rate).

Video decoder	Audio decoder
<ul style="list-style-type: none"> • Supports up to H.264, Level 4.1 (FMO/ASO/RS are not supported.) • frame rate : <ul style="list-style-type: none"> - Below 1280 x 720: 60 frame max - Above 1280 x 720: 30 frame max • VC1 AP L4 is not supported. • GMC is not supported. 	<ul style="list-style-type: none"> • WMA 10 Pro supports up to 5.1 channel and M2 profile. • WMA lossless audio is not supported. • Vorbis supports up to 2ch. • Dolby Digital Plus supports up to 5.1 channel.

Supported Subtitle Formats

- External

Name	File extension
MPEG-4 timed text	.ttxt
SAMI	.smi
SubRip	.srt
SubViewer	.sub
Micro DVD	.sub or .txt
SubStation Alpha	.ssa
Advanced SubStation Alpha	.ass
Powerdivx	.psb

Supported Photo Formats

File Extension	Type	Resolution
*.jpg *.jpeg	JPEG	15360 X 8640
*.bmp	BMP	4096 X 4096
*.mpo	MPO	15360 X 8640

- Internal

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

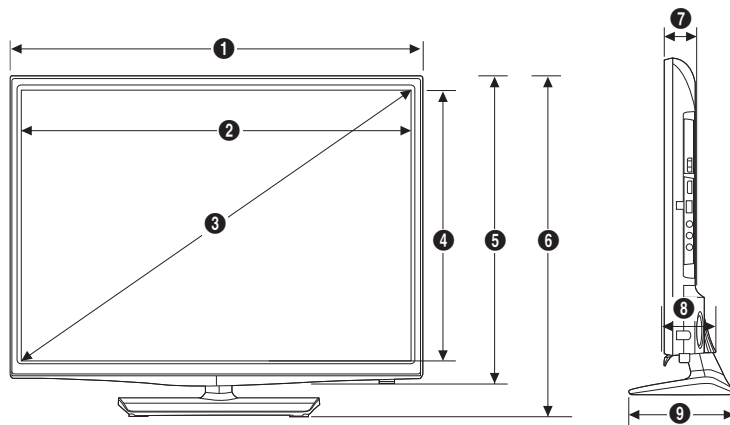
Supported Music Formats

File Extension	Type	Codec	Remark
*.mp3	MPEG	MPEG1 Audio Layer 3	
*.m4a *.mpa *.aac	MPEG4	AAC	
*.flac	FLAC	FLAC	Can support up to 2channel
*.ogg	OGG	Vorbis	Can support up to 2channel
*.wma	WMA	WMA	WMA 10 Pro supports up to 5.1 channel and M2 profile. (WMA lossless audio is not supported.)
*.wav	wav	wav	
*.mid *.midi	midi	midi	Can not support seeking

Dimensions

- Front view / Side view

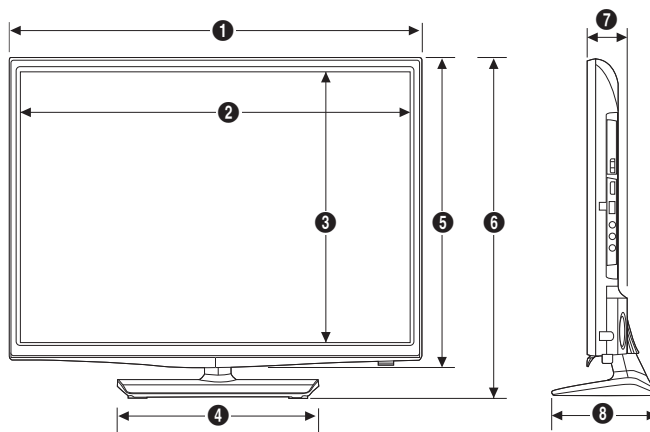
HG24ND470



(unit: mm)

	1	2	3	4	5	6	7	8	9
HG24ND470	561.8	523.3	600.0	295.2	349.1	384.2	47.9	65.2	163.8

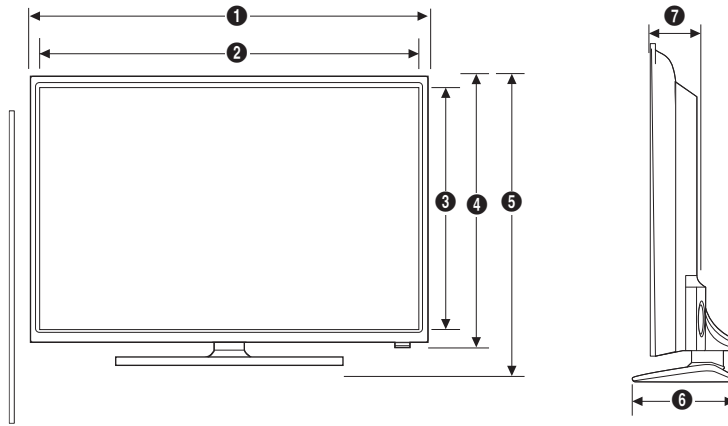
HG28ND460 / HG28ND670 / HG28ND677



(unit: mm)

	1	2	3	4	5	6	7	8
HG28ND460								
HG28ND670	643.4	609.5	347.0	311.4	396.5	435.0	62.9	163.4
HG28ND677								

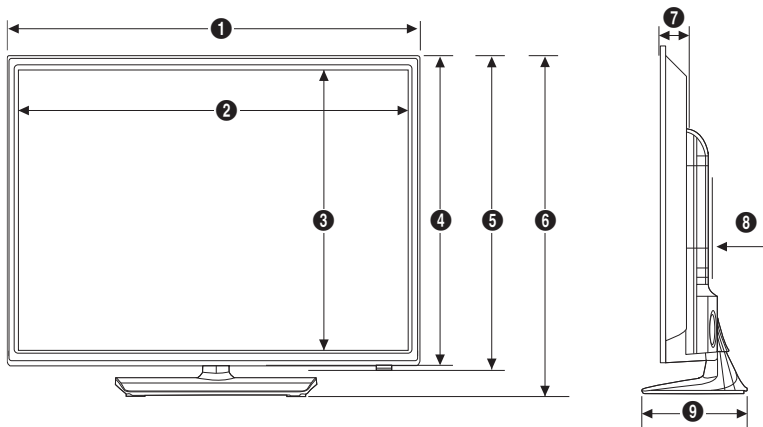
HG32ND470 / HG32ND477 / HG32ND478



(unit: mm)

	1	2	3	4	5	6	7
HG32ND470							
HG32ND477	737.4	703.4	397.8	500.1	498.1	191.7	93.1
HG32ND478							

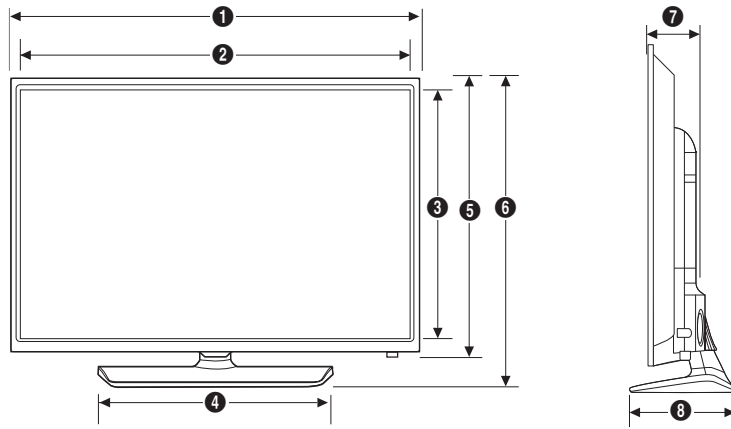
HG40ND450(ZD)



(unit: mm)

	1	2	3	4	5	6	7	8	9
HG40ND450(ZD)	905.2	879.5	486.3	519.9	525.4	561.8	58.1	91.1	169.0

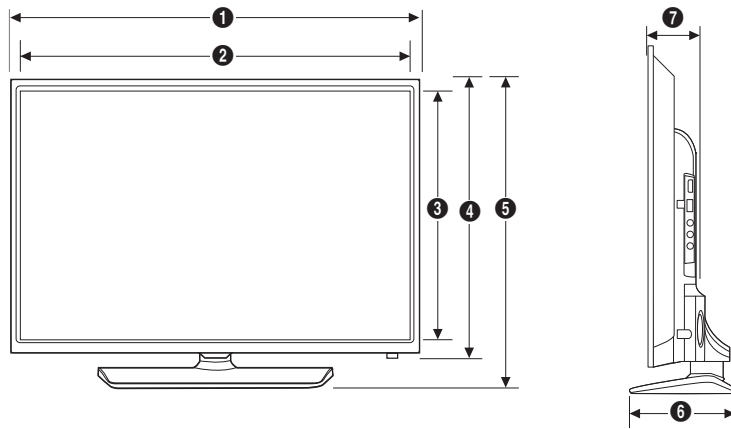
HG40ND460



(unit: mm)

	1	2	3	4	5	6	7	8
HG40ND460	905.2	879.5	486.3	535.5	525.4	562.3	91.1	196.4

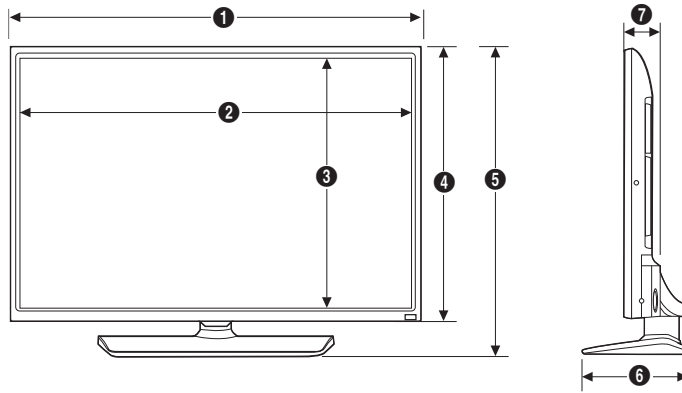
HG40ND470 / HG40ND477 / HG40ND478



(unit: mm)

	1	2	3	4	5	6	7
HG40ND470 HG40ND477 HG40ND478	905.2	879.5	486.3	525.4	562.7	226.5	91.1

HG40ND670 / HG40ND677 / HG48ND670 / HG48ND677 / HG48ND678 / HG55ND677 / HG55ND678

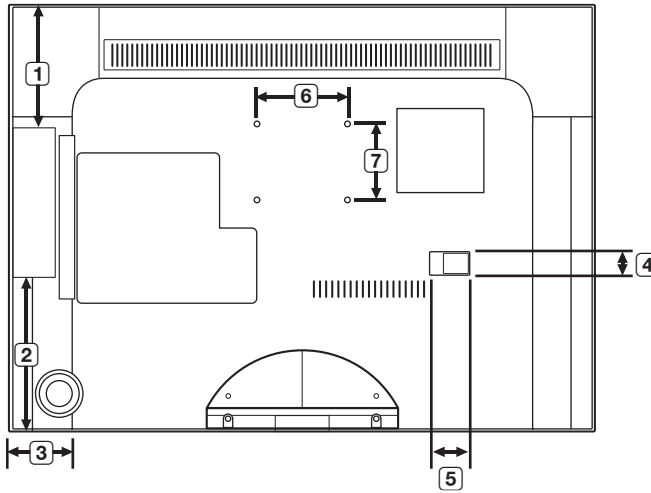


(unit: mm)

	1	2	3	4	5	6	7
HG40ND670	906.6	887.6	500.1	532.9	577.6	226.5	65.1
HG40ND677							
HG48ND670	1075.1	1056.1	594.9	627.5	673.5	226.5	65.5
HG48ND677							
HG48ND678							
HG55ND677	1231.6	1211.6	682.3	708.6	763.5	226.4	68.6
HG55ND678							

- Rear view

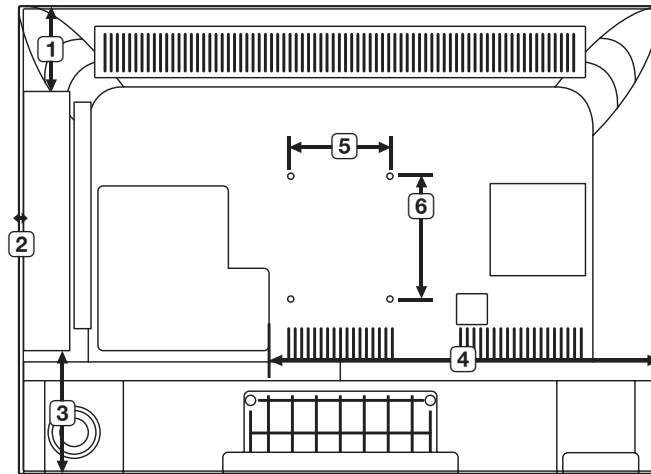
HG24ND470



(unit: mm)

	1	2	3	4	5	6	7
HG24ND470	94.8	96.2	81.7	22.8	30.8	75.0	75.0

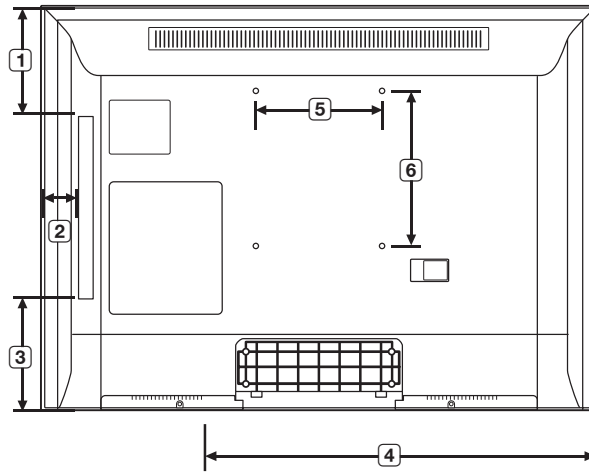
HG28ND460 / HG28ND670 / HG28ND677



(unit: mm)

	1	2	3	4	5	6
HG28ND460						
HG28ND670	69.5	5.1	100.0	390.8	100.0	100.0
HG28ND677						

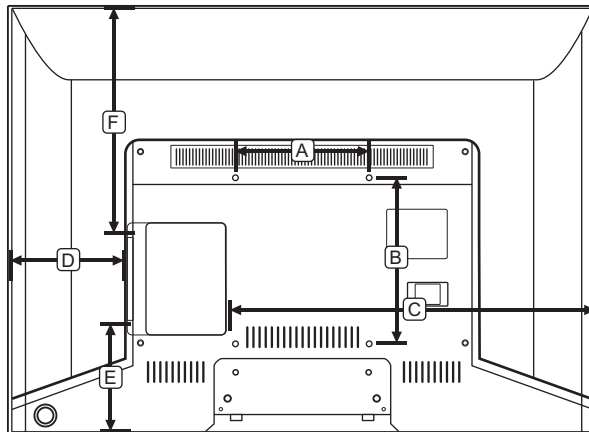
HG32ND470 / HG32ND477 / HG32ND478



(unit: mm)

	1	2	3	4	5	6
HG32ND470						
HG32ND477	129.3	44.0	112.0	503.2	200.0	200.0
HG32ND478						

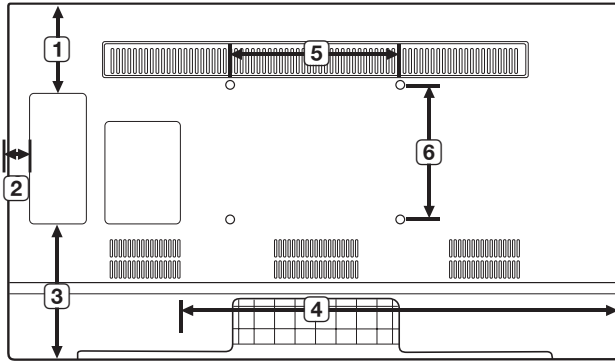
HG40ND450 / HG40ND460 / HG40ND470 / HG40ND477 / HG40ND478



(unit: mm)

	A	B	C	D	E	F
HG40ND450						
HG40ND460						
HG40ND470	200.0	200.0	574.7	194.9	166.1	248.9
HG40ND477						
HG40ND478						

HG40ND670 / HG40ND677 / HG40ND678 / HG48ND670 / HG48ND677 /
HG48ND678 / HG55ND670 / HG55ND677 / HG55ND678

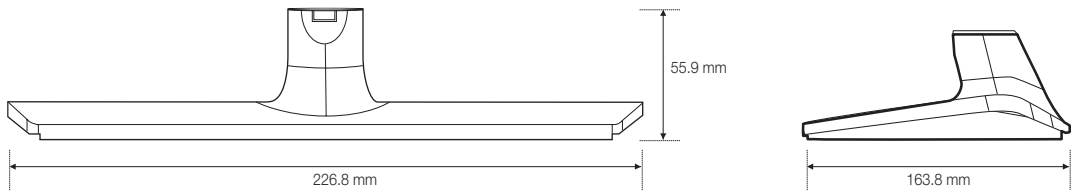


(unit: mm)

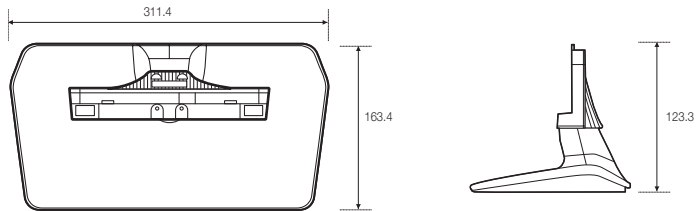
	1	2	3	4	5	6
HG40ND670 HG40ND677 HG40ND678	115.8	32.0	194.5	620.9	200.0	200.0
HG48ND670 HG48ND677 HG48ND678	184.0	41.5	221.7	768.2	400.0	400.0
HG55ND670 HG55ND677 HG55ND678	225.6	91.9	234.5	109.5	400.0	400.0

- Stand base view

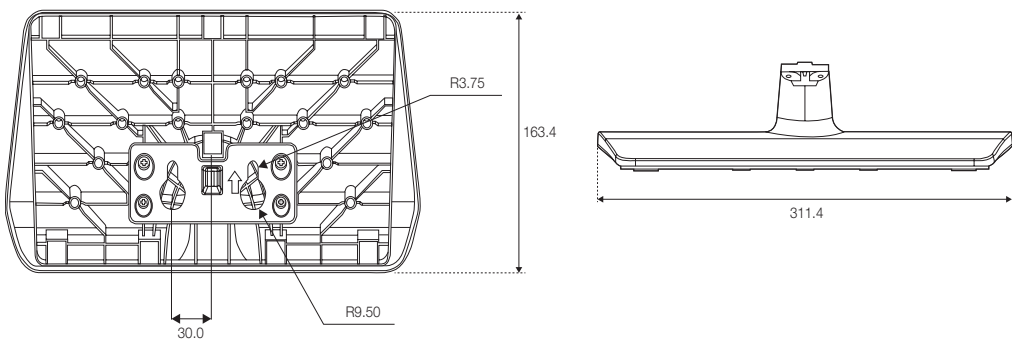
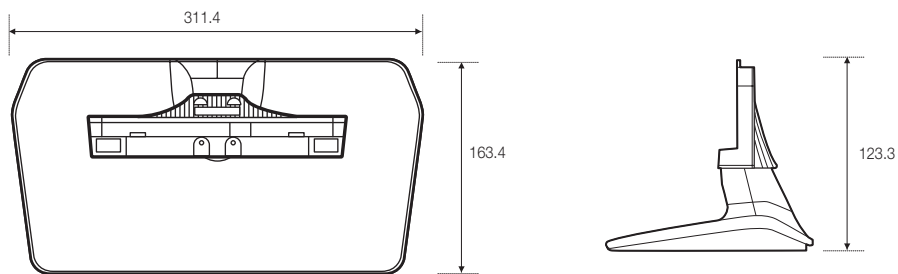
HG24ND470



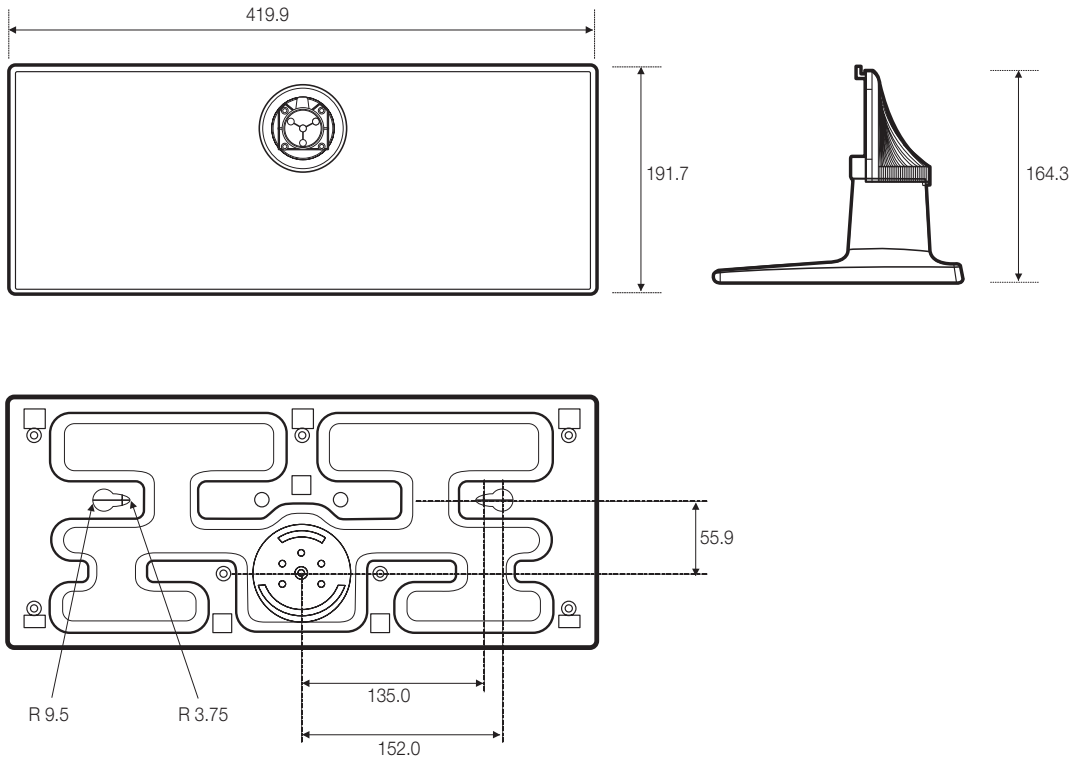
HG28ND460



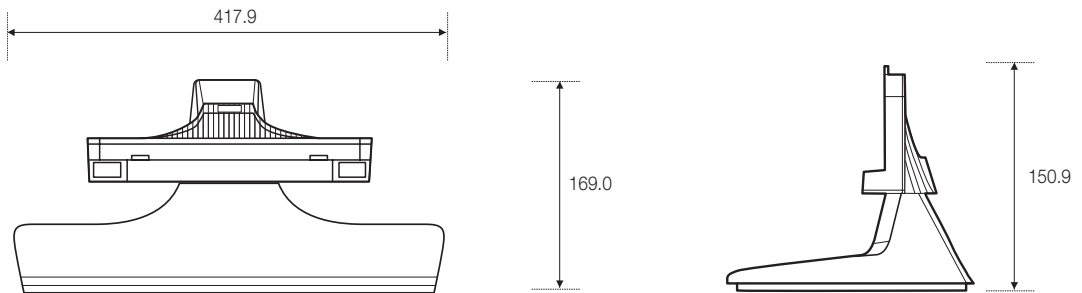
HG28ND670 / HG28ND677



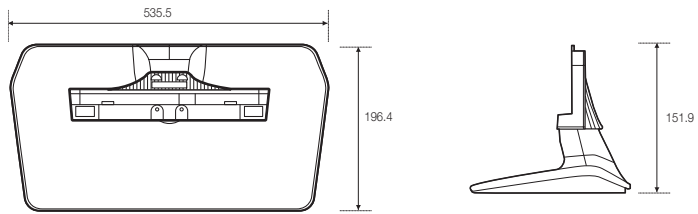
HG32ND470 / HG32ND477 / HG32ND478



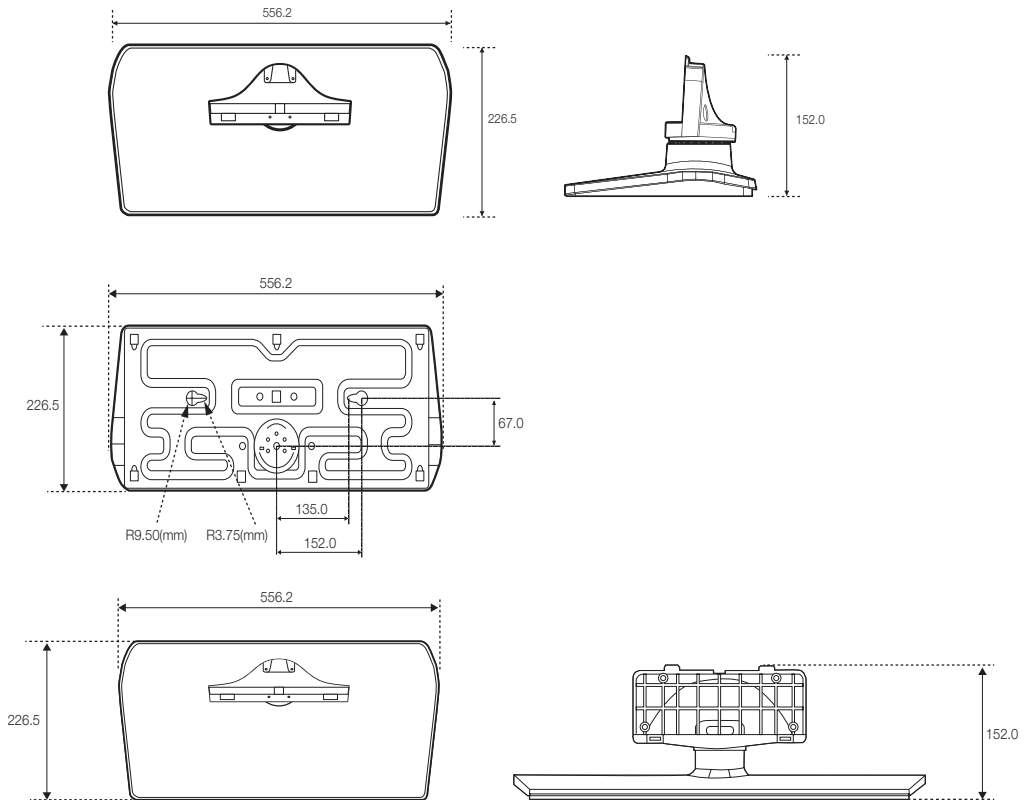
HG40ND450



HG40ND460



**HG40ND470 / HG40ND477 / HG40ND478 / HG40ND670 / HG40ND677 /
HG48ND670 / HG48ND677 / HG48ND678 / HG55ND677 / HG55ND678**



NOTE: All drawings are not necessarily to scale. Some dimensions are subject to change without prior notice. Refer to the dimensions prior to performing installation of your TV. Not responsible for typographical or printed errors.

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	<p>Correct Disposal of This Product (Waste Electrical & Electronic Equipment) (Applicable in the European Union and other European countries with separate collection systems)</p> <p>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.</p>
	<p>Correct disposal of batteries in this product (Applicable in the European Union and other European countries with separate battery return systems.)</p> <p>This marking on the 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.</p>

Important Warranty Information Regarding Television Format Viewing

See the warranty card for more information on warranty terms.

Wide screen format LED Displays (with aspect ratios of 16:9, the ratio of the screen width to height) are primarily designed to display wide screen format full-motion video. The images displayed on them should primarily be in the wide screen, 16:9 ratio format, or expanded to fill the screen if your model offers this feature, and the images are constantly moving. Displaying stationary graphics and images on screen, such as the dark sidebars on nonexpanded standard format television video and programming, should be limited to no more than 5% of the total television viewing per week.

Additionally, viewing other stationary images and text such as stock market crashes, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. Displaying stationary images that exceed the above guidelines can cause uneven aging of LED displays that leave subtle, but permanent burned-in ghost images in the LED picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars. On LED models that offer picture sizing features, use these controls to view different formats as a full screen picture.

Be careful in the selection and duration of television formats used for viewing. Uneven LED aging as a result of format selection and use, as well as burned-in images, are not covered by your Samsung limited warranty.

- SAMSUNG ELECTRONICS NORTH AMERICAN LIMITED WARRANTY STATEMENT**

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

The above described warranty repairs must be performed by a SAMSUNG Authorized Service Center. Along with this Statement, the Original Limited Warranty Statement and a dated Bill of Sale as Proof of Purchase must be presented to the Service Center. Transportation to and from the Service Center is the responsibility of the purchaser. Conditions covered are limited only to manufacturing defects in material or workmanship, and only those encountered in normal use of the product.

Excluded, but not limited to, are any originally specified provisions for, in-home or on-site services, minimum or maximum repair times, exchanges or replacements, accessories, options, upgrades, or consumables.

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

- In the United States : 1-866-894-0524
- In Canada : 1-800-213-8513

Disconnecting Device Instructions

Worded: "To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable" or equivalent.

Outdoor Use Marking - UL

Worded: "WARNING - To Prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture" or equivalent.

Wet Location Marking - c-UL

Worded: "Apparatus shall not be exposed to dripping or splashing" and "Do not place a vessel containing water on this apparatus as this can result in a risk of fire or electric shock" or equivalent.



Contact SAMSUNG WORLD WIDE

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

Country	Customer Care Center ☎	Web Site
CANADA	1-800-SAMSUNG (726-7864)	www.samsung.com/us/support
MEXICO	1-800-SAMSUNG (726-7864)	www.samsung.com/us/support
U.S.A	1-866-894-0524	www.samsung.com/us/support
BRAZIL	0800-124-421 or 4004-0000	www.samsung.com/br/support