SAMSUNG

SERIES 4+
440
450

Plasma TV
user manual

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

Important Warranty Information Regarding Television Format Viewing

✎ See the warranty card for more information on warranty terms.

Wide screen format PDP Displays (with 16:9 aspect ratios, the ratio of the screen width to height) are primarily designed to view 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, with the images constantly in motion. Displaying stationary graphics and images on the screen, such as the dark sidebars on non-expanded 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 crawls, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. Displaying stationary images for more than 5% of total viewing time can cause uneven aging of your PDP display and leave subtle, but permanent burned-in ghost images in the PDP picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars. On PDP models that offer picture sizing features, use these controls to view different formats as a full screen picture.

Be careful in the selection of television formats you use for viewing and the amount of time you view them. Uneven PDP 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 in 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 any originally specified provisions for, in-home or on-site services, minimum or maximum repair times, exchanges or replacements, accessories, options, upgrades, or consumables.

For the location of a SAMSUNG Authorized Service Center, please call toll-free:
– In the United States : 1-800-SAMSUNG (1-800-726-7864)
– In Canada : 1-800-SAMSUNG

Important User Information

• **Screen Image retention**
Do not display a still image (such as that from a video game) on the plasma display panel for more than a few minutes. Still images can cause screen image retention (burn in). To avoid such image retention, reduce the degree of brightness and contrast of the screen when displaying a still image.

• **Heat on the top of the Plasma TV**
The top side of the TV may become hot after long periods of use as heat dissipates from the panel through the vent hole in the upper part of the TV.

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This is normal and does not indicate any defect or operational failure of unit. However, children should be prevented from touching the upper part of the TV.

• **The TV is making a 'cracking' noise.**
A 'cracking' noise may occur when the TV contracts or expands due changes in the surrounding environment such as temperature or humidity. This is normal and not a defect.

• **Cell Defects**
Your plasma TV has a panel containing 2,360,000 (HD-level) to 6,221,000 (FHD-level) pixels which require sophisticated technology to produce. However, there may be a few bright or dark pixels on the screen. These pixels will have no impact on the performance of the product.

• **Avoid operating the TV at temperatures below 41°F (5°C)**

• **A still image displayed too long may cause permanent damage to the PDP Panel.**
Watching the Plasma TV in 4:3 format for a long period of time may leave traces of the borders on the left, right, top, or bottom of the screen. Playing a DVD or a game console may have a similar effect. Damage caused by the above effect is not covered by the warranty.

• **After-images on the Screen.**
Displaying still images from Video games or a PC for longer than a certain period of time may produce partial after-images. To prevent this effect, reduce the 'brightness' and 'contrast' when displaying still images for a long time.

• **Warranty**
Warranty does not cover any damage caused by image retention. Burn-in is not covered by the warranty.

• **Caution**
The glass screen of your PDP TV can break if you accidently drop the TV. Handle the TV with care. When moving the TV, always leave two or more people pick it up and carry it as a safety precaution. Do not lay the TV flat on its face or back.

Your Samsung Plasma TV is a high quality television that has been carefully packaged to protect the integrity of its glass panel and component parts during shipment. It is, nonetheless, a fragile piece of electronics that requires careful handling. Refrain from putting undue stress on any part of the packaging when shipping or unpacking the TV. Use care when installing the TV. Avoid placing the TV in a location where it may be struck, exposed to sharp impacts, or fatal breakage caused by a fall or impact strike is not covered under the manufacturer's warranty.

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

Country	CANADA	U.S.A.
Address	Samsung Electronics Canada Inc., Customer Service 55 Standish Court Mississauga, Ontario L5R 4B2 Canada	Samsung Electronics America, Inc. 85 Challenger Road Ridgefield Park, NJ 07660-2112
Customer Care Center ☎	1-800-SAMSUNG(726-7864)	1-800-SAMSUNG(726-7864)
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The On Screen Menus

Your TV has two kinds of menus, the Main menu and the various Tools menus. The Main menu gives you access to most or all of the menu options available on your TV. The Tools menus display a selected number of frequently used menu options that change depending on the screen you are viewing. A Tools menu symbol (🔧) in the lower right of the screen indicates that a Tools menu is available.

The Main menu has seven primary categories:

- Picture
- Sound
- Channel
- Setup
- Input
- Application
- Support

To view the Main menu, press the MENU button on your remote. To view a Tools menu, press the TOOLS button on your remote.

✎ The menu options that appear in the Main menu depend on the Source you have selected. For example, if you have selected the HDMI source, the Channel category will not appear. To see the Channel category, you must first select TV in the Source List.

The Menu options are presented below, arranged by Main menu categories. A Tools button symbol (🔧) next to an option name indicates the option is also available in one of the Tools menus.

Picture Menu

Mode 🔧

Select your preferred picture mode.

✎ When your TV is connected to a PC, you can only select **Entertain** and **Standard**.

- **Dynamic**: Brightens the screen. Suitable for a bright room.
- **Standard**: Suitable for a normally lit room.
- **Movie**: Darkens the screen, making it less glary. Suitable for watching movies in a darkened room.
- **Entertain**: Sharpens the picture. Suitable for games.
  ✎ Only available when the **TV** is connected to a **PC**.

Cell Light / Contrast / Brightness / Sharpness / Color / Tint (G/R)

- **Cell Light**: Adjusts the brightness of the screen by adjusting the brightness of the individual pixels.
- **Contrast**: Increases or decreases the contrast between dark and light areas of the picture.
- **Brightness**: Adjusts the brightness of the screen. Not as effective as Cell Light.
- **Sharpness**: Sharpens or dulls the edges of objects.
- **Color**: Adjusts the color saturation. The higher the Color setting, the more intense the color. Low settings remove color and the picture becomes black, white, and gray.
- **Tint**: Adjusts the amount of green and red in the picture. As you increase the amount of green, the amount of red decreases and vice versa.
  ✎ When the TV is connected to a PC, you can only make changes to **Cell Light, Contrast, Brightness,** and **Sharpness.**

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Advanced Settings

Available in **Standard** and **Movie** mode only.

Compared to previous models, new Samsung TVs offer a more precise picture with more precise controls.

✎ When your TV is connected to a PC, you can only make changes to **Gamma** and **White Balance.**

- **Color Space (Auto / Native)**: Auto automatically matches the range of colors available to create pictures to the color range of the video source. Native provides a color range wider than the color range of the video source.
- **White Balance**: Adjusts the color temperature of the picture so that white objects look white (instead of, for example, slightly pink or slightly yellow) and the overall color of the picture looks natural.
  R-Offset / G-Offset / B-Offset: Adjusts each color's (red, green, blue) darkness.
  R-Gain / G-Gain / B-Gain: Adjusts each color's (red, green, blue) brightness.
  Reset: Resets the White Balance to it's default settings.
- **Gamma**: Adjusts the primary color intensity.
- **Dynamic Contrast (Off / Low / Medium / High)**: Adjusts the screen contrast.
- **Black Tone (Off / Dark / Darker / Darkest)**: Selects the black level to adjust the screen depth. Darker settings make blacks look darker.
- **Flesh Tone**: Adjusts the amount of red in skin tones.
- **Motion Lighting (Off / On)**: When on, the TV automatically adjusts the brightness of the screen in response to the brightness of the screen. In bright light, the screen brightens. In dim light, the screen dims.
  ✎ Available in **Standard** mode only.

Picture Options

✎ When the TV is connected to a PC, you can only make changes to the **Color Tone, Size** and **HDMI Black Level.**

- **Color Tone (Cool / Standard / Warm1 / Warm2)**: Cool makes the picture bluer (cooler). Warm 1 and Warm 2 make the picture redder (warmer).
  ✎ **Warm1** and **Warm2** are deactivated when the picture mode is set to **Dynamic.**
- **Size**: Set the size and aspect ratio of the picture on the screen.
  Your cable box or satellite receiver may have its own set of screen sizes as well. However, we highly recommend you use the TV's 16:9 mode most of the time.
  16:9: Sets the picture to the 16:9 wide screen format.
  Zoom1: Provides moderate magnification of the picture. Sides, top, and bottom are cut off.
  Zoom2: Provides larger magnification of the picture. Sides, top, and bottom are cut off.
  Wide Fit: Enlarges the aspect ratio of the picture so the picture fits the entire screen.
  4:3: Sets the picture to the old, 4:3 format and puts black or gray borders on the right and left of the picture.
  ✎ Do not watch your TV in the 4:3 format for a long time. Traces of borders displayed on the left, right and center of the screen may cause image retention (screen burn) which is not covered by the warranty.
  Screen Fit: Displays the full image without any cut-off when your TV is inputting HDMI (720p / 1080i / 1080p) or Component (1080i / 1080p) HD signals.
  ✎ HD (High Definition) has a 16:9 aspect ratio and 1080i/1080p (1920x1080) or 720p (1280x720) resolution.
  ✎ You can adjust and store settings for each external device you have connected to an input on the TV. Picture Sizes available by Input Source are listed above and to the right:

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Input Source	Picture Size
ATV, AV, Component (480i, 480p)	16:9, Zoom1, Zoom2, 4:3
DTV (1080i, 1080p), Component (1080i, 1080p), HDMI (720p, 1080i, 1080p)	16:9, Wide Fit, 4:3, Screen Fit

- **Digital Noise Filter (Off / Low / Medium / High / Auto)**: If the broadcast signal received by your TV is weak, you can activate the **Digital Noise Filter** feature to reduce any static and ghosting that may appear on the screen.
  ✎ When the signal is weak, try all the Digital Noise Filter options until the TV displays the best picture.
- **HDMI Black Level (Normal / Low)**: For HDMI signals, select the black level to adjust the screen depth. Low make blacks look darker.
  ✎ Available only in HDMI mode (RGB signals).
- **Film Mode (Off / Auto)**: Sets the TV to automatically sense and process film signals from all sources and adjusts the picture for optimum quality.
  ✎ Available in ATV, DTV (interlace), AV, COMPONENT (480i / 1080i) and HDMI (480i / 1080i).
- **Screen Burn Protection**: To reduce the possibility of screen burn, this unit is equipped with Pixel Shift screen burn prevention technology. Pixel Shift moves the picture slightly on the screen. The Time function setting allows you to program the time between movement of the picture in minutes.
  • **Pixel Shift (Off / On)**: Using this function, you can set the TV to move pixels minutely on the PDP screen in a horizontal or vertical direction to minimize after images on the screen.

Available Pixel Shift Settings and Optimum Settings

	Available Settings	Optimum Settings
Horizontal	0~4 (pixels)	4
Vertical	0~4 (pixels)	4
Time (minute)	1~4 min	4 min

✎ The Pixel Shift value may differ depending on the monitor size (inches) and mode.
✎ This function is not available in the Screen Fit mode.

Your TV also has the following additional screen burn protection functions:

- **Scrolling**: This function removes after-images on the screen by illuminating all the pixels on the PDP according to a pattern. Use this function when there are after images or symbols on the screen, especially when you displayed a still image on the screen for a long time.
  ✎ The after-image removal function has to run a long time (approximately 1 hour) to remove after-images on the screen effectively. If the after-image is not removed after you run the function, run the function again.
  ✎ Press any key on the remote control to cancel this feature.
- **Side Gray (Dark/Light)**: Lets you select the color of the sidebars your TV displays when you set the screen size to 4:3.
- **Picture Reset (Reset Picture Mode/Cancel)**: Resets the picture settings to their factory defaults.

Sound Menu

Mode 🔧

- **Standard**: Selects the normal sound mode.
- **Music**: Emphasizes music over voices.
- **Movie**: Provides the best sound for movies.
- **Clear Voice**: Emphasizes voices over other sounds.
- **Amplify**: Increase the intensity of high-frequency sounds to allow a better listening experience for the hearing impaired.

Equalizer

Available in Standard sound mode only.

- **Balance L/R**: Adjusts the balance between the right and left speaker.
- **100Hz / 300Hz / 1KHz / 3KHz / 10KHz** (Bandwidth Adjustment): Adjusts the loudness of specific bandwidth frequencies.
- **Reset**: Resets the equalizer to its default settings.

SRS TruSurround HD (On/Off)

Available in Standard sound mode only.

SRS TruSurround HD is a patented SRS technology that solves the problem of playing 5.1 multichannel content through two speakers. TruSurround delivers a compelling, virtual surround sound experience through any two-speaker playback system, including internal television speakers. It is fully compatible with all multichannel formats.

Preferred Language

Digital channels only.

Digital-TV broadcasts can transmit many audio tracks simultaneously (for example, simultaneous translations of a program into foreign languages).

✎ You can only select a language from among the ones being broadcast.

Multi-Track Sound (MTS)

Analog channels only.

- **Mono**: Select for channels that are broadcasting in mono or if you are having difficulty receiving a stereo signal.
- **Stereo**: Select for channels that are broadcasting in stereo.
- **SAP**: Select to listen to the Separate Audio Program, which is usually a foreign-language translation.
  ✎ Depending on the program being broadcast, you can listen to **Mono, Stereo** or **SAP.**

Auto Volume

Because each station has its own broadcasting conditions, the volume may fluctuate each time you change the channel. This feature automatically adjusts the volume of a channel by lowering the sound output when the modulation signal is high or by raising the sound output when the modulation signal is low.

SPDIF Output

The SPDIF (Sony Philips Digital InterFace) outputs an uncompressed digital audio signal when you connect the digital audio jack on the back of the TV to a digital audio in jack on a receiver or home theater.

- **Audio Format (PCM/Dolby Digital)**: You can select the Digital Audio output (SPDIF) format. The available Digital Audio output format may differ depending on the input source.

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✎ By connecting the TV to a receiver or home theater with **Dolby Digital** and 5.1ch speakers and selecting **Dolby Digital**, you can maximize your interactive 3D sound experience.

- **Audio Delay**: Lets you correct timing mismatches between the audio track and the video when you are watching the TV and listening to digital audio output from the TV through an external device such as an AV receiver. When you select **Audio Delay**, a slider appears. Use the left and right arrow buttons to adjust the slider. Press ENTER when done (0ms ~ 250ms).

Speaker Settings

- **Speaker Select (External Speaker / TV Speaker)**
  If you are listening to the sound track of a broadcast or movie through an external receiver, you may hear a sound echo caused by the difference in decoding speed between the TV's speakers and the speakers attached to your audio receiver. If this occurs, set the TV to **External Speaker.**
  ✎ When you set **Speaker Select** to **External Speaker**, the TV's speakers are turned off. You will hear sound through the external speakers only. When you set **Speaker Select** to **TV Speaker** both the TV's speakers and the external speakers are on. You will hear sound through both.
  ✎ When **Speaker Select** is set to **External Speaker**, the **VOLUME** and **MUTE** buttons will not operate and the sound settings will be limited.
  ✎ If there is no video signal, both the TV's speakers and the external speakers will be mute.

Sound Reset

- **Reset All**: Resets all sound settings to the factory defaults.

Channel Menu

❑ Memorizing Channels

When you first set up your TV using **Plug & Play**, the TV memorized the channels that were available over the air or through your cable system and added them to the **Channel List.** The **Antenna** and **Auto program** functions described below let you re-run the channel memorization function without having to re-run the **Plug & Play** procedure.

Antenna (Air / Cable)

Before your television can memorize the available channels, you must select your TV's signal source, **Air** (using an antenna) or **Cable.** Select Menu >**Channel** > **Antenna** > **Air** or **Cable.** After you have selected the signal source, go on to the Auto Program function.

✎ Selecting the signal source using the **Antenna** function also determines the signal source the TV is tuned to. For example, if you receive your TV signal over the air, and you select **Cable**, you will see only snow. You must select Air to see a picture.

Auto Program

The **Auto Program** function memorizes all channels that are available over the air or through your cable system and adds them to the **Channel List.**

To start **Auto Program**, follow these steps:

1. Push MENU ▥ → **Channel** → ENTER ☑ on your remote. The Antenna Source screen appears.
2. On the Antenna Source screen, select the source of your TV signal.

Air

If your TV is connected to an antenna choose **Air**, and then press ENTER☑. The TV will automatically start memorizing channels.

Cable

If your TV is connected to a cable outlet, choose **Cable**, and then press ENTER☑. Go to Step 3.

Auto

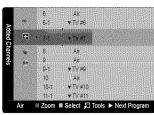If you choose Auto, and then press ENTER☑, the TV will automatically select the correct Antenna source. Go to Step 3.

3. On the Cable Type screen, use the ◄/► /▲/▼ buttons to select the type of digital and analog cable systems you have: **STD, HRC,** or **IRC.** Most systems are **STD** (Standard). When done, select **Start**, and then press ENTER☑. The TV will start memorizing channels.
   ✎ Channel memorization can take up to 45 minutes, depending on your cable system.
   ✎ Memorized channels are added to the **Added Channel** list. These are the channels you will see when you use the Channel buttons on your remote.

Clear Scrambled Channel

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

✎ Press the ENTER☑ button to stop the **Clear Scrambled Channel.**
✎ This function is only available in Cable mode.

❑ Managing Channels

Channel List

See your list of Added channels, Favorite channels, or channels you've scheduled for viewing. Add or delete Favorite channels, add or delete channels from the Added Channels list, schedule channels or programs for viewing. Watch a channel by selecting the channel in the **All Channels, Added Channels**, or **Favorite** screen, pressing the ▲ / ▼ buttons, and then pressing the ENTER☑ button.

Channel List Screens icons are listed on the left side. Select an icon using the ▲/▼ buttons to view each list.

- 🖵 **Channels**: Shows all currently available channels including those you deleted from the **Added channels** list.
- 🖵 **Added Channels**: Shows all **Added** channels. These are the channels that appear when you press the CH button.
- ♥ **Favorite**: Shows all favorite channels.
- 🕐 **Programmed**: Shows all channels and programs currently scheduled using **Timer Viewing.**

✎ Remote control buttons active on the Channel List screen.
- Green (Zoom): Enlarges or shrinks a channel number.
- Yellow (Select): Move the cursor to a channel. Press the Yellow button to select the channel. A ✓ mark appears. Repeat to select additional channels. Then, open the Tools menu and apply a function to the channels you selected.
- 🔧 (Tools): Displays the Channel List Tools menu. (The Tools menus may differ depending on the situation.)

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Display Icons Used in the Channel List Screens

Icons	Meaning
✓	A selected channel.
♥	A Favorite channel.
🕐	A reserved program.
◢	A program currently being broadcast.

❑ The Channel List Tools Menu 🔧

The Channel List Tools menu contains most of the functions you can use on the **All Channel, Added Channels,** and **Favorite** List screens. To view, select a list screen, select a channel, and then press the TOOLS button.

■ **Add / Delete**: Delete a channel from or add a channel to the **Added Channels** list.

To delete channels from the **Added Channels** list, follow these steps:

1. Select one or more channels in the **Added Channels** list using the ▲/▼ buttons and the Yellow Select button on your remote.
2. Press the TOOLS button on your remote. The Tools menu appears.
3. Select **Delete** in the Tools menu, and then press the ENTER☑ button.
   ✎ All deleted channels will be shown on the All Channels list. You add channels back to the **Added Channels** list on the **All Channels** list.
   ✎ A gray-colored channel indicates the channel has been deleted from the Added Channels list.
   ✎ The **Add** menu option only appears for deleted channels.

■ **Add to Favorite/Delete from Favorite**: Lets you add channels to and delete channels from your **Favorites** list.

To add channels to the Favorites list, follow these steps:

1. Select one or more channels in the **All Channels** list using the ▲/▼ buttons and the Yellow Select button on your remote.
2. Press the TOOLS button on your remote. The Tools menu appears.
3. Select **Add to Favorite** in the Tools menu, and then press the ENTER☑ button.

To delete channels from the Favorites list, follow these steps:

1. Select one or more channels in the **Favorite** Channels list using the ▲/▼ buttons and the Yellow Select button on your remote.
2. Press the TOOLS button on your remote. The Tools menu appears.
3. Select **Delete from Favorite** in the Tools menu, and then press the ENTER☑ button.

■ **Timer Viewing**: You can schedule a channel to be displayed automatically at a set time, even when you are watching another channel. You must set the current time first in the **Time > Clock** function to use **Timer Viewing.**

To schedule a channel, follow these steps:

1. Select a channel in the **Added Channels** list using the ▲/▼ buttons and the Yellow Select button on your remote.
2. Press the TOOLS button on your remote. The Tools menu appears.
3. Select **Timer Viewing** in the Tools menu, and then press the ENTER☑ button. The Timer Viewing screen appears.

4. Use the ◄/► buttons to move from entry field to entry field and the ▲/▼ buttons to change the entries. Where numbers are displayed, you can also enter numbers directly using the number keypad on your remote.
   ✎ If you select **Everyday** or **Every Week**, the date you select in the Date field becomes the start date for your scheduled viewing. For **Everyday**, the TV will turn on every day, at the time you selected, starting from that date. For **Everyweek**, the TV will turn on every week, on the same day of the week as the start date you selected, at the time you selected, from that day on. If you select **Once**, the TV will turn on once, on the date and time you selected.
5. Press the ENTER☑ button on your remote when done.
   ✎ Only **added** channels can be scheduled.
   ✎ Scheduled programs and channels are displayed in the **Programmed** List.
   ✎ When you select a digital channel, press the ► button to view the digital program list. If you highlight a program in the list, and then press the ENTER☑(Schedule) button, you set **Timer Viewing** for that program directly.

■ **Select All / Deselect All**: You can select or deselect all channels in the channel list.

■ **Select All**: Select all the channels in the displayed channel list.

■ **Deselect All**: Deselect all the selected displayed channels.
   ✎ You can only select **Deselect All** when one or more channels are selected.

■ **Channel Name Edit**: Analog channels only. Lets you assign a name of up to five characters to an analog channel. For example, Hist, Food, Golf, etc. This makes it easier to find and select a channel.

■ **Auto Program**: See Auto Program under Memorizing Channels.

❑ Programmed List (on the Channel List Screen)

The **Programmed** list displays the channels and programs you have scheduled for viewing using the **Time Viewing** function. You can view, modify, or delete a show you have scheduled using the functions on the **Programmed** List screen Tools menu.

Programmed List Screen Tools Menu 🔧

■ **Change Info**: Change the scheduling information for a show or channel you have scheduled.

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To change the information, follow these steps:

1. Select the **Programmed** List icon on the left side of the **Channel List** screen, and then press the ENTER☑ button.
2. On the **Programmed** List screen, select the show or channel entry you want to change, and then press the TOOLS button. The Tools Menu appears.
3. Select **Change Info**, and then press the ENTER☑ button. The **Time Viewing** screen appears.
4. Use the ◄/► buttons to move from entry field to entry field and the ▲/▼ buttons to change the entries. Where numbers are displayed, you can also enter numbers directly using the number keypad on your remote.
5. Press the ENTER☑ button when done.

■ **Cancel Schedules**: Cancel a show or channel you have scheduled.

To cancel a scheduled show or channel, follow these steps:

1. Select the **Programmed** List icon on the left side of the **Channel List** screen, and then press the ENTER☑ button.
2. On the **Programmed** List screen, select the show or channel entry you want to cancel, and then press the TOOLS button. The Tools Menu appears.
3. Select **Cancel Schedules**, and then press the ENTER☑ button. The **Cancel Schedule** screen appears.
4. Select **OK**, and then press the ENTER☑ button.

■ **Information**: Display the information for a show or channel you have scheduled. You can also change the schedule Information.

1. Select the **Programmed** List icon on the left side of the **Channel List** screen, and then press the ENTER☑ button.
2. On the **Programmed** List screen, select the show or channel entry you want information for, and then press the TOOLS button. The Tools Menu appears.
3. Select **Information**, and then press the ENTER☑ button. The **Time Viewing** Information screen appears.
4. Select **Change Info** and press the ENTER☑ button to change information, or select **Close** and press the ENTER☑ button to close the Information screen.

❑ Other Channel Menu Functions

Channel Mode (Added Channels/Favorite Channels)

Lets you select the channel list displayed when you press the ᐱCHᐯ (Channel) button on your remote. For example, if you select Favorite Channels, you will only see Favorite channels when you press the ᐱCHᐯ button.

Fine Tune

Analog channels only.

If the reception is clear, you do not have to fine tune the channel, as this is done automatically during the search and store operation. If the signal is weak or distorted, fine tune the channel manually.

✎ Select the channel, and then select **Fine Tune**.
✎ Fine tuned channels that have been saved are marked with an asterisk "*" on the right-hand side of the channel number in the channel banner.
✎ To reset fine-tuning, select the channel, select **Fine Tune**, and then select **Reset** on the **Fine Tune** screen.

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Setup Menu

Plug & Play

Lets you re-run the **Plug & Play** initial setup procedure. For instructions, see your Quick Start Guide.

Language

Set the menu language.

✎ Choose between **English, Español,** and **Français.**

❑ Setting the Time

Time

✎ The time you set will appear when you press the INFO button.

■ **Clock**: Set the clock so you can use the various timer features of the TV.
  ✎ If you disconnect the power cord, you have to set the clock again.

To set the clock, follow these steps:

1. Select Setup >Time > Clock.
2. Press ENTER☑ and select **Auto** or **Manual**, and then press ENTER☑ again.

If you selected Auto:

The TV will automatically download the correct time from a digital channel.

- Select **Time Zone**, and then press the ENTER☑ button. Use the ▲/▼ buttons to select your **Time Zone**, and then press ENTER☑.
- Select **DST** (Daylight Saving Time), and then press ENTER☑. Select **On** if you want to turn the DST adjustment on and off manually. Select **Off** to turn off the DST adjustment. Select **Auto** if you want the TV to adjust to DST automatically. Press ENTER☑ when done.
  ✎ DST and **Time Zone** function are only available when the **Clock Mode** is set to **Auto.**

If you selected Manual:

The **Clock Set** screen appears. Use the ▲/▼ buttons to change the values in each field or use the number buttons to enter the values directly. Use the ◄/► buttons to move from field to field. When done with all the fields, press ENTER☑.

✎ Available only when **Clock Mode** is set to **Manual.**

■ **Sleep Timer** 🔧

Automatically shuts off the TV after a preset period of time. (30, 60, 90, 120, 150 and 180 minutes).

✎ To cancel the **Sleep Timer**, select **Off.**

Timer 1 / Timer 2 / Timer 3

Turns the TV on and off automatically at times and days you select. You can set three different on/off timer settings.

✎ You must set the clock first.

■ **On Time / Off Time**: Set the hour, minute, am/pm, and Activate/Inactivate fields for the **On Time** and **Off Time.** Use the ◄/► buttons to move from field to field. Use the ▲/▼ buttons to change the values in each field. To activate the timer with the setting you have chosen, set the Activate/Inactivate field to **Activate.**

■ **Volume**: Set the desired loudness.

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■ **Contents**: To select what will be turned on when the timer setting is activated. You can set the TV to turn on a specific channel or play back contents such as photo or audio files.
  Use the ◄/► buttons to move to move to the Contents field, and then press the ENTER☑ button. The Contents screen appears. Use the ◄/► buttons to move from field to field. Use the ▲/▼ buttons to change the values in each field. Then:
  - TV/USB: Select **TV** or **USB.** The USB device must be connected to your TV before you can select USB.
  - Antenna: Displays the current antenna source, **Air** or **Cable.**
  - Channel: If you have selected TV, select the desired channel.
  - Music/Photo: If you have selected USB, follow these steps to select a folder containing MP3 (Music) or JPEG (Photo) files on the USB device:
    ✎ The maximum displayed number of files, including sub folders, in one folder of USB storage device is 2000.
    ✎ The media may not be playing smoothly when using the device lower than USB 2.0.
    1. Use the ◄/► buttons to move to the field under **Music** or the field under **Photo**, and then press the ENTER☑ button. The TV displays a single folder (the Root folder) and the type or name of the device.
    2. Press the ENTER☑ button. A list of folders on the device appears.
       ✎ If there are no folders on your device, press the **Yellow** select button to select the Root folder, and then press the RETURN button. The Timer screen re-appears.
    3. Use the ▲/▼ buttons to highlight a folder that contains music or photos, and then press the **Yellow** select button to select the folder.
    4. Press the RETURN button. The Timer screen re-appears.

■ **Repeat**: Select Once, Everyday, Mon–Fri, Mon–Sat, Sat–Sun or **Manual.** If you select **Manual**, you can select the days you want to activate the timer by using the ◄/► buttons to highlight the day, and then pressing the ENTER☑ button. To unselect a day, highlight it, and then press the ENTER☑ button.
  When you finished making all your selections on the Timer screen, press either the ENTER☑ or RETURN button.

❑ Other Features

Program Rating Lock

The **Program Rating Lock** feature lets you block programs you've determined are inappropriate for your children based on the program's ratings. To access the **Program Rating Lock** feature and make any changes, you must enter a PIN (personal identification number). To watch a blocked program, you must also enter the same PIN.

✎ **Program Rating Lock** is not available in HDMI or **Component** mode.
✎ The default PIN number of a new TV set is "0-0-0-0". You can set your own PIN using the **Change PIN** function.

How It Works

When you access the **Program Rating Lock** Menu functions for the first time, the PIN input screen appears. Enter 0-0-0-0. The PIN screen closes and the **Program Rating Lock** Menu appears. Every time you access the **Program Rating Lock** functions, the PIN screen will appear and you must enter a PIN.

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When the Rating Lock screen appears, select **Program Rating Lock**, and then press ENTER☑. Select **ON**, and then press the ENTER☑ key again. Depending on what type of programs or movies you want to block, select one of the options on the screen, and then press the ENTER☑ button. The options are listed below:

- **TV Parental Guidelines**: You can block TV programs based on their ratings. This function allows you to control what your children are watching.
- **MPAA Rating**: You can block movies based on their MPAA ratings. The Motion Picture Association of America (MPAA) has implemented a rating system that provides parents or guardians with advanced information on which films are appropriate for children.
- **Canadian English**: You can block TV programs based on their Anglophone Canadian ratings.
- **Canadian French**: You can block TV programs based on their French Canadian ratings.
- **Downloadable U.S. Rating**: Parental restriction information can be used while watching DTV channels.

Locking/Blocking Programs or Movies

You lock or block programs and/or movies in essentially the same way for each option. Each option displays a grid or table. All the tables have ratings listed on the left. The TV Parental Guidelines option also has kinds of content listed across the top: **ALL**: Lock all TV ratings. / **FV**: Fantasy violence / **V**: Violence / **S**: Sexual situation / **L**: Adult Language / **D**: Sexually Suggestive Dialog.

To lock/block movies or shows with certain ratings and/or kinds of content, click the square next to the rating and/or under the kind of content. A lock appears. To unlock/unblock, click the square again. When you click a row rating, all the ratings above it will also display locks. You can also Allow All or Lock All. When done, press the RETURN button on your remote.

- **Change PIN**: The Change PIN screen will appear. Choose any 4 digits for your PIN and enter them in **Enter New PIN** fields. Re-enter the same 4 digits in **Confirm New PIN** fields. When the Change PIN screen disappears, press the OK button. The TV has memorized your new PIN.
  ✎ If you forget the PIN, press the remote-control buttons in the following sequence, which resets the pin to "0-0-0-0" : POWER (off) → MUTE → 8 → 2 → 4 → POWER (on)

Game Mode (On/Off)

When you connect a game console such as a PlayStation™ or Xbox™ to your TV, you can enjoy a more realistic gaming experience by turning on the **Game Mode** function.

✎ Precautions and limitations for game mode:
  • Before you disconnect the game console and connect another external device, set **Game Mode** to **Off** in the setup menu.
  • If you display the TV menu in **Game Mode**, the screen shakes slightly.
✎ **Game Mode** is not available when the input source is set to **TV.**
✎ After connecting the game console, set **Game Mode** to **On.** You may notice slightly reduced picture quality.

Caption
(On-Screen Text Dialogue)

■ **Caption**: You can switch the caption function on or off. If captions are not available, they will not be displayed on the screen.
  ✎ The **Caption** feature does not work in **Component** or **HDMI** mode.

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■ **Caption Mode**: You can select the desired caption mode.
  Default / CC1–CC4 / Text1–Text4: (analog channels only) The Analog Caption function operates in either analog TV channel mode or when a signal is supplied from an external device to the TV. (Depending on the broadcasting signal, the Analog Caption function may or may not work with digital channels.)
  Default / Service1–Service6 / CC1–CC4 / Text1–Text4: (Digital channels only) The Digital Captions function works with digital channels.
  ✎ **Service1~6** may not be available in digital caption mode depending on the broadcast.

■ **Digital Caption Options**: (Digital channels only)
  Size: Options include Default, Small, Standard and Large. The default is Standard.
  Font Style: Options include Default and Styles 0 to 7. The default is Style 0.
  Foreground Color: Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. You can change the color of the letters. The default is White.
  Background Color: Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. You can change the background color of the captions. The default is Black.
  Foreground Opacity: This adjusts the opacity of text. Options include Default, Transparent, Translucent, Solid and Flashing.
  Background Opacity: This adjusts the opacity of the caption background. Options include Default, Transparent, Translucent, Solid and Flashing.
  Return to Default: This option sets each Size, Font Style, Foreground Color, Background Color, Foreground Opacity and Background Opacity to its default.
  ✎ **Digital Caption Options** are available only when you can select **Default** and **Service1 ~ Service6** in Caption Mode.
  ✎ The Foreground and Background cannot be set to the same color.

Melody

Lets you control whether a melody plays when the TV is turned on or off.

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

Auto Protection Time

■ **Auto Protection Time** (Off / 10 min / 20 min / 40 min / 1 hour): If the screen remains idle with a still image for a certain period of time you define, the screen saver is activated to prevent the formation of ghost images on the screen.

Eco Solution

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

■ **Eco Sensor** (Off / On): To enhance power savings, the picture settings will automatically adapt to the light in the room.
  ✎ If you adjust **Cell Light** in the Picture menu, the **Eco Sensor** will be set to **Off.**
  Min Cell Light : When **Eco Sensor** is **On**, you can manually adjust the minimum screen brightness.
  ✎ If **Eco Sensor** is On, the display brightness may change (become slightly darker or brighter) depending on the light intensity in your room. You can control the screen's minimum brightness with the **Min Cell Light** function.

Support Menu

Self Diagnosis

■ **Picture Test**: Use to check for picture problems. If the problem appears in the test picture, select Yes and follow the directions on the screen.

■ **Sound Test**: Use the built-in melody sound to check for sound problems. If the problem occurs during the test, select Yes and follow the directions on the screen.

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

■ **Reset**: Reset all settings to the factory defaults.
  ✎ The PIN input screen appears before the setup screen.
  ✎ Enter your 4-digit PIN. Change the PIN using the **Change PIN** option.

Software Upgrade

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

HD Connection Guide

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

Contact Samsung

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

Media Play

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

❑ Connecting a USB Device

1. Turn on your TV.
2. Connect a USB device containing photo, music, and/or movie files to the **USB** jack on the back of the TV. A pop up window appears.
3. Press the MEDIA.P button on your remote. The Media Play menu appears.

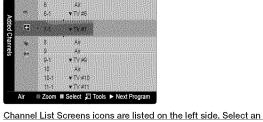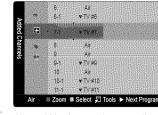### ❑ Using the Media Play Menu

To open Media Play in the Menu, follow these steps:

1. Press the MENU button. Then, press the ▲ or ▼ button to select **Application** on the left, and then press the ENTER☑ button.

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2. Press the ▲ or ▼ button to select **Media Play (USB)**, and then press the ENTER ⏎ button.

3. Press the ◄ or ► button to select an icon (**Videos, Music, Photos, Settings**), and then press the ENTER ⏎ button.

✎ Media Play might not work properly with unlicensed multimedia files.

✎ Need-to-Know List before using **Media Play (USB)**

• The file system supports FAT16, FAT32 and NTFS.
• Certain types of USB Digital camera and audio devices may not be compatible with this TV.
• **Media Play** only supports USB Mass Storage Class (MSC) devices. MSC is a Mass Storage Class Bulk-Only Transport

1. In the **Media Play** menu, press the ◄ or ► button to select **Videos**, and then press the ENTER ⏎ button.

2. Press the ◄/►/▲/▼ buttons to select a video in the file list.

3. Press the ENTER ⏎ button or ► (Play) button.
   - The file name is displayed on the top of the screen with the playing time.
   - If video time information is unknown, playing time and the progress bar are not displayed.
   - During video playback, you can search using the ◄ and ► buttons.

✎ In this mode, you can play movie clips contained in a game,

File Extension	Container	Video Codec	Resolution	Frame rate(fps)	Bit rate(Mbps)	Audio Codec
*.flv *.swf	flash formats	H.264	1920x1080	6~30	30Mbps	MP3
		Sorenson H.263	1920x1080	6~30	30Mbps	

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 Supported Video Formats table.

• If the Index Table error, the Seek (Jump) function is not

Photos

1. In the **Media Play** menu, press the ◄ or ► button to select

Media Play - Additional Functions

■ **Videos/Music/Photos Play Option menus**

When playing a file, press the TOOLS button.

Category	Operation	Videos	Music	Photos
Title	You can select another video file to play directly.	✓		
Repeat Mode	You can play movie and music files repeatedly.	✓	✓	
Picture Size	You can adjust the picture size to your preference.	✓		
Picture Mode	You can adjust the picture setting.	✓		✓

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

✎ **NOTE**

• Standard dimensions for wall mount kits are shown in the table below.
• When purchasing our wall mount kit, a detailed installation manual and all parts necessary for assembly are provided.
• Do not use screws that do not comply with the VESA standard screw specifications.
• Do not use screws that are longer than the standard dimension or do not comply with the VESA standard screw specifications.

Kensington Lock

The Kensington Lock is not supplied by Samsung. It is a device used to physically fix the system when using it in a public place. Refer to the manual provided with the Kensington Lock for additional information on proper use.

✎ Please find a "🔒" icon on the rear of the TV. The Kensington slot is beside the "🔒" icon.

✎ The position and color may differ depending on the model.

To lock the product, follow these steps:

1. Wrap the Kensington lock cable around a large, stationary object such as desk or chair.

Display Modes (HDMI Input)

Optimal resolution is 1024 x 768@60Hz.

Mode	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H / V)
IBM	640 x 350	31.469	70.086	25.175	+/-
	720 x 400	31.469	70.087	28.322	-/+
MAC	640 x 480	35.000	66.667	30.240	-/-
	832 x 624	49.726	74.551	57.284	-/-
	640 x 480	31.469	59.940	25.175	-/-
	640 x 480	37.861	72.809	31.500	-/-
	640 x 480	37.500	75.000	31.500	-/-
	800 x 600	37.879	60.317	40.000	+/+