



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 LED Displays (16:9, the aspect 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 and the images are constantly moving. Displaying stationary graphics and images on screen, such as the dark sidebars on non- expanded standard format television video 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 reports, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. Displaying stationary images that exceed the above guidelines can cause uneven aging of LED Displays that leave subtle, but permanent burned-in ghost images in the LED picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars. On LED models that offer picture sizing features, use these controls to view different formats as a full screen picture. Be careful in the selection and duration of television formats you use for viewing. Uneven LED aging as a result of format selection and use, as well as burned-in images, are not covered by our 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.



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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 side 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 (TOOLS)

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 normal 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.

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

- Backlight:** 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 Backlight.
- 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 **light**, **Contrast**, **Brightness**, and **Sharpness**.

- Information:** Display the information for a show or channel you have scheduled. You can also change the schedule information.
 - Select the **Programmed** List icon on the left side of the **Channel List** screen, and then press the ENTER button.
 - 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.
 - Select **Information**, and then press the ENTER button. The **Time Viewing** information screen appears.
 - Select **Change Info** and press the ENTER button to change information, or select **Close** and press the ENTER button to close the Information screen.
- Select All / Deselect All:** You can select or deselect all channels in the channel list.

Other Channel Menu Functions

Channel Mode (Added Channels/Favorite Channels)

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

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.

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 room. 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).
- 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.

- 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 TVs 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 below:

To set the clock, follow these steps:

- Select **Setup >Time > Clock**.
- 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 Savings 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 (TOOLS)** Automatically shuts off the TV after a preset period of time. (30, 60, 90, 120, 150 and 180 minutes).

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

- Timer 1 / Timer 2 / Timer 3** 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.

- 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.
- 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.

- 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.

Input Source	Picture Size
ATV, AV, Component (480, 480p)	16:9, Zoom1, Zoom2, 4:3
DTV (1080, 1080p), Component (1080i, 1080p), HDMI (720p, 1080, 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 (interface), AV, COMPONENT (480i / 1080i) and HDMI (480i / 1080i).
- LED Motion Plus (Off / On):** Removes drag from fast scenes with a lot of movement to provide a clear picture.

Picture Reset

- Picture Reset (Reset Picture Mode/Cancel):** Resets the picture settings to their factory defaults.

Sound Menu

Mode (TOOLS)

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

Equalizer

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.

- 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.

- Use the **▲/▼** buttons to highlight a folder that contains music or photos, and then press the **Yellow** select button to select the folder.

- 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.

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.

Multi-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.

- 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.

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 tabs have ratings listed on the left. The TV Parental Guidelines option also has kinds of content listed on 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 lock 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.

