



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 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 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 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.



EN68-0467-0A-00

- 1 -

Add to Favorite/Delete from Favorite (TOOLS): Lets you add channels to and delete channels from your Favorites list.

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

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

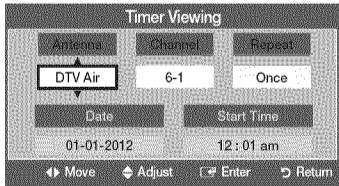
To delete channels from the Favorites list, follow these steps:

- Select one or more channels in the **Favorite** Channels list using the ▲/▼ buttons and the Yellow Select button on your remote.
- Press the TOOLS button on your remote. The Tools menu appears.
- 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 **Time Viewing**.

To schedule a channel, follow these steps:

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



- 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 that date, at the time you selected, starting from that day. 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.

- 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:** 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 (TOOLS)

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

To change the information, follow these steps:

- 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 to change, and then press the TOOLS button. The Tools Menu appears.
- Select **Change Info**, and then press the ENTER button. The **Time Viewing** screen appears.
- 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.
- 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:

- 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 to cancel, and then press the TOOLS button. The Tools Menu appears.
- Select **Cancel Schedules**, and then press the ENTER button. The **Cancel Schedule** screen appears.
- Select **OK**, and then press the ENTER button.

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 (T) 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 (TOOLS) 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.
- 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 **Backlight, 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 its 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).
 - 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 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

16:9, Zoom1, Zoom2, 4:3

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 makes 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).

Auto Motion Plus (Off / Clear / Standard / Smooth / Custom / Demo): Enhances motion in fast moving scenes.

The info screen on your TV displays the resolution and frequency of the incoming video signal (60Hz). This displayed frequency is not what the TV is displaying by using the **Auto Motion Plus** function.

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

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.

- 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.

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.

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) (TOOLS)

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 **snov**. 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:

- Push MENU → **Channel** → **Auto Program** → ENTER on your remote. The Antenna Source screen appears.

- 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.

- On the Cable Type screen, use the ◀/▶/▲/▼ buttons to select the type of digital and analog cable systems you want: **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 Channels** list. These are the channels you will see when you use the Channel buttons on your remote.

- Before connecting your device to the TV, please back up your files to prevent them from damage or loss of data. SAMSUNG is not responsible for any data file damage or data loss.
- A USB device that requires high power (more than 0.5A) may not be supported.
- Do not disconnect the USB device while it is loading.
 - The higher the resolution of the image, the longer it takes to display on the screen.
- If a file is corrupted or the TV does not support the file type, the "Not Supported File Format" message appears.
- The TV cannot play MP3 files with DRM that have been downloaded from a for-pay site. Digital Rights Management (DRM) is a technology that supports the creation, distribution, and management of digital content in an integrated and comprehensive way, including protecting the rights and interests of content providers, preventing illegal copying of contents, and managing billing and settlements.
- PTP devices are not supported.
- If an over-power warning message is displayed while you are connecting or using a USB device, the device may not be recognized or may malfunction.
- If the TV has no input during the time period set in **Auto Protection Time**, the Screensaver will run.
 - The power-saving mode of some external hard disk drives may be released automatically when you connect them to the TV.
 - If you use a USB extension cable, the TV may not recognize the USB device or may not be able to read the files on the device.
 - If a USB device connected to the TV is not recognized, the list of files on the device is corrupted, or a file in the list is not played, connect the USB device to a PC, format the device, and check the connection.
 - If a file you deleted from the PC is still found when you run **Media Play**, use the "Empty the Recycle Bin" function on the PC to permanently delete the file.
 - Photos** only supports the sequential jpeg format.
 - The **Videos** option does not support the scene search and thumbnail functions.
 - If the number of files and folders saved on a USB storage device is over approximately 4000, the files and folders may not appear and some folders may not open.
 - 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 longer than USB 2.0.

Videos



- In the **Media Play** menu, press the ◀ or ▶ button to select **Videos**, and then press the ENTER button.
 - Press the ◀/▶/▲/▼ buttons to select a video in the file list.
 - 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, but you cannot play the game itself.

Supported Subtitle Formats

| External | |
|---------------------------|----------------|
| Name | File extension |
| MPEG-4 timed text | .txt |
| SAMI | .smi |
| SubRip | .art |
| Sub/Viewer | .sub |
| Micro DVD | .sub or .dat |
| SubStation Alpha | .ssa |
| Advanced SubStation Alpha | .ass |

| Name | Container | Format |
|---------------------------|-----------|----------------|
| Yvau | 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 Video Formats

| File Extension | Container | Video Codec | Resolution | Frame rate(fps) | Bit rate(Mbps) | Audio Codec |
|----------------|---------------|-----------------------|------------|-----------------|----------------|-------------|
| *.mp4 | MP4 | H.264 3.11/4x5.1 /6.0 | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | AVC | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| *.avi | AVI | MPEG | 640x480 | 6-30 | 10Mbps | MP3 / AAC |
| | | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | MPEG4 SP / ASP | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| *.mkv | MKV | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | MPEG | 640x480 | 6-30 | 10Mbps | MP3 / AAC |
| *.asf | ASF | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | MPEG4 SP / ASP | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | MPEG | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| *.ts | TS | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | MPEG | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | H.264 BP /MP /HP | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| *.mpg | PS | H.264 BP /MP /HP | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | MPEG | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| | | H.264 BP /MP /HP | 1920x1080 | 6-30 | 30Mbps | MP3 / AAC |
| *.3gp | 3GPP | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 |
| | | MPEG4 SP / ASP | 1920x1080 | 6-30 | 30Mbps | MP3 |
| | | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 |
| *.flv | flash formats | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 |
| | | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 |
| | | H.264 | 1920x1080 | 6-30 | 30Mbps | MP3 |

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 Indexed Table erroneous, the Seek (Jump) function is not supported.
- The menu may take longer to appear if the video's bit rate exceeds 10Mbps.
- Video content can not be played if there are many contents in one file.

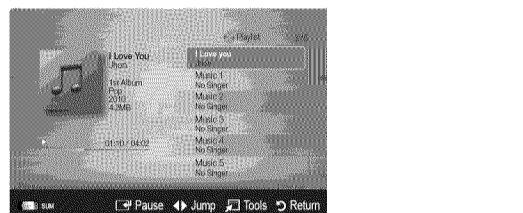
Video Decoder

- Supports up to H.264, Level 4.1
- H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.
- MPEG4 SP, ASP :
 - Below 1280 x 720: 60 frame max
 - Above 1280 x 720: 30 frame max
- H.263 is not supported.
- GMC is not supported.

Audio Decoder

- Supports up to WMA7, 8, 9 STD, 9 PRO, 10 PRO
- WMA 9 PRO and WMA 10 PRO support 5.1 channel. (LBR mode of WMA Pro is not supported)
- WMA Lossless is not supported.

Music



- In the **Media Play** menu, press the ◀ or ▶ button to select **Music**, and then press the ENTER button.
 - During music playback, you can search using the ◀ and ▶ button.
 - [] (REW) and [] (FF) buttons do not function during play.
- Media Play only displays files with MP3 and PCM file extension. Other file extensions are not displayed, even if they are saved on the same USB device.
- If the sound is abnormal when playing MP3 files, adjust the **Equalizer** in the **Sound** menu. (An over-modulated MP3 file may cause a sound problem).

Photos



- In the **Media Play** menu, press the ◀ or ▶ button to select **Photos**, then press the ENTER button.
- Press the ◀/▶/▲/▼ buttons to select a photo in the file list.
- Press the ENTER button or [] (Play) button.

NOTE

- While a photo list is displayed, press the [] (Play) / ENTER button on the remote control to start a slide show.
- All files in the file list section will be displayed in the slide show.
- During the slide show, files are displayed in order.
- During the slide show, you can adjust the slide show speed using [] (REW) or [] (FF) button.
- You can move to other files using ◀ or ▶ button.
- Media Play can play Music files automatically during a Slide Show if **Background Music** is set to **On**.
- You cannot change the **Mode** in **Background Music** until the Background Music file has finished loading.

Supported Photo Formats

| Image | Photo | Resolution |
|-------|-------------|--------------|
| JPEG | Base-line | 15360 x 8704 |
| | Progressive | 1024 x 768 |

Other Restrictions

- CMYK, YCC Color space JPEG are not supported.

Playing Multiple Videos

- Playing selected video/music/photo files**
 - On the File List screen, highlight a file, and then press the Yellow button on your remote.
 - Repeat Step 1 to select multiple files.
- NOTE**
 - A ◀ mark appears to the left of the selected files.
 - To cancel a selection, press the Yellow button again.
 - To deselect all selected files, press the TOOLS button, select **Deselect All**, and then the ENTER button.
- Press the TOOLS button, select **Play Selected Contents**, and then press the ENTER button.
- Playing a video/music/photo folder**
 - With the folders on your USB device displayed, use the ◀/▶/▲/▼ buttons to highlight a folder.
 - Press the TOOLS button, select **Play Folder**, and then press the ENTER button.

Media Play - Additional Functions

Video/Music/Photos Play Option menus

When playing a file, press the TOOLS button.

| Category | Operation | Video | Music | Photo |
|---|--|-------|-------|-------|
| 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. | ✓ | | |
| Auto Motion Plus | You can enhance motion in fast moving scenes. | ✓ | ✓ | ✓ |
| Sound Mode | You can adjust the sound setting. | ✓ | ✓ | ✓ |
| Subtitle Setting | You can play the video with Subtitles. This function only works if the subtitles have the same file name as the video. | ✓ | | |
| Audio Format | You can select the digital audio output format. | ✓ | | |
| Audio Language | You can change the audio language if the video has more than one language. | ✓ | | |
| Stop Slide Show / Start Slide Show | You can start or stop a Slide Show. | | | ✓ |
| Slide Show Speed | You can select the slide show speed during the slide show. | | | ✓ |
| Background Music | You can set and select background music when watching a Slide Show. | | | ✓ |
| Zoom | You can zoom into images in full screen mode. | | | ✓ |
| Rotate | You can rotate images in full screen mode. | | | ✓ |
| Information | You can see detailed information about the played file. | ✓ | ✓ | ✓ |

Settings

Using the Setup Menu

- DivX® Video On Demand** : Shows the registration code authorized for the TV. If you connect to the DivX web site and register with the 10-digit registration code, you can download the VOD activation file. Once you play it using Media Play, the registration is completed.
 - For more information on DivX® VOD, visit "http://vod.divx.com".
- Information**: Select to view information about the connected USB device.

Other Information

Installing the Wall Mount Kit

- The wall mount kit (sold separately) allows you to mount the TV on the wall.
- For detailed information about installing the wall mount, see the instructions provided with the wall mount items. 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.
- 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 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. 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 on a wall.

| Product Family | TV size in inches | VESA screw hole specs (A * B) in millimeters | Standard Screw | Quantity |
|----------------|-------------------|--|----------------|----------|
| LED-TV | 19--22 | 75 X 75 | M4 | 4 |
| | 26 | 100 X 100 | M4 | |
| | 32--40 | 200 X 200 | M6 | |
| | 42--60 | 400 X 400 | M8 | |



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 prevent the TV from falling**
 - Since the necessary brackets, screws, and string or cable are not supplied, please purchase these separately.
 - Insert the screws into the wall brackets and firmly fasten them to the wall. Make sure the screws are firmly fixed to the wall.
 - We strongly recommend you drive the screws into a stud.
 - Using screws, insert the screws through the TV brackets, and then fasten the screws to the top VESA screw holes on the back of the TV.
 - Connect the brackets on the TV and the brackets on the wall with a strong string or cable, and then tie the string or cable tightly to the brackets.
 - Verify all connections are properly secured. Periodically check the connections for any sign of fatigue or failure. If you have any doubt about the security of your connections, contact a professional installer.
 - Install the TV close to the wall so that it does not fall.
 - Connect the string or cable so that the brackets on the wall are at the same height or lower than the brackets on the TV. Untie the string or cable before moving the TV.
 - To purchase a TV Holder kit, contact Samsung customer care.

| | |
|--|--|
| Stand Assembly | <ul style="list-style-type: none"> If you have any trouble assembling the stand, refer to "Install the Stand" in the Start Up or Stand Installation Guide. |
| Cannot find a channel | <ul style="list-style-type: none"> Re-run Plug & Play or run Auto Program. (go to MENU - Channel - Auto Program) |
| Poor Picture | <p>First, perform the Picture Test and see if your TV is displaying the test image properly. Go to MENU - Support - Self Diagnosis - Picture Test</p> <p>If the test image is properly displayed, the poor picture may be caused by the source or signal.</p> <ul style="list-style-type: none"> If you have an analog cable/satellite box, upgrade to a digital set top box. Use HDMI or Component cables to deliver HD (high definition) picture quality. Cable/Satellite subscribers: Try HD channels from the channel line up. Air/Cable Antenna connection: Try HD channels after running Auto Program. <ul style="list-style-type: none"> Many HD channels broadcast up scaled SD (Standard Definition) content. The picture quality of up scaled SD content is low. Adjust the Cable/Set top box video output resolution to 1080i or 720p. Compression of video contents may cause picture distortion, especially on fast moving pictures such as those in sports and action movies. A weak signal can cause picture distortion. This is not a TV problem. Mobile phones used close to the TV (within 3.3ft) may cause noise in the picture on analog and digital channels. If you're using a component connection, make sure the component cables are connected to the correct jacks. Incorrect or loose connections may cause color problems or a blank screen. Adjust the Picture options in the TV menu. (go to Picture Mode / Color / Brightness / Sharpness) Adjust the Energy Saving option in the TV menu. (go to MENU - Setup - Eco Solution - Energy Saving) Try resetting the picture to the default picture settings. (go to MENU - Picture - Picture - Reset) |
| The TV image does not look as good as it did in the store. | <ul style="list-style-type: none"> If you have an analog cable/satellite box, upgrade to a digital set top box. Use HDMI or Component cables to deliver HD (high definition) picture quality. Cable/Satellite subscribers: Try HD channels from the channel line up. Air/Cable Antenna connection: Try HD channels after running Auto Program. <ul style="list-style-type: none"> Many HD channels broadcast up scaled SD (Standard Definition) content. The picture quality of up scaled SD content is low. Adjust the Cable/Set top box video output resolution to 1080i or 720p. Compression of video contents may cause picture distortion, especially on fast moving pictures such as those in sports and action movies. A weak signal can cause picture distortion. This is not a TV problem. Mobile phones used close to the TV (within 3.3ft) may cause noise in the picture on analog and digital channels. If you're using a component connection, make sure the component cables are connected to the correct jacks. Incorrect or loose connections may cause color problems or a blank screen. Adjust the Picture options in the TV menu. (go to Picture Mode / Color / Brightness / Sharpness) Adjust the Energy Saving option in the TV menu. (go to MENU - Setup - Eco Solution - Energy Saving) Try resetting the picture to the default picture settings. (go to MENU - Picture - Picture - Reset) |
| The picture is distorted: macroblock error, small block, dots, pixelization. | <ul style="list-style-type: none"> If the picture size is set to Screen Fit, change it to 16:9. Change the cable/satellite box resolution. If you are using an AV composite input, connect the video cable (yellow) to the Green jack of Component Input 1 on the TV. If connected to a cable box, please try to reset it. (Reconnect the AC cord and wait until the cable box reboots. It may take up to 20 minutes) Set the output resolution of the cable box to 1080i or 720p. |
| Sound Problems | <p>Perform the Sound Test to confirm that your TV audio is properly operating. (go to MENU - Support - Self Diagnosis - Sound Test)</p> <p>If the audio is OK, the sound problem may be caused by the source or signal.</p> <ul style="list-style-type: none"> Check the volume of the device (Cable/Sat Box, DVD, Blu-ray, etc.) connected to your TV. If you are using an external device, check the device's audio output option. Ex. you may need to change your cable box's audio option to HDMI if the box is connected to your TV using an HDMI cable. Reboot the connected device by reconnecting the device's power cable. Check the cable connections. Make sure a video cable is not connected to an audio input. For Antenna or Cable connections, check the signal information. A weak signal may cause sound distortion. Perform the Sound Test as explained above. |
| No Picture, No Video | <ul style="list-style-type: none"> Make sure the AC power cord is securely plugged into the wall outlet and the TV. Make sure the wall outlet is working. Try pressing the POWER button on the TV to make sure the problem is not the remote. If the TV turns on, refer to "Remote control does not work" below. |
| The TV turns off automatically. | <ul style="list-style-type: none"> Ensure the Sleep Timer is set to Off in the Time menu. If your PC is connected to the TV, check your PC power settings. Make sure the AC power cord is plugged securely into the wall outlet and the TV. When you are watching TV connected to an antenna or cable connection, the TV will turn off after 10 - 15 minutes if there is no signal. |
| There is no picture/video. | <ul style="list-style-type: none"> Check the cable connections. (Remove and reconnect all cables connected to the TV and external devices). Set your external device (Cable/Sat Box, DVD, Blu-ray etc) video outputs to match the connections to the TV input. For example, if an external device's output is HDMI, it should be connected to an HDMI input on the TV. Make sure your connected devices are powered on. Be sure to select the correct input source by pressing the SOURCE button on the remote control. Reboot the connected device by reconnecting the device's power cable. |
| RF (Cable/Antenna) Connection | |
| The TV is not receiving all channels. | <ul style="list-style-type: none"> Make sure the coaxial cable is connected securely. Run Auto Program to add available channels to the channel list. go to MENU - Channel - Auto program then select Auto and make sure the correct Cable TV signal type is set in the menu. There are 3 options. (STD, HRC and IRC) Verify the antenna is positioned correctly. |

| | |
|--|---|
| No Caption on digital channels. | <ul style="list-style-type: none"> Check the Caption Setup menu. Try changing Caption Mode Service 1 to CC1. Some channels may not have caption data. |
| The picture is distorted: macroblock error, small block, dots, pixelization. | <ul style="list-style-type: none"> Compression of video contents may cause picture distortion, especially on fast moving pictures such as those in sports and action movies. A weak signal can cause picture distortion. This is not a TV problem. |
| Others | <ul style="list-style-type: none"> Purple/green rolling horizontal bars and buzzing noise from the TV speakers with Component cable connection. <ul style="list-style-type: none"> Remove the left and right audio connections from the set-top-box. If the buzzing stops, this indicates that the set-top-box has a grounding issue. Replace the Component video cables with an HDMI connection. The picture will not display in full screen. <ul style="list-style-type: none"> HD channels will have black bars on either side of the screen when displaying up scaled SD (4:3) contents. Black bars on the top and bottom appear when movies that have aspect ratios different from your TV play on the TV. Adjust the picture size option on your external device or change the TV to full screen. |
| The remote control does not work. | <ul style="list-style-type: none"> Replace the remote control's batteries. Make sure you insert them with the polarity (+/-) correct . Clean the transmission window located on the top of the remote control. Try pointing the remote directly at the TV from 5-6 feet away. |
| The cable/set top box remote control does not turn the TV on or off, or adjust the volume. | <ul style="list-style-type: none"> Program the Cable/Set top box remote control to operate the TV. Refer to the Cable/Set top box user manual for the SAMSUNG TV codes. |
| A "Mode Not Supported" message appears. | <ul style="list-style-type: none"> Check the supported resolution of the TV and adjust the external device's output resolution accordingly. Refer to resolution settings in this manual. You cannot select Caption in the TV menu when watching content from a device connected via HDMI or Component. Caption must be activated on the external device. This smell is normal and will dissipate in a few days. This function is only available for digital channels received through an Antenna / RF/Coax connection. |
| Caption on the TV menu is greyed out. | <ul style="list-style-type: none"> You cannot select Caption in the TV menu when watching content from a device connected via HDMI or Component. Caption must be activated on the external device. |
| There is a plastic smell from the TV. | <ul style="list-style-type: none"> If TV is in the Store Demo mode, it will reset audio and picture settings every 30 minutes. Please change from Store Demo mode to Home Use mode using the Plug & Play procedure. Press the SOURCE button to select TV mode, go to MENU → Setup → Plug & Play → ENTER. |
| TV is tilted to the right or left side. | <ul style="list-style-type: none"> Remove the stand base from the TV and reassemble it. |
| The Channel menu is grey out (unavailable). | <ul style="list-style-type: none"> The Channel menu is only available when you select the TV source. |
| Your settings are lost after 30 minutes or every time the TV is turned off. | <ul style="list-style-type: none"> If TV is in the Store Demo mode, it will reset audio and picture settings every 30 minutes. Please change from Store Demo mode to Home Use mode using the Plug & Play procedure. Press the SOURCE button to select TV mode, go to MENU → Setup → Plug & Play → ENTER. |
| You have intermittent loss of audio or video. | <ul style="list-style-type: none"> Check the cable connections and reconnect them. Loss of audio or video can be caused by using overly rigid or thick cables. Make sure the cables are flexible enough for long term use. If mounting the TV to the wall, we recommend using cables with 90 degree connectors. |
| You see small particles when you look closely at the edge of the frame of the TV. | <ul style="list-style-type: none"> This is part of the product's design and is not a defect. |
| POP (TV's internal banner ad) appears on the screen. | <ul style="list-style-type: none"> Select Home Use under Plug & Play mode. For details, refer to Plug & Play (Initial Setup). |

- This TFT LED panel uses a panel consisting of sub 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.
- Watch these troubleshooting on video at www.samsung.com/spn.
- Some functions and pictures shown in this manual are available on specific models only.
- You can keep your TV in optimum condition by upgrading it with the latest firmware from the Samsung web site (www.samsung.com) → Support → Downloads). To upgrade, download the firmware to your computer, copy the firmware file to a USB memory stick, insert the USB memory stick into the TV's USB slot, and then select Support > Software Upgrade in the TV's menu.

To send inquiries and requests for questions regarding open sources, contact Samsung via Email (oss.requests@samsung.com).

- This product uses some software programs which are distributed under the Independent JPEG Group.

IOU License - IOU 1.8.1 and later

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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