SAMSUNG

E-MANUAL

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❑ Using the INFO button (Now & Next guide)

The display identifies the current channel and the status of certain audio-video settings.

The Now & Next guide shows daily TV programme information for each channel according to the broadcasting time.

When you press the **INFO** button, a channel information banner will appear on the top of the screen. And then press the **ENTER** button, you can see the details of the programme.

- Scroll ◄, ► to view information for a desired programme while watching the current channel.
- Scroll ▲, ▼ to view information for other channels.

❑ Memorizing channels

■ Aerial

(Depending on the country and model)

MENU → Broadcasting → Aerial → ENTER

Before your television can begin memorising the available channels, you must specify the type of signal source that is connected to the TV.

Auto Tuning

(Depending on the country and model)

MENU → Broadcasting → Auto Tuning → ENTER

Automatically allocated programme numbers may not correspond to actual or desired programme numbers. If a channel is locked, the PIN input window appears.

- **Auto Tuning**

  Aerial (**Terrestrial** / **Cable** / **Satellite**) (Depending on the country and model): Select the aerial source to memorise.

  When selecting **Terrestrial**, scans for a channel automatically and stores in the TV.

  Channel Type (**Digital & Analogue** / **Digital** / **Analogue**): Select the channel source to memorise.

  Channel Ordering (Depending on the country and model): Select the channel order type.

When selecting Cable → Digital & Analogue, Digital or Analogue

– **Operator Selection** (Depending on the country and model): Selects a provider of cable services.

– **Search Mode**: Scans for all channels with active broadcast stations and stores them in the TV.

  If you select **Quick**, you can set up the **Network**, **Network ID**, **Frequency**, **Modulation** and **Symbol Rate** manually by pressing the button on the remote control.

– **Network**: Selects the **Network ID** setting mode among **Auto** or **Manual**.

  - **Network ID**: When **Network** is **Manual**, you can set up **Network ID** using the numeric buttons.

- **Frequency**: Displays the frequency for the channel (differs in each country).
- **Modulation**: Displays available modulation values.
- **Symbol Rate**: Displays available symbol rates.

- **Cable Search Option**

  (Depending on the country and model & cable channels only)

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

  Start Frequency / **Stop Frequency**: Set the start or stop frequency (differs in each country).

  Symbol Rate: Displays available symbol rates.

  Modulation: Displays available modulation values.

- **Satellite**

  (Depending on the country and model & satellite only)

  When selecting **Satellite**, scans for a channel automatically and stores in the TV.

  Channel Type (**All** / **TV** / **Radio**): Select the channel type to memorise.

  Satellite: Select the satellite to scan.

  Scan Mode (**All Channels** / **Free Channels Only**): Select a scan mode for the selected satellite.

  Re-initialise: Selects the scanning mode of the selected satellite.

  Search Mode: Sets **Search Mode** using ▲ / ▼ buttons.

- **Standby Auto Tuning** (Depending on the country and model): Auto-tune channels while your TV is in standby mode.
- **Wake-up Timer** (Depending on the country and model): Schedule timer to turn the TV on and scan channels automatically.

❑ Using the Channel menu

■ Channel List

MENU → Broadcasting → Channel List → ENTER

The Channel List contains the channels your TV displays when you press the channel button. You can view channel information, All, TV, Radio, Data/Other, Analogue or Favourites 1-5.

Press ► (Mode) button to change the channel mode, or press ◄ (Sorting) button to change the channel order according to channel number or name on the list.

When you press the **CH LIST** button on the remote control, Channel List screen will be displayed at once.

Channel Sorting

- **Number** / **Name**: Arranges the channel order according to channel number or name on the list.

Channel Mode

- **Aerial**: Switches to **Terrestrial**, **Cable** or **Satellite**. (Depending on the country and model)
- **Edit Favourites**: Set channels you watch frequently as favourites.
  - For detailed information about using **Edit Favourites**, refer to "**Edit Favourites**".
- **Favourites 1-5**: Shows all favourite channels, arranged in up to five groups. Each group has a separate screen.
  - The TV displays **Favourites 1-5** only if you have added favourites using **Edit Favourites**.

- **All**: Shows all currently available channels.
- **TV**: Shows all currently available TV channels.
- **Radio**: Shows all currently radio channels.
- **Data/Other**: Shows all currently available MHP (Multimedia Home Platform) or other channels.
- **Analogue**: Shows all currently available analogue channels.

■ Guide (Depending on the country and model)

MENU → Broadcasting → Guide → ENTER

The EPG (Electronic Programme Guide) information is provided by broadcasters. Using programme schedules provided by broadcasters, you can specify programmes you want to watch in advance so that the channel automatically changes to the selected programme channel at the specified time. Programme entries may appear blank or out of date depending on a channel status.

- A Red (Quick Nav): Viewing the TV programmes on the list quickly using ▲/▼/◀/▶ buttons.
- B Green (Channel Category): Select the type of channels you want to display.
- C Yellow (Schedule Manager): Moves to the reserved programmes in Schedule Manager.

Schedule Manager

MENU → Broadcasting → Schedule Manager → ENTER

You can set a desired channel to be displayed automatically at the intended time. In addition, you can view, modify or delete a channel you have reserved to watch.

You must set the current time first using the Time → Clock function in the System menu to use this function.

1. Press the Schedule on the Schedule Manager screen. The Schedule Viewing menu appears.
2. Press the ▲/▼/◀/▶ buttons to set each option menu.
   - Aerial: Select the desired broadcasting signal.
   - Channel: Select the desired channel.

- **Repeat**: Select **Once**, **Manual**, **Sat~Sun**, **Mon~Fri** or **Everyday** to set at your convenience. If you select **Manual**, you can set the day you want.

  The (✓) mark indicates the day you've selected.

- **Date**: You can set the desired date.

  It is available when you select **Once** in **Repeat**.

- **Start Time**: You can set the start time you want.

If you want to edit or cancel a reserved schedule, select the reserved schedule on **Schedule Manager**. Then press the **ENTER** button and select the **Edit** or **Delete**.

Edit Channel

MENU → Broadcasting → Edit Channel → ENTER

You can edit or delete channels.

1. Go to Edit Channel screen.
2. Press the ▲/▼ buttons to select the desired channel, then press the ENTER button. The (✓) mark indicates the channel you've selected.
   - You can select more than one channel.
   - Press the ENTER again to deselect the channel.

Using the coloured and function buttons with the **Edit Channel**.

- A Red (**Change Number**): Changes channel order on the channel list.
  - (**Done**): Completes changing the channel order.

    Digital channel does not support this function when the **Edit Channel Number** is set to **Disable**. (Depending on the country and model)

- B Green (**Delete**): Deletes a channel from the channel list.
- C Yellow (**Lock** / **Unlock**): Lock a channel so that the channel cannot be selected and viewed. / Unlock the channel that you locked.

  This function is available only when the **Channel Lock** is set to **On**.

  The PIN input screen appears. Enter your 4-digit PIN. Change the PIN using the **Change PIN** option.

- D Blue (**Select All** / **Deselect All**): Selects or deselects all channels at once.
- 0~9 (**Go To**): Goes to channel directly by pressing numbers (0~9).
- ⇕ (**Page**): Moves to previous or next page.
- (**Tools**): Displays the option menu. The option menu items that appear may differ depending on the channel status and type.
  - **Sorting** (Digital channels only): Changes the list ordered by channel number or channel name.
  - **Aerial**: Selects the desired broadcasting signal. (Depending on the country and model)

- **Category**: Change the channel mode to **All**, **TV**, **Radio**, **Analogue**, **Data/Other**, **Recently Viewed**, **Most viewed**. The selected channel mode is displayed.
- **Edit Favourites**: Go to **Edit Favourites** screen directly.
- **Rename channel** (Analogue channels only): Assign a name of up to five characters to a channel. For example, Food, Golf, etc. This makes it easier to find and select the channel.
- **Channel Info**: Display details of the selected channel.
- **Information**: Display details of the selected programme.

Edit Favourites TOOLS

MENU → Broadcasting → Edit Favourites → ENTER

You can add, edit or delete favourite channels.

1. Go to Edit Favourites screen.
2. Press the ▲/▼ buttons to select the desired channel, and then press ENTER button.
3. Choose a specific favourite list among Favourites 1-5 using B (Change Fav.) button, and then press the D (Add) button. The selected channel has been added in Favourites 1-5.

   One favourite channel can be added in several of favourites among Favourites 1-5.

Using the coloured and function buttons with the **Edit Favourites**.

- A Red (**Category** / **Change order**)
  - **Category**: Changes the channel mode to **All**, **TV**, **Radio**, **Analogue**, **Data/Other**, **Recently Viewed**, **Most viewed**. The selected channel mode is displayed.
  - **Change order**: Changes the favourite channel order.
  - (**Done**): Completes changing the channel order.

- B Green (**Change Fav.**): Changes favourite list among **Favourites 1-5**.
- C Yellow (**Select All** / **Deselect All**): Selects or deselects all channels at once.
- D Blue (**Add** / **Delete**)
  - **Add**: Adds selected channels to **Favourites 1-5**.
  - **Delete**: Deletes the favourite channel from **Favourites 1-5**.

- 0~9 (**Go To**): Goes to channel directly by pressing numbers (0~9).
- ⇕ (**Page**): Moves to previous or next page.
- (**Tools**): Displays the option menu. The option menu items that appear may differ depending on the channel status and type.
  - **Sorting** (**Number** / **Name**): Arranges the channel order according to channel number or name on the list.
  - **Copy to Favourites**: Edit the selected favourite channel in **Favourites 1-5**.
  - **Rename Favourites**: Assign your own favourite channel name.
  - **Aerial**: Selects the desired broadcasting signal. (Depending on the country and model)
  - **Edit Channel**: Go to **Edit Channel** screen directly.
  - **Information**: Display details of the selected programme.

❑ Locking Programme

■ Programme Rating Lock

(Depending on the country and model)

MENU → Broadcasting → Programme Rating Lock → ENTER

Prevent unauthorised users, such as children, from watching unsuitable programme with a user-defined 4-digit PIN code. If the selected channel is locked, the "🔒" symbol will be displayed.

The items of Programme Rating Lock differs depending on the country and model.

Channel Lock

MENU → Broadcasting → Channel Lock → ENTER

Lock channels in Channel menu to prevent unauthorised users, such as children, from watching unsuitable programme.

Available only when the Source is set to TV.

■ Channel Settings

MENU → Broadcasting → Channel Settings → ENTER

- **Country (Area)**

  (Depending on the country and model)

  Selects your country (or area) so that the TV can correctly auto-tune the broadcasting channels.

- **Manual Tuning**

  Scans for a channel manually and stores in the TV.

  If a channel is locked, the PIN input window appears.

  According to the channel source, **Manual Tuning** may be supported.

  - **Digital Channel Tuning**: Scans for a digital channel manually and stores in the TV. Press the **New** button to search the digital channels. When scanning has finished, a channel is updated in the channel list.
    - When selecting **Aerial** → **Terrestrial**: **Channel**, **Frequency**, **Bandwidth**.
    - When selecting **Aerial** → **Cable** (Depending on the country and model): **Frequency**, **Modulation**, **Symbol Rate**.

- **Analogue Channel Tuning**: Scans for an analogue channel. Press the **New** button to search the channels by adjusting the **Programme**, **Colour System**, **Sound System**, **Channel**, **Search**.

  Channel mode

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

  – **C** (aerial channel mode) / **S** (cable channel mode): These two modes allow you to select a channel by entering the assigned number for each aerial broadcasting station or cable channel.

- **Satellite** (Depending on the country and model): Scans for a satellite channel. Press the **Scan** button to search the channels by adjusting the **Transponder**, **Scan Mode**, **Network Search**.

- **Fine Tune**

  (Analogue channels only)

  If the signal is weak or distorted, fine tune the channel manually.

  - Fine tuned channels are marked with an asterisk “*”.
  - To reset the fine-tuning, select **Reset**.

- **Transfer Channel List**

  (Depending on the country and model)

  Imports or exports the channel map. You should connect a USB storage to use this function.

  - The PIN number input screen appears. Enter your 4 digit PIN number.
  - Supported file systems are FAT and exFAT.

- **Delete CAM Operator Profile**: Selects the CAM operator to delete. (Depending on the country and model)

- **Satellite System** (Depending on the country and model)

  Configure settings for your satellite equipment

  - The PIN number input screen appears. Enter your 4 digit PIN number.
  - To reset the **Satellite System**, select **Reset all settings**.

Subtitle TOOLS

MENU → Broadcasting → Subtitle → ENTER

Use this menu to configure the **Subtitle** options.

- **Subtitle**: Switches subtitles on or off.
  - **Subtitle Mode**: Sets the subtitle mode.
    - If the programme you are watching does not support the **Hearing Impaired** function, **Normal** automatically activates even if the **Hearing Impaired** mode is selected.
  - **Subtitle Language**: Select the subtitle language.
    - The available language may differ depending on the broadcast.
    - English is the default in cases where the selected language is unavailable in the broadcast.

- **Primary Subtitle**: Sets the primary subtitle.
- **Secondary Subtitle**: Sets the secondary subtitle.

■ Edit Channel Number (Depending on the country and model)

MENU → Broadcasting → Edit Channel Number → ENTER

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

Audio Options

(Digital channels only)

MENU → Broadcasting → Audio Options → ENTER

- **Audio Language** TOOLS

  Change the default value for audio languages.

  Audio Language / **Primary Audio** / **Secondary Audio**: You can set the primary or secondary audio.

  The available language may differ depending on the broadcast.

- **Audio Format**

  (Depending on the country and model)

  When sound is emitted from both the main speaker and the audio receiver, a sound echo may occur due to the decoding speed difference between the main speaker and the audio receiver. In this case, use the TV Speaker function.

  ✎ **Audio Format** option may differ depending on the broadcast. 5.1ch Dolby digital sound is only available when connecting an external speaker through an optical cable.

- **Audio Description**

  (Depending on the country and model)

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

  Audio Description: Turn the audio description function on or off.

  Volume: Adjust the audio description volume.

Teletext Language

(Depending on the country and model)

MENU → Broadcasting → Teletext Language → ENTER

- Teletext Language

  English is the default in cases where the selected language is unavailable in the broadcast.

- Primary teletext / Secondary teletext

  Primary teletext and Secondary teletext may not be supported in some locations.

Common Interface

MENU → Broadcasting → Common Interface → ENTER

(Depending on the country and model)

- CI Menu: This enables the user to select from the CAM-provided menu. Select the CI Menu based on the menu CI CARD.
- CAM video transcoding: You can configure the setting to transcode the video codec from the CAM automatically. Turn it Off if you do not want to use it.

  You must use a CAM that supports transcoding the video codec.

- **Application Info**: View information on the CAM inserted into the CI slot and on the “CI or CI+ CARD” which is inserted into the CAM. You can install the CAM anytime whether the TV is on or off.
  1. Purchase a CI CAM module at your nearest dealer or by phone.
  2. Firmly insert the “CI or CI+ CARD” into the CAM in the direction of the arrow.
  3. Insert the CAM with the “CI or CI+ CARD” into the common interface slot, in the direction of the arrow so that it aligns parallel with the slot.
  4. Check if you can see a picture on a scrambled signal channel.

❑ Changing the Preset Picture Mode

■ Picture Mode TOOLS

MENU → Picture → Picture Mode → ENTER

Select your preferred picture type.

When connecting a PC, you can only make changes to the Entertain and Standard.

- Dynamic: Suitable for a bright room.
- Standard: Suitable for a normal environment.
- Natural (depending on the model): Suitable for reducing eye strain.
- Movie: Suitable for watching movies in a dark room.
- Entertain: Suitable for watching movies and games.

  It is only available when connecting a PC.

❑ Adjusting Picture Setting

■ Backlight / Contrast / Brightness / Sharpness / Colour / Tint (G/R)

Your television has several setting options for picture quality control.

NOTE

- In analogue TV, AV modes of the PAL system, the Tint (G/R) function is not available. (Depending on the country and model)
- When connecting a PC, you can only make changes to Backlight, Contrast, Brightness and Sharpness.
- Settings can be adjusted and stored for each external device connected to the TV.
- Lowering picture brightness reduces power consumption.

Picture Size

MENU → Picture → Picture Size → ENTER

Set the various picture options such as picture size and aspect ratio.

The available items may differ depending on the selected mode.

Depending on the input source, the picture size options may vary.

- Picture Size TOOLS: Your cable box/satellite receiver may have its own set of screen sizes as well. However, we highly recommend you use 16:9 mode most of the time.

  Auto Wide: Automatically adjusts the picture size to the 16:9 aspect ratio.

  16:9: Sets the picture to 16:9 wide mode.

Wide Zoom: Magnifies the picture size more than 4:3.

Adjusts the **Position** by using ▲, ▼ buttons.

Zoom: Magnifies the 16:9 wide pictures vertically to fit the screen size.

Adjusts the **Zoom** or **Position** by using ▲, ▼ button.

4:3: Sets the picture to basic (4:3) mode.

Do not watch in 4:3 format for a long time. Traces of borders displayed on the left, right and centre of the screen may cause image retention (screen burn) which are not covered by the warranty.

Screen Fit: Displays the full image without any cut-off when HDMI (720p / 1080i / 1080p) or Component (1080i / 1080p) signals are inputted.

Custom: Magnifies or shrinks 16:9 pictures vertically and/or horizontally. A magnified or shrunk picture can be moved left, right, up, and down.

- **Zoom/Position**: Adjust the picture size and position. It is only available in **Zoom** and **Custom**.
- **Position**: Adjust the picture position. It is only available in **Screen Fit** or **Wide Zoom**.

  NOTE

  - After selecting **Screen Fit** in HDMI (1080i / 1080p) or Component (1080i / 1080p) mode, you may need to centre the picture:

    1. Select the **Position**. Press the **ENTER** button.
    2. Press the ▲, ▼, ◄ or ► button to move the picture.

- If you want to reset the position you adjusted, select **Reset** in the **Position** screen. The picture will be set to its default position.
- If you use the **Screen Fit** function with HDMI 720p input, 1 line will be cut at the top, bottom, left and right as in the overscan function.

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

PIP TOOLS

MENU → Picture → PIP → ENTER

You can watch the TV tuner and one external video source simultaneously. For example, if you have a cable box connected to the Cable In jack, you can use PIP to watch programmes from the cable box and watch a movie from a Blu-ray player attached to the HDMI In jack. PIP does not function in the same mode.

NOTE

- If you turn the TV off while watching in PIP mode, the PIP window will disappear.
- You may notice that the picture in the PIP window becomes slightly unnatural when you use the main screen to view a game or karaoke.

- PIP settings

Main picture	Sub picture
Component (Depending on the country and model), HDMI1, HDMI2/DVI	TV, AV (Depending on the country and model)

- **PIP**: Activate or deactivate the PIP function.
- **Source** (Depending on the country and model): Selects the source for the sub-screen.
- **Aerial** (Depending on the country and model): Select aerial for the sub-screen.
- **Channel**: Select the channel for the sub-screen.
- **Size** (/): Select a size for the sub-picture.
- **Position** (/ / /): Select a position for the sub-picture.
- **Sound Select**: You can choose the desired sound in **PIP** mode.

❑ Changing the Picture Options

■ Advanced Settings

MENU → Picture → Advanced Settings → ENTER

(available in Standard / Movie mode)

You can adjust the detailed setting for the screen including colour and contrast.

When connecting a PC, you can only make changes to the White Balance and Gamma.

- Dynamic Contrast: Adjust the screen contrast.
- Black Tone: Select the black level to adjust the screen depth.
- Flesh Tone: Adjust the flesh tone colour.

- **RGB Only Mode**: Displays the Red, Green and Blue colour for making fine adjustments to the hue and saturation.
- **Colour Space**: Adjust the range of colours available to create the image.
- **White Balance**: You can adjust the colour temperature of the picture to make white objects look white, and the overall picture appear natural.

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

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

  Reset: Resets the **White Balance** to its default settings.

- **Gamma**: Adjust the primary colour intensity.
- **Motion Lighting**: Reduce power consumption by brightness control adapted motion.
  - Only available in **Standard** mode.
  - When changing a setting value of **Backlight**, **Brightness** or **Contrast**, **Motion Lighting** will be set to **Off**.

Picture Options

MENU → Picture → Picture Options → ENTER

When connecting a PC, you can only make changes to the Colour Tone.

- Colour Tone

  Warm1 or Warm2 will be deactivated when the picture mode is Dynamic.

  Settings can be adjusted and stored for each external device connected to an input on the TV.

- Digital Clean View: If the broadcast signal received by your TV is weak, you can activate the Digital Clean View feature to reduce any static and ghosting that may appear on the screen.

  When the signal is weak, try other options until the best picture is displayed.

Auto Visualisation: When changing analogue channels, displays signal strength.

- Only available for analogue channels.
- When the **INFO** button is pressed, the signal strength bar is displayed.
- When bar is green, you are receiving the best possible signal.

- **MPEG Noise Filter**: Reduces MPEG noise to provide improved picture quality.
- **HDMI Black Level**: Selects the black level on the screen to adjust the screen depth.
  - Available only in **HDMI** mode (RGB signals).

- **Film Mode**: Sets the TV to automatically sense and process film signals from all sources and adjust the picture for optimum quality.
  - Available in TV mode and external input mode which supports SD (480i / 576i) and HD (1080i) except in PC mode.
  - If the screen does not seem natural, change its option to **Off** / **Auto1** / **Auto2** in **Film Mode**.
- **Analogue Clean View** (Analogue channels only) (Depending on the country and model): Reduces diagonal noise in picture caused by the crosstalk of signals.
- **LED Clear Motion** (Depending on the model): Removes drag from fast scenes with a lot of movement to provide a clear picture.
  - It will be deactivated when the **Picture Mode** is set to **Natural**.
  - The screen may become slightly darker when you play **LED Clear Motion**.

Picture Off TOOLS

MENU → Picture → Picture Off → ENTER

The screen is turned off but the sound remains on. Press any button except volume button and power button to turn on the screen.

Reset Picture

MENU → Picture → Reset Picture → ENTER

Resets your current picture mode to its default settings.

❑ Changing the Preset Sound Mode

■ Sound Mode

MENU → Sound → Sound Mode → ENTER

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

If Speaker Select is set to External Speaker, Sound Mode is disabled.

❑ Adjusting Sound Settings

■ Sound Effect

(standard sound mode only)

MENU → Sound → Sound Effect → ENTER

- **Equaliser**

  Use Equaliser to customise sound setting for each speaker.

  Balance: Adjusts the balance between the right and left speaker.

  100Hz / 300Hz / 1kHz / 3kHz / 10kHz (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.

  Reset: Resets the equaliser to its default settings.

If Speaker Select is set to External Speaker, Sound Effect is disabled.

Speaker Settings

MENU → Sound → Speaker Settings → ENTER

- **Speaker Select** TOOLS

  A sound echo may occur due to a difference in decoding speed between the main speaker and the audio receiver. In this case, set the TV to **External Speaker**.

  When **Speaker Select** is set to **External Speaker**, the volume and **MUTE** buttons will not operate and the sound settings will be limited.

When **Speaker Select** is set to **External Speaker**.

- **TV Speaker**: Off, **External Speaker**: On

When **Speaker Select** is set to **TV Speaker**.

- **TV Speaker**: On, **External Speaker**: On

If there is no video signal, both speakers will be mute.

- **Auto Volume**

  To equalize the volume level on each channel, set to **Normal**.

  Night: This mode provides an improved sound experience compared to **Normal** mode, making almost no noise. It is useful at night.

  To use the volume control on the source device connected to the TV, set **Auto Volume** to **Off** on the TV. Otherwise, a change to the volume control of the source device may not be applied.

- **TV Installation Type**

  Specify the TV's installation type. Choose between **Wall Mount** and **Stand** to optimize the TV's sound automatically.

Additional Settings

MENU → Sound → Additional Settings → ENTER

- DTV Audio Level (Digital channels only): This function allows you to reduce the disparity of a voice signal (which is one of the signals received during a digital TV broadcast) to a desired level.
  - According to the type of broadcast signal, MPEG / HE-AAC can be adjusted between -10dB and 0dB.
  - To increase or decrease the volume, adjust between the range 0 and -10 respectively.
- HDMI Audio Format : Sets the audio input signal format suitable for the external device connected to the TV's HDMI port.

- **Dolby Digital Comp**: This function minimises signal disparity between a dolby digital signal and a voice signal (i.e. MPEG Audio, HE-AAC, ATV Sound).

  Select **Line** to obtain dynamic sound, and **RF** to reduce the difference between loud and soft sounds at night time.

  Line: Set the output level for signals greater or less than -31dB (reference) to either -20dB or -31dB.

  RF: Set the output level for signals greater or less than -20dB (reference) to either -10dB or -20dB.

Reset Sound

MENU → Sound → Reset Sound → ENTER

Reset all sound settings to the factory defaults.

❑ Selecting the Sound Mode TOOLS

When you set to **Dual I-II**, the current sound mode is displayed on the screen.

	Audio Type	Dual I-II	Default
A2 Stereo	Mono	Mono	Automatic change
	Stereo	Stereo ↔ Mono	
	Dual	Dual I ↔ Dual II	Dual I
NICAM Stereo	Mono	Mono	Automatic change
	Stereo	Mono ↔ Stereo	
	Dual	Mono → Dual I ↖ Dual II ↙	Dual I

- If the stereo signal is weak and an automatic switching, occurs, then switch to the mono.
- Only activated in stereo sound signal.
- Only available when the **Source** is set to **TV**.

❑ Executing initial setup

■ Setup

MENU → System → Setup → ENTER

Configure the channels and the time when setting up the TV for the first time or when resetting the unit.

Execute the initial setup following instructions that the TV guides.

❑ Setting the Time

■ Time

MENU → System → Time → ENTER

The current time will appear every time you press the **INFO** button.

- Clock: Setting the clock is for using various timer features of the TV.

  If you disconnect the power cord, you have to set the clock again.

  Clock Mode: Set up the current time manually or automatically.

  – Auto: Set the current time automatically using the time from a digital channel.

- The aerial must be connected in order to set the time automatically.

– **Manual**: Set the current time manually.

- Depending on the broadcast station and signal, the auto time set up may not be correct. In this case, set the time manually.

Clock Set: Set the **Date** and **Time**.

- Available only when **Clock Mode** is set to **Manual**.
- You can set the **Date** and **Time** directly by pressing the number buttons on the remote control.

Time Zone (Depending on the country and model): Select your time zone.

- This function is only available when the **Clock Mode** is set to **Auto**.
- When selecting **Manual** in **Time Zone**, **GMT** and **DST** will be activated.

Time Offset (Depending on the country and model): Adjusts the time when your TV receives the time information via Internet. Set the right time by selecting an offset.

- The current time will be set through a network, if the TV fails to receive the time information including the broadcast signal from TV stations. (ex: Watching TV via set-top box, Satellite receiver, or etc)

❑ Using the Sleep Timer

MENU → System → Time → Sleep Timer → ENTER

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

  Use the ▲/▼ buttons to select a period of time, and then press ENTER. To cancel the Sleep Timer, select Off.

❑ Setting the On / Off Timer

MENU → System → Time → On Timer <or> Off Timer → ENTER

- On Timer: You can set up three separate On Timer configurations. (On Timer 1, On Timer 2, On Timer 3)

  Setup: Select Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun or Manual to set at your convenience. If you select Manual, you can set up the day you want to activate the timer.

  The ✓ mark indicates the day you've selected.

  Time: Set the hour and minute.

  Volume: Set the desired volume level.

Source: To select the source of the content that will play when the TV turns on. You can:

- Select **TV** and have the TV display a specific aerial or cable channel.
- Select **USB** and have the TV play back photo or audio files from a USB device.
- Select a source on your TV that you have connected a set-top box to, and have the TV display a channel from the set-top box.

The USB device must be connected to your TV before you can select **USB**.

If you select a source other than **TV** or **USB**, you must:

- Have a cable or satellite set-top box attached to that source
- Set the set-top box to the channel you want to watch when the TV goes on
- Leave the set-top box turned on.

When you select a source other than **TV** or **USB**, the Aerial and Channel options will disappear.

Aerial (when the **Source** is set to **TV**): Select **ATV** or **DTV**.

Channel (when the **Source** is set to **TV**): Select the desired channel.

Music / **Photo** (when the **Source** is set to **USB**): Select a folder in the USB device containing music or photo files to be played when the TV is turned on automatically.

- If there is no music file on the USB device or the folder containing a music file is not selected, the timer function does not operate correctly.
- When there is only one photo file in the USB device, the slide show will not play.
- If a folder name is too long, the folder cannot be selected.
- Each USB you use is assigned its own folder. When using more than one of the same type of USB, make sure the folders assigned to each USB have different names.

– It is recommended that you use a USB memory stick and a multi card reader when using **On Timer**.

– The **On Timer** function may not work with USB devices with a built-in battery, MP3 players, or PMPs made by some manufacturers because these devices take a long time to be recognised.

- **Off Timer**: You can set up three separate **Off Timer** configurations. (**Off Timer 1**, **Off Timer 2**, **Off Timer 3**)

  Setup: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual** to set at your convenience. If you select **Manual**, you can set up the day you want to activate the timer.

  The ✓ mark indicates the day you've selected.

  Time: Set the hour and minute.

❑ Economical Solutions

■ Eco Solution

MENU → System → Eco Solution → ENTER

- Energy Saving: This adjusts the brightness of the TV in order to reduce power consumption.
- Eco Sensor (depending on the model): To enhance your power savings; the picture settings will automatically adapt to the light in the room.

  If you adjust the Backlight, the Eco Sensor will be set to Off.

Min. Backlight: When **Eco Sensor** is **On**, the minimum screen brightness can be adjusted manually.

If **Eco Sensor** is **On**, the display brightness may change (become slightly darker or brighter) depending on the surrounding light intensity.

- **No Signal Power Off**: To avoid unnecessary energy consumption, set how long you want the TV to remain on if it's not receiving a signal.

  Disabled when the PC is in power saving mode.

- **Auto Power Off**: If the TV remains turned on for four hours without any user input, the TV will automatically turn off to prevent overheating.

  If the **Auto Power Off** option is set to **Off**, the TV will stay on even if no operations are performed on the TV.

❑ Other Features

■ Menu Language

MENU → System → Menu Language → ENTER

Set the menu language.

Auto Protection Time

MENU → System → Auto Protection Time → ENTER

- Auto Protection Time (Off / 2 hours / 4 hours / 8 hours / 10 hours):
  If the screen remains idle with a still image for a certain period of time defined by the user, the screen saver is activated to prevent the formation of ghost images on the screen.

General

MENU → System → General → ENTER

- Game Mode: When connecting to a game console such as PlayStation™ or Xbox™, you can enjoy a more realistic gaming experience by selecting game mode.

  NOTE

  - Precautions and limitations for game mode
    - To 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 in **TV** mode.
- After connecting the game console, set **Game Mode** to **On**. Unfortunately, you may notice reduced picture quality.
- If **Game Mode** is **On**:
  - **Picture Mode** is set to **Game** and **Sound Mode** is set to **Game**.

- **Panel Lock**: Lock or unlock all the keys on the panel at once. When Panel Lock is on, none of the keys on the panel will work.
- **Boot Logo**: Display Samsung logo when the TV is turned on.

Change PIN

MENU → System → Change PIN → ENTER

Change your password required to set up the TV.

- The PIN input screen appears before the setup screen.
- Enter your 4-digit PIN. Change the PIN using the **Change PIN** option.

DivX® Video On Demand

MENU → System → DivX® Video On Demand → ENTER

Shows the registration code authorised for the TV. If you connect to the DivX web site and register with 10-digit registration code, you can download the VOD activation file.

Once you play it using **Videos**, the registration is completed.

For more information on DivX® VOD, visit http://vod.divx.com.

❑ Using the Source List

■ Source List

MENU → Applications → Source List → ENTER

When you press the **SOURCE** button, Source screen will be displayed at once.

You can only choose external devices that are connected to the TV. In Source, connected inputs are highlighted.

For the detailed information, refer to “Changing the Input Source” in User Manual.

❑ Connecting a USB Device

1. Turn on your TV.
2. Connect a USB device containing photo, music and movie files to the USB port on the side of the TV.
3. When USB is connected to the TV, popup window appears. You can select the **Photos**, **Videos**, **Music** or **Story Replay** (Depending on the country and model) directly.

- It might not work properly with unlicenced multimedia files.
- Need-to-Know List before using Media Contents
  - MTP (Media Transfer Protocol) is not supported.
  - Supported file systems are FAT and exFAT.
  - Certain types of USB Digital camera and audio devices may not be compatible with this TV.
  - Media Play only supports sequential jpeg format.
  - Media Play only supports USB Mass Storage Class (MSC) devices. MSC is a Mass Storage Class Bulk-Only Transport device. Examples of MSC are Thumb drives, Flash Card Readers (USB HUB are not supported). Devices should be connected directly to the TV's USB port.

- 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.
- 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.
- The maximum supported JPEG resolution is 15360 x 8640 pixels.
- For unsupported or corrupted files, the “Not Supported File Format” message is displayed.
- The scene search and thumbnail functions are not supported in the **Videos**.

- MP3 files with DRM that have been downloaded from a non-free site cannot be played. Digital Rights Management (DRM) is a technology that supports the creation, distribution and management of the content in an integrated and comprehensive way, including the protection of the rights and interests of the content providers, the prevention of the illegal copying of contents, as well as managing billings and settlements.
- PTP connection mode is fully available only with digital cameras. When connecting a smartphone or tablet to the TV using PTP mode, it may not be recognised.
- Connect a USB HDD to the dedicated USB (HDD 5V 1A) port. More than 2TB USB HDD is not supported. (Depending on the country and model)
- A USB device that requires high power (more than 500mA or 5V) may not be supported. The HDD (Hard Disk Drive) connected to USB is not supported.

- If the TV has been no input during time set in **Auto Protection Time**, the screen saver will run.
- The power-saving mode of some external hard disk drives may be released automatically when connected to the TV.
- If a USB extension cable is used, the USB device may not be recognised or the files on the device may not be read.
- If a USB device connected to the TV is not recognised, the list of files on the device is corrupted or a file in the list is not played, connect the USB device to the PC, format the device and check the connection.
- If a file deleted from the PC is still found when Media Contents is run, use the “Empty the Recycle Bin” function on the PC to permanently delete the file.
- If the number of files and folders saved on a USB storage device is approximately over 4000, the files and folders may not appear and some folders may not be opened.

Disconnecting a USB Device

1. Press the **SOURCE** button.
2. Select a desired USB device, and then press the **TOOLS** button. The **Tools** menu appears.
3. Select **Disconnect USB Device**, and then wait until the selected USB device is disconnected. You can remove a USB device from the TV.

To remove a USB device from the TV, we recommend use **Disconnect USB Device** function.

❑ Using the Media Contents

MENU → Applications → Media Play → ENTER

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

1. Press the **MEDIA.P** button.
2. Press ◄/► button to select desired menu (**Photos**, **Videos**, **Music**, **Story Replay** (Depending on the country and model)), then press the **ENTER** button.
3. Press ◄/► button to select desired device, then press the **ENTER** button again.
4. Press the ▲/▼/◄/► button to select the desired file in the list, then press the **ENTER** button or ►II / ► (Depending on the country and model) button.

Playing the selected files

1. Press the ▲ button to select **Options** at the top of each main screen and select **Play Selected**.
2. Select the desired files.
   - The check box appears to the left of the selected files.
   - Press **ENTER** button again to deselect the file.
3. Press the ▲ button to select **Play**.
   - You can select or deselect all files pressing the **Select All** / **Deselect All**.

❑ Playing the Photos / Videos / Music / Story Replay (Depending on the country and model)

During playing a file, press the ▲/▼/◄/► button to select the desired menu.

- When the option menu is not displayed, press the **TOOLS** button or **ENTER** button.
- You can also use ►II or ► (Depending on the country and model) /■/ ◄◄/►► buttons on the remote control during playback.
- If you press the **INFO** button during playback, you can view the playback information.

Playback menu

Button	Operation	Photos	Videos	Music
❮ / ❯	Previous / Next	●		
▶II or (▶ / II) / ■ (Depending on the country and model)	Start Slide Show / Stop Slide Show	●		
	Play / Pause	Mini Player*	●	●
⏮ / ⏭	Previous / Next	Mini Player*	●	●
◀◀ / ▶▶	Rewind / Fast Forward	●	●	●

* When setting the Background Music to Mini Player in Photos, these buttons previous appear.

Photos

Button	Operation	
	Slideshow Settings	You can set the Speed and Effects during the slide show.
	Zoom	You can zoom the image.
	Rotate	You can rotate images in full screen mode.
	Background Music / Mini Player	You can set background music when watching a slide show. / You can control simple playback menus.
	Settings	Picture Mode / Sound Mode: You can adjust the picture or sound setting. Information: You can see detailed information about the played file.

- During the slide show, all files in the file list will be displayed in order.
- When you press the ►II or ► (Depending on the country and model) button (or ▲ button → **Options** → **Slide Show**) in the file list, slide show will be started immediately.
- During the slide show, you can adjust the slide show speed using ◄◄ (REW) or ►► (FF) button.

- Supported Photo Formats
  - For the details, refer to “Specifications” in User Manual.

Videos

Button	Operation	
	Search	Search Titles: You can move the other file directly. Search Time Bar: You can search the video using ◄ and ► button at one minute interval or entering the number directly. It may not be supported depending on the input source.
	Repeat Mode	You can play movie files repeatedly.
	Picture Size	You can adjust the picture size to your preference.

Button	Operation	
	Settings	Subtitle Settings: You can play the video with subtitles. This function only works if the subtitles are the same file name as the video. Picture Mode / Sound Mode: You can adjust the picture or sound setting. Audio Language: You can change the audio language if the video has more than one language. Information: You can see detailed information about the played file.

- If video time information is unknown, play time and progress bar are not displayed.
- In this mode, you can enjoy movie clips contained on a Game, but you cannot play the Game itself.

- Supported Subtitle / Video Formats
  - For the details, refer to “Specifications” in User Manual.

Music

Button	Operation	
	Repeat	You can play music files repeatedly.
	Shuffle	You can play the music randomly.
	Sound Mode	You can adjust the sound setting.

Only displays the files with supported music 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 music files, adjust the **Equaliser** in the **Sound** menu. (An over-modulated music file may cause a sound problem.)

- Supported Music Formats

  For the details, refer to “Specifications” in User Manual.

Setting the Encoding language

Set the encoding language if the text is not supported.

1. Press the ▲ button to select **Options** at the top of music main screen and select **Encoding**.
2. Select the desired encoding language.

Components & DTV (Depending on the country and model)

Source	Resolution	Frequency (Hz)
Components	1280 x 720p	50 / 59.94 / 60 Hz
	1920 x 1080i	50 / 59.94 / 60 Hz
	1920 x 1080p	23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60 Hz
DTV	1280 x 720p	50 / 59.94 / 60 Hz
	1920 x 1080i	50 / 59.94 / 60 Hz
	1920 x 1080p	25 Hz

Videos / Photos (In Media Play)

For the details, refer to “Specifications” in user manual.

❑ Viewing the e-Manual

■ e-Manual

MENU → Support → e-Manual → ENTER

You can read the introduction and instructions about the TV features stored in your TV.

For the detailed information about e-Manual Screen, refer to “How to use the e-Manual” in User Manual.

❑ Using the Self Diagnosis

■ Self Diagnosis

MENU → Support → Self Diagnosis → ENTER

Self Diagnosis might take few seconds, this is part of the normal operation of the TV.

- Picture Test: Use to check for picture problems.
- Sound Test: Use the built-in melody sound to check for sound problems.

  If you hear no sound from the TV's speakers, before performing the sound test, make sure Speaker Select is set to TV Speaker in the Sound menu.

- The melody will be heard during the test even if the sound is muted by pressing the **MUTE** button.

- **Signal Information** (Digital channels only): HDTV channel's reception quality is either perfect or the channels are unavailable. Adjust your aerial to increase signal strength.
- **Reset**: Reset all settings to the factory defaults except network settings.
  - The PIN input screen appears before the setup screen.
  - Enter your 4-digit PIN. Change the PIN using the **Change PIN** option.

❑ Updating the Software

■ Software Update

MENU → Support → Software Update → ENTER

The Software Update menu lets you upgrade your TV's software to the latest version.

When software is upgraded, video and audio settings you have made will return to their default settings. We advise you to write down your settings so that you can easily reset them after the upgrade.

- **Update now**

  The TV's firmware can be updated through either USB connection or broadcast signal.

  – By USB: Insert a USB drive containing the firmware upgrade file, downloaded from “www.samsung.com” into the TV.

    Please be careful not to disconnect the power or remove the USB drive until upgrades are complete. The TV will be turned off and on automatically after completing the firmware upgrade.

– By Channel: Upgrade the software using the broadcasting signal.

  - If the function is selected during the software transmission period, software will be automatically searched and downloaded.
  - The time required to download the software is determined by the signal status.

- **Auto update** (Depending on the country and model): This option upgrades the TV while it is in Standby Mode. This allows the TV to upgrade itself automatically while it is not in use. Because the TV's internal processes are operating, the screen may emit a faint glow, and this may continue for more than 1 hour until the software download is complete.
- **Manage Satellite Channels** (Depending on the country and Model): Manage software downloads via a satellite channel.

❑ Changing the Use Mode

■ Use Mode

MENU → Support → Use Mode → ENTER

Select the Use Mode suitable for your place. We strongly recommend you select Home Use.

- Home Use: Home Use is the default setting.
- Store Demo: Store Demo is for retail environments only. If you select Store Demo, some functions will not work, and the picture settings will be reset every 5 minutes.

❑ Viewing the Contact Samsung

■ Contact Samsung

MENU → Support → Contact Samsung → ENTER

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 centres, and how to download products and software.

❑ Using the Sports Mode

■ Sports Mode TOOLS

MENU → Applications → Sports Mode → ENTER

This mode provides optimised condition for watching sports games.

- A (Zoom): Pause playback and divide the picture into 9 parts. Select a part to zoom it in. Press this button again to resume.

When the Sports Mode is On, the picture and sound modes are set to Stadium automatically.

If you turn the TV off while watching Sports Mode, the Sports Mode will be disable.

When the Data Service is running, the Zoom is not available.

❑ Using the African Cinema Mode

■ African Cinema Mode

(Depending on the country and model)

MENU → Applications → African Cinema Mode → ENTER

When you set African Cinema Mode to On, the TV provides an optimal picture and sound for popular content.

This function is only available on certain models in specific geographical areas.

❑ Using the More TV Feature function

(Depending on the country and model)

(Depending on the country name may different for **More TV Feature**)

■ More TV Feature TOOLS

MENU → Applications → More TV Feature → ENTER

This feature may not be available, depending on the model or country.

This function provides Screen Capture or Sound Recording from the TV screen being viewing. Additionally, you can save the capture image and record audio on the USB device connected to the TV. This function provides the TV screen you watched capture image and record audio.

More TV Feature are for personal use only, not for commercial purpose or communication to the public.

- **More TV Feature** name may vary depending on nations. **Family TV Feature** or **More TV Feature**.
- The user may not use those features to capture pictures or audios without prior approval from the copyright owners or to use it unlawfully.
- Samsung does not accept responsibility for any misuse of the service.

- **More TV Feature**

  Turns the **More TV Feature** function on or off.

- **Default Recording Device**

  You can set the default device for saving captured image files and recorded audio files.

- This function is only available when the USB device is connected to the TV.
- If the **More TV Feature** function is running, this function is not available.

Story Replay (Depending on the country and model)

1. To start **Story Replay** while watching TV, press B. This records audio in realtime, and captures the screen every 5 seconds in the meanwhile.
   - A pop-up window will appear on the screen while recording is in progress. The pop-up window displays the duration of the recording.
2. To stop **Story Replay**, press B. The recording is stored as a .plt file on the USB device connected to the TV. Thumbnails of the story recordings are then shown on the screen.

- Select the thumbnail screen to play the saved files on **Media Play**.
- You cannot change the channel or source to an external device. To change the channel or the source to an external device, first stop story recording.

Story Replay (Depending on the country and model) feature is just an application provided by samsung and samsung does not take any responsibility of its use by the user. The use/intended use of the application is for the personal or private use of the user only. User shall be responsible for complying with all other laws of the land while using the application and shall further be liable for any damage, penalty, legal action arising out of misuse of application, including without limitation, infringement of intellectual property rights.

Screen Capture

1. To capture the screen while watching TV, press C. This captures the screen. It may take 2 to 3 seconds to capture the screen.
2. Once captured, the image is saved as a. jpg file to the USB device connected to the TV. Thumbnails of captured images are then displayed on the screen.
   - Select the thumbnail screen to view the saved images on **Media Play**.
   - Screen capture resolution: 1280 x 720

Sound Recording

1. Press D. This records audio in real-time.
   - A popup window will appear on the screen while recording is in progress. The popup window displays the duration of the recording.
2. To stop recording, press D. The recording is stored as a. wav file on the USB device connected to the TV. Thumbnails of the audio recordings are then shown on the screen.
   - Select the thumbnail screen to play the saved audio files on **Media Play**.
   - You cannot change the channel or source to an external device. To change the channel or the source to an external device, first stop recording audio.

Restrictions

- A USB device must be connected to the TV in order to use it.
- **More TV Feature** can only be used if there is more than 5MB free space available on the USB device connected to the TV.
- Do not turn off the TV or disconnect the USB device while using **More TV Feature**. The file might not be saved or play if you do so.
- If the strength of the broadcast signal decreases or the signal is dropped altogether while using **More TV Feature**, the concerned file might not be saved or play.

More TV Feature cannot be used under the following circumstances:

- While **Media Play** is running
- While using **PIP**
- No signal
- Data service channels
- Scrambled channels
- Service not available channels
- Parental lock channels

❑ Using the Satellite System

For the details, you can find an additional web manual on our website "www.samsung.com".

❑ Listening to audio sound on mobile device through TV speaker (Sound Mirroring)

You can listen to audio sound on a mobile device through the TV speaker after connecting the device to the TV via Bluetooth.

- The Bluetooth technology is a short-range wireless technology that can connect Bluetooth devices such as mobile phone, laptop computer, earphone, and headset. Be sure to read the "Read Before Using Bluetooth Devices."
- The sound quality may differ with the wireless network status.
- While in sound mirroring, you cannot use the Sound menu.

❑ Connecting a mobile device via Bluetooth

1. Activate Bluetooth on your mobile device. Then the device searches for available devices.
2. Select the TV from the searched list. Then a pop-up window prompts asking whether or not to connect the mobile device.
   - If the TV is not found, turn off and on both TV and mobile device.
3. Select **Allow** in the pop-up window. Then the TV is connected to the mobile device.
   - The previously connected mobile devices are automatically connected when the Bluetooth is turned on.
   - While any content is being played on your mobile device, you can immediately listen to the content through the TV.
   - For more information about the buttons, refer to "Available buttons while in Sound Mirroring."

❑ Available buttons while in Sound Mirroring

Button	Operation	
▶ / ⏸	Pause / Play	Pauses or plays audio content.
⏭	Next	Plays the next audio content.
⏮	Previous	Plays the previous audio content.
	Picture Off	Plays audio files only with the screen off.
✕	Exit	Exits from the Sound Mirroring.

❑ Read Before Using Bluetooth Devices

- Only one Bluetooth device can be connected.
- The TV and Bluetooth device may disconnect, depending on the distance between them.
- A Bluetooth device may hum or malfunction in the following cases:
  - When a part of your body is in contact with the receiving/transmitting system of the Bluetooth device or the TV.
  - When the device is subject to electrical variation from obstructions caused by a wall, corner, or office partitioning.
  - When the device is exposed to electrical interference from same frequency-band devices including medical equipment, microwave ovens, and wireless LANs.

❑ All care protection

1. All care protection will update Picture quality every 5,000 hours.
2. All care protection pop-up menu will show every 5,000 hours, Max 3 times (5,000/10,000/15,000 hours)
3. The notification or pop-up menu will be closed by time out (30sec.) or selecting any key on the remote except power key.

- When user turns the power off and then on again, pop-up menu for requesting update is provided again.
- Pop-up menu is provided only 3 times including initial pop-up menu.
- Pop-up menu will show only at TV on time.