



INSTALLATION MANUAL

LED LCD TV

Please read this manual carefully before operating your set and retain it for future reference.

LY54**

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EZ MANAGER

EZ-Manager 2.1 - Introduction

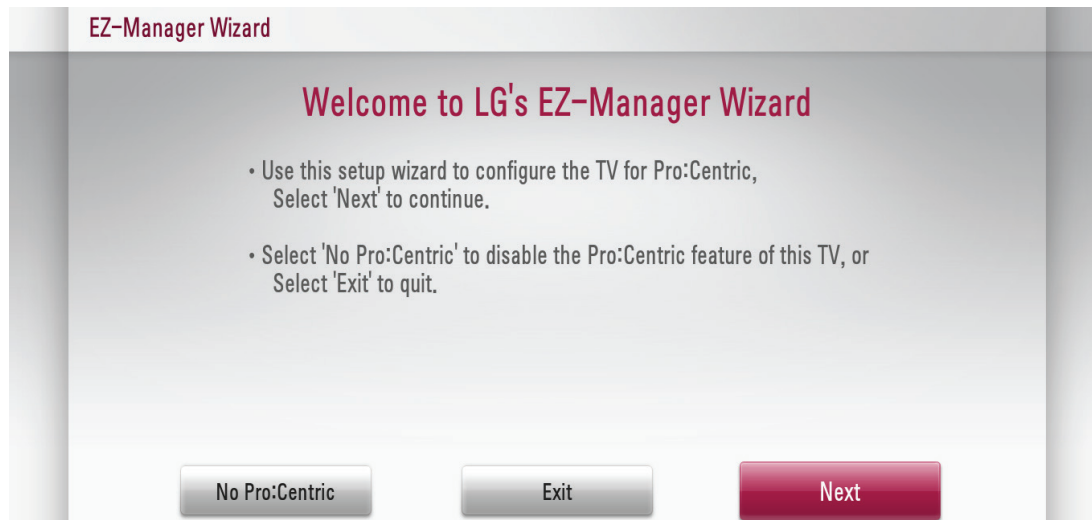
The Pro:Centric Platform enables you to simply install, manage and use guest-centric solutions.

The default Domain "procentric.local" and IP Server Address are needed to be registered in DNS. TV will contact the IP Server using the default Domain "procentric.local" via IP on server search page. If TV doesn't contact the Server, TV will search the pre-defined channel earlier than all channels (DVB-C only)

The frequencies of pre-defined channels are '794000, 714000, 634000, 554000, 474000, 394000, 314000, 234000, 154000, 90000 khz'.

EZ-Manager Wizard

- Image shown may differ from your TV.

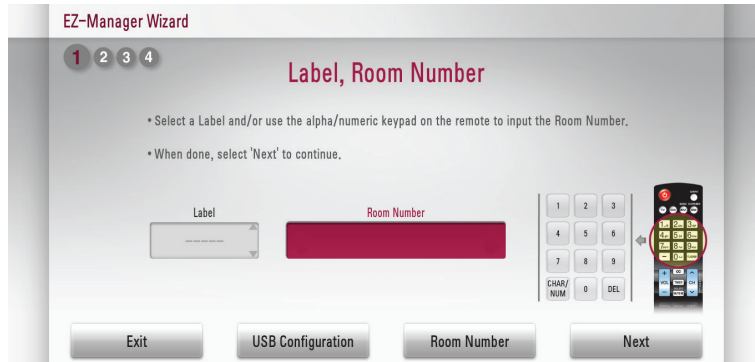


If you are using Pro:Centric, this setup wizard will help you easily set up the TV. Select 'Next' to continue.

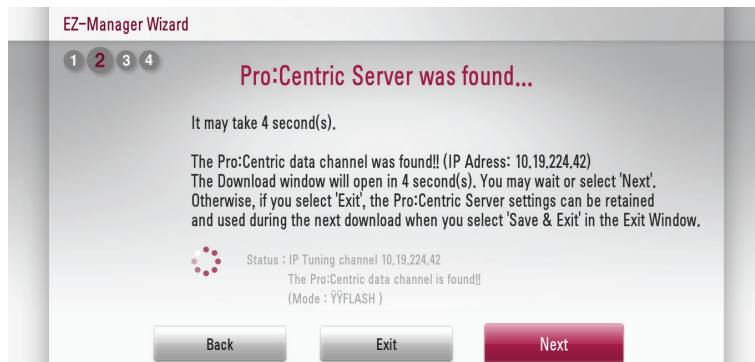
Otherwise, you may select either 'No Pro:Centric', if you will not be installing a Pro:Centric Server or 'Exit' to quit.

EZ-Manager Wizard - Automatically for Setup

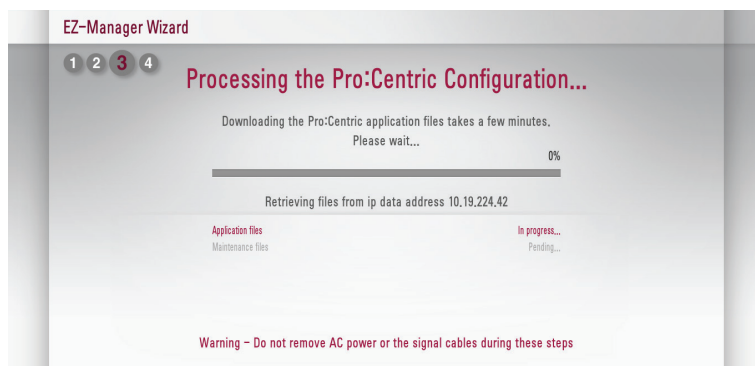
1. Select a Label and/or enter the Room Number using the numeric keypad on the remotes. To continue, move and select **'Next'**.



2. This step automatically searches for the Pro:Centric Server. If was found the Pro:Centric data channel, select the **"Next"**.



3. Downloading the Pro:Centric application files takes few minutes.

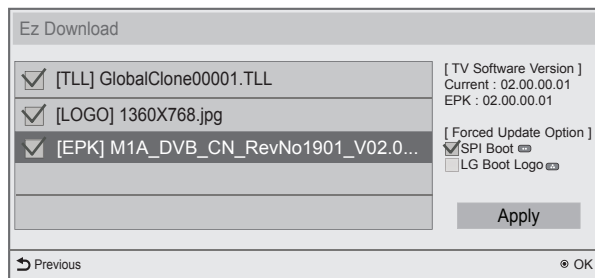
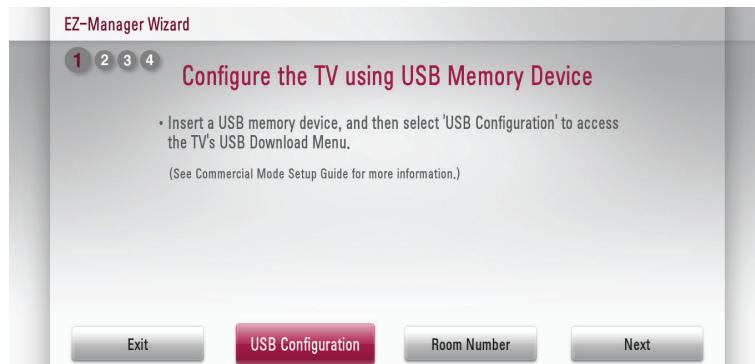


4. After the installation is completed, the following screen will be displayed.



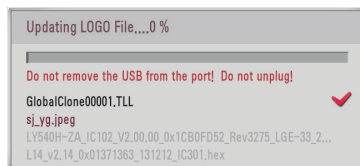
EZ-Manager Wizard - Automatically for Setup (USB Configuration)

1. Select the 'USB Configuration → Ez Download'.



* If you have USB Memory for "lgsmartininstall" or "LGSMARTINSTALL" folder, this step automatically searches for the USB file list page.

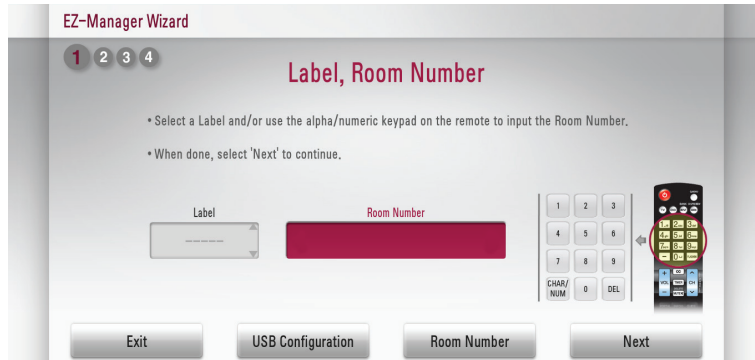
2. Downloading the software/jpeg/TLL files takes few minutes.



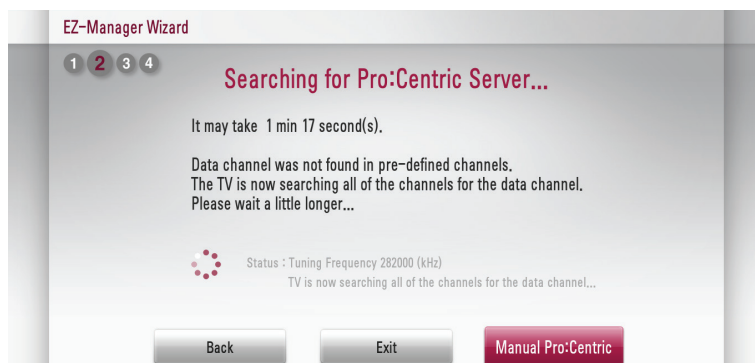
3. After the installation is completed, turn off.

EZ-Manager Wizard - Manually for Setup

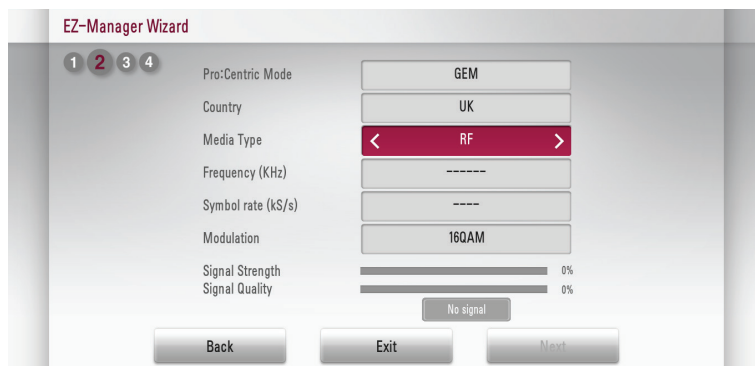
1. Select a Label and/or enter the Room Number using the numeric keypad on the remotes. To continue, move and select 'Next'.



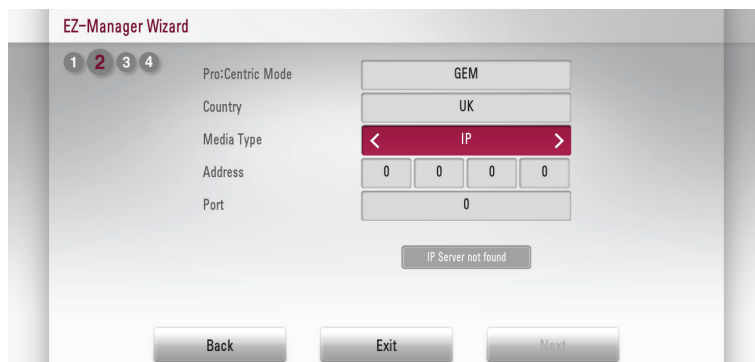
2. Please select the 'Manual Pro:Centric'.



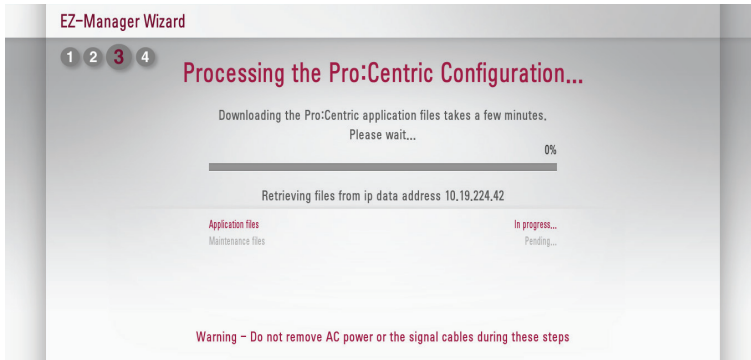
3. Select the Pro:Centric Mode "GEM" or "Flash".



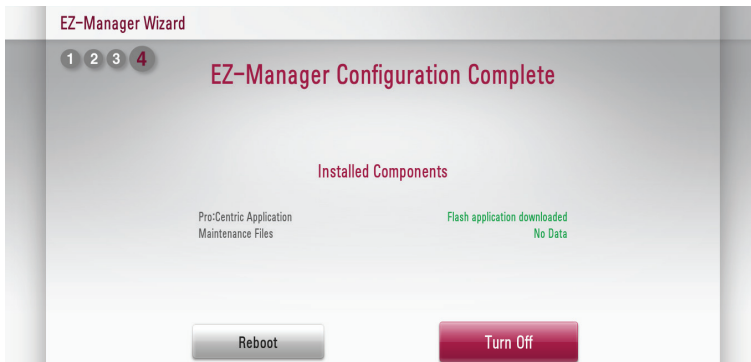
OR



3. Downloading the Pro:Centric application files takes few minutes.



4. After the installation is completed, the following screen will be displayed.



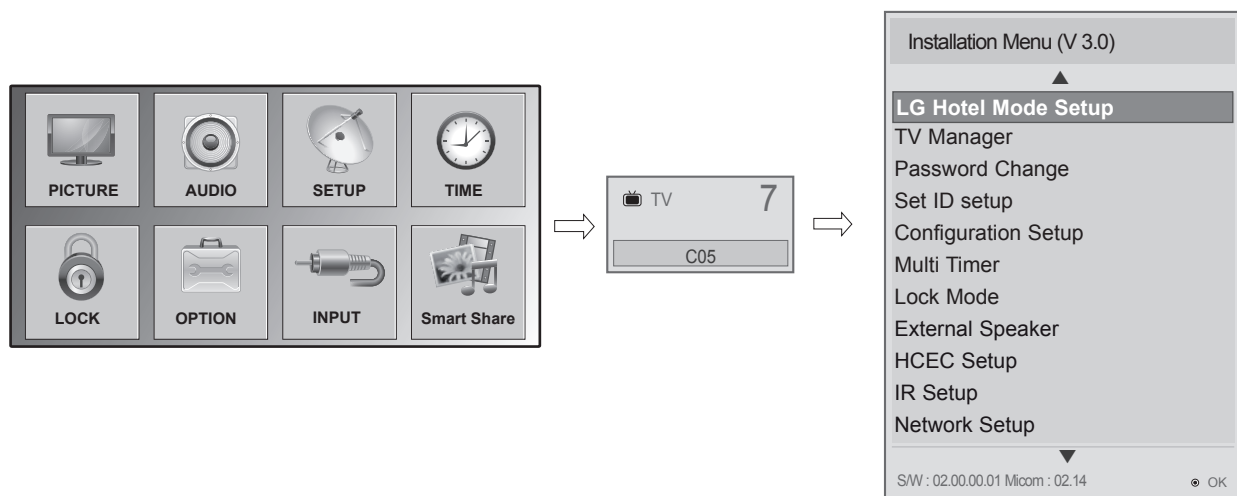
INSTALLATION MENU

Introduction

The abundant functions for Hotel TV linked with software installation can be projected on OSD as 'Installation Menu'.

The wide range of hotel features can be performed simply on additional window to enhance the LG hotel TV's easy installation and convenient operation for Hotelier and System Integrators.

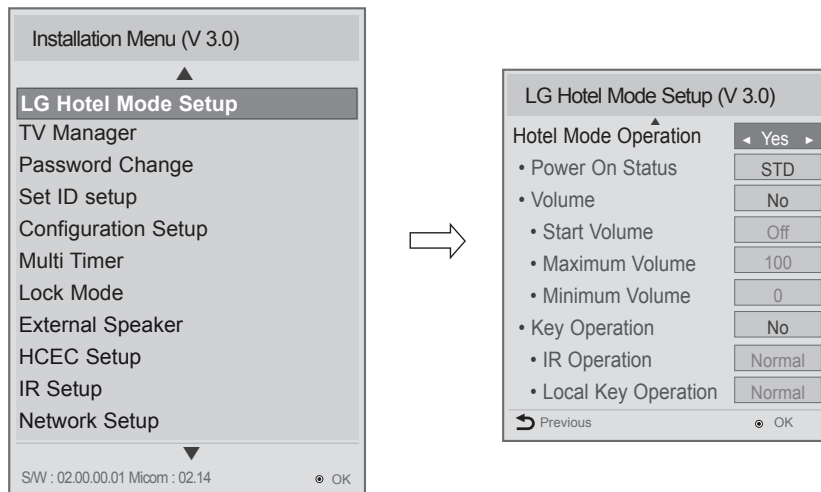
- Image shown may differ from your TV.



- 1 Press the **Setting** button for more than 5 seconds using the user remote control, programme information will appear at top left on the screen.
- 2 Enter a four digit password and press OK button.
 - The TV is set with the initial password "1-1-0-5".
- 3 Use the ∇ \blacktriangle button to select the desired menu.

LG Hotel Mode Setup

- Image shown may differ from your TV.



- 1 Use the ∇ \blacktriangle button to select the LG Hotel Mode Setup.
- 2 Use the **OK** button and then ∇ \blacktriangle button to select Hotel Mode Operation.

*When 'Hotel Mode Operation' is set to Yes(Work), all functions of Hotel Mode apply.

(1) Hotel Mode Operation (DVB)

- Decide to work all functions of 'Hotel Mode Operation' or not by setting 'Hotel Mode Operation' as Yes(Work) or No(Do Not Work)
- When 'Hotel Mode Operation' is set to Yes(Work), all functions of Hotel Mode apply.
- When 'Hotel Mode Operation' is set to No(Do Not Work), all functions of Hotel Mode Do Not apply.
- When it is set to 'Yes', 'Key Lock' item of the User menu is disabled and the OSD is displayed same to the Local Key Operation setting of the Hotel mode.
- When it is set to 'Yes', all items reserved at the Schedule list are deleted and the reservation function is not supported. (applied for the model offering the reservation function)
- The TV triggered by the external device (ex: SIMPLINK, TVLink-Tuner, etc.) operates separately from the Hotel mode.
- When it is set to 'Yes', User Menu-> Option -> 'Factory Reset' is disabled.

(2) Power On Status

- Decide to select working status of TV Set when turn on main power.
- You can set with PWR, STD, LST.
- PWR always make TV set On status when turn on main power .
- STD make Stand-by status when turn on main power.
- LST make TVSet work like previous power status. As same concept as Power Backup mode; If main power were turned off in Power On status, TVSet would work in On status. If main power were turned off in Stand-by status, TVSet would work in Stand-by status.

(3) Volume ($0 \leq \text{Min} \leq \text{Start} \leq \text{Max} \leq 100$)

- Decide to apply volume policy of 'Start Volume', 'Maximum Volume' and 'Minimum Volume' as Yes(Work) or No(Do Not Work).

(3-1) Start Volume

This entry sets the start volume level when is power on.

- The level is specified as a number between minimum volume to maximum value. ($\text{Min} \leq \text{Start} \leq \text{Max}$)
- The default setting is 'Off' (disabled).
- When enabled, if the value is lower than the minimum specified in the minimum volume entry, the minimum volume entry must be used.
- When enabled, if the value is larger than the maximum specified in the maximum volume entry, the maximum volume value must be used.
- Access to a volume in 'On Timer' must be fixed to start volume when 'Hotel Mode Operation' (Yes) and 'Start Volume' (Off, 0 ~ 100) were set simultaneously.

(3-2) Maximum Volume

This entry sets the maximum volume level the set. The level is specified as a number between 'Minimum Volume' to 100. ($\text{Min} \leq \text{Max} \leq 100$)

- If the command volume up to higher than maximum volume' is received, that should be ignored.
- The default value is 100.
- If RS232 DC Power Outlet is set to 5V or 12V, maximum volume limit is set to 75 on 32/39/42/47LY540H-ZA(80 on 22/28LY540H-ZA).

(3-3) Minimum Volume

This entry sets the minimum volume level the set will produce.

- The level is specified as a number between 0 to 'Maximum Volume'. ($0 \leq \text{Min} \leq \text{Max}$)
- If the command volume down to lower than minimum volume is received, that should be ignored.
- The default value is 0.

(4) Key Operation

- Manage key usability of Local(Front) Key and Remote Control. When selected to 'Yes', following 'IR Operation' and 'Local Key Operation' will be worked by below.

(4-1) IR Operation

Decide whether work the LG remote control or not.

- Able to set Normal, Use PWR Only, Block All.
- When 'IR Operation' is set to Block All, all normal remote keys don't work. Use PWR Only (Block except power) makes block all remote keys except power key.
- Although 'IR Operation' value is Use PWR Only or Block All.
 - » It can work in 'Service mode'. (In-Start, In-Stop, Power-Only, ADJ, Hotel-Mode, Hotel-Mode-Ready, P-Check, S-check, In-Time, FMode-Init, FMode-Start, FMode-AV, FMode-F1)
 - » Menu key action to enter the 'Installation Menu' and key action with 'Special menu(In-Start / EZ-Adjust ...)' are still available.
- When 'IR Operation' is set to 0 (Work), all remote keys are available.

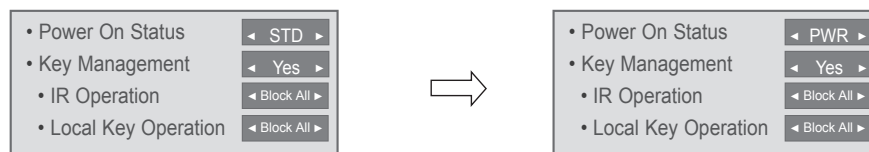
(4-2) Local Key Operation

Decide to operate 'Local/Front Key' working behavior by setting 'Local Key Operation' as Normal, Use PWR Only, Block All.

- When 'Local Key Operation' is set to Block All, all local keys don't work. If value is Use PWR Only, it blocks all local keys except power key.
- When 'Local Key Operation' is set to Normal, all local key are available.

Exception)

In case of power off condition with all key are blocked, 'Power On Status' value turns to 'PWR', and disabled status to fix value for power on operation. (fool-proof routine)



(5) Limited Mode

Configure TV function's limitation. When selected to 'Yes', following sub-menus will be worked by below.

(5-1) Setup Menu

Decide to enter 'Setup' Menu' as 'Yes'(Enter possible) or 'No'(Enter impossible)

(5-2) Input Source Change

Decide to change input source or not by setting 'Input Source Change' as Yes(Change possible) or No (Change impossible).

- When 'Input Source Change' is set to 'No' (Change impossible)
 - » 'INPUT key' doesn't work, and Input Source Changing via 'TV D/A' key, 'TV/RADIO' key aren't possible (ex. Press TV/RADIO Key in HDMI source to view TV channel)
 - » User's input (pressing Programme key, numeral key, List key, Q.View key in all Input source except TV source) doesn't work.
 - » Entering 'Setup Menu' item in the 'Main Menu OSD' except TV mode doesn't accepted. Because entering 'Setup Menu' item makes present mode as TV mode even though present mode is not TV. Change to TV mode isn't allowed.
 - » TV set always turns on fixed input source and volume information regardless of already set information.
 - » Entering 'Setup Menu' except TV mode is impossible regardless of 'Programme Change' or 'Setup Menu' items' value.
 - » TV can be only turned on with the input source which is irrelevant from the programme related information set (volume, input) in 'On Time' Menu.
 - » Auto AV and HDMI-CEC still work regardless of Input Source Change's value.
 - » When 'Input Source Change' is set to Yes(Change possible), changing input source is available.

(5-3) Programme Change

Decide to change channel or not by setting 'Program Change' as 'Yes'(Change Possible) or 'No'(Change Impossible) when present source is TV.

- When 'Programme Change' is set to No (Change Impossible)
 - » Program Key, Numeral Key, List Key, Q.View Key don't work and entering 'Channel Menu' in the Main Menu OSD is impossible.
 - » 'Programme' item in 'On Time' menu will be fixed.
 - » Entering 'Setup Menu' in the 'Main Menu' OSD is impossible regardless of 'Setup Menu' item.
- When 'Program Change' is set to Yes(Change Possible), 'Program Key', 'Numeric Key', 'List Key', 'Q.View' Key does work and entering 'Channel Menu' in the Main Menu OSD is possible.

(5-4) Menu Display

Function to decide whether work with menu (including relevant menus too) of control key (Yes – Enter possible) or not (No – Enter Impossible).

- Although select No(Enter impossible), the action that press a Menu button for 5 seconds to enter 'Installation Menu' is available.
- When select Yes(Enter possible), Menu works.

(5-5) OSD Display

Decide to display OSD or not by setting 'OSD Display' as Yes(Display) or No(Do not Display).

- When 'OSD Display' is set to 'No'(Do not Display), all OSD is not displayed except some exception.
- Although select 'No' (Do not Display), the action that press a Menu button for 5 seconds to enter 'Installation Menu' and entering service menu are available. (In-Start, Power-Only, Adjust, Installation Menu ...)

(5-6) System Provider Mode

'System Provider Mode' allows access to the menu system from the front panel or remote control but access is controlled as follows:

- When value is 'Yes', Accessible Items on the menu system, others are not permissible.
 - » Input select screens
 - » Sleep timer
 - » Aspect Ratio
 - » Closed Caption
 - » 'Lock' / 'My Media' / 'Network' / 'Support' / 'Bluetooth' Menu
- 'Q.menu', which is related to 'Setup' Menu, is not accessible.
- If the channel map is empty, 'Auto-tuning' guide dialog should be blocked by pressing 'List', 'Fav', 'CH+', 'CH-' keys.

(6) Power Management

The Power Management feature will turn off the television receiver if no input control command is received from either the Local or IR Key within a selected hours.

- Activity on either of these inputs shall restart the 'Power Management' timer and check key time interval again.
- This entry can be set to a value which is corresponding to the desired hours (1 to 7).
- Default value is 'Off(disabled)'.
- TV should off and on after apply this setting.

(7) DTV Programme Update

It is a mode to set whether to update DTV channel information automatically or not.

- When DTV Channel Update is set to 'Auto', the function to update TV's programme map according to DTV channel's stream information
- DTV Channel Update is set to 'Manual', the function to keep TV's channel map even though DTV programme's information is changed.

(8) Power On Default

Set the input source or channel to display and A/V settings when turn on power in AC Power On or Stand-by status.

(8-1) Input Source

Set whether it is turned on by the set input source or by the last stored input source.

- It is turned on by the Last Memory Input if the Input source is turned off.
- It is turned on by the Last Pr. If the Input source is turned off and the last memory Input is the RF.
- The available Input Source values should be rotated.
- If both the Input source and the 'On Time' menu are set, the Input source takes the priority.
- When the Input source is changed to the TV, Programme menu is available.
- When the Input source is changed to the ATV, the Program No. is set to 0. (If the channel map structure does not support this, it depends on model's channel handling.
- Access to an input source item and a channel in 'On Timer' menu must be disabled when Power On Default is activated.

(8-2) Programme

Select start channel number if Input source's value is TV. (in case of ATV, it means physical channel number.)

(8-3) A/V Setting

If 'A/V Setting' is changed from 'No' to 'Yes', parameters that are set before entering 'Installation Menu' are applied whenever turn on power.

- Following Parameters are applied to basic.
 - » Picture section - PSM mode, Picture Data (Contrast, Brightness, Color, Sharpness, Tint)
 - » Sound section - SSM mode, Sound Data (Balance, Equalizer Data)
 - » AVL (Auto Volume Level) and Language, Teletext language, ARC Data. Except these, other parameters are applied differently according to the TV-Set.

(8-4) Aspect Ratio

The aspect ratio determines the default aspect ratio that the set returns to on power up.

- The modes are as follows:
 - » Aspect ratio = "Disabled(0)" stays at previous state, same as consumer model.
 - » Aspect ratio = "Set by Program(1)"
 - » Aspect ratio = "4:3 ratio (2)"
 - » Aspect ratio = "16:9 ratio (3)"
- If enabled, upon power up the television reset the aspect ratio to the specified state regardless of how the user has previously changed the aspect ratio.

(9) Aux Source Setting

The Auxiliary (Input) Source Setting feature will enable or disable for each external input. When 'Aux Source Setting' is set to Yes(Work), the RJP or HDMI-CEC / HTNG will not operate.

(9-1) Input Source

- Available Input Source List

(9-2) Setting

- Decide whether selected 'Input Source' is usable (Enable) or not (Disable).
- User cannot disable the current input's 'Aux Source Setting'.

(10) Radio Name Display

Instead of 'Audio Only', the name of a radio channel is displayed on the screen when a radio broadcast is playing.

- Set to Yes(Work) or No(Do Not Work).
- If the setting is 'Yes', the name of a radio channel is displayed for the radio channel.
- If the setting is 'No', the text 'Audio Only' is displayed for the radio channel.

(11) Radio Video Blank

Manage video blank channel(sound only). This feature affects on analog channel (ATV) only.

(11-1) Start PR. No.

- Start channel number to video blank.
- Available programme to set are 0~199(For Taiwan : TV 2~69, CATV 1~199).

(11-2) No. Of. PR.

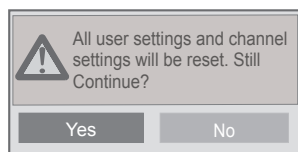
- Number of channels to blank
- The max value for the 'No. of PR' is 10.
- Can not set more than maximum available channel number. For example if Start PR. set to 195, "Number of PR". can not set more than 5.
- Radio programme should be in sequence with starting programme number.

(12) Factory Reset

Factory reset returns all the parameters to the default settings.



- Press 'Enter key' to proceed factory reset. and confirmation message window will be shown.



- When select 'Yes', all television settings except UTT value should write to the default settings.

Public Display Settings / LG Hotel Mode Setup (Value Range Table)

Item	Enable	Disable	Initial
Hotel Mode Operation	Yes	No	No
Power On Status	-	-	*STD
Volume	Yes	No	No
Start Volume	Off, Minimum Volume ~ Maximum Volume		Off
Maximum Volume	Minimum Volume ~ 100		100
Minimum Volume	0 ~ Maximum Volume		0
Key Management	Yes	No	No
LG IR Operation	Normal / Use PWR Only / Block All		Normal
Local Key Operation	Normal / Use PWR Only / Block All		Normal
Limited Mode	Yes	No	No
Setup Menu	Yes	No	Yes
Input Source Change	Yes	No	Yes
Programme Change	Yes	No	Yes
Menu Display	Yes	No	Yes
OSD Display	Yes	No	Yes
System Provider Mode	Yes	No	No
Power Management	Off, 1 ~ 7		Off
DTV Channel Update	Auto	Manual	Auto
Power On Default	Yes	No	No
Input Source	Off, ATV, DTV, ...		Off
Programme	Minimum Program ~ Maximum Program		Minimum Program
AV Setting	Yes	No	No
Aspect Ratio	Disable / Set by Program / 4:3 / 16:9		Disable

LG Hotel Mode Setup (Value Range Table)

Item	Enable	Disable	Initial
Aux Source Setting	Yes	No	No
Input Source	Aux Input(AV1 ~ MAX_INPUT)		AV1
Setng	Enable	Disable	Enable
Radio Name Display	Yes	No	No
Radio Video Blank	Yes	No	No
Start PR. No.	0 ~ 199 (Taiwan TV 2 ~ 69 / CATV 1 ~ 199)		1
No. Of. PR.	0 ~ 10 (Start PR. NO + No. of PR. <= Max Start PR. NO. + 1)		1
Factory Reset	Confirmation window (Yes / No)		

TV Manager

1. USB

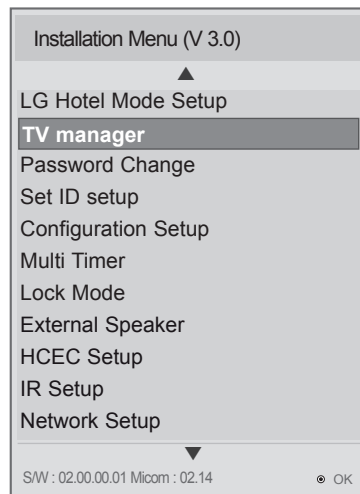
Ez Download

Ez Download is a function that enables users to download the desired items all at once, such as EPK (software update file), TLL (see Send to USB descriptions for more information regarding file types), Logo Image, etc (TLX, MICOM for Pro:Centric).

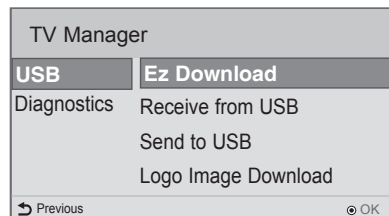
* Splash images and EPK files should be copied into the folder named LG_DTV on the USB.
TLL files should be copied to the root folder of the USB.

- Image shown may differ from your TV.

- 1 Plug USB memory card into the USB port of the TV.
- 2 Use the $\wedge \vee$ button to select the **TV Manager** option and then press the **OK** button.

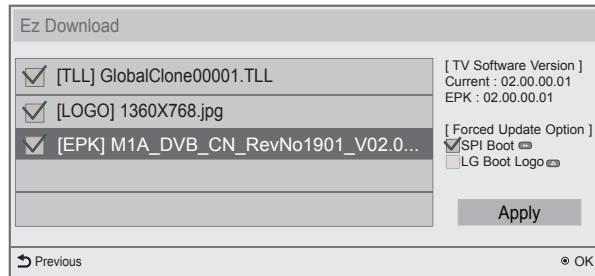


- 3 Use the $\wedge \vee$ button to select the **Ez Download** and press the **OK** button.



- 4 Select a list to download and press the **OK** button.

- 5 Select the EPK option (software update) and then use the green and yellow buttons to download either SPI Boot or LG Boot Logo.
If you checked the LG Boot Logo checkbox, then the Splash image, if selected, will be unchecked. Also, if you select the LG Boot Logo and proceed with the download, the existing Splash image will be deleted.



- 6 When you are finished with your selections, use the (->) button to select Apply and then press OK.
7 Wait for the download to complete. When it is finished, your TV will be turned off.

NOTE

- If the DZM file is still in the USB after the download is complete:
 - An Ez Download pop-up window will appear and list the file types, such as TLL, LOGO, EPK or Micom with the previously downloaded lists checked automatically.
- If the global TLL and model TLL files exist in the same USB root directory, then only the global TLL will be shown.
If the global TLL has been deleted, then the model TLL will be shown.

USB Cloning

An Installer can quickly set up and clone multiple TV sets at a property. These cloned TVs will all have the same Master TV Setup: Public Display Mode Installation Menu settings, User A/V settings and the Channel Map. This newer procedure significantly decreases the installation time that would be necessary if the standard RS-232C method were used instead.

Introduction

(1) Overview USB Cloning Procedure

- Commercial TVs have the capability to support cloning internal TV data and programme information with an external clone device called “USB Cloning”, in order to copy TV data accurately and quickly. The clone internal functions use slightly different internal processes for the two types of commercial TVs. However, the UI of cloning feature remains the same in both.
Regarding the demands over the current cloning feature for quicker cloning, better portability and etc, we would like to announce the cloning process via USB port, named as USB Cloning.
USB cloning process is divided into 2 main processes. One is writing the previously saved TV data into the TV, and one another is reading of current TV data into USB memory card. To avoid any confusion due to the words, it is clearly specified as “Receive from USB” and “Send to USB” in the whole process.

(2) Data To Be Cloned

- The data cloned are the same data cloned by previous USB Cloning. Details are explained in the following:
 1. TV data includes:
 - A. Installer Menu settings
 - B. Main menu settings (Audio, Picture etc)
 2. Analog / Digital Channel information includes:
 - A. Channel numbers
 - B. Channel label
 - C. Channel attributes including channel type, skipping status and etc.

(3) Input Source

- The user needs a USB memory card with FAT formatted to make successive cloning via USB port. A USB memory card size more than 128 Mega Bytes and less than 4 Giga Bytes is recommended.



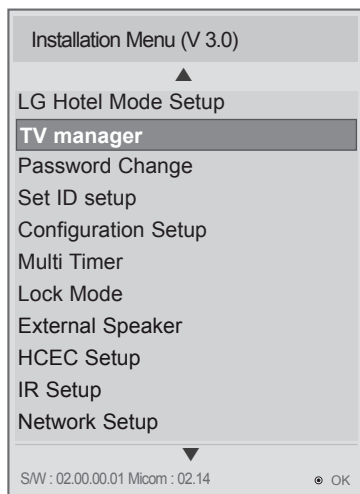
NOTE

- Currently, support the preceding USB file system for FAT file format only. Other file formats including NTFS is not currently supported. Microsoft Windows officially supports FAT for the USB memory card.
- Only a USB storage device is recognizable.
- If the USB storage device is connected through a USB hub, the device is not recognizable.

Receive From USB

- Image shown may differ from your TV.

- 1 Plug USB memory card into the USB port of the TV.
- 2 Use the $\wedge \vee$ button to select the **TV Manager** option and then press the **OK** button.

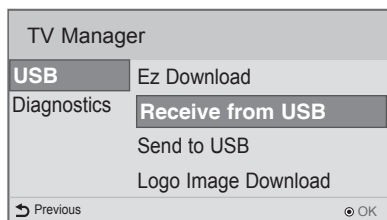


- 3 Use the $\wedge \vee$ button to select the **Receive from USB** and press the **OK** button.

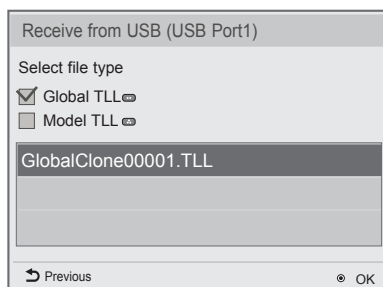
* **Below explains the naming rules for .TTL files.**

The supported model line will be in the name of the file but the screen size will be listed as "xx". This allows TVs having the same chassis model number to use the same '*.TTL' file without regard to the screen size.

ex) The name of '*.TTL' file is 'xxLY540H-ZA00000.TLL' for 32/42LY540H-ZA model.



- 4 Use the $\wedge \vee$ button to select the desired *.TTL files name and press the **OK** button.



- 5 The TV is changed to Standby mode after a successful download.
If the download failed, the TV will be changed to the initial installation screen.

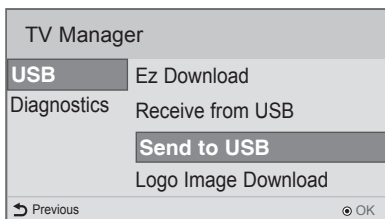
Send To USB

- Image shown may differ from your TV.

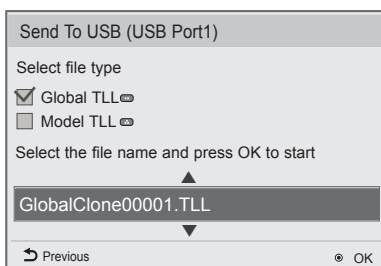
- 1 Plug USB memory card into the USB port of the TV.
- 2 Use the $\wedge \vee$ button to select the **TV Manager** option and then press the **OK** button.



- 3 Use the $\wedge \vee$ button to select the **Send to USB** and press the **OK** button.



- 4 Use the $\wedge \vee$ button to select the desired file name and press the **OK** button.



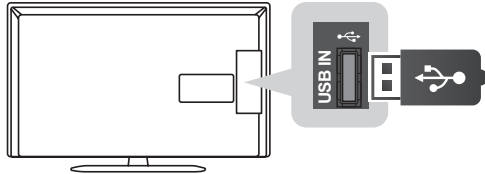
- 5 The TV is changed to the initial installation screen after a successful download.

Logo Image Download

Make a 'LG_DTV' folder on the USB flash drive and then copy the splash image file to that folder.

- Image shown may differ from your TV.

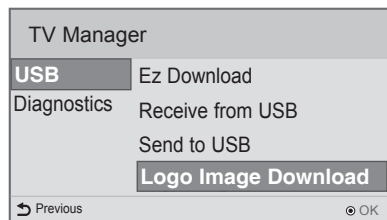
- 1 Connect the USB device to the USB IN jack on the TV.



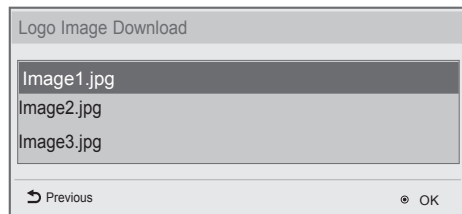
- 2 Use the $\wedge \vee$ button to select the **TV Manager** option and then press the **OK** button.



- 3 Use the $\wedge \vee$ button to select the **Logo Image Download** and press the **OK** button.



- 4 Use the $\wedge \vee$ button to select the desired file name and press the **OK** button.



! NOTE

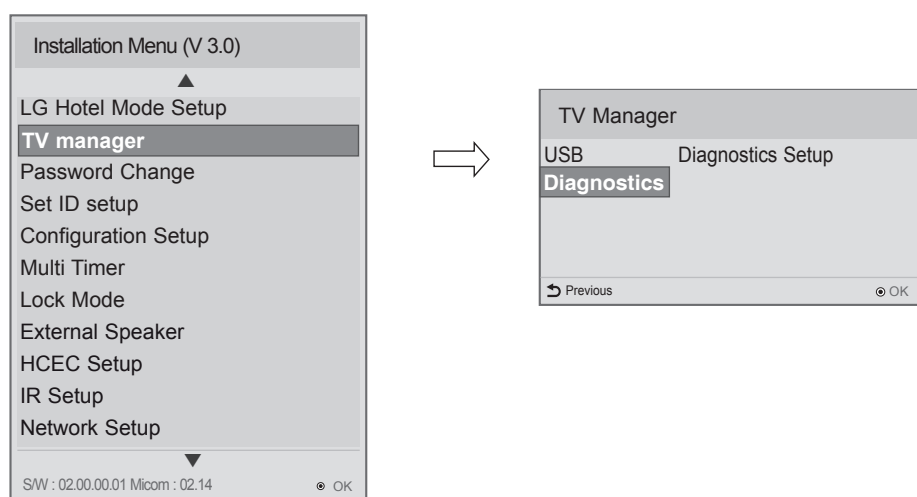
- Splash Image update function supports only JPEG format file of less than 1 MB filesize..
- Except for JPEG images with progressive encoding.
- We recommend you that splash image resolution match the TV's panel resolution.
- 'Max resolution of splash image : Full HD->1920x1080, HD->1360x768.
- 'Min resolution of splash image : Full HD->64x64, HD->64x64.
- TV keep splash image until you change a new splash image.

2. Diagnostics

Diagnostics Setup

Introduction

This diagnostic function provides current status information of the TV in XML file format using a USB device. If the user sets a signal standard level, SignalTrace checks the signal strength status of the digital channel that the user tuned to. It checks and records good and bad channel signals, and then provides the signal information to a USB storage device in XML file format.



(1) Overview Diagnostics

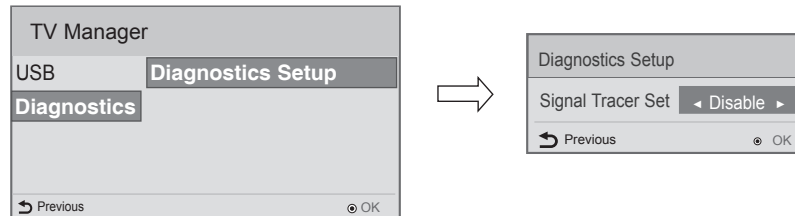
- 1 It provides status information of the TV and information about the current input in XML file format. (There are two kinds of information. There is information which is extracted regardless of the model, such as the model name or boot version, and there is information which is available depending on the model, such as the micom version, PTC version, etc.). The information created in the XML file can be checked in the TV's UI by pressing 88888888 in the TV's Option menu.
- 2 If a SignalTrace standard level is set, it saves the average value of the channel signal with less than 30 tuning counts to the digital broadcasting channel. If the count is more than 30, it saves good and bad signals by comparing the average signal value to the current signal strength and signalTrace standard level (SignalTracer Set) value.
 - ▷ Bad signal: $BML (average\ value) > strength (current\ signal\ strength) \text{ and } (BML - strength) > SignalTracer\ Set$
 - ▷ Good signal: $BML < strength \text{ and } (strength - BML) > SignalTracer\ Set$It provides the good and bad signals, average signal value, channel information, and date information etc. in USB in XML file format. (Saved in changedSignal_report tag) Up to 127 reports for good and bad signals are saved. If the reports number more than 127, they are written again beginning from 1.

(2) Saving some status information of the TV set through USB in XML file format

- Create an LG_SVC folder on the USB on a PC.
- Create an empty file named tv_signal.rms in the LG_SVC folder.
- Insert the USB device into the TV.
- If the "Diagnostics is completed" message is displayed, remove the USB, open the tv_signal.rms file on a PC and check the XML (model name, FirmwareVersion, bootVersion etc.) created within the file.
- The information created in the XML file can be checked in the TV's UI by pressing 88888888 in the TV's Option menu.

(3) Saving signal status information of digital channels through SignalTrace in XML format

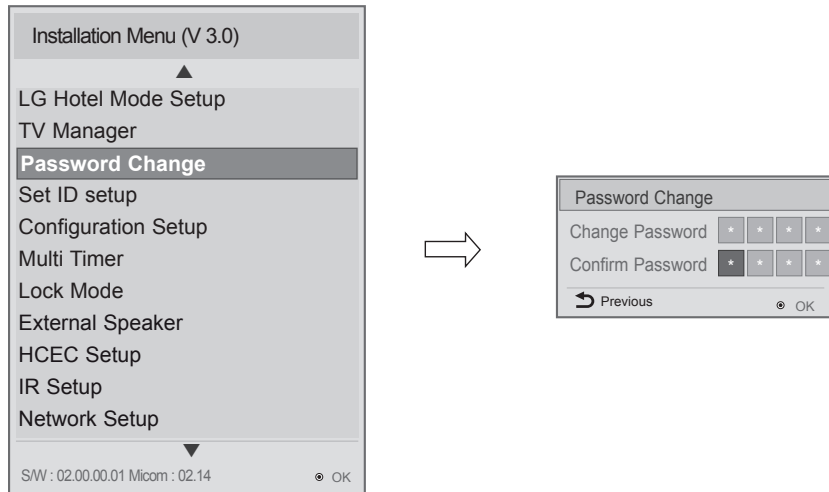
- Go to Installation menu -> TV Manager -> Diagnostics -> Diagnostics Setup
- Set the level value in Signal Tracer Set. (Disable, 10 to 90)



- Change the channel and tune to a digital channel, then maintain the status for more than 5 seconds.
- Create an empty file named tv_signal.rms in the LG_SVC folder.
- Insert the USB device into the TV.
- If the "Diagnostics is completed" message is displayed, remove the USB, open the tv_signal.rms file on a PC and check XML created in the file.
- ※ If the user tunes to the same digital channel 30 times, the signal average is calculated. If the tuning count to the same digital channel is more than 30, the good/bad signals, current signal, average signal, date and channel information are saved in changedSignal_report XML tag.
- ※ The information created in SignalTrace is not displayed in the TV's UI.
- ※ In USB cloning, the configured Signal Tracer value is not cloned.
- ※ When a factory reset is performed, Signal Tracer Set is disabled and traced information is deleted.

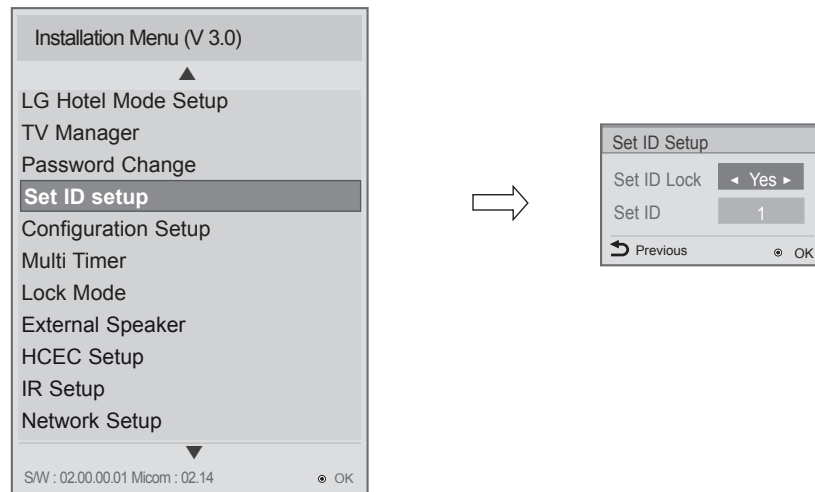
Password Change

- Image shown may differ from your TV.
- To ensure more security, Password can be changed by installers' own design.



- 1 Use the \vee \wedge button to select the Password Change and then press the **OK** button.
- 2 Enter four digit password.
- 3 Input the password again for confirmation.

Set ID Setup



1 Use the \vee \wedge button to select the Set ID Setup.

- **Set ID Lock**

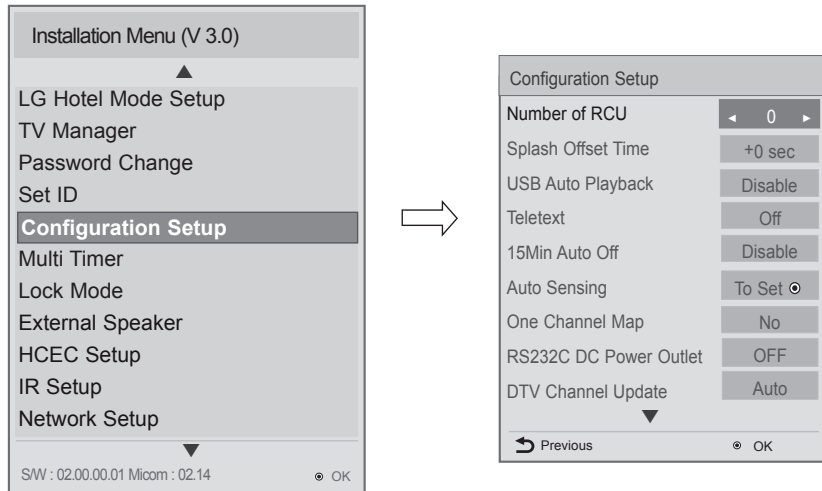
- Set the 'Set ID' item in 'Option' Menu whether to activate or not.
- Set to Yes(Work) or No(Do Not Work).

- **Set ID**

- Set the 'Set ID' of TV Set with 1~99.

Configuration setup

- Image shown may differ from your TV.



(1) Number of RCU

- It is a function to set whether to use Select RCU or not and set number of RCU.
- When Number of RCU is set to '0', this function do not use.
- Number of RCU value range 1~9
- * RCU(Remote Control Unit) : It is special RCU that operates only setted number of RCU in TV.

(2) Splash Offset Time

- Set the splash image display time
- When Splash Offset Time is set to 'OFF', TV logo(splash image) do not display.
- The time can be set to between 0 and 10 seconds.

(3) USB Auto Playback

- When 'USB Auto Playback' is set to 'Movie', TV finds and plays the USB's movie files located at the root(top) directory Movies if USB is plugged in. (Some menu OSDs may prevent this function.)
- When 'USB Auto Playback' is set to 'Photo', TV finds and plays the USB's photo files located at the root(top) directory Photos if USB is plugged in. (Some menu OSDs may prevent this function.)
- If it reaches the last file, it starts the first file again.

(4) 15Min Auto Off

- When '15Min Auto Off' is set to 'Enable', TV will turn off if there is no signal in 15Min.

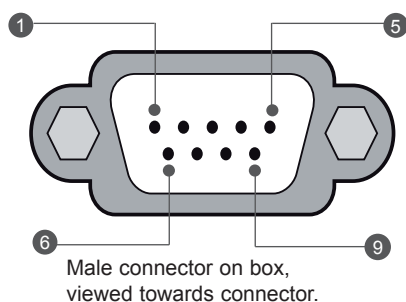
(5) Auto Sensing

- If 'Auto Sensing' is set to 'To Set ☉', the input is automatically switched when the input signal that you set to 'ON' is received.
- If 'Auto Sensing' is set to 'Disable', the input is not switched when the input signal is received.
- If SIMPLINK is set to On, HDMI is automatically set to Disable and can not work.
- If the signal is removed while Auto Sensing (automatic input switch) is enabled, the input returns to the previous setting.
- If the several inputs are connected by enabling Auto Sensing and the automatic input switch is performed several times, the input returns to the previous setting only for the last input and does not repeat the operation for the rest.
- For the AV input connected using the euro scart cable, Auto Sensing does not work for the TV input because the Auto AV function is enabled.(For other inputs, Auto Sensing works normally.)

(6) One Channel Map

- If 'One Channel Map' is 'YES', the TV will operate as below.
 - A. When the TV is auto-scanning, it searches both air and cable channels.
 - B. In 'Programme Edit' window, all channels are shown in a single list regardless of input source. (DTV/RADIO/TV) (For satellite supported models, a Satellite input source is also included.)
 - C. Select the 'Auto Sort' button in the 'Programme Edit' window to sort channels sequentially.

Type of Connector: D-Sub 9-Pin Male

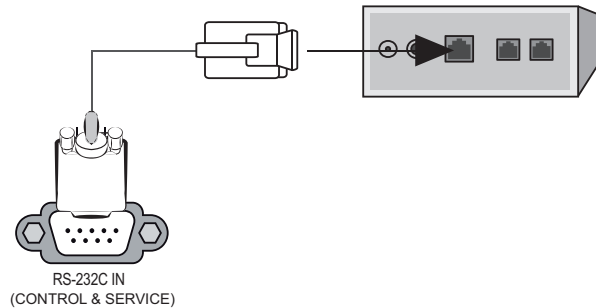


No.	Signal	Signal requirements
1	VCC	
2	RX RS232	Standard RS232 specification
3	TX RS232	Standard RS232 specification
4	IR from TV	
5	GND	Power ground
6, 8	Not connected	
7	2 A	+5VDC 10%, max 100mV ripple
9	1 A	+12VDC 10%, max 100mV ripple

(7) RS232 DC Power Outlet

- It is a mode to decide whether to output DC or not for power supply to IB Box in Installation Menu. We offer a output terminal in one Pin of RS232C Jack for the use of communication.
- 5V DC Power Outlet and 12V DC Power Outlet must operate mutually exclusively. That is, only one of the two sides must be turned on.

- 1 You can select '**OFF**', '**5V**' or '**12V**' by pressing < > button.
 - When select '**5V**' the 5V is forwarded through the port. when select '**12V**' the 12V is forwarded through the port.



(8) DTV Channel Update (This feature is not available for all models.)

- It is a mode to set whether to update dtv channel automatically or not.
When DTV Channel Update is set to 'Auto', the function to update TV's programme map according to dtv programme's stream information.
DTV Channel Update is set to 'Manual', the function to keep TV's programme map even though dtv programme's information is changed.

(9) On Timer Operation

- It is a mode to select 'On Timer Operation' working one time or repeatedly.
'ONE' : 'On Time' in the user menu operates only one time when the 'On Time' menu is set to 'ON'.
'Repeat' : 'On Time' operates repeatedly when the 'On Time' menu is set to 'ON'.

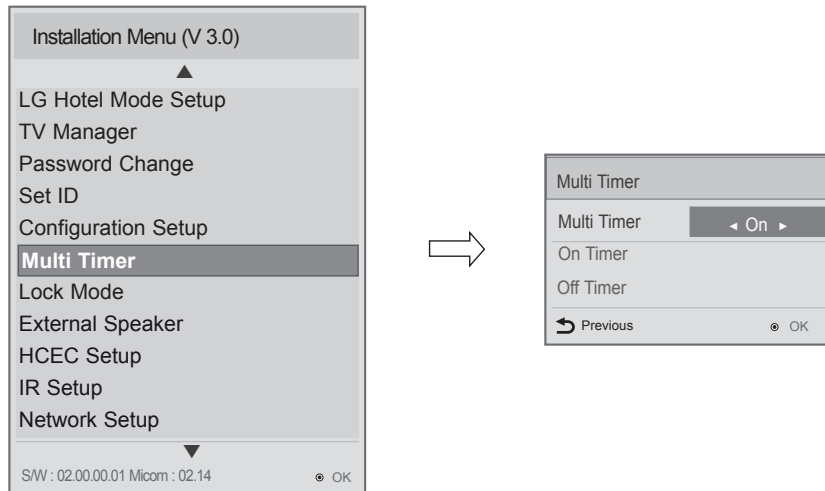
(10) Scart Out

- The monitor out signals can or cannot be output through the SCART cable, depending on the setting value of scart out. You can set to Enable or Disable using the < > button. The default value is Enable.

(11) Radio Name Display

- Instead of "Audio Only", the name of a radio channel is displayed on the screen when a radio broadcast is playing.
- Set to Yes(Work) or No(Do Not Work).
- If the setting is "Yes", the name of a radio channel is displayed for the radio channel.
- If the setting is "No", the text "Audio Only" is displayed for the radio channel.

Multi Timer



- 1 Use the ∇ \blacktriangle button to select the Multi Timer.

(1) Multi Timer

- It is a mode to set whether to use or not.
- When 'Multi Timer' is set to 'On', You can adjust 'On Timer', 'Off Timer' menu.

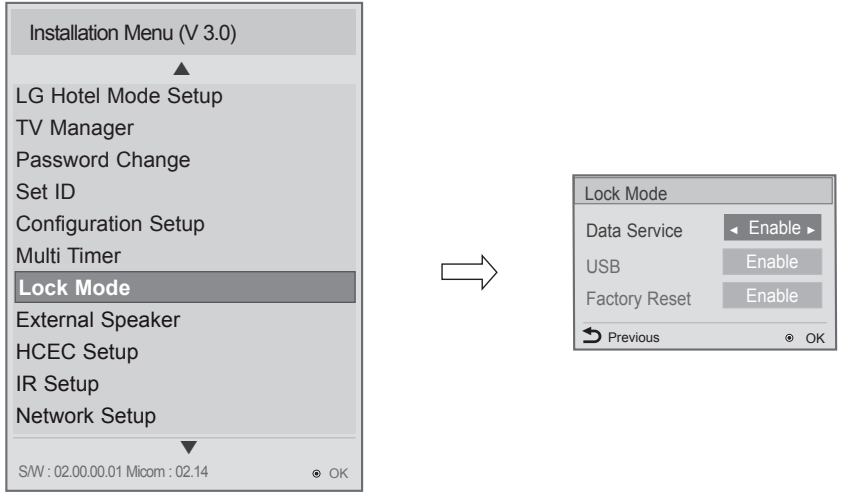
(2) On Timer

- It sets the time for turning the TV on. A maximum of 5 timers can be set.

(3) Off Timer

- It sets the time for turning the TV off. A maximum of 5 timers can be set.

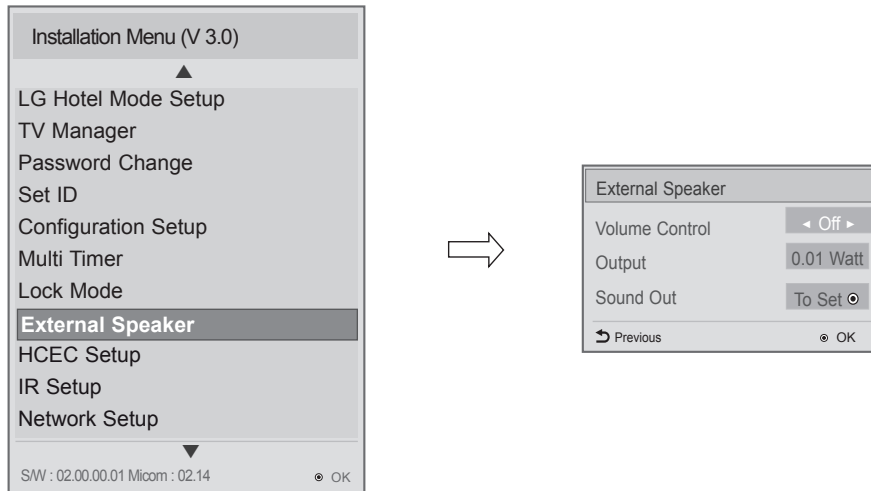
Lock Mode



1 Use the \vee \wedge button to select the Lock Mode.

- If 'Lock Mode' items are disabled, the following features will be unavailable.
 - Data Service(Teletext, EPG, Sub-Title, Caption (Include MPEG4), MHEG)
 - USB Enable(Exclude S/W update)
 - Factory Reset

External Speaker



- 1 Use the ∇ \blacktriangle button to select the External Speaker.

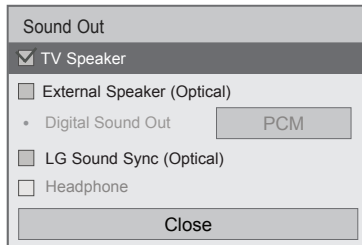
(1) Volume Control

- Selects the volume control method of an external speaker. You can choose either Variable or Fixed. Variable is linked to the main volume OSD and change the volume 0-1 Watts. Fixed produces a fixed output. The default is Off.

(2) Output

- This item is enabled when Volume Control is set to Fixed. You can choose one of 7 steps. (0.01/0.03/0.05/0.1/0.2/0.5/1 Watts)

(3) Sound Out



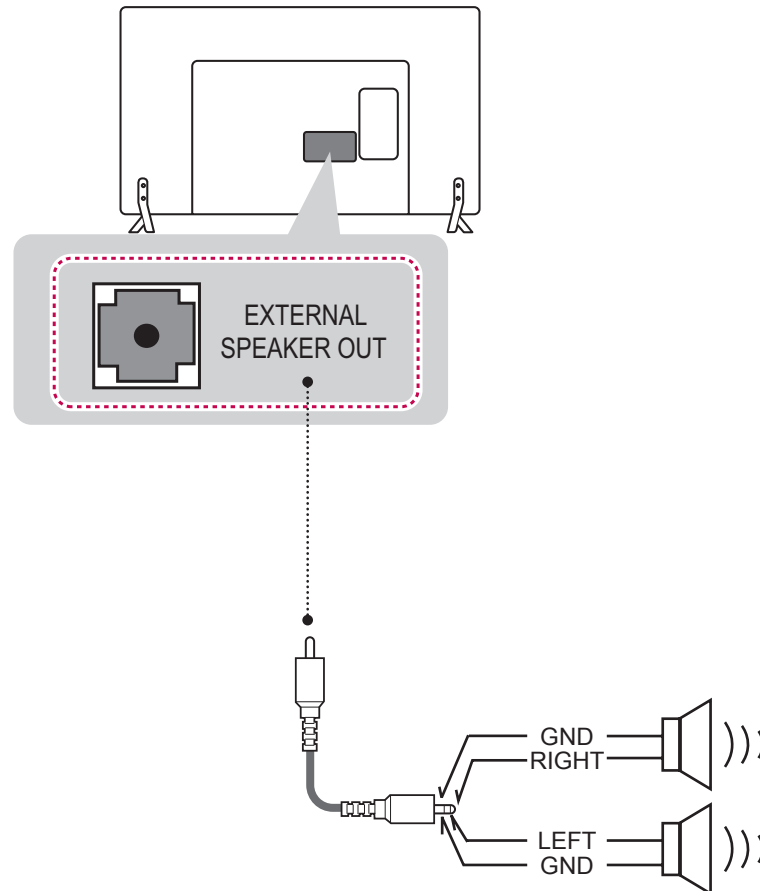
- TV Speaker : Sound is output through the TV speaker.
- External Speaker(Optical) : [Only available for models with an optical port]
Sound is output through the speaker connected to the optical port.
SimpLink is supported.
- LG Sound Sync(Optical) : [Only available for models with an optical port]
Connect LG audio device with the SoundSync logo to the optical digital audio output port.
LG audio device allows you to enjoy rich powerful sound easily.
- Headphone : [Only available for models with an earphone/headphone port]
Sound is output through the headphone connected to the earphone/headphone port.
If you connect headphones while the TV is powered on, it automatically detects the headphones and sounds through them.

NOTE

- Optical supported models :
 - If You use External Speaker as Variable Mode, External Speaker will be off when you select 'External Speaker(Optical)' in Sound-Out menu.
- HeadPhone supported models :
 - External Speaker and HeadPhone can not be used simultaneously.
 - Disconnect Headphone to use External Speaker. External Speaker only works when HeadPhone is disconnected.

Speaker output SETUP

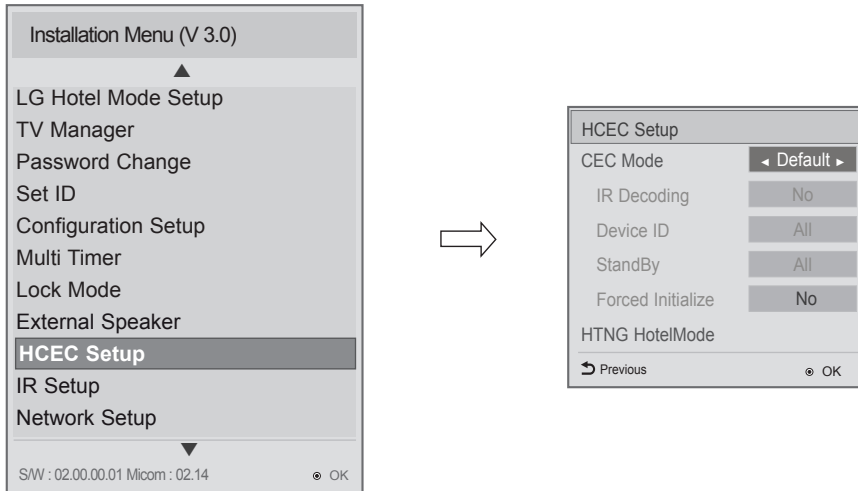
- 1 Connect the external speaker to the external speaker out jack on the TV.



! NOTE

- External speaker must be used three plug(SE : Single Ended, Stereo) as shown in the drawings and external speaker fully inserted with external Speaker Jack.
- Otherwise it will cause defect.

HCEC Setup



- 1 Use the \downarrow \uparrow button to select the HCEC Setup.

(1) CEC Mode

- When CEC Mode is set to 'HCEC Mode', 'IR Decoding', 'Device ID', 'Stand By' item will be enabled. And SIMPLINK feature will be automatically changed to 'On' state and user will not change this status through SIMPLINK menu.
- When CEC Mode is set to 'TVLink-CEC', 'IR Decoding', 'Device ID', 'Forced Initialize' item will be enabled. Also SIMPLINK feature will be automatically changed to Off state and user will not be able to control this status unless user changes CEC mode as 'Off' or 'CEC Mode'.

(a) IR Decoding

- If 'IR Decoding' is set as 'Yes', TV decodes IR signal to generate a CEC command and sends it to device.
- If CEC mode is 'TVLink-CEC' with IR Decoding 'No', TV Will just pass through the IR to device without any reaction by itself.

(b) Device ID

- Sets the ID of a device(Logical Address) connected to the CEC Line. You can choose between 'All' and 'E'.
- The default value is 'All'.

(c) Stand By

- Sets the sending and receiving scenario of OpStandBy(0x0c) command.
- The detailed scenario is described on the table below.

	Send	Receive
Send Only	O	X
Receive Only	X	O
All	O	O
OFF	X	X

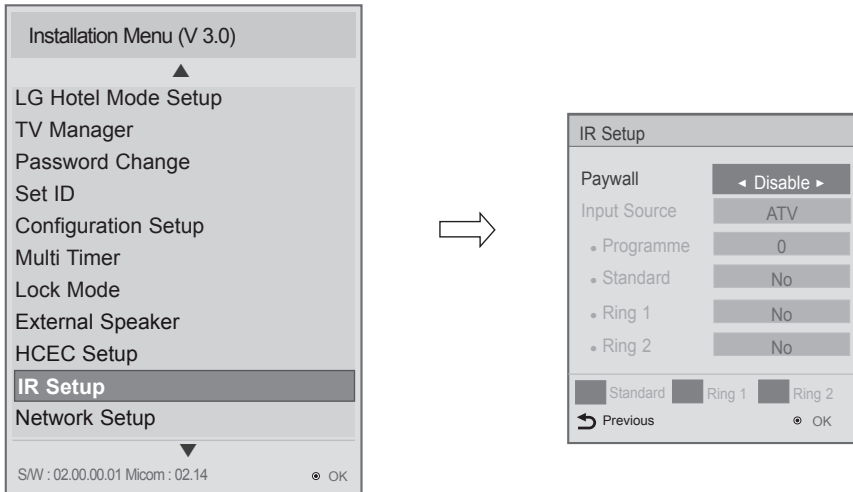
(d) Forced Initialize

- If 'No' is selected, a command should be sent and received between the TV and a -device for proper initialization.
- If 'Yes' is selected, initialization is implemented when a device receives a command.
If initialization is not implemented, the TV remote control and local key will work.

(2) HTNG HotelMode

- If the following options are selected because of the HTNG command:
*Power On Default, Start Volume, Maximum Volume, Minimum Volume, or Start Volume,
then the value for the HTNG HotelMode changes automatically to Yes and, even if the HotelMode is set to No, the above options are still affected.
- If you change it to No, then the values set by the HTNG will be canceled.

IR Setup



1 Use the ∇ \blacktriangle button to select the IR Setup.

(1) Paywall

- Decide whether to work Paywall function or not by setting 'Paywall' as 'Enable(Work)' or 'Disable(Do not work)'.
- When 'Paywall' is set to 'Enable', 'Programme', 'Standard', 'Ring1' and 'Ring 2' menus are Enabled.
- When 'Paywall' is set to 'Disable', 'Programme', 'Standard', 'Ring 1' and 'Ring 2' menus are Disabled.

(2) Programme

- This menu is enabled when 'Paywall' is set to 'Enable'.
- Select programme that you want to set to PPV Programme or Standard Programme.

(3) Standard

- Select Standard programme by setting 'Standard' as 'Yes' or 'No'.
- When 'Standard' is set to 'Yes', the programme works as a standard programme.
- It is possible to set 'Standard' using 'Red' key of remote controller.

(4) Ring 1

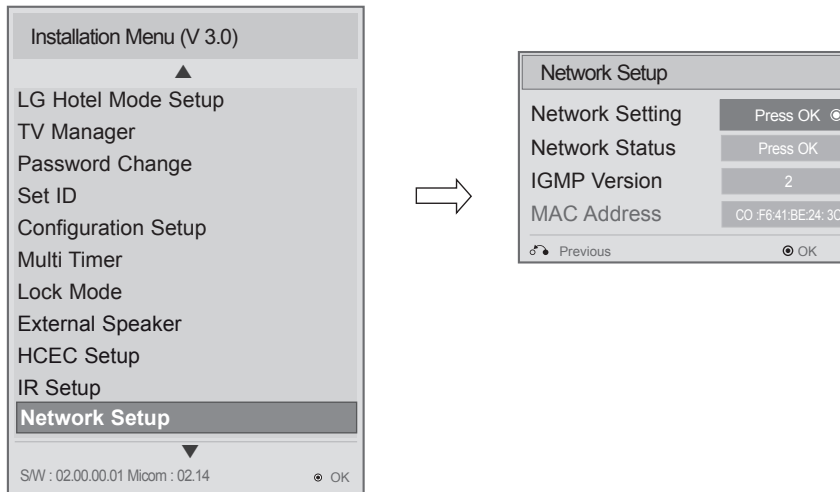
- Select Ring 1 programme by setting 'Ring 1' as 'Yes' or 'No'.
- When 'Ring 1' is set to Yes, the Programme works as a PPV programme which is shown using Ring1 card.
- It is possible to set 'Ring 1' using 'Green' key of remote controller.

(5) Ring 1

- Select Ring 2 programme by setting 'Ring 2' as 'Yes' or 'No'.
- When 'Ring 2' is set to 'Yes', the Programme works as a PPV programme which is shown using Ring2 card.
- It is possible to set 'Ring 2' using 'Yellow' key of remote controller.

Network Setup

- Image shown may differ from your TV.



- 1 Use the ∇ \blacktriangle button to select the Network Setup.

(1) Network Setting

- One-click network connection
 - Connects easily to a wired network.
 - Network Connection to connect to an available network automatically. Follow the prompts on the TV.
- To connect to a network through Set Expert
 - For use in special circumstances such as in offices (in cases where a static IP is used).

! NOTE

- When connecting via Wired, Configures the IP settings of the TV set. You can set the IP address, subnet mask, gateway and DNS server.

(2) Network Status

- You can also check whether the IP settings are configured properly using the Enter button.

(3) IGMP Version

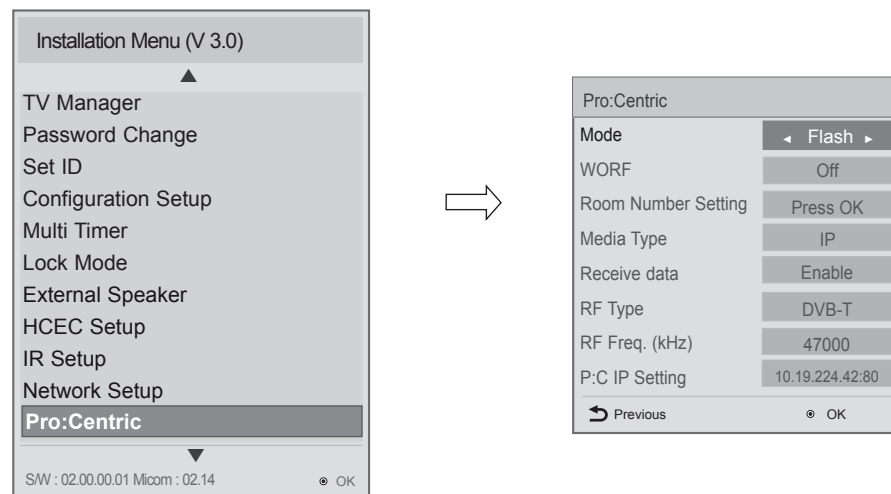
- You can set up the IGMP Version. The initial value is version 2, and it can be changed version 3.

(4) MAC Address

- Displays the MAC address (not customizable).

Pro:Centric

- Image shown may differ from your TV.



- 1 Use the \vee \wedge button to select the Pro:Centric.

(1) Mode

- Sets whether or not enable Pro:Centric and the service method.
- You can set to Off, Flash or GEM using the \lt \gt button. The default value is Off; when it is set to Off, all the sub items are disabled.(Except for WORF, Room Number Setting)

(2) WORF

- Press the 'OK' button in 'WORF' item to go to the 'WORF' menu.
- When WORF is set to 'On', Hour and Minute items are enabled and then the WORF function is enabled.
- When WORF is set to "Off", "Hour" and "Minute" items are disabled and then the WORF function is disabled.

(3) Room Number Setting

- Press the OK button in Room Number Setting item to go to the "Change a room number" menu.
- You can set or change Label and Room Number using the Room Number Setting.

(4) Media Type

- You can set to IP or RF using the \lt \gt button.
 - If it is set to IP, RF is disabled.
 - If it is set to RF, P:C IP Setting is disabled.

(5) Receive data

- Set to Enable or Diabile.
- If the setting is "Enable", receive data via RF or IP.
- If the setting is "No", data carousel is not supported. It can be downloaded via only USB.

(6) RF Type

- Sets the RF modulation type to DVB-T or DVB-C. The default value is DVB-T.

(7) RF Freq.(kHz)

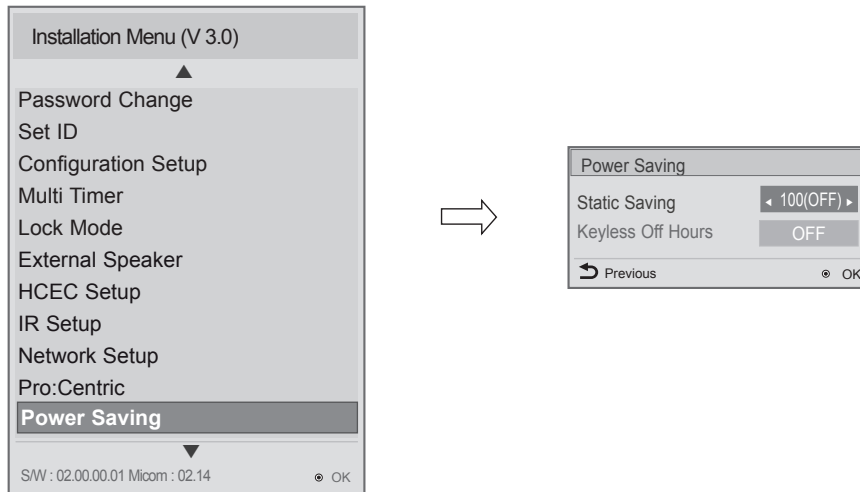
- Sets the RF frequency at which the Pro:Centric data is received.
- Frequency tolerance : start frequency~end frequency for each country
- If the RF Type is DVB-T, it can be changed in the range of 47000~890000.
- If the RF Type is DVB-C, it can be changed in the range of 46000~862000.

(8) P:C IP Setting

- It can be set using the < > button or number buttons.
 - (IP a) : Sets the first number in the IPv4 address.
 - (IP b) : Sets the second number in the IPv4 address.
 - (IP c) : Sets the third number in the IPv4 address.
 - (IP d) : Sets the fourth number in the IPv4 address.
 - (Port) : Sets the actual port number where the Pro:Centric server is running. It can be set using the < > or number buttons.
- The default value of IP a/b/c/d is 0 and the range is between 0 and 255. The default value of Port is 80 and the range is between 0 and 65535.

Power Saving

- Image shown may differ from your TV.

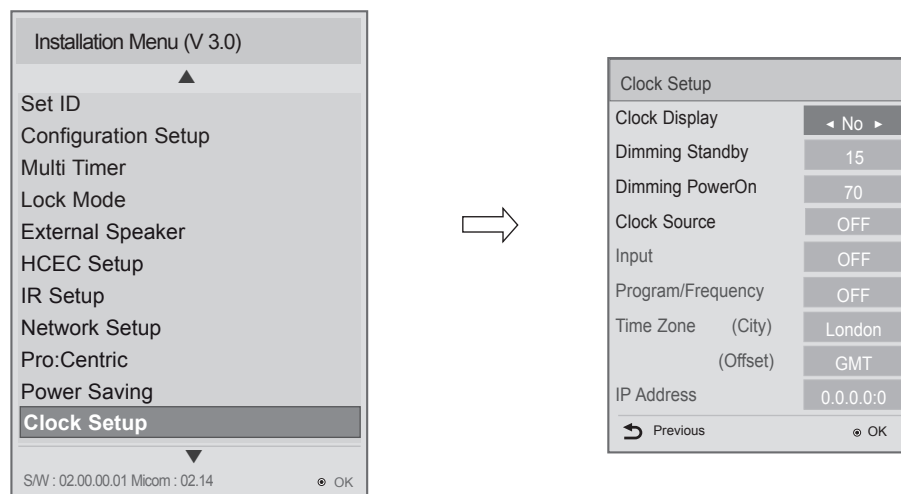


- 1 Press the ∇ \blacktriangle button to select the Power Saving.

- **Static Saving** : It is the item for setting the level to reduce the backlight control from the items for saving the consuming power, which is increased or decreased by 10 steps from 0 to 100. 100 makes the consuming power set to the same one from the TV. 0 reduces the consuming power to the minimum. The default value is 100.
 - The value displayed at the OSD is not changed and only the actual setting value is converted to percentage based on the static saving value to set.
 - 0 ~ 30 : HIGH, 40 ~ 60 : MID , 70 ~ 90 : LOW , 100 : OFF
- **Keyless Off Hours** : Automatically TV will be turned off if there is no key input for the preset time period.
 - Set the 'OFF', '1~99'.

Clock Setup

- Image shown may differ from your TV.



- 1 Press the \vee \wedge button to select the Clock Display.
- 2 You can select 'YES' or 'NO' by pressing \lt \gt button.

- After selecting 'YES', you can see the LED Clock TV.
 - Standby Dimming value Range: 0~15
 - PowerOn Dimming value Range: 0~99
- **Clock Source** : You can select 'Off', 'TV', 'Pro:Centric' by pressing \lt \gt button.
- **Input** : Select a specific source to receive time information from. When the Clock Source is set to TV, the available options are: Off, ATV, DTV, RADIO, CATV, CADTV, CA-Radio, SDTV, and S-Radio. When it is set to Pro:Centric, the available options are RF and IP. If RF is selected, you can set the Program/Frequency to receive time information. If IP is selected, the Program/Frequency option is disabled. You can set the IP address and port number to receive time information.
- **Program/Frequency** : Select the program number or frequency to get the time information when tuning on TV. If the current setting for clock source is 'DTV', you can get the clock information when selecting the decided source and program. If the current setting for clock source is 'ATV', you can get the clock information of teletext at the number of program. Set up the program in accordance with the condition of the hotel clock source.
- **Time Zone** : The city corresponding to the state designated in the TV settings is set as default. You can change the selected city to Offset. If the selected city is changed to Offset, you can change the time value from GMT+12 to GMT-11.
- **IP Address** : You can set the IP address and port number to receive time information.

 **NOTE**

- Options of Clock Display, Dimming Standby and Dimming PowerOn are only available for the models that support the external LED clock.
- For clock setup, select 'YES' for Clock Display only if the LED clock is connected to your TV. If you do not use the LED clock, select 'NO' for Clock Display. If you connect an external device, other than the LED clock, to the port for the LED clock connection on the TV, it may cause damage to the TV.
- If the current setting for clock source is 'Pro:Centric', 'City' and 'Offset' deactivates.

DOWNLOAD EXTRA CONTENTS

Download Extra Contents(flash file) toTV set

The Pro:Centric application can be downloaded to your TV.

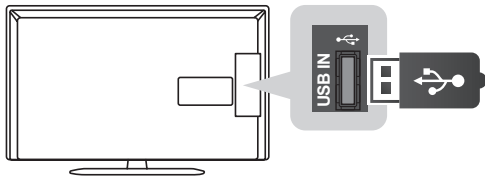
FLASH (*.SWF) / GEM supporting file

An SWF file compiled with Flash Lite 3.0 or earlier (the 3.0 version is recommended)

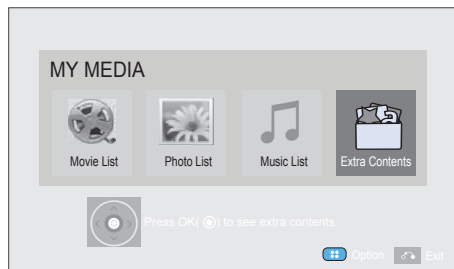
- **Mode** must be set to **Flash** or **GEM** under **Pro:Centric** in **Installation Menu**.
- The folder called /hcapfs/as/abs_service/ must exist in USB drive root directory.
- The file called xait.xml must exist in the /hcapfs/as/abs_service/ folder.
- The file called I_AM_FLASH must exist in the /hcapfs/config/ folder with **Flash** mode.
The file called I_AM_GEM must exist in the /hcapfs/config/ folder with **GEM** mode.
- You will have no response even if selecting **Yes** in step 3 when the above conditions are not met.

- Image shown may differ from your TV.

- 1 Connect the USB device to the USB IN jack on the TV.



2



- 1  Select **Extra Contents**.

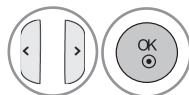
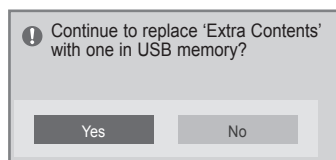
- 2 Enter a four digit password.

- The TV is set with the password "1-1-0-5".

! NOTE

- ▶ You can not select the **Extra Contents** in **MY MEDIA** when the **Mode** under **Pro:Centric** in **Installation Menu** is set to **OFF**.

3



Select 'Yes'.

4

Wait till the download process is completed.
After completion of download,
TV set will restart automatically.

TV is in updating process.
Please wait for a while.

You can see a new Application File on TV.



■ To stop playing the Application file

Change **Mode** other than **Flash** or **GEM** under **Pro:Centric** in **Installation Menu**.
When you change the **Mode**, the downloaded content is deleted from the memory.

! NOTE

- ▶ When playing the Application file(FLASH or GEM file), the buttons are controlled according to the settings of the Extra Contents option.

