LG
Life's Good

INSTALLATION MANUAL

LED TV*

* LG LED TV applies LCD screen with LED backlights.

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

UT78**
UT76**
UT66**
UT64**
LT66**
ET96**

MFL70423711
(1905-REV00)

www.lg.com

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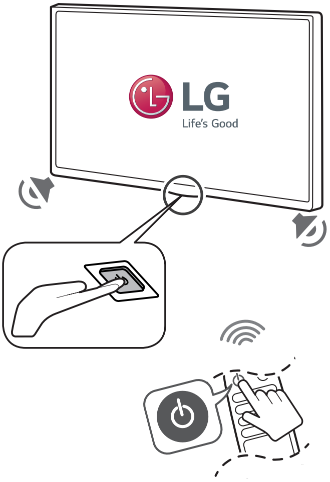
Location and Function of Controls

Parts and Button



Basic functions

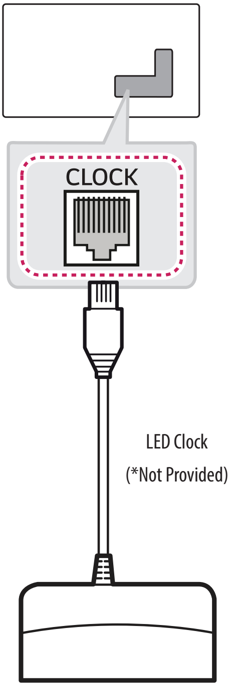
⏻	Power On (Press)
	Power Off[1] (Press and Hold)
	Menu Control (Press[2])
	Menu Selection (Press and Hold[3])

1 All running apps will close.
2 You can access and adjust the menu by pressing the button when TV is on.
3 You can use the function when you access menu control.

LED Clock Connection

(Depending on model)

This TV can be connected to a LED Clock via the **CLOCK** port.

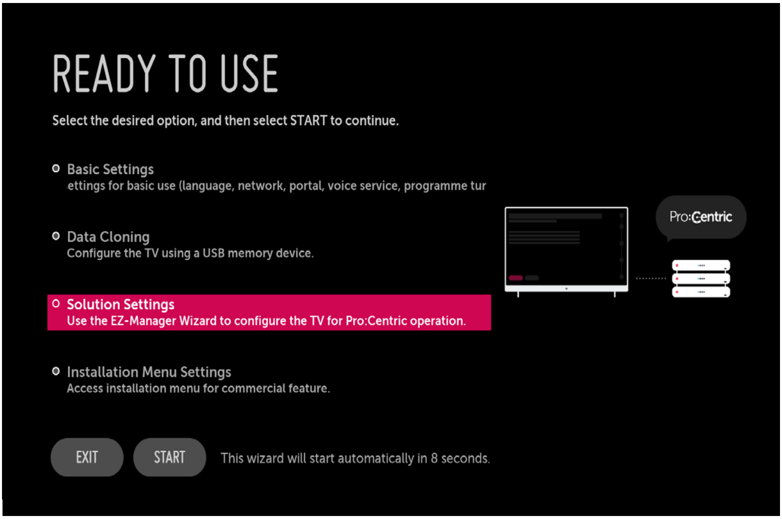


First Use Wizard

* Images shown may differ from your TV.

(Depending on model)

- There are four options - **Basic Settings**, **Data Cloning**, **Solution Settings**, and **Installation Menu Settings**. Each menu can access by **START** button.



READY TO USE

Select the desired option, and then select START to continue.

○ Basic Settings
ettings for basic use (language, network, portal, voice service, programme tur

○ Data Cloning
Configure the TV using a USB memory device.

○ Solution Settings
Use the EZ-Manager Wizard to configure the TV for Pro:Centric operation.

○ Installation Menu Settings
Access installation menu for commercial feature.

This wizard will start automatically in 8 seconds.

Basic Settings

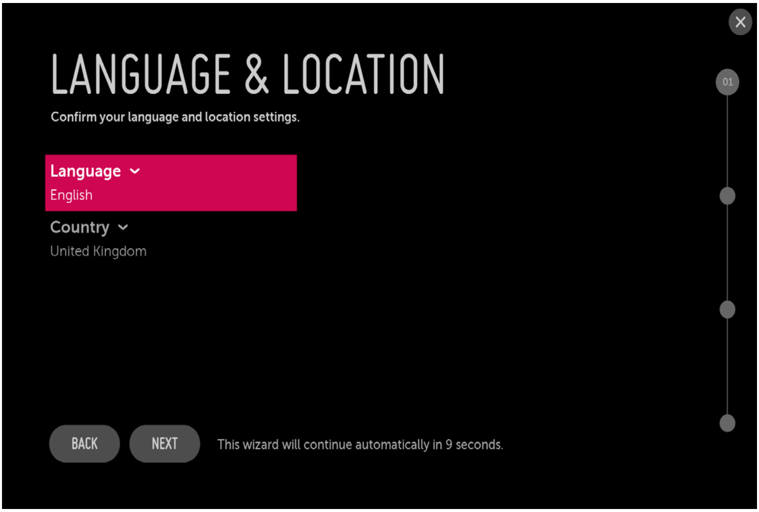
(Depending on model)

This menu is for basic settings related to language, network, portal, voice service coverage and programme tuning without SI (Pro:Centric) setting. There are four steps for it.

Language & Location

(Depending on model)

- Select the **Language** and **Country**. Some countries need to select the Time Zone.



LANGUAGE & LOCATION

Confirm your language and location settings.

Language
English

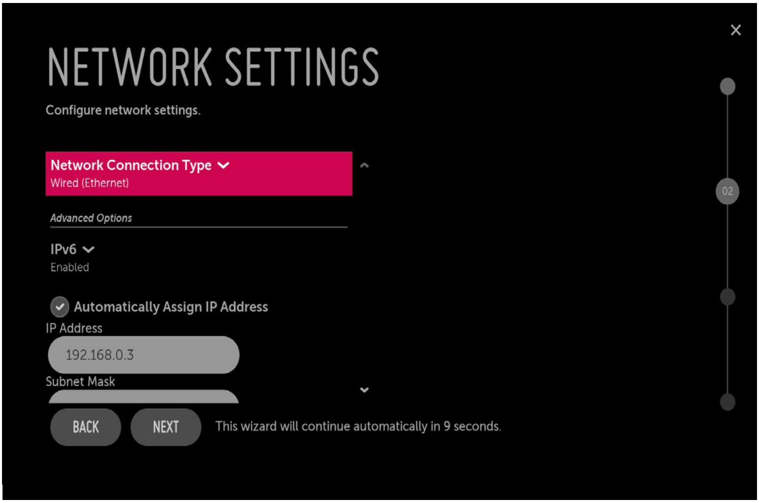
Country
United Kingdom

This wizard will continue automatically in 9 seconds.

Network Settings

(Depending on model)

- Set Network connection. You can connect easily to wired/wireless network. ("Network Settings" on page 24)



NETWORK SETTINGS

Configure network settings.

Network Connection Type
Wired (Ethernet)

Advanced Options

IPv6
Enabled

☑ Automatically Assign IP Address

IP Address
192.168.0.3

Subnet Mask

This wizard will continue automatically in 9 seconds.

Portal Settings

(Depending on model)

- Set the Portal Mode and Portal Auto Start.

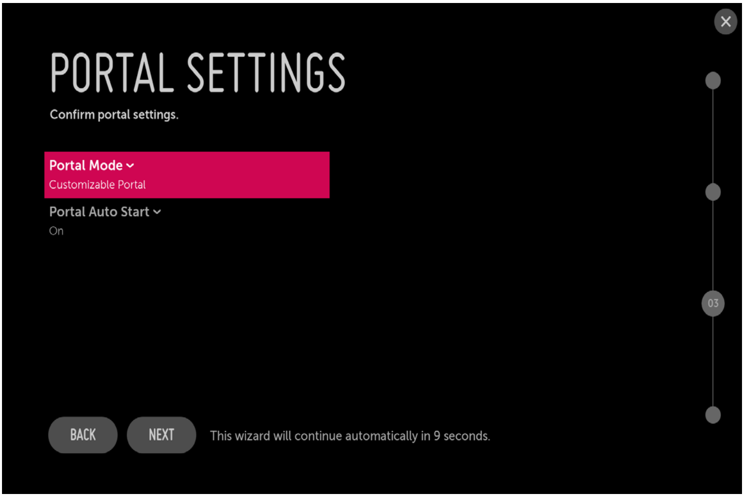
Portal Mode

(Depending on model)

- You can select 'Default Portal' (Use webOS default portal), 'Customizable Portal' (Use editable Portal), or 'None' (Do not use portal).

Portal Auto Start

- You can select 'On' or 'Off'. If you select 'On', Portal (Home Launcher) will be execute automatically after TV on.



PORTAL SETTINGS

Confirm portal settings.

Portal Mode
Customizable Portal

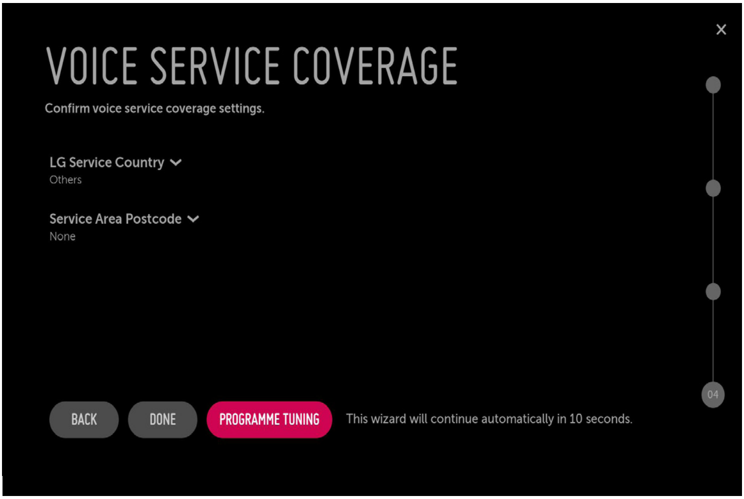
Portal Auto Start
On

This wizard will continue automatically in 9 seconds.

Voice Service Coverage

(Depending on model)

- Set the voice service coverage. You can set **LG Service Country** and **Service Area Postcode(Depending on model)** for voice service.



VOICE SERVICE COVERAGE

Confirm voice service coverage settings.

LG Service Country
Others

Service Area Postcode
None

This wizard will continue automatically in 10 seconds.

Data Cloning

(Depending on model)

Access Data cloning menu of TV Manager application for applying cloning file.

Solution Settings

(Depending on model)

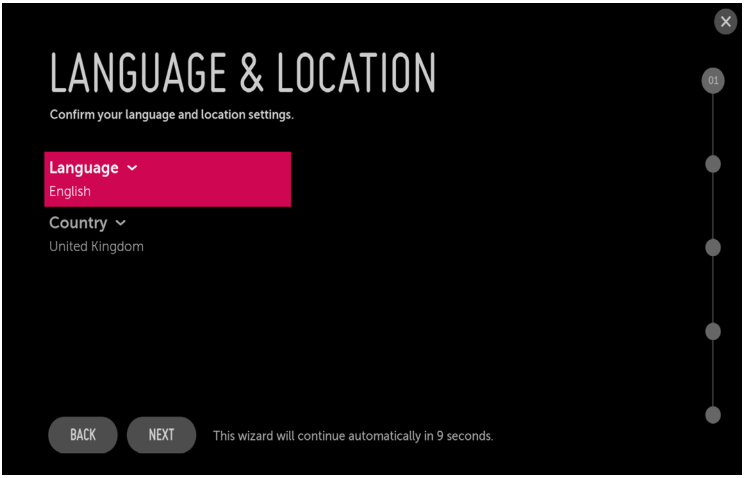
The Pro:Centric Platform enables you to simply install, manage and use guest-centric solutions. The default Domain “procentric.local” and IP Server Address are needed to be registered in DNS TV will contact the IP Server using the default Domain “procentric.local” via IP on server search page. If TV doesn’t contact the Server, TV will search the pre-defined programme earlier than all programmes. (Only DVB-C)

The frequencies of pre-defined programmes are below.

- Germany: ‘51000, 858000, 778000, 698000, 618000, 538000, 458000, 378000, 298000, 218000, 138000 khz’.
- Philippines 6 Mhz: ‘57000, 651000, 591000, 531000, 471000, 411000, 351000, 291000, 231000, 171000, 111000 khz’.
- Other Country: ‘50000, 842000, 762000, 682000, 602000, 522000, 442000, 362000, 282000, 202000, 122000 khz’.

Language & Location selection

(Depending on model)



LANGUAGE & LOCATION

Confirm your language and location settings.

Language
English

Country
United Kingdom

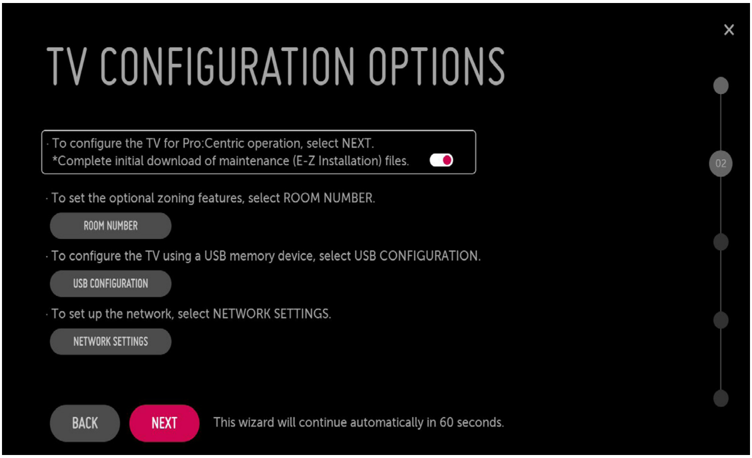
This wizard will continue automatically in 9 seconds.

- Please select the **Language** and **Country**. Some countries need to select the **Time Zone.**

Automatically for Setup

(Depending on model)

1 From the TV Configuration Options screen, you can choose how to proceed with the configuration of this TV. Whether you will configure the TV for Pro:Centric operation via the wizard or use a USB memory device to configure the TV, you may first wish to set the Room Number on the TV. Also, you can configure the network environment.



TV CONFIGURATION OPTIONS

· To configure the TV for Pro:Centric operation, select NEXT.
*Complete initial download of maintenance (E-Z Installation) files.

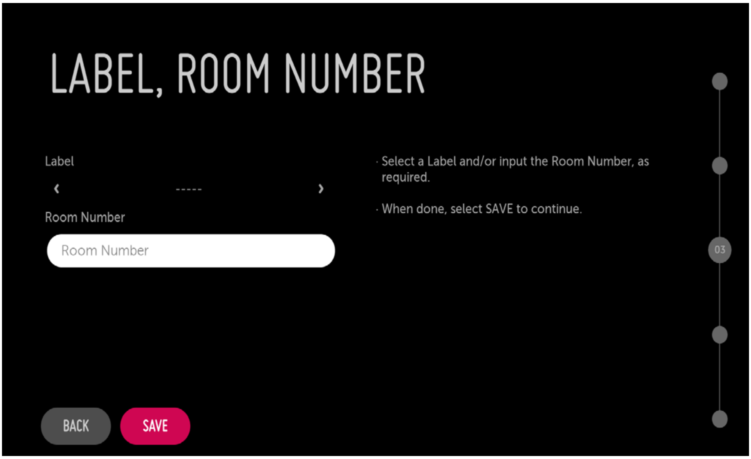
· To set the optional zoning features, select ROOM NUMBER.

· To configure the TV using a USB memory device, select USB CONFIGURATION.

· To set up the network, select NETWORK SETTINGS.

This wizard will continue automatically in 60 seconds.

- Complete initial download of maintenance(On/Off Toggle): you can choose the option whether to skip the maintenance files download during the EZ-Manager process.
- If you intend to set Room Number as part of the TV configuration, use the Room Number option to assign the Room # for this TV before you continue with additional configuration.
- In the Label field, use the Left/Right arrow keys to specify a North, South, East, or West designation for this TV.
- In the Room Number field, you can use the number keys on the Installation Remote to direct enter a room number or use the virtual keyboard on the TV screen.



LABEL, ROOM NUMBER

Label

‹ ----- ›

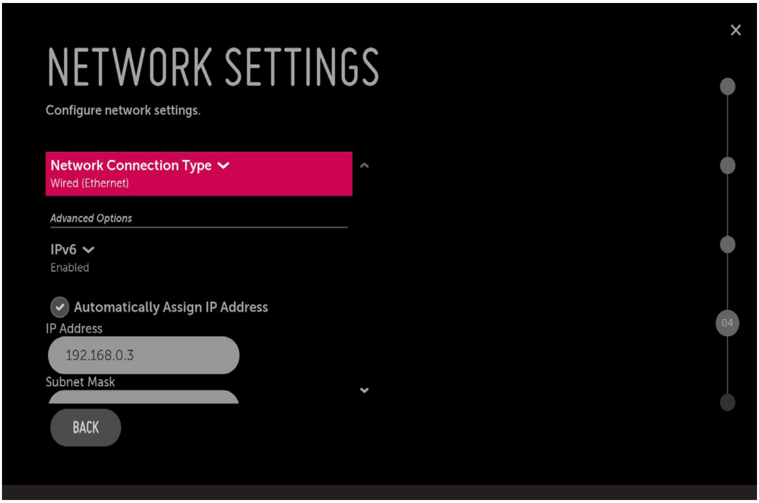
Room Number

Room Number

· Select a Label and/or input the Room Number, as required.

· When done, select SAVE to continue.

- If you intend to apply the files via USB, use USB Configuration option to access TV Manager app. ("TV Manager" on page 46)
- To continue, move and select **NEXT**.
- If you intend to set network, use the Network Settings option. You can connect easily to wired/wireless network by this option. ("Network Settings" on page 24)



NETWORK SETTINGS

Configure network settings.

Network Connection Type
Wired (Ethernet)

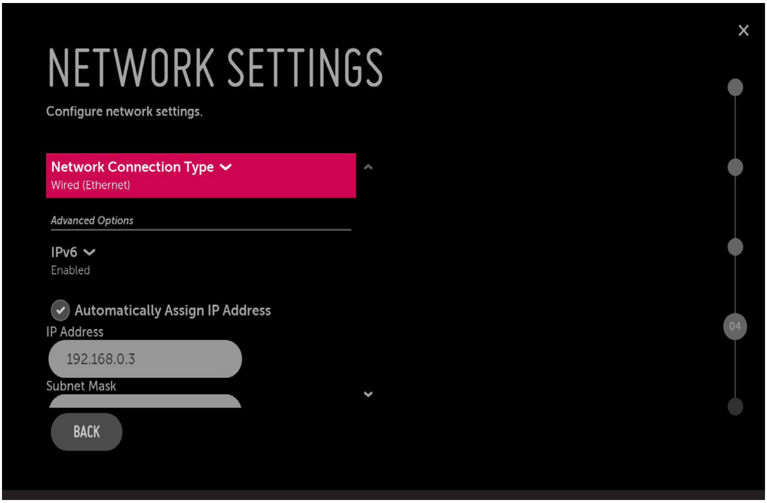
Advanced Options

IPv6
Enabled

☑ Automatically Assign IP Address

IP Address
192.168.0.3

Subnet Mask



NETWORK SETTINGS

Configure network settings.

Network Connection Type
Wired (Ethernet)

Advanced Options

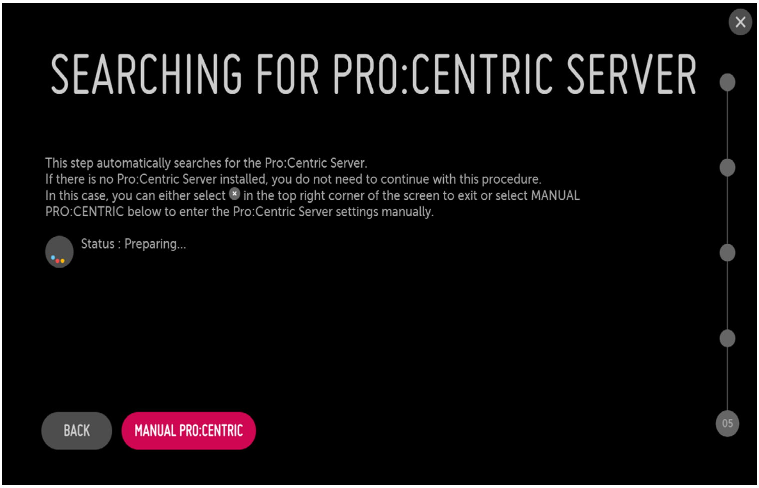
IPv6
Enabled

☑ Automatically Assign IP Address

IP Address
192.168.0.3

Subnet Mask

2 This step automatically searches for the Pro:Centric Server. If was found the Pro:Centric data programme, select the **NEXT**.

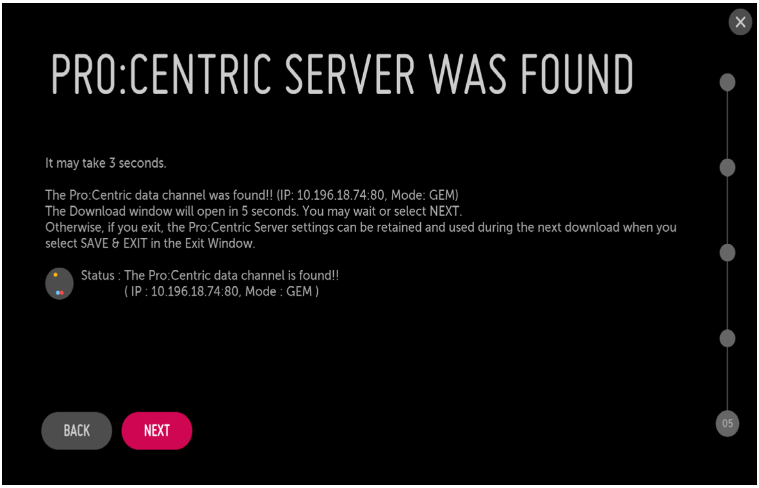


SEARCHING FOR PRO:CENTRIC SERVER

This step automatically searches for the Pro:Centric Server.
If there is no Pro:Centric Server installed, you do not need to continue with this procedure.
In this case, you can either select ☒ in the top right corner of the screen to exit or select MANUAL PRO:CENTRIC below to enter the Pro:Centric Server settings manually.

Status : Preparing...

⇩



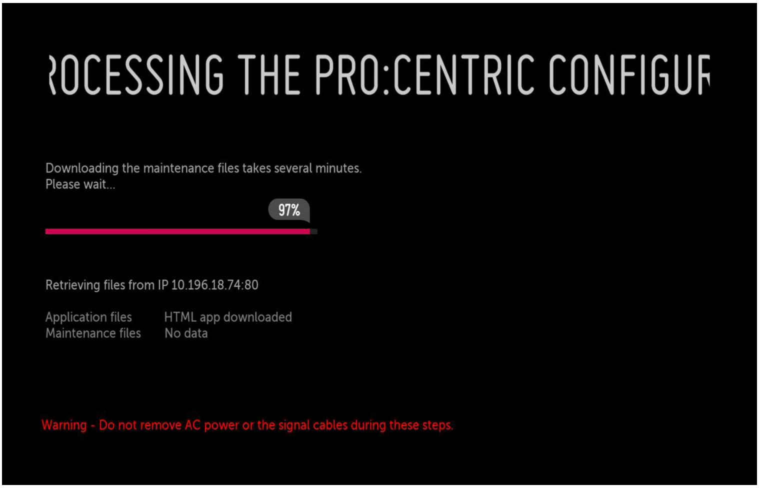
PRO:CENTRIC SERVER WAS FOUND

It may take 3 seconds.

The Pro:Centric data channel was found!! (IP: 10.196.18.74:80, Mode: GEM)
The Download window will open in 5 seconds. You may wait or select NEXT.
Otherwise, if you exit, the Pro:Centric Server settings can be retained and used during the next download when you select SAVE & EXIT in the Exit Window.

Status : The Pro:Centric data channel is found!!
(IP : 10.196.18.74:80, Mode : GEM)

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



ROCESSING THE PRO:CENTRIC CONFIGUF

Downloading the maintenance files takes several minutes.
Please wait...

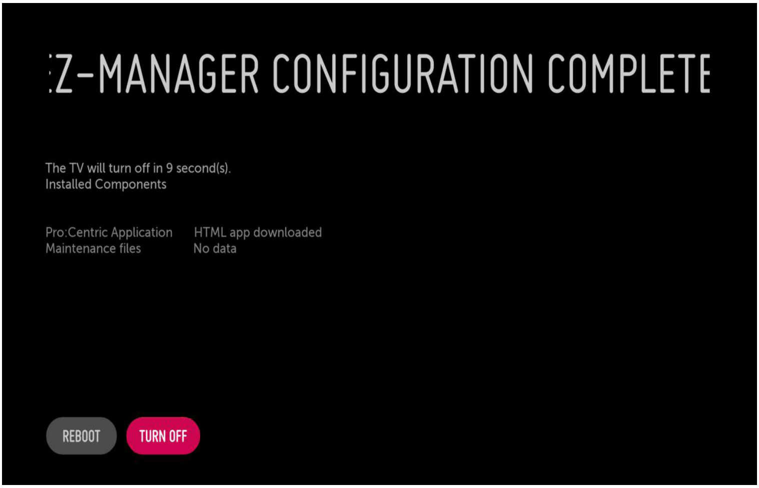
97%

Retrieving files from IP 10.196.18.74:80

Application files	HTML app downloaded
Maintenance files	No data

Warning - Do not remove AC power or the signal cables during these steps.

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



Z-MANAGER CONFIGURATION COMPLETE

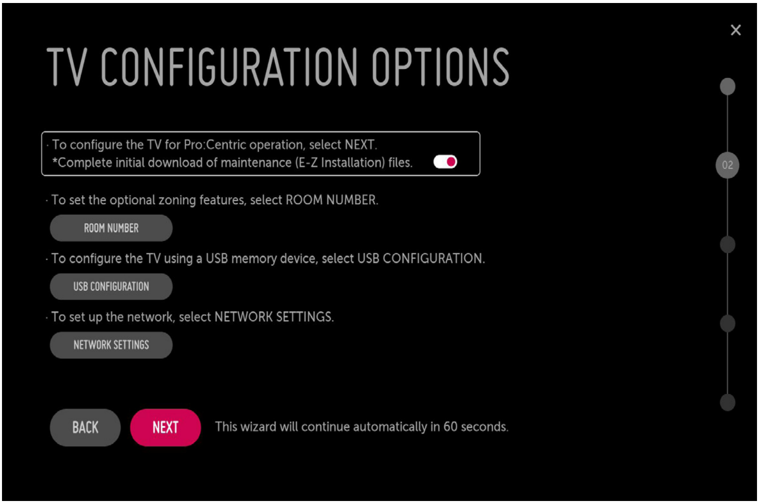
The TV will turn off in 9 second(s).
Installed Components

Pro:Centric Application	HTML app downloaded
Maintenance files	No data

Manually for Setup

(Depending on model)

1 Select a Label and/or enter the Room Number using the numeric keypad on the remotes or using the virtual keyboard on the TV screen. To continue, move and select **NEXT**.



TV CONFIGURATION OPTIONS

· To configure the TV for Pro:Centric operation, select NEXT.
*Complete initial download of maintenance (E-Z Installation) files.

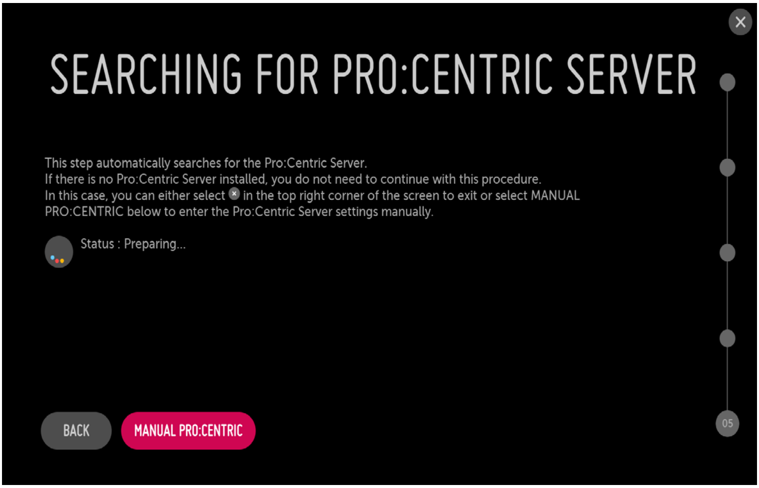
· To set the optional zoning features, select ROOM NUMBER.

· To configure the TV using a USB memory device, select USB CONFIGURATION.

· To set up the network, select NETWORK SETTINGS.

This wizard will continue automatically in 60 seconds.

2 Please select the **MANUAL PRO:CENTRIC**.

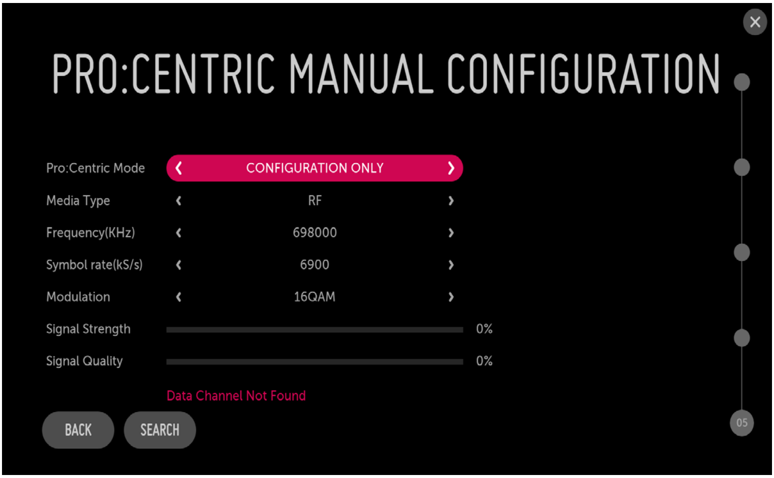


SEARCHING FOR PRO:CENTRIC SERVER

This step automatically searches for the Pro:Centric Server.
If there is no Pro:Centric Server installed, you do not need to continue with this procedure.
In this case, you can either select ⊗ in the top right corner of the screen to exit or select MANUAL PRO:CENTRIC below to enter the Pro:Centric Server settings manually.

Status : Preparing...

3 Configure the appropriate Pro:Centric settings in the TV. (Taiwan does not support RF)



PRO:CENTRIC MANUAL CONFIGURATION

Pro:Centric Mode: CONFIGURATION ONLY

Media Type: RF

Frequency(KHz): 698000

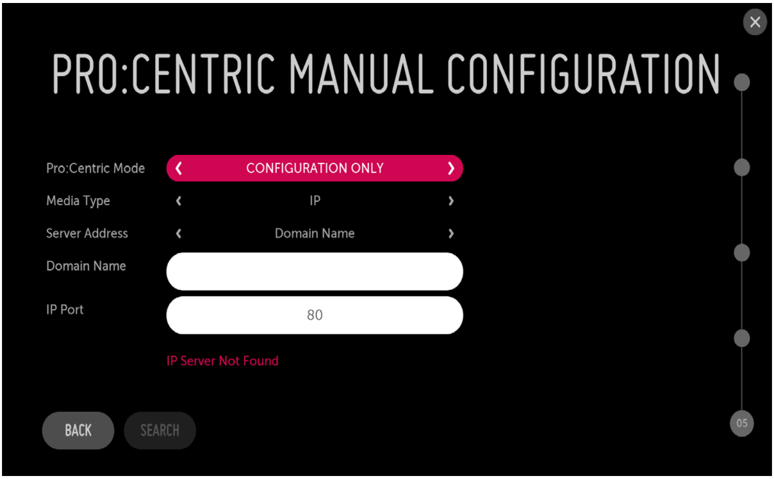
Symbol rate(kS/s): 6900

Modulation: 16QAM

Signal Strength: 0%

Signal Quality: 0%

Data Channel Not Found



PRO:CENTRIC MANUAL CONFIGURATION

Pro:Centric Mode: CONFIGURATION ONLY

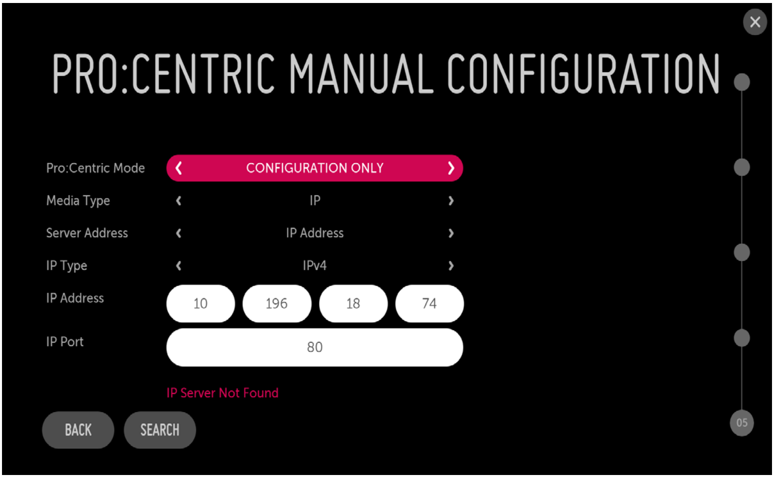
Media Type: IP

Server Address: Domain Name

Domain Name:

IP Port: 80

IP Server Not Found

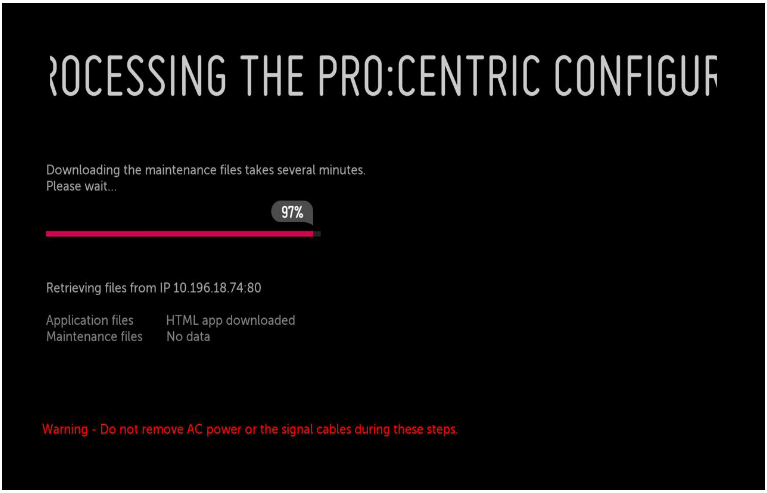


PRO:CENTRIC MANUAL CONFIGURATION

Pro:Centric Mode ‹ CONFIGURATION ONLY ›
Media Type ‹ IP ›
Server Address ‹ IP Address ›
IP Type ‹ IPv4 ›
IP Address 10 196 18 74
IP Port 80

IP Server Not Found

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



ROCESSING THE PRO:CENTRIC CONFIGUR

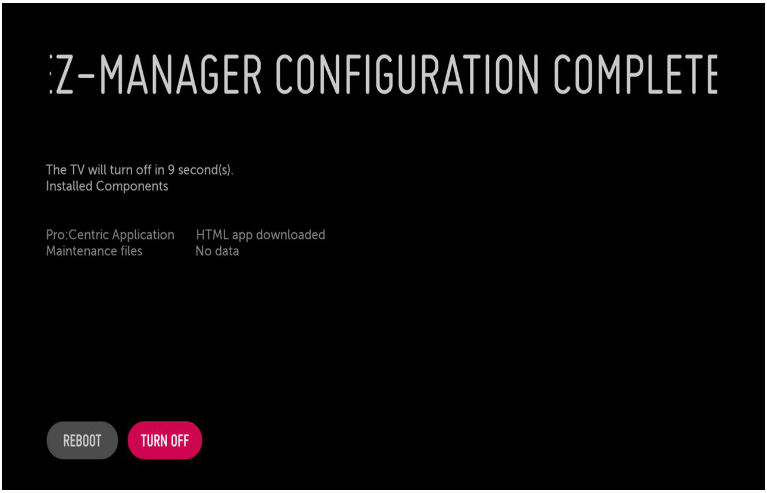
Downloading the maintenance files takes several minutes.
Please wait...

Retrieving files from IP 10.196.18.74:80

Application files HTML app downloaded
Maintenance files No data

Warning - Do not remove AC power or the signal cables during these steps.

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



ZZ-MANAGER CONFIGURATION COMPLETE

The TV will turn off in 9 second(s).
Installed Components

Pro:Centric Application	HTML app downloaded
Maintenance files	No data

Installation Menu Settings

(Depending on model)

Access Installation menu for commercial feature settings.

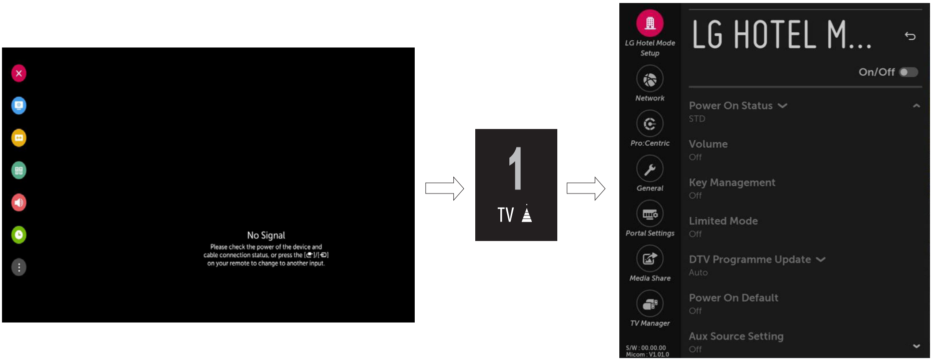
Installation Menu

* Images shown may differ from your TV.

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.



No Signal

Please check the power of the device and cable connection status, or press the [ ]/[ ] on your remote to change to another input.

1

TV

LG HOTEL M...

On/Off

Power On Status
STD

Volume
Off

Key Management
Off

Limited Mode
Off

DTV Programme Update
Auto

Power On Default
Off

Aux Source Setting
Off

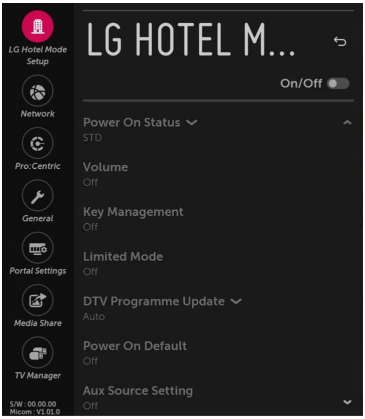
S/W : 00.00.00
Micom : V1.01.0

1 Press the Setting button for more than 5 seconds using the user remote control, banner 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".

LG Hotel Mode



On/Off

Power On Status
STD

Volume
Off

Key Management
Off

Limited Mode
Off

DTV Programme Update
Auto

Power On Default
Off

Aux Source Setting
Off

When 'Hotel Mode Operation' is set to On, all functions of Hotel Mode apply.

Hotel Mode Operation

(Depending on model)

- Decide to work all functions of 'Hotel Mode Operation' or not.
- When 'Hotel Mode Operation' is set to On, all functions of Hotel Mode apply.
- When 'Hotel Mode Operation' is set to Off, all functions of Hotel Mode Do Not apply.

Power On Status

- Decide to select working status of TV Set when turn on main power.
- You can select 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.
- If there Block All is both IR Operation and Local Key Operation from Key Management, In order to provide the Option that must be able to turn on the TV in the TV turned off situation, change the value of the PWR. (Reference the Key Management)

Volume

- Decide to apply volume policy of 'Start Volume', 'Maximum Volume' and 'Minimum Volume' as On or Off.
- (0 ≤ Min ≤ Start ≤ Max ≤ 100)

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. (Min ≤ Start ≤ Max)
  - The default setting is 'Off'.
  - When selected to 'On', if the value is lower then the minimum specified in the minimum volume entry, the minimum volume entry must be used.
  - When selected to 'On', if the value is larger then the maximum specified in the maximum volume entry, the maximum volume value must be used.
  - Access to a volume in '**Timer Power On**' must be fixed to start volume when 'Hotel Mode Operation' (On) and 'Start Volume' (Off, 0 ~ 100) were set simultaneously.

Maximum Volume

- This entry sets the maximum volume level the set. The level is specified as a number between 'Minimum Volume' to 100. (Min ≤ **Max** ≤ 100).
  - The default value is 100.

Minimum Volume

- This entry sets the minimum volume level the set. The level is specified as a number between 0 to 'Maximum Volume'. (0 ≤ Min ≤ Max)
  - The default value is 0.

Key Management

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

IR Operation

- Decide whether work the LG remote control or not.
  - When 'IR Operation' is set to 'Normal', all remote keys are available.
  - 'Use PWR Only' makes block all remote keys except power key.
  - When 'IR Operation' is set to 'Block All', all normal remote keys don't work.

Local Key Operation

- Decide to operate 'Local Key' working behavior.
  - When 'Local Key Operation' is set to 'Normal', all local keys are available.
  - 'Use PWR Only' makes block all local keys except power key.
  - When 'Local Key Operation' is set to 'Block All', all local keys don't work.

Limited Mode

- Configure TV function’s limitation. When selected to ‘On’, following sub-menus will be worked by below.

Setup Menu

- Permit to tune and manage programmes.

Programme Change

(Depending on model)

- Decide to change programme or not by setting ‘Programme Change' as ‘On’(Change Possible) or ‘Off’(Change Impossible) when present source is TV.

Menu Display

- Function to decide whether work with menu of control key or not.
  - Although select Off, the action that press a Menu button for 5 seconds to enter ‘Installation Menu’ is available.
  - When select On, Menu works.

OSD Display

- Decide to display OSD or not.
  - When set to ‘Off’, all OSD is not displayed except some exception.
  - Although select ‘Off’, 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...)

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 ‘On’, Accessible Items on the menu system, others are not permissible. (Depending on model)
    - Input select screens
    - Sleep timer
    - Aspect Ratio
    - Subtitles
    - Programmes (Except for Programme Tuning & Settings and Programme Manager)

DTV Programme Update

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

Power On Default

- Set the programme to display and Volume Level, etc. when turn on power.
- When set to Off, it is not applied to the subordinate Input, Programme, A/V Setting, Aspect Ratio menu.
- When set to On, it can set by entering the subordinate menu.

Input

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

Programme

- Select start programme number if Input source's value is TV.

A/V Setting

- If 'A/V Setting' is changed from 'Off' to 'On', A/V parameters that are set before entering 'Installation Menu' are applied whenever turn on power.

Aspect Ratio

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

Aux Source Setting

- Set to On or Off.
- The Auxiliary (Input) Source Setting feature will enable or disable for each external input.
- User cannot disable the current input.

Power Management

- The Power Management feature will turn off the TV 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 reset the 'Power Management' timer.
  - This entry can be set to a value which is corresponding to the desired hours (1 hour to 7 hours).
  - Default value is 'Off'.

Radio Video Blank

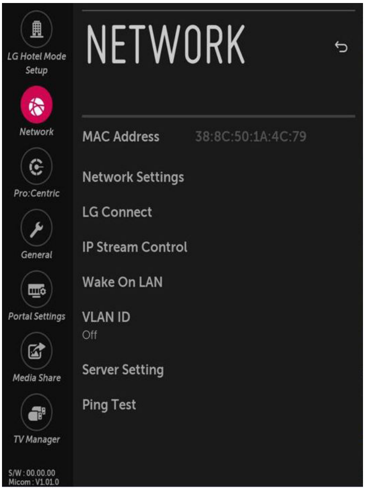
(Depending on model)

- When 'Radio Video Blank' is set to On, 'Video Blank' works only in case of Radio Programme.
- Although set to On, if there are Video signal, 'Video Blank' wouldn't work. In consideration of case that display background screen and broadcast only with Radio, 'Video Blank 'works only when there is no Video signal.
- When set to Off, 'Video Blank' do not work although it is the Radio Programme.
- This operates only in the Analog TV Mode.

Factory Reset

- Change all settings to their default values.

Network



NETWORK

MAC Address 38:8C:50:1A:4C:79

Network Settings

LG Connect

IP Stream Control

Wake On LAN

VLAN ID
Off

Server Setting

Ping Test

MAC Address

- Displays the MAC address (not customizable).

Network Settings

One-click network connection

- Connects easily to a network.
- This menu supports to connect to an available network.

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).
  1 Select a network connection, either Wired or Wireless.
  2 When connecting via Wired, Configures the IP settings of the TV set. You can set the IP address, subnet mask, gateway and DNS server.
  3 When connecting via Wi-Fi, use the one of the following network connection methods.

AP List	Connects to the network selected from the AP List.
Enter the SSID	Connects to the wireless AP typed in.
WPS-PBC	Connects easily when the button of a wireless AP supporting PBC is pressed.
WPS-PIN	Connects easily when the PIN of the wireless AP that you wish to connect to is entered in to the AP website.
Advanced Wi-Fi Settings	After connects Wi-Fi, you can set the IP address, subnet mask, gateway and DNS server.

LG Connect

(Depending on model)

- Sets the 'LG Connect' function to On or Off.
  - You can connect TV via 'LG TV Plus' app in smart device.
  - Default setting is 'On'.

IP Stream Control

(Depending on model)

Audio PTS Offset

- Controlling output stream timing of audio.
- You can set the '-500~500'. (Change step is -10 or +10)

Video PTS Offset

- Controlling output stream timing of video.
- You can set the '-500~500'. (Change step is -10 or +10)

IGMP

- You can set IGMP version. (2 or 3)

Wake On LAN

- Sets the Wake On LAN function.
  - The Wake On LAN feature enables the TV to receive software updates and/or be powered ON upon receipt of Wake Up Frame packets and/or Magic Packet data via the wired LAN. To facilitate use of this feature, note that the appropriate wired connection must be made. (‘Wake up Frame’ - Depending on model)

VLAN ID

(Depending on model)

- This menu provides TV with VLAN settings.
- Recommend that the network manager set this menu.
- If you set different ID between switch and TV, you cannot use network.

LAN ID

- Set VLAN ID for TV network.

Aux LAN ID

(Depending on model)

- Set AUX LAN ID for devices connected via **AUX LAN** port.

Server Settings

(Depending on model)

- Sets the information to connect to the external server.

CMS Server

- Sets the network information to connect to SuperSign CMS (or other compatible solutions)

Control Server

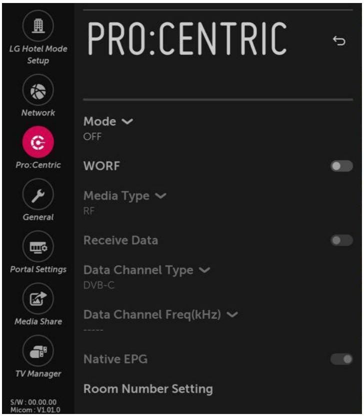
- Sets the network information to connect to SuperSign Control (or other compatible solutions)

Ping Test

- Check your network status with the ping test.

Pro:Centric

(Depending on model)



PRO:CENTRIC

Mode
OFF

WORF

Media Type
RF

Receive Data

Data Channel Type
DVB-C

Data Channel Freq(kHz)

Native EPG

Room Number Setting

S/W : 00.00.00
Micom : V1.01.0

Mode

- Sets whether or not enable Pro:Centric and the service method.
- You can set to Off, Configuration Only, GEM or HTML. The default value is Off.

WORF

- When WORF is set to 'Enable', Hour and Minute items are enabled and then the WORF function is enabled.
- When WORF is set to 'Disable', 'Hour' and 'Minute' items are disabled and then the WORF function is disabled.

Room Number Setting

- You can set Label and Room Number using the Room Number Setting.

Media Type

- Sets the media type to RF or IP.
- The default value is RF.

RF

- **Data Channel Freq (KHz)**
  - Sets the RF frequency at which the Pro:Centric data is received.
- **Data Channel Type**
  - Sets the RF modulation type to DVB-T or DVB-C.
    The default value is DVB-C.

IP

- P:C IP Setting
  - Server Address is set to IP Address.
  - Can select IPv4 or IPv6 type using 'IP Type'. (Depending on model)

(IP Address)	Set IPv4 or IPv6 address.
(Port Number)	Sets the actual port or number where the Pro:Centric server is running.

  - Server Address is set to Domain Name.

(Domain Name)	Sets the domain name where the Pro:Centric server is running.
(Port Number)	Sets the actual port or number where the Pro:Centric server is running.

  - The default value of IP(IPv4) is 0 and the range is between 0 and 255.
  - The default value of IP(IPv6) is 0 and the range is between 0 and FFFF.
  - The default value of Port is 0 and the range is between 0 and 65535.

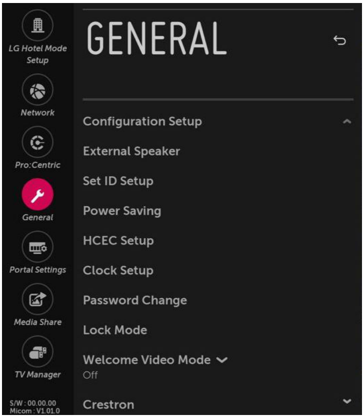
Receive Data

- Sets Enable or Disable.

Native EPG

- When Pro:Centric Mode is set to 'Off' or 'Configuration Only', 'Native EPG' is forced to be 'Enable' and unable to change.
- When set to ‘Enable’, You can use the TV Guide Application in Pro:Centric.

General


LG Hotel Mode Setup
Network
Pro:Centric
General
Portal Settings
Media Share
TV Manager
S/W : 00.00.00
Micom : V1.01.0
GENERAL
Configuration Setup
External Speaker
Set ID Setup
Power Saving
HCEC Setup
Clock Setup
Password Change
Lock Mode
Welcome Video Mode
Off
Crestron

Configuration Setup

Select RCU

- It is a mode to set whether to use Select RCU or not. When 'Select RCU' is set to 'Enable', You can adjust 'Number of RCU' menu.

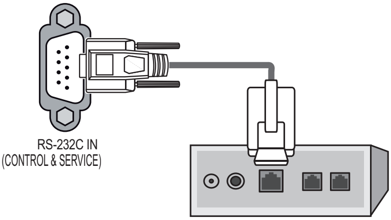
Number of RCU

- Number of RCU value range 1~9. (When 'Select RCU' is set to 'Enable')
- Number of RCU value range 0. (When 'Select RCU' is set to 'Disable')
  - RCU (Remote Control Unit) : It is special RCU that operates only setted number of RCU in TV.

RS232 DC Power Outlet

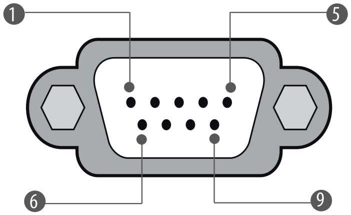
(Depending on model)

- 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.
- 5 V DC Power Outlet and 12 V DC Power Outlet must operate mutually exclusively. That is, only one of the two sides must be turned on.
  - You can select **OFF**, '5 V' or '12 V'.
    - » When select '5 V' the 5 V is forwarded through the port. when select '12 V' the 12 V is forwarded through the port.


RS-232C IN
(CONTROL & SERVICE)

Interface box

» Type of Connector: D-Sub 9-Pin Male



Male connector on box, viewed towards connector.

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	+5 V DC 10 %, max 100 mV ripple
9	1.5 A	+12 V DC 10 %, max 100 mV ripple

One Channel Map

(Depending on model)

- If set to 'Enable', the TV will operate as below.
  - A. When the TV is auto-scanning, it searches both air and cable channels.
  - B. User can assign a channel number him/herself by manual scan.
  - C. In 'Programme Edit' window, all channels are shown in a single list regardless of input source.
  - D. Automatically scanned channels may not have the user-desired channel numbers.
- If user change the 'Enable/Disable' value, an pop-up window will be displayed to warn that all channel will be deleted. The Default value is 'Enable'.

DTV Programme Update

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

On Timer Operation

- It is a mode to select **Timer Power On** working one time or repeatedly.
- 'Once': '**Timer Power On**' in the user menu operates only one time when the **Timer Power On** menu is set to **On**.
- 'Repeat' : '**Timer Power On**' operates repeatedly when the **Timer Power On** menu is set to **On**.

Radio Name Display

- Instead of "Audio Only", the name of a radio programme is displayed on the screen when a radio broadcast is playing.
- If the setting is "On", the name of a radio programme is displayed for the radio programme.
- If the setting is "Off", the text "Audio Only" is displayed for the radio programme.

USB Auto Playback

(Depending on model)

- 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.
- 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.
- If it reaches the last file, it starts the first file again

Teletext

(Depending on model)

- If set to On, the teletext mode stays enabled even when the programme signal disappears on the teletext screen.
- If set to Auto, the teletext mode is disabled when the programme signal disappears on the teletext screen.

15Min Auto Off

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

DVB-C

(Depending on model)

- DVB-T/C programmes are searchable and selectable like following if DVB-C is "Enable".

DVB-C Bandwidth

(Depending on model)

- If country is 'Philippines', 'DVB-C Bandwidth' menu will be shown.
- Select the bandwidth of cable tuning (6 Mhz/8 Mhz). The default is 6 Mhz.

Auto Sensing

- If 'Auto Sensing' is set to 'On', 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.
  - SIMPLINK and Auto Sensing cannot work simultaneously. If SIMPLINK is set to On, Auto Sensing is automatically set to Disable.
  - If the signal is removed while Auto Sensing (automatic input switch) is enabled, the input returns to the previous setting.
    If the several input are connected by enabling Auto Sensing and the automatic 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.

InStant On

(Depending on model)

- Set to 'Instant On Mute Mode' or 'Instant On Reboot mode' to enable the Instant ON feature. The Instant ON feature allows the TV to turn ON when AC power is applied, but with video and audio muted (Muted ON). The TV retains its ON status while appearing to be OFF. Pressing the POWER button toggles Off/On the video and audio mutes, so that the TV appears to turn ON instantly.
  - If this item is set to Instant On Mute Mode, the TV will not reboot to check for and download updates at turn OFF. TV seems to be turned off to user(panel is off), but both micom and chipset are on.
  - If this item is set to Instant On Reboot mode, the TV will reboot to check for and download updates from the Pro:Centric server at every turn OFF.
  - If this item is set to Instant On Mute mode or Instant On Reboot mode when 'WORF' is 'Disable', 'WORF' is set to 'Enable' and 'Update Time' is set to auto(random) time. (Depending on model)

Insert Image

(Depending on model)

- Set to On or Off.
- It is a mode to decide whether to display background image when using Clock app, Bluetooth Sound Sync app, Audio Programme app, No Signal state and watching Radio programme.
- You can download the background image at TV Manager app.

No Signal Image

(Depending on model)

- Set to On or Off.
- It is a mode to decide whether to use no signal image when there is no signal.

DPM

(Depending on model)

- You can configure the DPM (Display Power Management) function.
- If this option is not set to Off, the TV set enters the DPM mode when there is no input signal.
- If you set this option to Off, the DPM function is disabled.

Sustain Aspect Ratio

(Depending on model)

- Sustain Aspect Ratio sets the power mode of the HDMI Switching IC, which detects HDMI external input signals in the TV Standby state after DPM Power Off turns off the TV.
- If set to ON, the HDMI Switching IC is supplied with power even in Standby state after DPM turns off the TV.
- If set to OFF, the HDMI Switching IC maintains low power mode in Standby state after DPM turns off the TV.

Healthcare Headphone Mode

(Depending on model)

- **Healthcare Headphone On**
  - Mute is always applied to TV Speaker.
  - Sound Out menu is displayed as Internal TV Speaker + Wired Headphone, and all Sound Out submenus are gray out (Disable).
  - Internal TV Speaker / Headphone Simultaneous output, Volume key is adjust TV volume (Mute off).
  - Select TV Speaker User Interface. Volume key adjusts the internal TV Speaker volume.
  - Select Headphone User Interface. Volume key adjusts the headphone volume.
- **Healthcare Headphone Off**
  - Sound Out Normal Scenario on Commercial Hotel TV.
  - Sound Out has Menu in default mode (Internal TV Speaker + Audo Out (Optical)).

Screen Saver

(Depending on model)

- When the currently displayed app has not received any user input for an hour, it will be replaced by a Screen Saver.
- If you turn this option 'Off', the current picture may create an afterimage burned onto your screen, possibly permanently.

Default Sound Out

- You can configure the Sound Out to be set after power on.
- You can select Off, TV Speaker, Optical, LG Sound Sync., HDMI ARC
- If you set this option to Off, the TV maintains Sound Out after power on.
- If you set this option to HDMI ARC, SIMPLINK is enabled.
- If a SIMPLINK-enabled device is connected to the TV and item SIMPLINK is enabled, the SIMPLINK device Audio Mode will have priority over the setting of this item when the TV is turned ON.

USB Power

(Depending on model)

- You can control the power status of USB port according to the mode. Set to 'Default' or 'Warm Off' to enable the USB Power feature.
  - Default : When the TV is turned on, the USB device is powered. USB devices can be used regardless of 'Instant On' state.
  - Warm Off: When the TV is turned on, the USB device is powered. USB devices are available. However, if 'InStant On' is 'Instant On Mute Mode' or 'Instant On Reboot' mode and TV State is 'Instant On', the USB device is powered off.

⚠
- Please do not turn off the display when the connected USB storage device is working.
- When Turned off the power of USB storage device is suddenly, the stored files or the USB storage device may be damaged.

External Speaker

(Depending on model)

Volume Control

- Selects the volume control method of an external speaker.
- You can select ‘Off’, ‘Int Variable’ Fixed. ‘Ext Variable’. (Depending on model)
- Ext Variable uses the External Vol Up/Down Control Line to change the volume up to 2 Watts.
- Int variable is linked to the main volume OSD and change the volume 0 - 2 Watts.
- Fixed produces a fixed output. The default is Off.

Output

- This item is enabled when Volume Control is set to Fixed. You can choose one of 7 steps. (0.01/0.03/0.05/0.1/0.2/0.5/1/1.5/2 Watts).
- The Default is 1 Watt.

⚠
- Some models support the volume up to 1Watts.

Set ID Setup

Set ID Lock

- Set the ‘Set ID’ item in **GENERAL** Menu whether to activate or not.
- Set to On (Work) or Off (Do Not Work).

Set ID

- Set the ‘Set ID’ of TV Set with 1~99.

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.

HCEC Setup

(Depending on model)

CEC Mode

(Depending on model)

- You will have 3 modes to choose [Default], [HCEC] and [TVLink-CEC].
- If [Default] is selected, you can use SIMPLINK which is provided in LG TV. Also you can enable and disable SIMPLINK through SIMPLINK MENU.
- If [HCEC] is selected, you can use TVLink-HCEC Protocol. (For more detailed information, please refer to TVLink-HCEC Protocol document)
- If [TVLink-CEC] is selected, TV will not directly work for key input except for power key. And volume related keys will work just in case of Follower volume control mode. (For more detailed information regarding the scenario of volume control, please refer to "TVLink-CEC protocol" document)

IR Decoding

- When 'IR Decoding' is set to 'Enable', the TV decodes and changes it into a CEC Message and sends it to Command via the HDMI CEC Line. The default value is Disable.

Device ID

- Sets the ID of a device(Logical Address) connected to the CEC Line. You can choose 'All' and from '0 x 01' to '0 x 0E'(All, 0 x 01 ~ 0 x 0e).
- The default value is 'All'.

StandBy

- Set the sending and receiving scenario of OpStandBy(0 x 0c) command.
- Ths detailed scenario is described on the table below.

	Send	**Receive**
Send Only	0	X
Receive Only	X	0
All	0	0
Off	X	X

Forced Initialize

- This setting will be enabled When CEC mode is set as 'TVLink-CEC'.
- If 'Enable" is selected, TV will change its input source to HDMI1 by any HDMI-CEC simulation from a device.

HTNG Hotel Mode

- If you use following functions via TVLink-HCEC, HTNG Hotel mode will be set as "Yes" automatically.
  - Power On Default, Start Volume, Maximum Volume, Minimum Volume, or Start Volume.
- Even if 'Hotel Mode Operation' is set as No, above settings are still effective.

Clock Setup

(Depending on model)

Clock Display

(Depending on model)

- You can select 'Enable' or 'Disable'.
- After selecting 'Enable', you can see the LED Clock TV.

Dimming Standby

(Depending on model)

- Standby Dimming value Range : 1~2

Dimming PowerOn

(Depending on model)

- PowerOn Dimming value Range: 1~5

Clock Source

- You can select 'Off', 'Pro:Centric', 'TV', 'NTP', 'Admin'.
- NTP : Clock is synchronized using Network Time Protocol. It's only enabled when network cable is connected.
- Admin : It's automatically set to Admin when clock is updated by commercial protocols like TVLink-HCEC, TVLink-Interactive, or HCAP API.
- Off : Clock is synchronized using any available clock source.
- Pro: Centric : Clock is synchronized using Pro:Centric server. (Depending on model)
- TV : Clock is synchronized using particular TV programme.
  - **Input** (Depending on model)
    - » You can select 'Input' according to 'Clock Source'.
    - » You can select 'RF' or 'IP' when Clock Source is 'Pro:Centric'.
    - » You can select TV source when Clock Source is 'TV'.
    - » Input is set to 'None', 'HCAP', 'Protocol', 'HTNG' automatically when Clock Source is 'Admin'.
  - **Programme / Frequency** (Depending on model)
    - » Sets the Frequency to get the time information when Clock Source is 'Pro:Centric'.
    - » You can select programme when Clock Source is 'TV'.
  - **Timezone (City) / Timezone (Custom) / Timezone (Offset)** (Depending on model)
    - » In the case when there is difference between the time information received from the Teletext and the time of the current area, it can be set up to correct this. The initial value is 0, and it can be changed in the range of -12 Hrs ~ +14 Hrs. (Timezone (Offset) range is -12 Hrs ~ +12 Hrs)

Password Change

- To ensure more security, Password can be changed by Installations' own design.
  1. Change password by using virtual keyboard.
  2. Input the password again for confirmation.

Lock Mode

USB

- If set to 'Enable', USB devices do not work in relative features. (Exclude S/W update)

Factory Reset

- If set to 'Enable', User Menu ⇨ **General** ⇨ **Reset to Initial Settings** is disabled.

Crestron

(Depending on model)

- This function enables synchronization with applications provided by Crestron.
- Server: This menu sets the server's IP address for the network connection with the server. (equipment provided by Crestron)
- Port (1024~65535): This menu sets the port for the network connection with the server. The default port number is 41794.
- IP ID (3-254): This menu sets a unique ID for synchronizing with the application.

Welcome Video Mode

(Depending on model)

- You can set to Off, Once or Repeat.

Operation

- The video displays after your TV is turned on and the boot logo appears.
- If Welcome Video is enabled and a video is downloaded on the TV, the video plays.
- The time it takes a video to be displayed may differ depending on the decoding time of the video.
- Controls for playing the video are not available. (Pause, stop, fast forward, etc.)
- Videos in any file format that the TV supports can be downloaded and displayed.

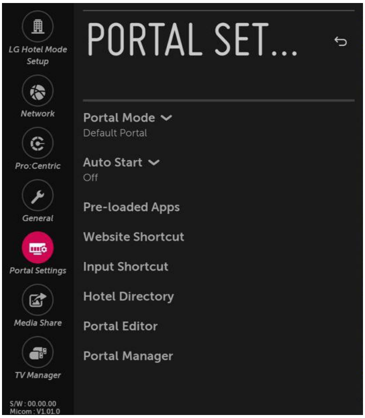
Developer Mode

(Depending on model)

- This feature provides great convenience to the app developers.
- Set up to install the Developer mode app.

Portal Settings

(Depending on model)


PORTAL SET...
LG Hotel Mode Setup
Network
Pro:Centric
General
Portal Settings
Media Share
TV Manager
S/W : 00.00.00
Micom : V1.01.0
Pre-loaded Apps
Website Shortcut
Input Shortcut
Hotel Directory
Portal Editor
Portal Manager

Portal Mode
Default Portal

Auto Start
Off

Portal Mode

(Depending on model)

- You can select 'Default Portal' (Use webOS default portal), 'Customizable Portal' (Use editable Portal), or 'None' (Do not use portal).

Auto Start

(Depending on model)

- You can select 'Off', 'Website Shortcut', or 'Portal Mode'.
- If you select 'Website Shortcut', Shortcut app will be excute automatically after TV on.
- If you select 'Portal Mode', Portal(Home Launcher) will be excute automatically after TV on.

PreLoaded App

(Depending on model)

- If you want to use a particular app, you can choose from the menu. you can setting each apps activation.

Website Shortcut

(Depending on model)

Shortcut

- Sets Enable or Disable. When it is set to Enable, Website Shortcut app is displayed at launcher bar.

Shortcut Name

- You can set Website Shortcut app name (title).

Shortcut URL

- Sets URL to connect when excute Website Shortcut app.

Shortcut Icon

- You can select default icon, fav icons, downloaded icon or Download(Go to TV Manager).
- You can download the shortcut icon at TV Manager app.

Tile Color (Color Code)

- You can change Website Shortcut app tile color using RGB color code.

Input Shortcut

Shortcut

- Sets Enable or Disable. When it is set to Enable, Input Shortcut app is displayed at launcher bar.

Shortcut Name

- You can set Input Shortcut app name (title).

Shortcut Icon

- You can select default icon, downloaded icon or Download(Go to TV Manager).
- You can download the shortcut icon at TV Manager app.

Tile Color (Color Code)

- You can change Input Shortcut app tile color using RGB color code.

Hotel Directory

(Depending on model)

- Set the information to display at Hotel Directory app.

Facility or Service Name

- Set the facility or service name.

Details or Extension

- Set the detailed information.

Related Photo

- You can select None, downloaded images or Download (Go to TV Manager).
- You can download the directory images at TV Manager app.

Portal Editor

(Depending on model)

- If you press 'Portal Editor' menu, each portal editor is launched according to 'Portal Mode'.

Customizable Portal

- Template
    - You can set Template when selecting focus. Select between Bar Type or Tile Type (City, Beach, and Forest).
- Hotel Video
    - You can set this mode to On/Off when selecting Customizable Portal.
    - You can download the video at TV Manager app.
- Welcome Message, Hotel Name
    - You can set the welcome messages and hotel name.
- HOTEL Logo
    - You can select images for Default/Downloaded image.
    - You can download the icon at TV Manager app.

Portal Manager

(Depending on model)

This feature enables you to group together multiple monitor sets on a single network into the same group and copy portal setting data on a group basis. This feature has two modes, Master and Slave.

Master

- Add, edit, and delete group.
- Distribute your device's portal data.
- All monitor sets initially come in Master mode.

Slave

- Remove monitor sets for their groups.
- Monitor sets that have been added to a group are automatically switched to Slave mode. Conversely, when a monitor set has been deleted from a group, it is automatically initialized and switched to Master mode.

- If a new Slave has been added to an existing group, or if the portal data has not been properly distributed from master, the Cloning button will be activated.
- You can duplicate the master device's portal setting data by using Cloning.

GROUP MANAGEMENT

- Creating a New Group
    1. Click Add New Group.
    2. Enter a group name.
    3. Click Add Device, select the devices you wish to add to the group, and add them.
    4. Click Done, and you will see that a new group has been created.
- Editing a Group
    1. Click the group you wish to edit.
    2. Add a new device by using Add Device.
    3. Delete a device by using Delete Device.
    4. Check whether the devices in the group are connected to a network by using Device Check.
    5. If there are any sets of devices in the group that are not portal data synchronized, Distribute button will be activated.
    6. You can re-distribute the master device's portal setting data to the group by using Distribute.
- Deleting a Group
    1. Click Delete Group.
    2. Select the group you wish to delete and click Delete.
    3. Check that the group you selected has been deleted.
- ALL DEVICES VIEW: All Devices View: This page enables you to manage all slave monitor sets that are connected to the same network.
    1. Click All Devices View.
    2. Click Reset Device Mode.
    3. Select the slave monitor set whose device mode you wish to change and click Initializing.

PORTAL DISTRIBUTION

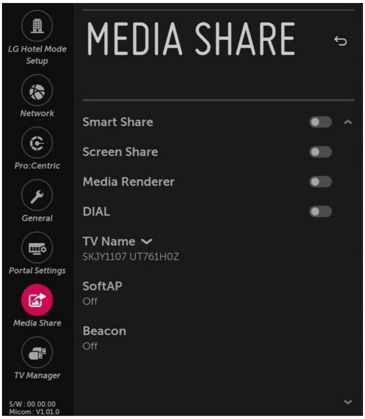
1. Select your desired group and click Distribute.
2. Set power off on the slave sets by using remote controller after distribution is completed.
3. Check that the data have been copied on the slave sets after a 1 minute.

* How to Use

- Monitor: Run, add, delete or edit app on the portal setting of the installation menu
- You can create up to 25 groups.
- You can add up to 12 slave devices to a group.
- A list of devices you can add to your desired group appears only when the following conditions have been met:
    - The devices you wish to add must be on the same network as the master device.
    - The devices you wish to add must be in Master mode, and they must not belong to any existing group.
    - The UPnP feature must be enabled (go to General Network UPnP and set it to On).
- It may not work properly in wireless network environments. It is recommended you use a wired network.

Media Share

(Depending on model)



MEDIA SHARE

Smart Share

Screen Share

Media Renderer

DIAL

TV Name
SKJY1107 UT761H0Z

SoftAP
Off

Beacon
Off

SmartShare

(Depending on model)

- Smart Share enables DLNA function. If this value is enabled, TV acts as Media Player and displays Media Server contents through Smart Share app.

Screen Share

(Depending on model)

- Screen Share enables WiFi p2p functions such as Miracast and WiDi. If this value is enabled, Screen Share app is displayed at launcher bar and TV can display the screen of mobile phone by Miracast or laptop by WiDi.
- If you want Completely Exit Screen Share App, Click 'X' Button on right top side.

Media Renderer

(Depending on model)

- Media Renderer enables the TV to act as a Media Renderer device to receive contents from devices on the same network.

DIAL

(Depending on model)

- With this DIAL service, you can launch the target app at Smart Home Launcher bar without select the target app by remote controller. Before this function enables, the target app should be selected at Installation Menu ⇨ **Portal Settings** ⇨ **Preloaded App**.

TV Name

- When media devices(ex: smart phone, desktop, laptop) are searching TV, this string will be displayed.

SoftAP

- SoftAP is similar to Access Point. When you enable this function, TV acts as an Access Point.
- Regardless of the Instant On mode, the SoftAP setting stays unchanged after power off/on. (Depending on model)

Use Default

- If you want to use default password(this password was generated randomly), you must select 'Enable' in this item.

Security Key

- If you want to change default password, you need to change 'Use Default' value into 'Disable'.

Wi-Fi Signal Strength

- You can control wireless signal strength on SoftAP. This is controlled by 5 step. If you select 'Not Used', wireless signal strength will be set to Max value.

Wi-Fi Channel

- You can control wireless channel on SoftAP mode. This is controlled from 1 to 11 channel. If you select 'Auto', wireless channel of SoftAP will be set to random channel.

Mode

- You can select NAT(Network address translation) mode and BRIDGE mode for Soft AP.

Security Type

- You can select 'WPA2-PSK', 'WPA2-Enterprise' and 'Open' if you selected 'BRIDGE' mode.

Radius Server IP, Radius Server Port, Radius Server Key

- You should enter Radius Server information if you selected 'WPA2-Enterprise'.

Beacon

(Depending on model)

- This option enables BLE Beacon, one of Bluetooth 4.0's features.
- Beacon Mode (On/Off Toggle): enables the Beacon feature.
- The iBeacon/Eddystone Type Beacon features are supported.

iBeacon

- Beacon UUID (hex): Set the UUID.
  1. Field1: 4byte hex value (8 digits)
  2. Field2: 2byte hex value (4 digits)
  3. Field3: 2byte hex value (4 digits)
  4. Field4: 2byte hex value (4 digits)
  5. Field5: 6byte hex value (12 digits)
- Major (0–65535): Sets the Major value.
- Minor (0–65535): Sets the Minor value.

Eddystone

- Frame: Set UUID or URL.
  - Beacon UUID (hex): Set the UUID
    1. Field1: 10 byte hex value (20 digits)
    2. Field2: 6 byte hex value (12 digits)
  - Setting the URL method
    - » URL Prefix: Sets the prefix of the URL.
    - » URL Suffix: Set the suffix of the URL.
    - » URL: Enter the part of the URL that excludes the prefix and suffix.
    - » URL string length is limited to 15 characters.

OK

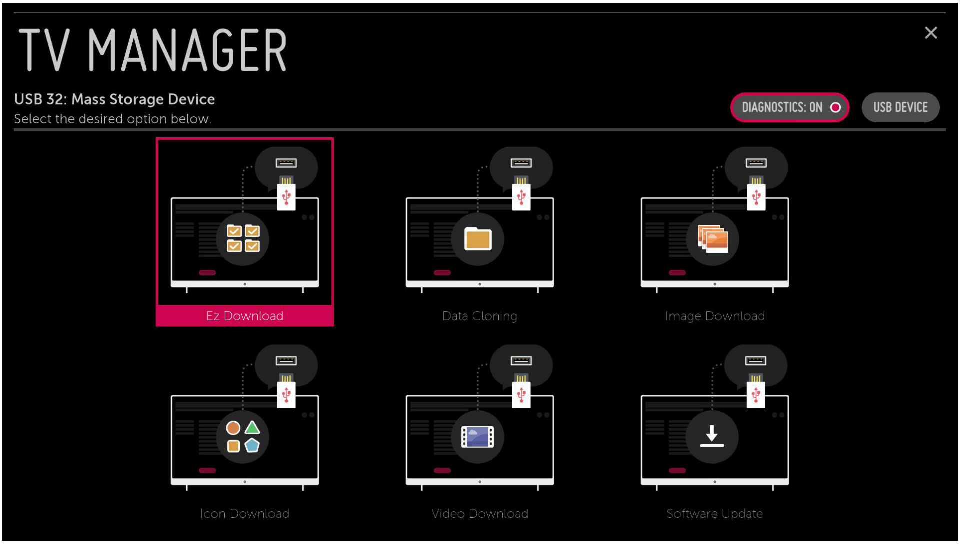
- The button used to confirm and apply the settings that you have entered.

- Some models do not support background screening services in iOS.
- A reboot is recommended for the settings to be applied properly.
- The UUID value is hexadecimal and the exact number of digits must be entered.
- The distance of the beacon may vary depending on the external device.
- Beacon’s distance may vary depending on the app you use on your external device.
- The Beacon feature uses Bluetooth Low Energy (BLE) technology and is therefore susceptible to radio waves. 2.4 GHz environment if not, normal operation may not be possible.

TV Manager

* Images shown may differ from your TV.

You can update files from USB to TV through the TV manager.



TV MANAGER

USB 32: Mass Storage Device

Select the desired option below.

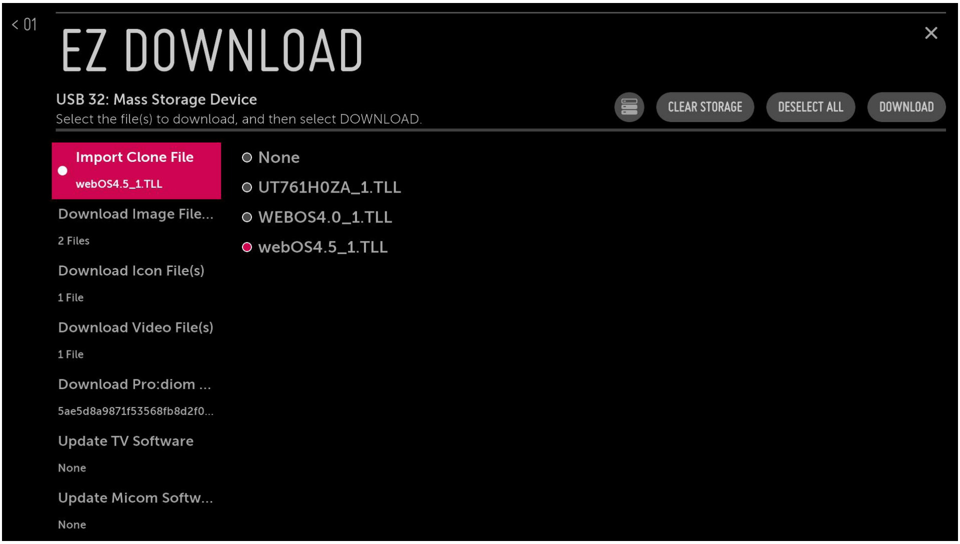
DIAGNOSTICS: ON
USB DEVICE
Ez Download
Data Cloning
Image Download
Icon Download
Video Download
Software Update

Diagnostics

(Depending on model)

- Sets Enable or Disable. When it is set to Disable, user can't control TV via RMS. The changed setting is applied after reboot.

Ez Download



< 01

EZ DOWNLOAD

USB 32: Mass Storage Device

Select the file(s) to download, and then select DOWNLOAD.

CLEAR STORAGE DESELECT ALL DOWNLOAD

- ● Import Clone File
  webOS4.5_1.TLL
- Download Image File...
  2 Files
- Download Icon File(s)
  1 File
- Download Video File(s)
  1 File
- Download Pro:diom ...
  5ae5d8a9871f53568fb8d2f0...
- Update TV Software
  None
- Update Micom Softw...
  None

○ None

○ UT761H0ZA_1.TLL

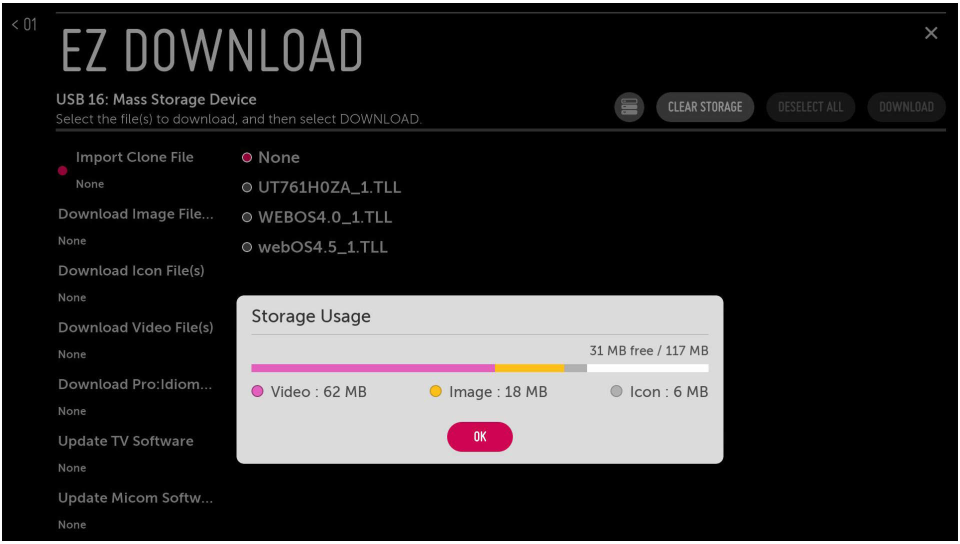
○ WEBOS4.0_1.TLL

● webOS4.5_1.TLL

- Ez Download is a function that enables users to download the desired items all at once, such as EPK (software update file), TLL, Media files, Micom, Pro:Idiom M Key. (Depending on model)
  - Images, Icon, Pro:Idiom M Key file and Software Update 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.
    - » If you press 'EZ Download' menu, EZ Download is launched.
    - » If .DZM file exist file will be selected previously download file.
    - » For Pro:Idiom M key to appear, "pim" file must exist in USB.
    - » Pro:Idiom M key file name should be specified as checksum with MD5 and extension should be specified as "pim". (case-insensitive)
    - » Pro:Idiom M Key file should be encoded by ANSI(ASCII).
    - » Pro:Idiom M Key file length should be 1024 bytes. (32 bytes * 32)
    - » If file name or the length are wrong, the file download will be failed.
    - » If you do "Factory Reset", Pro:Idiom M Key will return back to default Key.

⚠

- 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 EPK (software update file), TLL, Image, Icon, Micom, Pro:Idiom M key with the previously downloaded lists checked automatically.


< 01
✕
☰
CLEAR STORAGE
DESELECT ALL
DOWNLOAD
Import Clone File
None
Download Image File...
None
Download Icon File(s)
None
Download Video File(s)
None
Download Pro:Idiom...
None
Update TV Software
None
Update Micom Softw...
None
● None
○ UT761H0ZA_1.TLL
○ WEBOS4.0_1.TLL
○ webOS4.5_1.TLL
OK

EZ DOWNLOAD

USB 16: Mass Storage Device

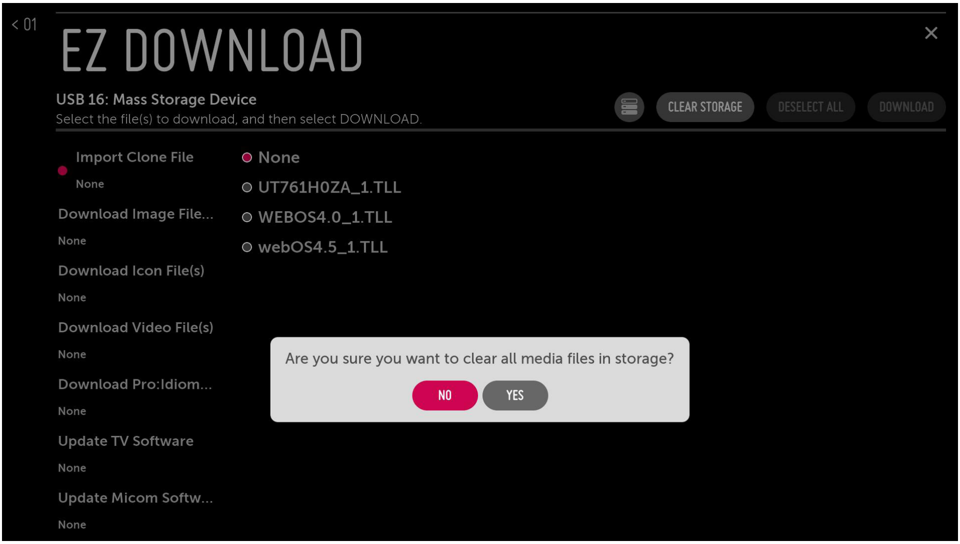
Select the file(s) to download, and then select DOWNLOAD.

Storage Usage

31 MB free / 117 MB

● Video : 62 MB ● Image : 18 MB ● Icon : 6 MB

- Press ☰ button to display storage usage information.


< 01
✕
☰
CLEAR STORAGE
DESELECT ALL
DOWNLOAD
Import Clone File
None
Download Image File...
None
Download Icon File(s)
None
Download Video File(s)
None
Download Pro:Idiom...
None
Update TV Software
None
Update Micom Softw...
None
● None
○ UT761H0ZA_1.TLL
○ WEBOS4.0_1.TLL
○ webOS4.5_1.TLL
NO
YES

EZ DOWNLOAD

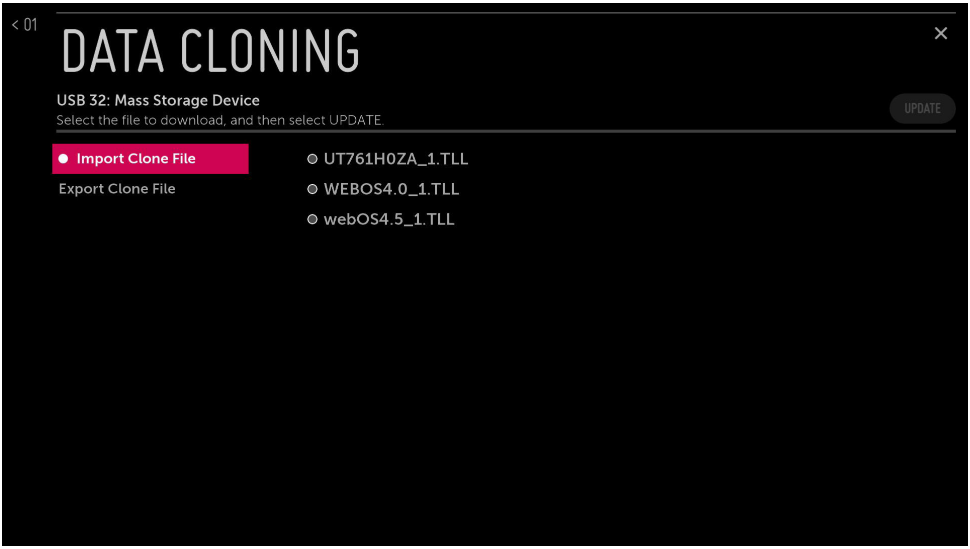
USB 16: Mass Storage Device

Select the file(s) to download, and then select DOWNLOAD.

Are you sure you want to clear all media files in storage?

- Press the “CLEAR STORAGE” button to delete the downloaded media files.

Import Clone File



< 01
DATA CLONING
✕
UPDATE
● Import Clone File
Export Clone File

USB 32: Mass Storage Device

Select the file to download, and then select UPDATE.

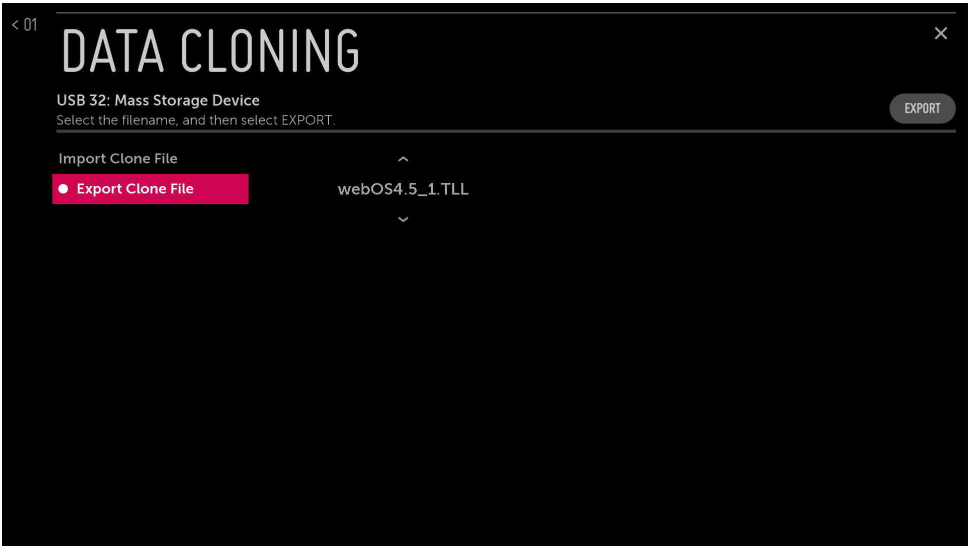
○ UT761H0ZA_1.TLL

○ WEBOS4.0_1.TLL

○ webOS4.5_1.TLL

- Once the internal TV data and its programme map information are written to the USB memory card, the user can start "Import Clone File" process with the data file generated and stored in USB memory card. The user should not turn TV off nor unplug the USB memory card while processing. The following reference images might be slightly different.

Export Clone File



< 01
DATA CLONING
×
EXPORT
Import Clone File
● Export Clone File
⌃
⌄

USB 32: Mass Storage Device

Select the filename, and then select EXPORT.

webOS4.5_1.TLL

- “Export Clone File” creates “TLL” file in USB root folder. “TLL” file can be used to “Import Clone File”. While writing is in process, the user must not turn TV off nor unplug the USB memory card. The following reference images might be slightly different.

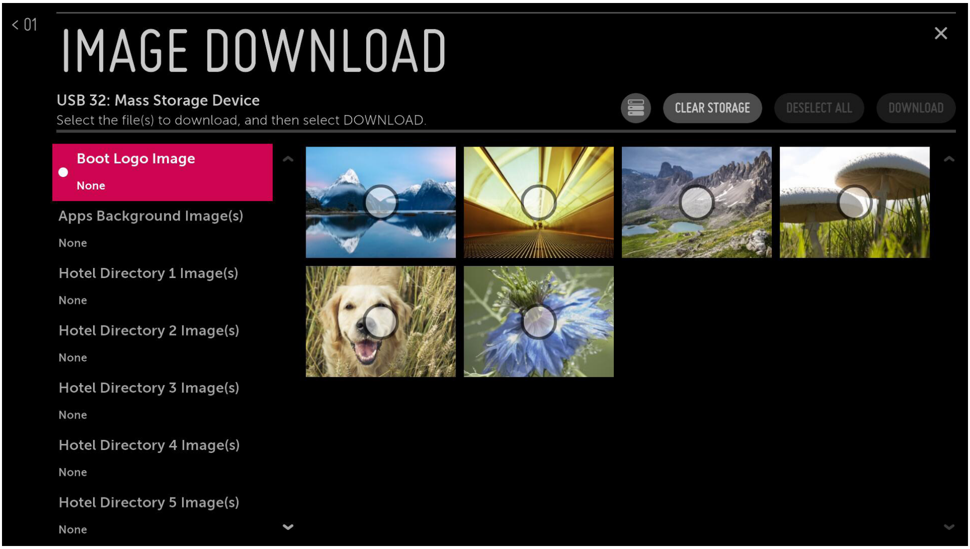
USB Download Menu

USB Cloning

- An Installation 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 programme Map. This newer procedure significantly decreases the installation time that would be necessary if the standard RS-232C method were used instead.
  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 "Import Clone File" and "Export Clone File" 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:
     - TV data includes :
       A. Installation Menu settings
       B. Main menu settings (Audio, Picture etc)
     - Analog / Digital Programme information includes:
       A. Programme numbers
       B. Programme label
       C. Programme attributes including programme type, skipping status and etc.

Image Download

(Depending on model)



USB 32: Mass Storage Device

Select the file(s) to download, and then select DOWNLOAD.

Boot Logo Image: None

Apps Background Image(s): None

Hotel Directory 1 Image(s): None

Hotel Directory 2 Image(s): None

Hotel Directory 3 Image(s): None

Hotel Directory 4 Image(s): None

Hotel Directory 5 Image(s): None

- If there are more than two USB Memory Device, It is possible to select the USB.
- The download sequence is Image Download ⇨ Select Image(s) ⇨ Download.
- The target file is located in LG_DTV folders.
- Press the "CLEAR STORAGE" button to delete the downloaded images.

- **Boot Logo Image**

(Depending on model)

  - » Boot Logo Image can download only one file.
  - » Boot Logo Image update function supports only JPG, JPEG, BMP format file of less than 8 MB filesize.
  - » We recommend you that splash image resolution match the TV`s panel resolution.
  - » Max resolution of splash image : Full HD ⟶ 1920 x 1080, HD ⟶ 1360 x 768.
  - » Min resolution of splash image : 64 x 64.

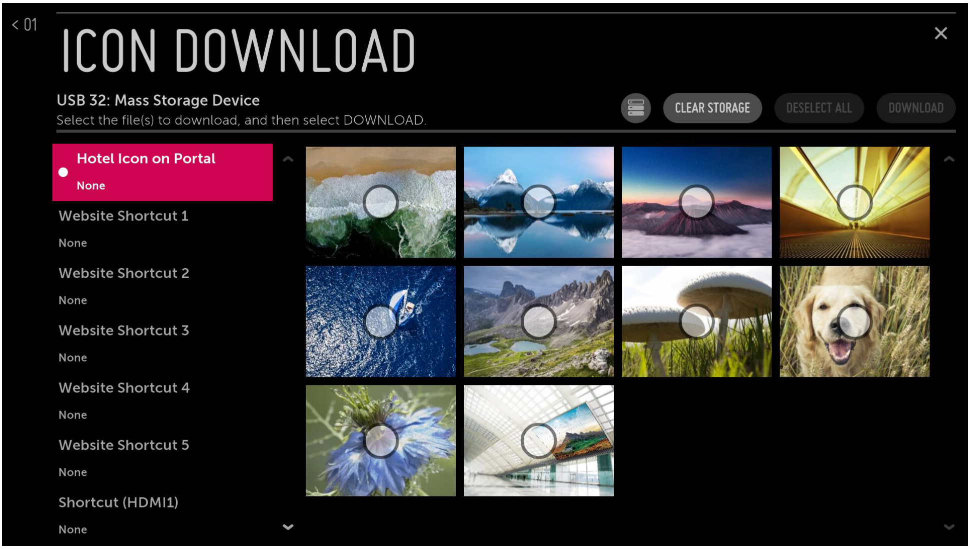
- **Apps Background Image(s) & Hotel Directory Image(s)**

(Depending on model)

  - » Image update function supports only JPG, JPEG, PNG format file(s).
  - » Max resolution of image : UHD ⟶ 3840 x 2160, Full HD ⟶ 1920 x 1080, HD ⟶ 1360 x 768.
  - » Min resolution of image : 64 x 64.
  - » The maximum number of images to choose from per feature is 12.
  - » Images per feature can not be downloaded beyond 10 MB.
  - » If you updates the images, original images will be removed.
  - » If you want to use inserted image in Bluetooth Sound Sync app and Live TV's Radio Programme, Clock please change the value of 'Insert Image' property to enable ('Insert Image' in Installation ⇨ **General** ⇨ **Configuration Setup**).

Icon Download

(Depending on model)



ICON DOWNLOAD

USB 32: Mass Storage Device

Select the file(s) to download, and then select DOWNLOAD.

Hotel Icon on Portal
None

Website Shortcut 1
None

Website Shortcut 2
None

Website Shortcut 3
None

Website Shortcut 4
None

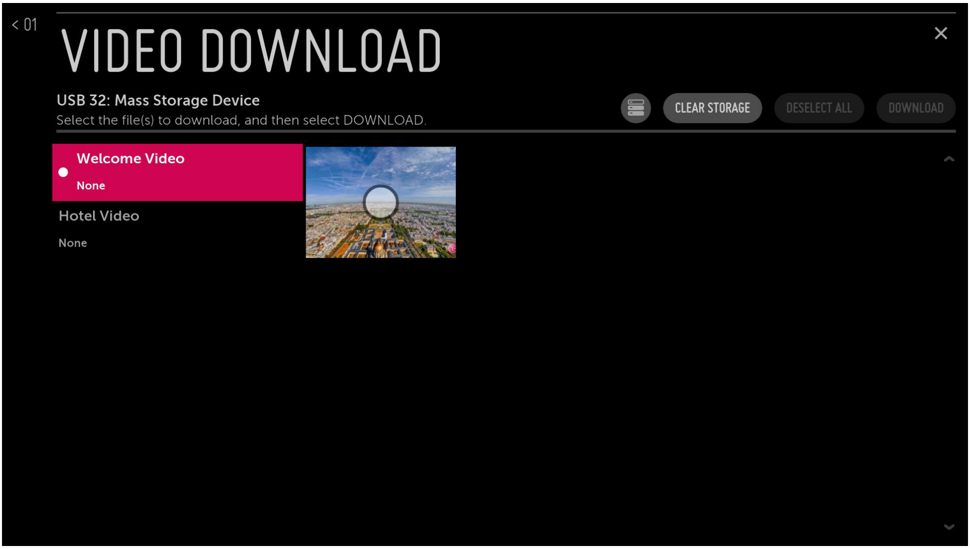
Website Shortcut 5
None

Shortcut (HDMI1)
None

- Images is located in LG_DTV folder.
- If you updates the images, original images will be removed.
- The download sequence is Icon Downalod ⇨ Select Images ⇨ DOWNLOAD.
- Icon Image can download only one file.
- Icon update function supports only JPG, JPEG, PNG format file.
- Max resolution of icon : UHD ⟶ 3840 x 2160, Full HD ⟶ 1920 x 1080, HD ⟶ 1360 x 768.
- Min resolution of icon : 64 x 64.
- Press the "CLEAR STORAGE" button to delete the downloaded icons.

Video Download

(Depending on model)


< 01
VIDEO DOWNLOAD
✕
CLEAR STORAGE
DESELECT ALL
DOWNLOAD

USB 32: Mass Storage Device

Select the file(s) to download, and then select DOWNLOAD.

● Welcome Video

None

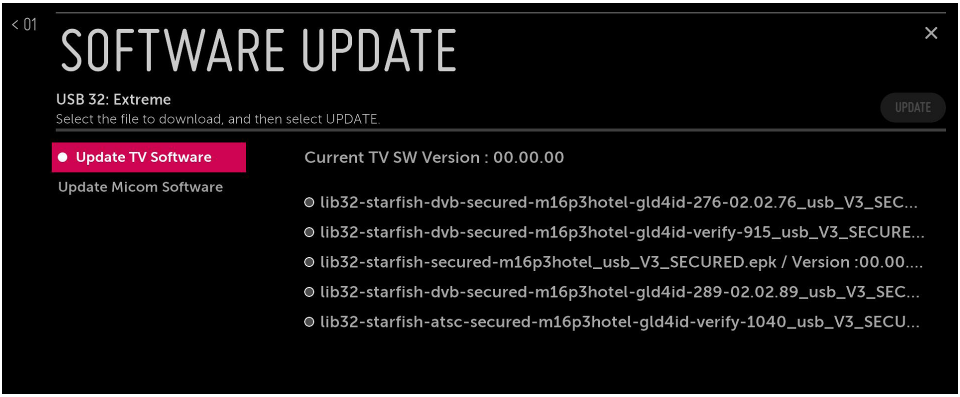
Hotel Video

None

- Media files is located in LG_DTV folder.
- The download sequence is Video Download ⇨ Select media file ⇨ DOWNLOAD.
- Media files can only download one file each.
- If you updates the video file, original file will be removed.
- Press the “CLEAR STORAGE” button to delete the downloaded videos.

Software Update

▶ Update TV Software



SOFTWARE UPDATE

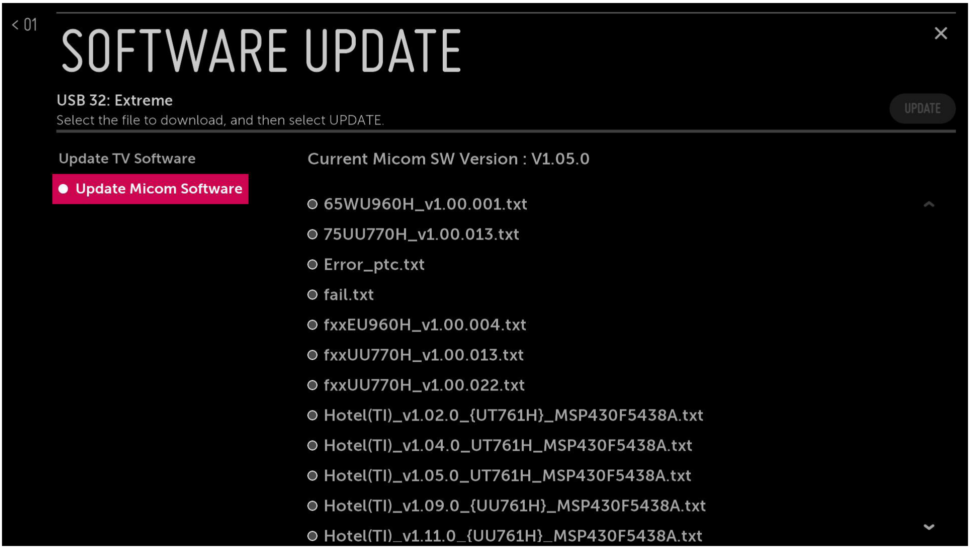
USB 32: Extreme
Select the file to download, and then select UPDATE.

Current TV SW Version : 00.00.00

- ○ lib32-starfish-dvb-secured-m16p3hotel-gld4id-276-02.02.76_usb_V3_SEC...
- ○ lib32-starfish-dvb-secured-m16p3hotel-gld4id-verify-915_usb_V3_SECURE...
- ○ lib32-starfish-secured-m16p3hotel_usb_V3_SECURED.epk / Version :00.00....
- ○ lib32-starfish-dvb-secured-m16p3hotel-gld4id-289-02.02.89_usb_V3_SEC...
- ○ lib32-starfish-atsc-secured-m16p3hotel-gld4id-verify-1040_usb_V3_SECU...

- This feature updates TV software through the EPK file in USB.
- The target file is located in ₩ LG_DTV folder.
- The download sequence is Software Update ⇨ Update TV Software ⇨ Select file(EPK) ⇨ UPDATE.

▶ Update Micom Software



SOFTWARE UPDATE

USB 32: Extreme
Select the file to download, and then select UPDATE.

Current Micom SW Version : V1.05.0

- ○ 65WU960H_v1.00.001.txt
- ○ 75UU770H_v1.00.013.txt
- ○ Error_ptc.txt
- ○ fail.txt
- ○ fxxEU960H_v1.00.004.txt
- ○ fxxUU770H_v1.00.013.txt
- ○ fxxUU770H_v1.00.022.txt
- ○ Hotel(TI)_v1.02.0_{UT761H}_MSP430F5438A.txt
- ○ Hotel(TI)_v1.04.0_UT761H_MSP430F5438A.txt
- ○ Hotel(TI)_v1.05.0_UT761H_MSP430F5438A.txt
- ○ Hotel(TI)_v1.09.0_{UU761H}_MSP430F5438A.txt
- ○ Hotel(TI)_v1.11.0_{UU761H}_MSP430F5438A.txt

- This feature updates Micom software through the txt file in USB.
- The target file is located in ₩ LG_DTV folder.
- The download sequence is Software Update ⇨ Update Micom Software ⇨ Select file(txt) ⇨ UPDATE.

CONTENT MANAGER

(Depending on model)

Web Login

- Different features are supported depending on the product.

This Signage product comes with a feature that enables you to access it on your PC or mobile device.

  - Content Manager, Group Manager 2.0, Log Out, Change Password menus are provided.

- URL: https://set ip:443
- The default password: 00000000

⚠

- Supported resolutions (this program is optimized for the following resolutions):
  - PC 1920 x 1080 / 1280 x 1080
  - Mobile: 360 x 640(1440 x 2560, 1080 x 1920), DPR
- Supported browsers (this program is optimized for the following browsers):
  - PC 1920 x 1080 / 1280 x 1080

Content Manager

Player

HOME / ⌂ ➔ (Player)

The Content Manager app's player feature enables you to play/manage contents of video, image, template, SuperSign and playlist in an integrated way. (The OLED models do not support the playback and management of image content and template content.)

- Continuous Play
  1. Select your desired type of content from the tab on the left and then select your desired content.
  2. Click **PLAY** in the upper right-hand corner of the screen and enjoy the content you have selected.
- Export
  1. Select your desired type of content from the tab on the left and click **Export** in the upper right-hand corner of the screen.
  2. Select the content you wish to export.
  3. Click **COPY**/**Orbiter** in the upper right-hand corner of the screen and select the device to which you wish to export the content. (If a content file stored on the target device has been selected, the processing of the content file is skipped.)
  4. You can see that the content has been moved/copied to the device.
- DELETE
  1. Select your desired type of content from the tab on the left and click **DELETE** in the upper right-hand corner of the screen.
  2. Select the content you wish to delete.
  3. Click **DELETE** in the upper right-hand corner of the screen.
  4. You can see that the content has been deleted.
- Filter / Sort
  1. Click **Filter** / **Sort** in the upper right-hand corner of the screen.
  2. 1) Choose your desired sort criterion to sort content files either by file name or in the order they have been played (the most recently played file shown at the top of the list).

  2) It is possible to only view the content stored on your desired device by filtering content files by device.

  3) It is possible to only view the content of your desired type by filtering content files by content type.

- Create Playlist

When creating a playlist, you cannot include characters that cannot be used in file names on Windows — such as \, /,:, *,?, “, <,>, and | — in the names of the files in the playlist. In addition, if the playlist contains content files whose names include such characters, you cannot move or copy the playlist.

  1. Select the **Playlist** tap from the tab on the left and click **Create Playlist** in the upper right-hand of the screen.
  2. Select the content you wish to add to the playlist and click **NEXT** in the upper right-hand of the screen.
  3. Set a play time for each piece of content (applicable only for photo and template content), as well as other items such as Conversion Effect, Ratio, and Auto Playback, and then click **DONE** button in the upper right-hand corner of the screen.
  4. You can see a new **Playlist** has been created.

- DISTRIBUTION
  1. Click **Distribute** in the upper right-hand corner of Playlist tab screen.
  2. Go to the Group Manager app to distribute the created playlists.

Scheduler

HOME / ⌂ ➔ (Scheduler)

The Content Manager app’s scheduler feature enables certain content to be played at a scheduled time through a playlist or external input.

- Creating a Schedule
  1. Click **New Schedule** in the upper right-hand corner of the screen.
  2. Choose between **Playlist** and **Input Source**.
  3. 1) If you have selected **Playlist**, select the playlist you wish to schedule the playback of.

  2) If you have selected **Input Source**, select the external input source you wish to schedule the playback of.

  4. Enter schedule information and create a new schedule. (When creating a schedule, you cannot include characters that cannot be used in file names on Windows — such as \, /,:, *,?, “, <,>, and | — in the name of the schedule file. In addition, if the playlist linked to the schedule contains content files whose names include such characters, you cannot move or copy the playlist.)
  5. Watch the playlist or external input you selected play back at its scheduled time.

- Importing a Schedule
  1. Click **Import** in the upper right-hand corner of the screen.
  2. Select the external storage device from which you wish to import a schedule.
  3. Select the schedule you wish to import to your monitor. (You can only choose a single schedule.)
  4. Click **Select** in the upper right-hand corner of the screen.
  5. Check that the schedule has been imported to the monitor’s internal storage memory.

- Exporting a Schedule
  1. Click **Export** in the upper right-hand corner of the screen.
  2. Select the external storage device to which you wish to export a schedule.
  3. Select the schedule you wish to export from your monitor. (You can choose multiple schedules.)
  4. Click **Select** in the upper right-hand corner of the screen.
  5. Check that the schedule has been exported to the external storage device you selected.

- Delete Schedule
  1. Click **DELETE** in the upper right-hand corner of the screen.
  2. Select the schedules you wish to delete.
  3. Click **DELETE**.
  4. Check that the schedules have been deleted.

- Calendar View
  1. When you have registered schedules, click **Calendar View**.
  2. You can see that the schedules registered are displayed in the form of a timetable.

- DISTRIBUTION
  1. Click **Distribute** in the upper right-hand corner of the screen.
  2. Go to the Group Manager app to distribute the created schedules.
     - » If the schedule creation time overlaps, the previously created schedule is deleted.
     - » Schedule does not work while Scheduling list app is running.

Editor

HOME / ⌂ → (Editor)

The Content Manager app's editor feature enables you to add your desired templates.

1. Select the template of your desired format.
2. Modify the template's text.
   2-1. Apply your desired font style (Size, Weight, Underline, Italic)
3. Modify the media file.
4. Save the template by clicking **Save** in the top right-hand corner of the screen.
5. Check that the template you saved is shown in the template list.

Supported Photo & Video Files

- Subtitles are not supported.
- The photo feature is not supported in OLED model.

*** Supported video codecs**

Extension	Codec	
.asf, .wmv	Video	VC-1 Advanced Profile (except for WMVA), VC-1 Simple and Main Profiles
	Audio	WMA Standard (excluding WMA v1/WMA Speech)
.avi	Video	Xvid (excluding 3 warp-point GMC), H.264/AVC, Motion Jpeg, MPEG-4
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, LPCM, ADPCM, DTS
.mp4, .m4v, .mov	Video	H.264/AVC, MPEG-4, HEVC
	Audio	Dolby Digital, Dolby Digital Plus, AAC, MPEG-1 Layer III (MP3), Dolby AC-4
.3gp .3g2	Video	H.264/AVC, MPEG-4
	Audio	AAC, AMR-NB, AMR-WB
.mkv	Video	MPEG-2, MPEG-4, H.264/AVC, VP8, VP9, HEVC
	Audio	Dolby Digital, Dolby Digital Plus, AAC, PCM, DTS, MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)
.ts, .trp, .tp, .mts	Video	H.264/AVC, MPEG-2, HEVC
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, Dolby Digital Plus, AAC, PCM, Dolby AC-4
.mpg, .mpeg, .dat	Video	MPEG-1, MPEG-2
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)
.vob	Video	MPEG-1, MPEG-2
	Audio	Dolby Digital, MPEG-1 Layer I, II, DVD-LPCM
.rm[1] .rmvb[1]	Video	RV30, RV40
	Audio	Realaudio6(cook), AAC LC, HE-AAC

[1] Depending on country

*** Supported Photo File Formats**

File type	Format	Resolution
.jpeg, .jpg, .jpe	JPEG	• Minimum: Min: 64 x 64 • Maximum: Normal Type: 15360 (W) x 8640 (H) Progressive Type: 1920 (W) x 1440 (H)
.png	PNG	• Minimum: Min: 64 x 64 • Maximum: 5760 (W) x 5760 (H)
.bmp	BMP	• Minimum: Min: 64 x 64 • Maximum: 1920 (W) x 1080 (H)

*** Tips for using USB storage devices**

- Only USB storage devices are recognized.
- USB storage devices connected to the monitor through a USB hub may not work properly.
- USB storage devices that use an automatic recognition program may not be recognized.
- USB storage devices that use their own drivers may not be recognized.
- The recognition speed of a USB storage device may depend on each device.
- Please do not turn off the display or unplug the USB device when the connected USB storage device is working. When the device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- Please do not connect the USB storage device which was artificially maneuvered on the PC. The device may cause the product to malfunction or fail to be played. Remember to only use USB storage devices that store normal music, image, and/or movie files.
- Storage devices formatted with utility programs that are not supported by Windows may not be recognized.
- Please connect power to a USB storage device (over 0.5 A) which requires an external power supply. Otherwise, the device may not be recognized.
- Please connect a USB storage device with the cable offered by the device maker.
- Some USB storage devices may not be supported or operated smoothly.
- File alignment methods of the USB storage device is similar to Windows XP and filenames can include up to 100 English characters.
- Be sure to back up important files since data stored in a USB memory device may be damaged. We will not be responsible for any data loss.
- If the USB HDD does not have an external power source, the USB device may not be detected. So make sure to connect it to an external power source.
- Please use a power adapter for an external power source. No USB cable is provided for an external power source.
- If your USB storage device has multiple partitions, or if you use a USB multi-card reader, you can use up to four partitions or USB memory devices.
- If a USB storage device is connected to a USB multi-card reader, its volume data may not be detected.
- If the USB storage device does not work properly, remove it and connect it again.
- The speed at which a USB storage device is detected differs from device to device.
- If the USB storage device is connected in Standby Mode, a specific hard disk will automatically be loaded when the display is turned on.
- The recommended capacity is 1 TB or less for a USB external hard disk and 32 GB or less for USB memory.
- Any device with more than the recommended capacity may not work properly.
- If a USB external hard disk with a **Energy Saving** feature does not work, turn the hard disk off and on again to make it work properly.
- USB storage devices (USB 2.0 or below) are also supported. However, they may not work properly in the videos list.
- A maximum of 999 folders or files can be recognized under one folder.

Group Manager 2.0

(Depending on model)

This feature enables you to group together multiple monitor sets on a single network into the same group and to distribute content (schedules and playlists) or copy setting data on a group basis. This feature has two modes, Master and Slave, and it can access the browser on your PC or mobile device.

Master

- Add, edit, and delete group.
- Clone your device's settings data.
- Distribute **Schedule** and **Playlists** on a group basis.
- All monitor sets initially come in Master mode.

Slave

- Play **Schedule** and **Playlists** distributed in Master mode.
- Remove monitor sets for their groups.
- Monitor sets that have been added to a group are automatically switched to Slave mode. Conversely, when a monitor set has been deleted from a group, it is automatically initialized and switched to Master mode.
- If a new Slave has been added to an existing group, or if the **Data Cloning** or the distribution of **schedule**/**Playlist** has not been properly performed, the **Data Cloning** or **SYNCHRONIZE** button will be activated.
- You can duplicate the master device's setting data to the group by using **Data Cloning**.
- You can re-download the content distributed to the group by using **SYNCHRONIZE**.

GROUP MANAGEMENT

- Creating a New Group

1. Click **Add New Group**.
2. Enter a group name.
3. Click **Add Device**, select the devices you wish to add to the group, and add them.
4. Click **Done**, and you will see that a new group has been created.

- Editing a Group

1. Click the group you wish to edit.
2. Add a new device by using **Add Device**.
3. Delete a device by using **Delete Device**.
4. Check whether the devices in the group are connected to a network by using **Device Check**.
5. If there are any sets of devices in the group that are not **Data Cloning** or content synchronized, **Data Cloning** or **SYNCHRONIZE** button will be activated.
6. You can re-copy the master device's setting data to the group by using **Data Cloning**.
7. You can re-distribute the content distributed to the group by using **SYNCHRONIZE**.

- Deleting a Group

1. Click **Delete Group**.
2. Select the group you wish to delete and click **Delete**.
3. Check that the group you selected has been deleted.

- ALL DEVICES VIEW: All Devices View: This page enables you to manage all slave monitor sets that are connected to the same network.

1. Click **All Devices View**.
2. Click **Reset Device Mode**.
3. Select the slave monitor set whose device mode you wish to change and click **Initializing**.

Setting Data Cloning

1. Select your desired group and click **Clone**.
2. Check that the data have been copied on the slave sets.

Content Distribution

1. Select the type of content you wish to distribute (Schedules or Playlists).
2. Select the content you wish to distribute.
3. Select the group to which you wish to distribute the content and click **Distribute**.
4. Run the Content Manager app on the slave sets and check that the content has been distributed.

*** How to Use**

- Monitor: Run, add, delete or edit app on the home screen.
- Mobile: Mobile devices: Run the app in the Launcher bar or access the app from a mobile device using the QR code or URL provided.

- You can create up to 25 groups.
- You can add up to 12 slave devices to a group.
- You can distribute the schedules stored on external devices after executing Content Manager's import operation.
- Make sure to delete all schedules stored on the slave sets before distributing any schedules.
- A list of devices you can add to your desired group appears only when the following conditions have been met:
  - The devices you wish to add must be on the same network as the master device.
  - The devices you wish to add must be in Master mode, and they must not belong to any existing group.
  - The UPnP feature must be enabled (go to **General** ⇨ **Network** ⇨ UPnP and set it to **On**).
- It may not work properly in wireless network environments. It is recommended you use a wired network.
- Run the initial settings for Slave function when deleting the group.

IR Codes

- This feature is not available for all models.

Code (Hexa)	Function	Note
08	⏻(POWER)	Remote control Button (Power On/Off)
95	℮⌀ENERGY SAVING	Remote control Button
AF	○LIVE ZOOM∗	Remote control Button
0B	⇦INPUT	Remote control Button
F0	TV/RAD 📺/📻	Remote control Button
10-19	Number Key 0-9 Alphabet buttons ␣(Space) QUICK ACCESS	Remote control Button
53	LIST −LIST	Remote control Button
1A	Q.VIEW	Remote control Button
02	+⊿	Remote control Button
03	⊿−	Remote control Button
7C	SMART 🏠(HOME)	Remote control Button
B5	APP	Remote control Button
09	MUTE🔇 🔇(MUTE)	Remote control Button
00	∧P ╿PAGE ◍Wheel (UP)	Remote control Button
01	P∨ PAGE╿ ◍Wheel (DOWN)	Remote control Button
AB	GUIDE	Remote control Button
0C	PORTAL	Remote control Button
AA	INFO ⓘ	Remote control Button
40	∧ △	Remote control Button
41	∨ ▽	Remote control Button
07	< ◁	Remote control Button
06	> ▷	Remote control Button

Code (Hexa)	Function	Note
44	OK ◉	Remote control Button
43	SETTINGS ⚙(Q. Settings)	Remote control Button
28	⮌(BACK) BACK	Remote control Button
5B	EXIT	Remote control Button
72	⚀ 🟥(RED)	Remote control Button
71	⚁ 🟩(GREEN)	Remote control Button
63	⚂ 🟨(YELLOW)	Remote control Button
61	⚃ 🟦(BLUE)	Remote control Button
20	☰TEXT	Remote control Button
21	T.OPT(T.Option)	Remote control Button
39	SUBTITLE SUBT.	Remote control Button
B1	■	Remote control Button
B0	▶	Remote control Button
BA	❚❚	Remote control Button
8F	◀◀	Remote control Button
8E	▶▶	Remote control Button
DC	3D/∗	Remote control Button
9F	DATA/∗	Remote control Button
91	AD/∗	Remote control Button
E8	ALARM/∗	Remote control Button
DE	▦(Screen Remote) AD 🎤(Voice recognition)	Remote control Button
83	◍Wheel (OK)	Remote control Button
79	RATIO	Remote control Button

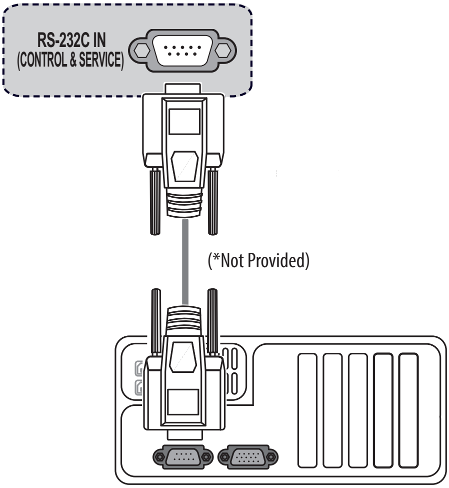
External control device Setup

RS-232C Setup

Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

Connect the serial port of the control device to the RS-232C jack on the product.

- RS-232C connection cables are not supplied with the product.



(*Not Provided)

(Depending on model)

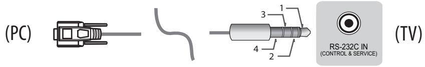
Phone jack Type

(Depending on model)

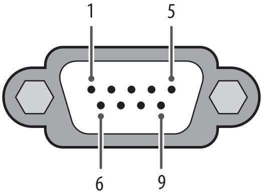
- You need to purchase the phone-jack to RS-232C cable required for the connection between the PC and the TV, which is specified in the manual.

* For other models, connect to the USB port.

* The connection interface may differ from your TV.



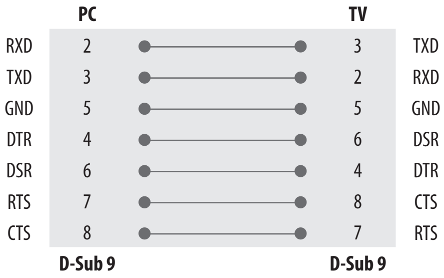
Type of Connector : D-Sub 9-Pin Male



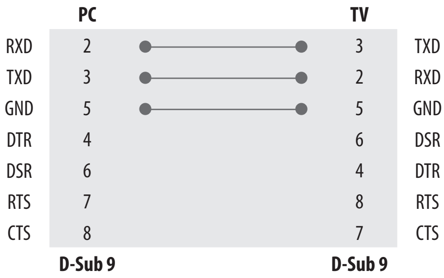
No.	Pin name
1	3.5 V
2	RXD (Receive data)
3	TXD (Transmit data)
4	IR OUT from TV
5	GND
6	No Connection
7	No Connection (5 V available in some models)
8	No Connection
9	No Connection (12 V available in some models)

RS-232C Configurations

7-Wire Configurations
(Standard RS-232C cable)


PC
TV
RXD 2 — 3 TXD
TXD 3 — 2 RXD
GND 5 — 5 GND
DTR 4 — 6 DSR
DSR 6 — 4 DTR
RTS 7 — 8 CTS
CTS 8 — 7 RTS
D-Sub 9
D-Sub 9

3-Wire Configurations
(Not standard)


PC
TV
RXD 2 — 3 TXD
TXD 3 — 2 RXD
GND 5 — 5 GND
DTR 4 6 DSR
DSR 6 4 DTR
RTS 7 8 RTS
CTS 8 7 CTS
D-Sub 9
D-Sub 9

Communication Parameters

- Baud rate: 9,600 bps (UART)
- Data length: 8 bits
- Parity : None
- Stop bit: 1 bit
- Communication code: ASCII code
- Use a crossed (reverse) cable.

IR OUT Using Guide

Suitable / Not Recommend remote-controller data format

Item	Formats
Suitable data format	NEC, RC5, Toshiba
Not recommend data format	Continuous data format (short burst/gap signal)

IR Receiver specifications

Carrier frequency	37.9 KHz
Peak Wavelength	940 nm
Minimum burst length	Min. 300 us
Minimum gap time is required of	Min. 350 us
Data word length	Max. 100 ms
Minimum gap time in the data stream is needed of	Min. 50 ms

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
High Level Out Pulse Width	Twh	Burst Wave = 600 μs Period = 1.2 ms	400	-	800	μs
Low Level Out Pulse Width	Twl		400	-	800	μs

- If not use the remote-controller with data formats recommended, IR output signals will be suppressed automatically by IR receiver.
- In this case, LG does not guarantee IR working function.
- To make sure of this matter, here are two methods as below.
  - Use the remote-controller with suitable data formats.
  - Use the IR dongle receiver of the set-top box.

Command Reference List

(Depending on model)

	Command1	Command2	Data (Hexadecimal)
01. **Power**	k	a	00 to 01
02. **Aspect Ratio**	k	c	(See p. 66)
03. **Screen Mute**	k	d	(See p. 67)
04. **Volume Mute**	k	e	00 to 01
05. **Volume Control**	k	f	00 to 64
06. **Contrast**	k	g	00 to 64
07. **Brightness**	k	h	00 to 64
08. **Colour**	k	i	00 to 64
09. **Tint**	k	j	00 to 64
10. **Sharpness**	k	k	00 to 32
11. **OSD Select**	k	l	00 to 01
12. **Remote Control Lock Mode**	k	m	00 to 01
13. **Balance**	k	t	00 to 64
14. **Colour Temperature**	x	u	00 to 64
15. **Energy Saving**	j	q	(See p. 68)
16. **Auto Configuration**	j	u	01
17. **Equalizer**	j	v	(See p. 69)
18. **Tune Command**	m	a	(See p. 69)
19. **Programme Skip/Add**	m	b	00 to 01
20. **Key**	m	c	(See p. 69)
21. **Control Backlight**	m	g	00 to 64
22. **Input select**	x	b	(See p. 70)

- During USB operations such as DivX or EMF, all commands except Power(ka) and Key(mc) are not executed and treated as NG.

Transmission / Receiving Protocol

(Depending on Model)

Transmission

[Command1][Command2][ ][Set ID][ ][Data][Cr]

[Command1] : First command to control the TV. (j, k, m or x)

[Command2] : Second command to control the TV.

[Set ID] : You can adjust the set ID to choose desired monitor ID number in option menu. Adjustment range is 1 to 99. When selecting Set ID '0', every connected set is controlled. Set ID is indicated as decimal (1 to 99) on menu and as Hexa decimal (0 x 0 to 0 x 63) on transmission/ receiving protocol.

[Data] : To transmit command data. Transmit 'FF' data to read status of command.

[Cr] : Carriage Return

ASCII code '0 x 0D'

[ ] : ASCII code 'space (0 x 20)'

OK Acknowledgement

[Command2][ ][Set ID][ ][OK][Data][x]

* The set transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Error Acknowledgement

[Command2][ ][Set ID][ ][NG][Data][x]

* The set transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

Data 00 : Illegal Code

1 Power (Command: k a)

▶ To control Power On/Off of the set.

Transmission

`[k][a][ ][Set ID][ ][Data][Cr]`

Data 00 : Off

Data 01 : On

Ack

`[a][ ][Set ID][ ][OK/NG][Data][x]`

▶ To Show TV is Power On/Off.

Transmission

`[k][a][ ][Set ID][ ][FF][Cr]`

Ack

`[a][ ][Set ID][ ][OK/NG][Data][x]`

* Similarly, if other functions transmit '0 x FF' data based on this format, Acknowledgement data feed back presents status about each function.

* OK Ack., Error Ack. and other message may display on the screen when TV is power On.

2 Aspect Ratio (Command: k c) (Main Picture Size)

▶ To adjust the screen format. (Main picture format) You can also adjust the screen format using the picture settings.

Transmission

`[k][c][ ][Set ID][ ][Data][Cr]`

Data 01 : 4:3 (Normal screen - Just Scan Off)

Data 02 : 16:9 (Wide screen - Just Scan Off)

Data 06 : Original (Just Scan Off)

Data 09 : Just Scan

Ack

`[c][ ][Set ID][ ][OK/NG][Data][x]`

* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.

3 **Screen Mute** (Command: k d)

▶ To select screen mute on/off.

Transmission

`[k][d][ ][Set ID][ ][Data][Cr]`

Data 00 : Screen mute off (Picture on) / Video mute off

Data 01 : Screen mute on (Picture off)

Data 10 : Video mute on

Ack

`[d][ ][Set ID][ ][OK/NG][Data][x]`

* In case of video mute on only, TV will display On Screen Display (OSD). But, in case of Screen mute on, TV will not display OSD.

4 **Volume Mute** (Command: k e)

▶ To control volume mute on/off.
You can also adjust mute using the mute button on remote control.

Transmission

`[k][e][ ][Set ID][ ][Data][Cr]`

Data 00 : Volume mute on (Volume off)

Data 01 : Volume mute off (Volume on)

Ack

`[e][ ][Set ID][ ][OK/NG][Data][x]`

5 **Volume Control** (Command: k f)

▶ To adjust volume.
You can also adjust volume with the volume buttons on remote control.

Transmission

`[k][f][ ][Set ID][ ][Data][Cr]`

Data Min : 00 to Max : 64
* Refer to "Real data mapping".

Ack

`[f][ ][Set ID][ ][OK/NG][Data][x]`

6 **Contrast** (Command: k g)

▶ To adjust screen contrast.
You can also adjust contrast in the picture settings.

Transmission

`[k][g][ ][Set ID][ ][Data][Cr]`

Data Min : 00 to Max : 64
* Refer to "Real data mapping".

Ack

`[g][ ][Set ID][ ][OK/NG][Data][x]`

7 **Brightness** (Command: k h)

▶ To adjust screen brightness.
You can also adjust brightness in the picture settings.

Transmission

`[k][h][ ][Set ID][ ][Data][Cr]`

Data Min : 00 to Max : 64
* Refer to "Real data mapping".

Ack

`[h][ ][Set ID][ ][OK/NG][Data][x]`

8 **Colour** (Command: k i)

▶ To adjust the screen colour.
You can also adjust colour in the picture settings.

Transmission

`[k][i][ ][Set ID][ ][Data][Cr]`

Data Min : 00 to Max : 64
* Refer to "Real data mapping".

Ack

`[i][ ][Set ID][ ][OK/NG][Data][x]`

9 **Tint** (Command: k j)

▶ To adjust the screen tint.
You can also adjust tint in the picture settings.

Transmission

`[k][j][ ][Set ID][ ][Data][Cr]`

Data Red : 00 to Green : 64
* Refer to "Real data mapping".

Ack

`[j][ ][Set ID][ ][OK/NG][Data][x]`

10 **Sharpness** (Command: k k)

▶ To adjust the screen sharpness.
You can also adjust sharpness in the picture settings.

Transmission

[k][k][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 32

* Refer to "Real data mapping".

Ack

[k][ ][Set ID][ ][OK/NG][Data][x]

11 **OSD Select** (Command: k l)

▶ To select OSD (On Screen Display) on/off when controlling remotely.

Transmission

[k][l][ ][Set ID][ ][Data][Cr]

Data 00 : Off

Data 01 : On

Ack

[l][ ][Set ID][ ][OK/NG][Data][x]

12 **Remote Control Lock Mode** (Command: k m)

▶ To lock the front panel controls on the monitor and remote control.

Transmission

[k][m][ ][Set ID][ ][Data][Cr]

Data 00 : Off

Data 01 : On

Ack

[m][ ][Set ID][ ][OK/NG][Data][x]

* If you are not using the remote control, use this mode. When main power is on/off, external control lock is released.

* In the standby mode, if key lock is on, TV will not turn on by power on key of IR & Local Key.

13 **Balance** (Command: k t)

▶ To adjust balance.
You can also adjust balance in the audio settings.

Transmission

[k][t][ ][Set ID][ ][Data][Cr]

Data L : 00 to R : 64

* Refer to "Real data mapping".

Ack

[t][ ][Set ID][ ][OK/NG][Data][x]

14 **Colour Temperature** (Command: x u)

▶ To adjust Colour Temperature. You can also adjust Colour Temperature in the picture settings.

Transmission

[x][u][ ][Set ID][ ][Data][Cr]

Data Warm: 00 to Cool:64

* Refer to "Real data mapping".

Ack

[u][ ][Set ID][ ][OK/NG][Data][x]

15 **Energy Saving** (Command: j q)

▶ To reduce the power consumption of the TV. You can also adjust Energy Saving in picture settings.

Transmission

[j][q][ ][Set ID][ ][Data][Cr]

Power Saving Function					**Level**				**Description**
7	6	5	4		3	2	1	0	
0	0	0	0	Low Power	0	0	0	0	Off
0	0	0	0	Low Power	0	0	0	1	Minimum
0	0	0	0	Low Power	0	0	1	0	Medium
0	0	0	0	Low Power	0	0	1	1	Maximum
0	0	0	0	Low Power	0	1	0	1	Screen Off
0	0	0	0	Low Power	0	1	0	0	Auto

▶ 'Auto' is available in TV that supports 'Intelligent Sensor'.

Ack

[q][ ][Set ID][ ][OK/NG][Data][x]

16 **Auto Configuration** (Command: j u) (Only RGB support model)

▶ To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

Transmission

`[j][u][ ][Set ID][ ][Data][Cr]`

Data 01 : To set

Ack

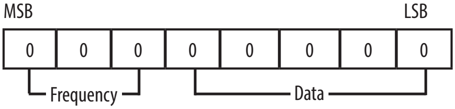
`[u][ ][Set ID][ ][OK/NG][Data][x]`

17 **Equalizer** (Command : j v)

▶ To adjust equalizer.

Transmission

`[j][v][ ][Set ID][ ][Data][Cr]`



7	6	5	Frequency	4	3	2	1	0	Step
0	0	0	1st Band	0	0	0	0	0	0 (decimal)
0	0	1	2nd Band	0	0	0	0	1	1 (decimal)
0	1	0	3rd Band	...	...	...	...	...	...
0	1	1	4th Band	1	0	0	1	1	19 (decimal)
1	0	0	5th Band	1	0	1	0	0	20 (decimal)

Ack

`[v][ ][Set ID][ ][OK/NG][Data][x]`

18 **Tune Command** (Command: m a)

▶ Select channel to following physical number.

Transmission

`[m][a][ ][Set ID][ ][Data 00][ ][Data 01][ ][Data 02][Cr]`

Data 00 : High channel data
Data 01 : Low channel data
ex. No. 47 → 00 2F (2FH)
No. 394 → 01 8A (18AH),
DTV No. 0 → Don’t care
Data 02 : [Antenna]
0 x 00 : Analogue Main
0 x 10 : DTV Main
0 x 20 : Radio
[Cable]
0 x 80 : Analogue Main
0 x 90 : DTV Main
0 x A0 : Radio
[Satellite]
0 x 40 : DTV Main
0 x 50 : Radio Main
Channel data range
Min : 00 Max : 270F (0 to 9999)

Ack

`[a][ ][Set ID][ ][OK/NG][Data][x]`

19 **Programme Skip/Add** (Command: m b)

▶ To set skip status for the current Programme.

Transmission

`[m][b][ ][Set ID][ ][Data][Cr]`

Data 00 : Skip
Data 01 : Add

Ack

`[b][ ][Set ID][ ][OK/NG][Data][x]`

20 **Key** (Command: m c)

▶ To send IR remote key code.

Transmission

`[m][c][ ][Set ID][ ][Data][Cr]`

Data IR CODES

Ack

`[c][ ][Set ID][ ][OK/NG][Data][x]`

21 Control Backlight (Command: m g)

▶ To control the backlight.

Transmission

`[m][g][ ][Set ID][ ][Data][Cr]`

Data Min : 00 to Max : 64

Ack

`[g][ ][Set ID][ ][OK/NG][Data][x]`

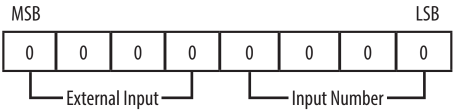
22 Input select (Command: x b) (Main Picture Input)

▶ To select input source for main picture.

Transmission

`[x][b][ ][Set ID][ ][Data][Cr]`

Data Structure



External Input				Data
0	0	0	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB
0	1	1	1	HDMI
1	0	0	0	
1	0	0	1	
1	0	1	0	

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

Ack

`[b][ ][Set ID][ ][OK/NG][Data][x]`

* **Real data mapping**

00 : Step 0
⋮
A : Step 10 (Set ID 10)
⋮
F : Step 15 (Set ID 15)
10 : Step 16 (Set ID 16)
⋮
64 : Step 100
⋮
6E : Step 110
⋮
73 : Step 115
74 : Step 116
⋮
CF : Step 199
⋮
FE : Step 254
FF : Step 255

LG
Life’s Good