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32LD660H 37LD660H 42LD660H
32LD665H 37LD665H 42LD665H
32LV555H 37LV555H 42LV555H 47LV555H 55LV555H

Lodging Guest Interactive Pro:Centric™ TVs

Commercial Mode Setup Guide

Note: Selected features shown in this guide may not be available on all models.

EXPERIENCED INSTALLER

Master TV Setup
pages 11 – 14

Cloning Information
pages 24 – 32

FTG Mode of Operation
pages 33 – 44

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P/N: 206-4200 (Rev B)

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MODEL and SERIAL NUMBER
The model and serial numbers of this TV are located on the back of the cabinet. For future reference, LG suggests that you record those numbers here:

Model No._____ Serial No._____

WARNING:

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

POWER CORD POLARIZATION:
This product is equipped with a 3-wire grounding-type alternating current power plug. This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the 3-wire grounding-type plug.

NOTE TO CABLE/TV INSTALLER:
This reminder is provided to call the cable TV system installer’s attention to Article 820-40 of the National Electrical Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

REGULATORY INFORMATION:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION:
Do not attempt to modify this product in any way without written authorization from LG Electronics U.S.A., Inc. Unauthorized modification could void the user’s authority to operate this product.

COMPLIANCE:
The responsible party for this product’s compliance is: LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, USA • Phone: 1-201-816-2000

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IMPORTANT SAFETY INSTRUCTIONS

1. **Read these instructions.**
2. **Keep these instructions.**
3. **Heed all warnings.**
4. **Follow all instructions.**
5. **Do not use this apparatus near water.**
6. **Clean only with dry cloth.**
7. **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.**
8. **Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**
9. **Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.**
10. **Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where it exits from the apparatus.**
11. **Only use attachments/accessories specified by the manufacturer.**
12. **Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination in order to avoid injury from tip-over.**

PORTABLE CART WARNING

13. **Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.**
14. Never touch this apparatus or antenna during a thunder or lighting storm.
15. When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.
16. Do not allow an impact shock or any objects to fall into the product, and do not drop objects onto the screen.
17. **Power Cord**
    Caution: It is recommended that appliances be placed upon a dedicated circuit; that is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page in the Owner's Manual to be certain.

    Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer. Protect the power cord from physical or mechanical abuse, such as twisting, kinking, or pinching or being closed in a door or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.

    Do not use a damaged or loose power cord. Be sure to grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.
18. **Overloading**
    Do not connect too many appliances to the same AC power outlet as this could result in fire or electric shock. Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in fire or electric shock.
19. **Outdoor Use/Wet Location**

    Warning: To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids.

    Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles or expose the TV to direct air conditioning.

    Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc., on or over the apparatus (e.g., on shelves above the unit).
20. **Grounding**
    Ensure that you connect the earth ground wire to prevent possible electric shock (i.e., a TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet). If grounding methods are not possible, have a qualified electrician install a separate circuit breaker. Do not try to ground the unit by connecting it to telephone wires, lightning rods, or gas pipes.
21. **Disconnect Device**
    The mains plug is the disconnecting device. The plug must remain readily operable.

    As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if you turn off this unit by SWITCH.

(Continued on next page)

IMPORTANT SAFETY INSTRUCTIONS

(Continued from previous page)

22. Outdoor Antenna Grounding

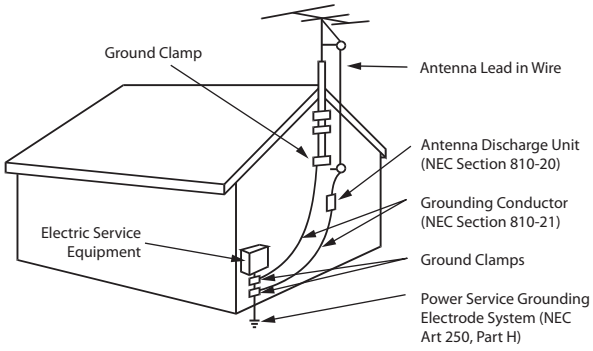
If an outside antenna or cable system is connected to the product, follow the precautions below.

An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits or where it can come into contact with such power lines or circuits as death or serious injury can occur.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Article 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Antenna Grounding According to NEC, ANSI/NFPA 70



23. Cleaning

When cleaning, unplug the power cord and wipe gently with a soft cloth to prevent scratching. Do not spray water or other liquids directly on the TV as electric shock may occur. Do not clean with chemicals such as alcohol, thinners or benzene.

24. Transporting Product

Make sure the TV is turned Off and unplugged and that all cables have been removed. It may take two or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV during transport.

25. Ventilation

Install the TV where there is proper ventilation. Do not install in a confined space such as a bookcase. Do not cover the TV with cloth or other materials (e.g., plastic) while it is plugged in. Do not install in excessively dusty places.

26. Do not touch the ventilation openings, as they may become hot while the TV is operating.

27. If you smell smoke or other odors coming from the TV or hear strange sounds, unplug the power cord, and contact an authorized service center.

28. Do not press against the front panel of the TV with your hand or a sharp object (e.g., a nail, pencil, or pen) or make a scratch on it.

29. Keep the product away from direct sunlight.

30. Dot Defect

The LCD panel is a high technology product with resolution of two million to six million pixels. In a very few cases, you could see fine dots on the screen while you are viewing the TV. Those dots are deactivated pixels and do not affect the performance and reliability of the TV.

31. Generated Sound

“Cracking”: A cracking noise that occurs while the TV is On or when it is turned Off is generated by plastic thermal contraction due to temperature and humidity. This noise is common for products where thermal deformation is required.

Electrical circuit humming/panel buzzing: A low level noise is generated from a high-speed switching circuit, which supplies a large amount of current to operate a product. It varies depending on the product. This generated sound does not affect the performance and reliability of the product.

32. For LCD TV

If the TV feels cold to the touch, there may be a small “flicker” when it is turned On. This is normal; there is nothing wrong with the TV. Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the TV’s performance. Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

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Notes

- Installer Menu content is intended for use primarily by qualified TV electronics technicians.
- Refer to the Owner's Manual for additional information on TV installation, features, specifications, maintenance, and safety instructions.
- Design and specifications subject to change without prior notice.

Commercial Mode Overview

This document describes how to set up LD660H/LD665H and LV555H Pro:Centric™ TVs for Commercial Mode operation. LG commercial TV functionality is based on “ownership” of the Channel Map; that is, the Channel Map resides in the TV’s CPU, Protocol Translator Card (PTC), or embedded *b*-LAN™ (EBL) module, or it resides externally from the TV (i.e., in a device from the solution provider).

Each of these TV models has an EBL module that can be configured either for Pass-through Mode (default) or Free-To-Guest (FTG) Mode. In addition, each of these TVs is capable of FTG Mode operation via the TV CPU when the EBL is in Pass-through Mode.

Setup Checklist

Note: This document provides information specific to Commercial Mode operation. Refer to the Owner’s Manual for detailed information on TV installation and hardware and cable connections.

Installation

__ Unpack TV and all accessories.
__ Install batteries in the Installer Remote.
__ Install TV on VESA mount or stand.
Note: It may be advisable to make all cable connections before installing on VESA mount or stand, as appropriate.

Hardware Connections

__ Install any additional hardware as appropriate to your institution, LAN, etc.

Cable Connections

__ Make all rear jack panel and MPI card slot connections, as appropriate.

Commercial Mode Setup

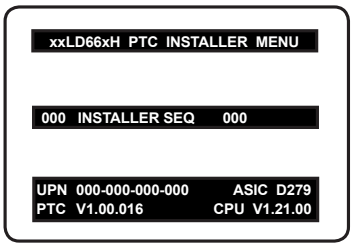
__ Complete appropriate procedures as described in this document for Commercial Mode operation. See “Pass-through Mode” and “FTG Mode” sections below for further information.

Pass-through Mode

This mode allows you to create a Master TV Setup for cloning purposes for TVs that are to remain in Pass-through Mode. This mode also allows external control via the GAME CONTROL/MPI port on the TV rear jack panel. Use the Installer Remote to configure Installer Menu items as required for TV operation and set up TV features (Channel, Picture, Audio, etc.). See “Master TV Setup” on pages 11 to 14 for detailed information.

Installer Menu

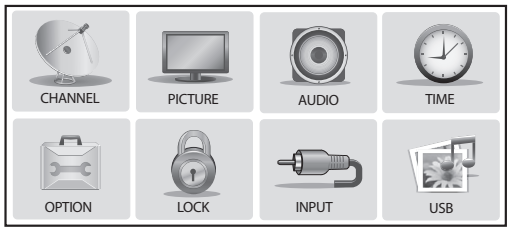
To set up a Master TV for cloning purposes, you will need to know how to enter the commercial controller (PTC) Installer Menu and make changes to the default values as required. If necessary, familiarize yourself with the Installer Menu and how to make and save changes. Refer to pages 15 to 22 for information on accessing the Installer Menu in Pass-through Mode and for detailed descriptions of the Installer Menu items.



Typical Installer Menu

TV Setup Menus

On-screen setup menus control the features of the TV. Use the Installer Remote to access the TV setup menus, and set the TV features to the desired configuration for the end user. Refer to the Owner’s Manual for detailed information on the TV setup menus.



TV Setup Menus

Cloning
Cloning refers to the process of capturing a Master TV Setup and transferring it to a Target TV (both TVs must be in Pass-through Mode). The Master TV's clonable setup menu options should be configured as part of the Master TV Setup. If there are features in the Master TV's setup—channel icons or labels, digital font options, etc.—that are not set or that are set incorrectly, those features also will not be set or will be set incorrectly in the Target TVs. Pages 24 to 32 provide detailed information on cloning requirements and procedures.

FTG Mode

This mode enables Pro:Idiom® decryption and also allows logical channel mapping of physical channels to remove the need for dash tuning. TV operation in FTG Mode is based on which element of the TV owns the FTG Logical Channel Map—the CPU or the EBL. Understanding the application in which the TV will be used is vital in determining the owner.

As indicated above, FTG mode operation in the LD660H/LD665H and LV555H models can be provided either by the TV CPU or EBL. These are two separate and distinct FTG Modes of operation, each with its own unique advantages and requirements as described later in this document. When the TV CPU is configured with an FTG Channel Map, the CPU controls the operation of the TV, and when the EBL is configured with an FTG Channel Map, the EBL controls the operation of the TV.

Once it is determined whether the TV CPU or the EBL will own the FTG Channel Map, configuration can begin. Configuration of either requires a PC application—the LG FTG File Manager for the TV CPU or the LG FTG Device Configuration Application for the EBL. Each application provides utilities that enable you to create/edit an FTG Channel Map and configure Installer Menu settings. See pages 33 to 44 for further information on FTG Mode operation and configuration.

Remote Management in FTG Mode

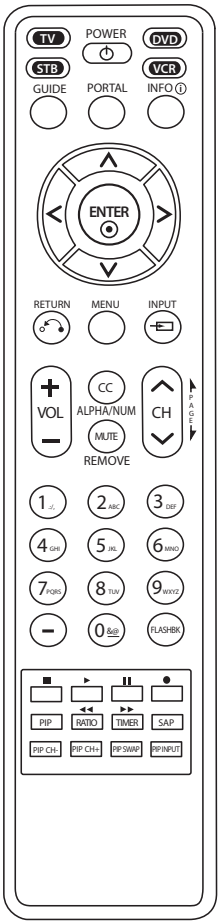
When the TV is configured for FTG Mode via CPU, remote management of the FTG Channel Map and FTG Installer Menu settings is provided by a Pro:Centric server. Refer to the ***Pro:Centric™ Server Admin Client User Guide*** for further information.

When the TV is configured for FTG Mode via EBL, the *b*-LAN module, which is internal to the TV, allows hotel/institution head end equipment (for example, an FMA-LG101) with *b*-LAN technology to communicate with the TV to provide remote management of the FTG Channel Map and FTG Installer Menu settings. See Reference section, "*b*-LAN Setup & Overview," for further information.

External MPI Control

To control the TV using an external MPI control device, you must use the TV's GAME CONTROL/MPI port for communication purposes. In these TVs, Installer Menu item 118 POWER SAVINGS controls the power circuitry for both the embedded *b*-LAN module and the GAME CONTROL/MPI port; therefore, to ensure that the GAME CONTROL/MPI port circuitry is powered, thus enabling MPI communication, Installer Menu item 118 POWER SAVINGS must be set appropriately. See Installer Menu item descriptions as well as Reference section, "*b*-LAN Setup & Overview," for further information.

Pro:Centric Operation



Pro:Centric TV Interactive Menu Features

The interactive Pro:Centric TV enables guests—from the comfort of their hotel rooms—to view and select from a complete listing of hotel services and amenities. The Pro:Centric TV is connected to the hotel's billing computer, and service/amenities charges are billed at the time of order.

Interactive amenities may include:

- Hotel information, news, and events
- Directory services (tourist attractions, restaurants, etc.)
- Reservation services (business meetings, fitness, spa, etc.)
- Weather and traffic information
- Shopping services (delivery to guest room)
- Room service (menu ordering, memo service, morning wake up call, laundry, etc.)
- Ticketing and gaming services
- Check-out service (in the guest room)
- E-mail resources/account access

Use the Installer Remote to operate both interactive menus and regular TV features. Press **PORTAL** on the Installer Remote to access the interactive menus.

Note: Interactive menu options may vary, depending on Pro:Centric features enabled for the site. The following are default interactive menus.

Channel Guide
Shows available TV networks and logical channels. When available, electronic program guide (EPG) data provides additional channel and program information.

Information
Typically displays hotel information, for example, photos of guest rooms, dining rooms, business centers, facilities, etc., as well as information on local weather and attractions. Information may also include resources, such as local school programs, run in cooperation with the hotel.

Help
Provides help for navigating the interactive menus.

Watch TV
Removes the interactive menu from the screen and returns to the previously tuned TV channel.

Pro:Centric Setup

The Pro:Centric server provides the following functionality:

- Remote management/administration (TV E-Z Installation): The Pro:Centric server Admin Client provides remote management/administration facilities for downloading splash screens and software/firmware updates as well as facilities for downloading FTG Channel Map and FTG Installer Menu settings for TVs that are in FTG Mode via CPU (see also “Remote Management in FTG Mode” on page 7).

  The Data Channel must be set appropriately to enable Pro:Centric remote management/administration facilities. The Data Channel can be set either in the Installer Menu (item 119 DATA CHANNEL) or in the Pro:Centric Menu (see “Pro:Centric Setup” on page 46).

- Pro:Centric application: The application comprises the Pro:Centric interactive menus/features described on the previous page. Pro:Centric application settings are managed via the Pro:Centric server Admin Client.

  In addition to the Data Channel, the Pro:Centric Application Mode must be set appropriately to enable the Pro:Centric application. The Pro:Centric Application Mode can be set either in the Installer Menu (item 098 PRO:CENTRIC) or in the Pro:Centric Menu (see “Pro:Centric Setup” on page 46).

Administration and management options for the Pro:Centric server are described in detail in the ***Pro:Centric™ Server Admin Client User Guide***. This document describes only those settings that must be specified on the TVs.

Pro:Centric Modes of Operation

There are now two modes that enable Pro:Centric operation, as described below.

FTG Mode via CPU
This mode enables Pro:Idiom decryption and also allows logical channel mapping of physical channels as described in the introduction to this document. See pages 33 to 44 for further information on FTG Mode operation and configuration.

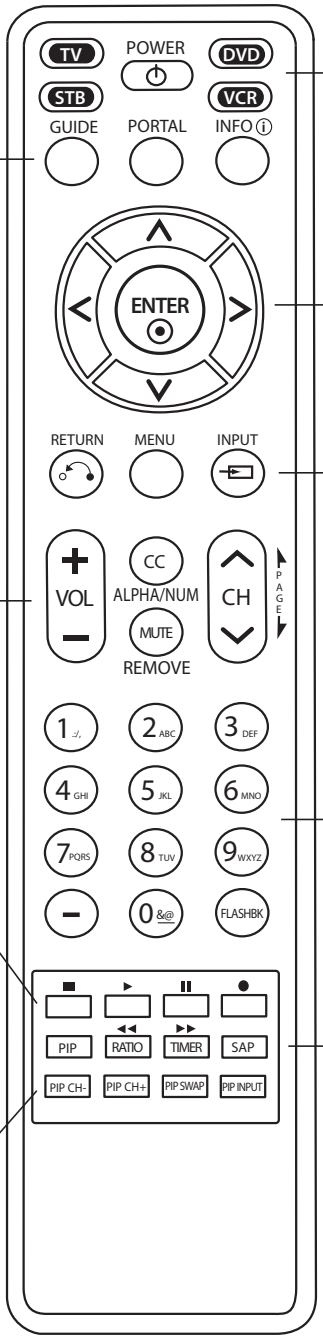
Application Tuning Mode
If the TV is not in FTG Mode, but both the Data Channel and the Pro:Centric Application Mode have been set in the Installer Menu or the Pro:Centric Menu, the TV enters Application Tuning Mode. In Application Tuning Mode, the logical channel mapping of physical channels is done in the Pro:Centric application.

Also in Application Tuning Mode, only the Function Menu is available to end users instead of the TV setup menus (see sample display of the Function Menu under “Determining the TV Operating Mode” on page 34). Additionally, all Channel Map updates must be administered from the Pro:Centric server Admin Client; Teach To TV options will not be available from the USB Download Menu.

Note: The Installer Menu remains editable while the TV is in Application Tuning Mode.

Installer Remote Control Typical Key Functions

The LG Installer Remote is supplied with and dedicated to operate the TV. The LG Installer Remote illustrated below and throughout this document shows typical remote control functions and is provided for reference only. This Installer Remote may vary from the Installer Remote supplied with the TV.



GUIDE
Displays and removes the electronic program guide.

PORTAL
Displays and removes the interactive menu.

INFO
Displays channel information.

VOLUME UP/DOWN
Increases/decreases sound level.

CC
Press to activate subtitles.

MUTE
Switches sound ON or OFF.

CHANNEL/PAGE UP/DOWN
Changes the channel. Moves from one full set of screen information to the next.

DVD/VCR BUTTONS
Control some LG DVD/VCR products. (RECORD button not functional in DVD mode.)

Color buttons access special functions in some menus.

PIP
Toggles through PIP options.

PIP CH +/-
Changes the PIP channel.

PIP SWAP
Exchange the main/sub images.

PIP INPUT
Select the connected input source for the sub-picture.

TV/STB/DVD/VCR
Select the remote's operating mode: TV, STB, DVD, or VCR.

POWER
Turns TV or any other programmed equipment ON or OFF, depending on mode.

Arrows (Up/Down/Left/Right) & ENTER
Use to navigate on-screen menus and adjust TV settings to your requirements.

RETURN
Returns one level to the previous menu/display.

MENU
Displays the TV setup menus on the screen. Also exits the on-screen menu system and returns to TV viewing.

INPUT
Selects RGB, HDMI/DVI1, HDMI2, Component Input, AV1, and AV2 sources.

NUMBER Buttons (0 - 9) & DASH
Use to enter a program number or channel. Dash is used for sub-channel numbers such as 2-1, 2-2, 9-1, 9-2, 100-3, 100-4, etc.

FLASHBK (FLASHBACK)
Returns to the previously tuned channel.

RATIO
Adjusts the picture aspect ratio.

TIMER
Sets the amount of time before the TV automatically turns itself OFF.

SAP
Analog Mode: Selects MTS sound (Mono, Stereo, or SAP). DTV Mode: Changes the audio language, if additional languages are available. *

* SAP notes:

- If SAP is selected and no SAP is provided, sound may not be heard on channel.
- Each analog channel may have its own SAP setting.
- Digital channels will reset to default audio language with a power off/on.

This section describes how to set up a Master TV for cloning purposes when the TV is in Pass-through Mode.

Note: Refer to FTG Mode information on pages 33 to 44 for details on entering FTG Mode and configuring/editing FTG Channel Map and FTG Installer Menu settings.

Before You Begin

- Disconnect all Aux inputs if you intend to run Auto Tuning (Channel Search). Under certain conditions, Auto Tuning is disabled if there is an Aux input active.
- Determine which cloning tool—USB memory device or clone programmer—is appropriate for your application; several of the Master TV Setup procedure steps are dependent on the cloning tool to be used. See “Cloning Methods” below for further information.
- If you intend to use a USB memory device, determine the type of file—either the new “.tlx” file format or the legacy “.tll” file format—to use for cloning purposes; several of the Master TV Setup procedure steps are dependent on the desired file type. See “Cloning Methods” below for further information.

Cloning Methods

Using a USB Memory Device / .tlx File

- The .tlx file format clones the following menu settings: Installer Menu settings, IP Environment Offset Setup and Pro:Centric Setup settings (see pages 45 and 46), and all TV sources’ (analog, digital, AV1, HDMI, etc.) clonable setup menu settings. See “Clonable TV Setup Menu Features” list below.
- Not intended for cloning an auto-tuned/edited Channel Map, as the channel lineup is converted to a logical FTG Channel Map when saved (Learned) from a TV to a .tlx file. If the .tlx file with the FTG Channel Map is then used for Teaching purposes, all Target TVs will be configured for FTG Mode via CPU.

Using a USB Memory Device / .tll File

The .tll file format clones the contents of the commercial controller (PTC) memory, including an auto-tuned/edited Channel Map, Installer Menu settings, and one TV source’s (analog, digital, or Aux) clonable setup menu settings. See “Clonable TV Setup Menu Features” list below.

Using a Clone Programmer (TLL-1100A or LT2002)

Both the TLL-1100A and LT2002 clone the contents of the commercial controller (PTC) memory, including an auto-tuned/edited Channel Map, Installer Menu settings, and one TV source’s (analog or Aux) clonable setup menu settings. See “Clonable TV Setup Menu Features” list below.

Clonable TV Setup Menu Features

Channel
- Auto Tuning (Channel Lineup)
- Manual Tuning
- Channel Edit
- Channel Label

Picture
- Aspect Ratio
- Picture Mode

Audio
- Auto Volume
- Clear Voice
- Sound Mode
- Balance
- TV Speaker

Time
- Auto Clock
- Auto Off (Sleep Timer)

Option
- Menu Language
- Audio Language
- Caption

Lock
- Movie Rating
- TV Rating – Children
- TV Rating – General

Note: Some menu options vary between analog and digital channels and Aux inputs.

Master TV Setup (Cont.)

Master TV Setup Procedure

1. Set Installer Menu items.

This step provides specific instruction only on the Installer Menu items that should be set on a Master TV. Refer to pages 15 to 22 for detailed information on all Installer Menu items.

a) Make sure the TV is ON. Then, use the Installer Remote to enter the PTC Installer Menu: Press **MENU** repeatedly until the on-screen display of the TV setup menus no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.

b) Set Installer Menu item **117 FACT DEFAULT** to **001** and press **ENTER** on the Installer Remote.

This clears all Installer Menu custom settings, channel lineup, etc. and reloads the factory default settings. The value will change back to 0 after the PTC has been restored to factory default condition. This step ensures that the TV Channel Memory will be the active channel lineup.

c) Set Installer Menu item **003 BAND/AFC**, as appropriate.

- Broadcast: Set to 000.
- CATV: Set to 001 (default).
- HRC: Set to 002.
- IRC: Set to 003.

d) Set any other Installer Menu items that affect your TV programming network to the required configuration. For example, enable/disable Aux inputs, set a Start Channel, etc.

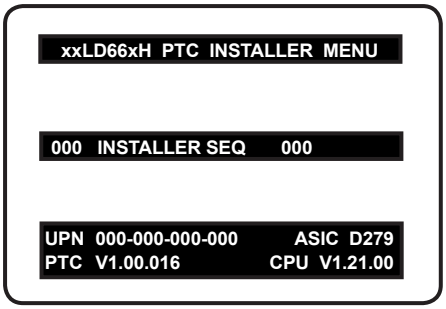
e) After you have adjusted all required Installer Menu item settings, press **ENTER** once on the Installer Remote to save your changes; then, press **ENTER** again to exit the menu.

2. Set up TV features.

On-screen setup menus control the features of the TV. Press **MENU** on the Installer Remote to access the TV setup menus, and then set Channel, Picture, Audio, Lock, Time, etc. options to the desired configurations. See also the Clonable TV Setup Menu Features list on page 11.

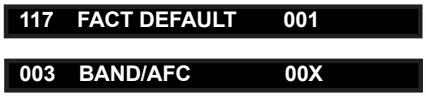
Note: If you intend to clone the PTC, remember that only one TV source's clonable setup menu settings will be cloned. Thus, for a clone programmer, the TV setup menu settings should be applicable to either an analog channel or Aux input, while for a USB device / .tll file, the TV setup menu settings should be applicable to the analog or digital channel or Aux input to which the Target TV will be set during the Teaching process.

Note: If desired and if appropriate depending on the cloning method you intend to use (see "Cloning Methods" on previous page), you can run Auto Tuning (see step 3) prior to completing this step.

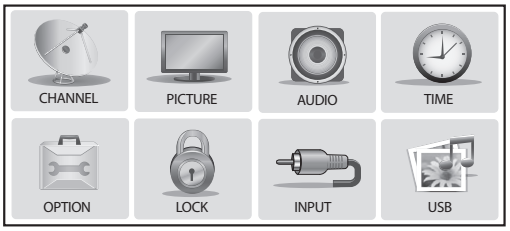


Typical Installer Menu

Note: The Installer Menu header will vary depending on the TV you are setting up.



Adjust the settings for these Installer Menu items.



Use the TV setup menus to set the TV features to the desired configuration for the end user.

(Continued on next page)

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3. **(Optional) Run Auto Tuning.**

   Important: If you intend to use a USB memory device / .tlx file for cloning purposes, DO NOT run Auto Tuning. If you Teach a .tlx file with an auto-tuned/edited Channel Map to a Target TV, this will put the Target TV in FTG Mode via CPU. If you run Auto Tuning with the intension to clone the resulting Channel Map, you must use a USB memory device / .tll file or a clone programmer for this cloning purpose.

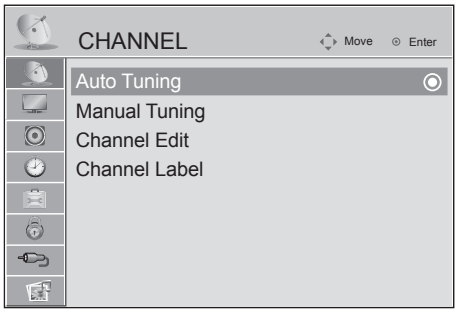
   a) To search for all available analog and digital channels, go to the Channel Menu, select the **Auto Tuning** option, and follow the on-screen instructions.

   b) Use the **Channel Edit** option in the Channel Menu to edit the channel lineup, as necessary, to include only free to guest (non-encrypted) channels.

   - Add/delete channels per your system requirements.
   - Use the **Channel Label** option in the Channel Menu to select the appropriate trademark/icon for each channel's Channel-Time on-screen display. Icons are available for familiar channels, such as ABC, CBS, NBC, etc. Identifiable labels (icons) should enable the end user to readily know what common networks are available.

   Note: If you intend to clone the PTC and Installer Menu item 103 ATSC TUNE MODE is set for Physical Channel tuning (default and recommended setting), channels with minor channel numbers higher than 255 will not transfer correctly in step 5. If item 103 is set for Virtual Channel tuning and either the major or minor channel numbers are higher than 255, the channel(s) will not transfer correctly in step 5.

   Note: If you intend to clone the PTC, you can add the channel icons in this step or as described in step 6. Also in step 6, you can add custom text labels for channels without icons.



(Optional) Use Channel Menu options to run Auto Tuning, edit channels, and select channel icons.

4. **Determine the next appropriate step according to the cloning method you intend to use.**

   - If using a USB memory device / .tll file or a clone programmer: Continue with step 5. You must perform this step to transfer the TV setup menu settings to the PTC in order to clone the PTC successfully.
   - If using a .tlx file: Proceed to step 7 to verify the TV setup. (Steps 5 and 6 are not applicable for .tlx files.)

(Continued on next page)

Master TV Setup (Cont.)

(Continued from previous page)

5. **Transfer the TV setup menu settings to the commercial controller (PTC): 2-5-5 + MENU Mode**

   Important: This step is essential for successful cloning using a USB memory device / .tll file or a clone programmer. Without this step, the PTC will not contain any of the TV setup menu settings.

   a) After the TV channel lineup has been edited and channel label icons added, tune to the channel (source) for which you wish to transfer TV setup menu settings.

      Note: If you intend to use a clone programmer for cloning purposes, this must be either an analog channel or Aux input.

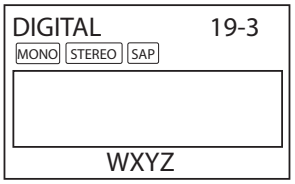
   b) Enter the Installer Menu, and press **2-5-5** + **MENU** on the Installer Remote to initiate the transfer of the Master TV Setup to the PTC. The TV exits the Installer Menu and then tunes through the channels in the channel lineup during the transfer. When the transfer is complete, the TV tunes back to the channel that was tuned before the transfer began.

   Note: The maximum number of channels that can be transferred is 141. An attempt to transfer more than 141 channels will result in erratic TV tuning operation.

6. **(Optional) Add Custom Channel and Aux Input Labels: 2-5-4 + MENU Mode**

   Note: This step is applicable only if you intend to clone the PTC. 2-5-4 + MENU Mode enables you to add/edit channel icons and custom text labels in the PTC once the Master TV Setup has been transferred as described in the previous step.

   Enter the Installer Menu, and press **2-5-4** + **MENU** on the Installer Remote. Add/edit custom text labels and/or change icons for the Channel-Time on-screen displays (see 2-5-4 + MENU procedural information on page 23). Note that broadcast digital channels often already have a broadcaster generated label. When you are finished, press **MENU** to exit 2-5-4 + MENU Mode.



Custom text label “WXYZ” created in 2-5-4 + MENU Mode.

7. **Verify the TV setup.**

   As applicable, verify that the channel lineup, channel icons, and custom text labels are correct. Also, make sure the TV features are set per your requirements.

8. **Lock the channel lineup.**

   Enter the Installer Menu. Set item **028 CH. OVERIDE** to **000** and press **ENTER** to lock the channel lineup and restrict access to the TV setup menus. Press **ENTER** again to save your changes and exit the Installer Menu.*

028 CH. OVERIDE 000

After verifying the TV Setup, set Installer Menu item 028 CH. OVERIDE to 000.*

* This step prevents end users from accessing channel settings (i.e., the Channel Menu will be inaccessible/ grayed out).

The Master TV Setup is now ready to be copied to the predetermined cloning tool—a USB memory device (.tlx or .tll file) or a clone programmer. See cloning procedures in this document.

Use the Installer Menu to set up, change, or view operational settings.
Refer to the table starting on the next page for brief descriptions of Installer Menu items.
More detailed descriptions follow the table listing.

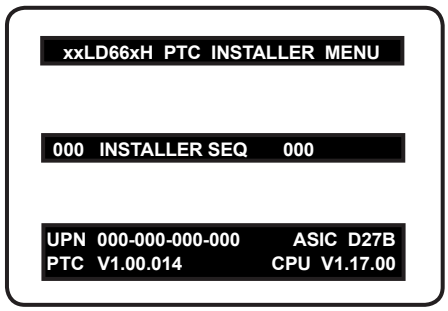
Accessing the Installer Menu

1. Make sure the TV is ON.
2. Using an Installer Remote, press **MENU** repeatedly until the on-screen display of the TV setup menus (if the TV is in Pass-through Mode) or the Function Menu (if the TV is not in Pass-through Mode) no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER** to access the Installer Menu.

The Installer Menu opens with item 000 INSTALLER SEQ 000.

Note: If the password is not entered or registered correctly, you will see the message “ENTER PASSWORD 0000” at the top of the screen instead of the Installer Menu header. Once you re-enter the correct password (i.e., press **9**-**8**-**7**-**6** + **ENTER**), the Installer Menu will display.

Note: If the TV is in FTG Mode, the Installer Menu is accessible as read-only. Refer to pages 33 to 43 for information on FTG Mode configuration.



Typical Installer Menu

Using the Installer Menu

Refer to the table on pages 16 and 17 for an overview of the available Installer Menu items, including their item numbers, functions, value ranges, and default values.

Installer Menu items not relevant to this TV series are not present in the Installer Menu; therefore, some numbers are missing. For example, item 006 will not appear. In addition, items that are dependent on other Installer Menu item settings will not be initially accessible. For example, item 046 STRT AUX SRCE will not display in the Installer Menu unless item 004 STRT CHANNEL is set to 0.

Navigation within the Installer Menu
Use the Up/Down arrow keys on the Installer Remote to sequence through the available menu items, or access an item directly by keying in the item number and then pressing **MENU**. For example, to access the SLEEP TIMER option, which is item 015, press 0-1-5 + MENU.

Changing Installer Menu Settings
To change an Installer Menu item value, use the Left/Right arrow keys on the Installer Remote, or enter a valid value directly. To save the new setting, press **ENTER**, or use the Up/Down arrow keys to navigate to a new Installer Menu item if you have additional items to edit. Note that invalid values will not be saved.

Exiting the Installer Menu and Activating Updates

After you have adjusted all required Installer Menu item settings, press **ENTER** once on the Installer Remote to save your changes; then, press **ENTER** again to exit the Installer Menu. Any changes you make will be stored in non-volatile memory.

Note: Each time you exit the Installer Menu in Pass-through Mode, all V-Chip (Parental Control) settings in the TV are reset to their default values; that is, the Lock System, if previously enabled from the Lock setup menu (see the Owner’s Manual for additional information), will now be disabled, and the individual Parental Control settings will be restored to default values.

Installer Menu (Cont.)

Installer Menu Items 000 through 073

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
000	INSTALLER SEQ	0 ~ 3	0	Leave default set to 0.
001	POWER MANAGE	0 ~ 7	0	Sets number of hours of no activity before automatic shutoff.
002	AC ON	0 / 1	0	Set to 1 to enable Auto Turn ON when AC power is applied.
003	BAND/AFC	0 ~ 3	1	Selects Tuning Band: 0=Broadcast, 1=CATV, 2=HRC, 3=IRC
004	STRT CHANNEL	0 ~ 127, 253, 255	255	Channel tuned when TV is turned ON. (Set to 255 to tune to channel tuned before TV turned OFF.)
005	CHAN LOCK	0 / 1	0	If set to 1, cannot tune from current channel.
007	STRT VOLUME	0 ~ 63, 255	255	Volume level when TV is turned ON. (Set to 255 to use volume level before TV turned OFF.)
008	MIN VOLUME	0 ~ 63	0	Sets minimum allowable volume setting.
009	MAX VOLUME	0 ~ 63	63	Sets maximum allowable volume setting.
010	MUTE DISABLE	0 / 1	0	Set to 1 to disable Mute Function.
011	KEY DEFEAT	0 / 1	0	Set to 1 to disable menu navigation keys on display panel.
015	SLEEP TIMER	0 / 1	1	Set to 1 to enable Sleep Timer.
016	EN TIMER	0 / 1	0	Set to 1 to enable On/Off Timers.
017	ALARM	0 / 1	1	Set to 1 to enable Alarm.
020	FEATURE LEVEL	0 ~ 1, 16 ~ 24	1	Determines an additional IR code scheme to which the TV will respond.
021	V-CHIP	0 / 1	1	Set to 1 to enable V-Chip (Parental Control) functions.
022	MAX BLK HRS	0 ~ 99	12	Sets number of V-Chip blocking hours.
023	CAPTION LOCK	0 / 1	0	Set to 1 to retain caption setting set before TV turned OFF.
028	CH. OVERIDE	0 / 1	1	If set to 0, limits direct access to favorite channels.
029	OLD OCV	0 / 1	0	Set to 1 to change MPI operation to OCV.
030	ACK MASK	0 / 1	0	If set to 1, enables ACK feature of MPI.
031	POLL RATE	20 ~ 169	94	Selects poll rate for MPI.
032	TIMING PULSE	186 ~ 227	207	Sets baud rate for MPI.
034	CAMPORT EN	0 / 1	1	Set to 1 to enable Video 2 input.
035	COMPPORT EN.	0 / 1	1	Set to 0 to disable HDMI 1. Set to 1 enable HDMI 1.
038	YPrPb EN.	0 / 1	1	Set to 1 to enable display panel Component Video 1 input jacks.
039	REAR AUX EN	0 / 1	1	Set to 1 to enable display panel Video 1 input jack.
040	AUTO CAMPORT	0 / 1	1	Set to 1 to automatically switch to Camport. If set to 1, STRT AUX SRCE cannot be set to 2.
046	STRT AUX SRCE	1 ~ 6, 255	6	Sets the starting Aux source (if item 004 STRT CHANNEL is set to 0).
047	AUX STATUS	0 / 1	0	Set to 1 for MPI Aux source to be reported as a channel number instead of Channel 0.
053	DIS. CH-TIME	0 / 1	0	Set to 1 to disable Channel-Time display.
069	EN. CH-T COL.	0 / 1	1	Set to 1 to enable custom color for the Channel-Time display.
070	FOR. CH-TIME	0 ~ 7	2	Chooses custom foreground color for the Channel-Time display.
071	BCK. CH-TIME	0 ~ 7	2	Chooses custom background color for the Channel-Time display.
073	CH NOT AVBLE	0 / 1	0	If set to 1 and item 028 CH. OVERIDE is set to 0, “NOT AVAILABLE” message is displayed if user direct tunes a channel that is not in the favorite channel list.

Installer Menu Items 075 through 122

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
075	REVERT CH	0 / 1	0	If set to 1 and loss of MPI communication occurs, TV tunes to Start Channel.
078	UPN MSB	0 ~ 255	0	User programmable number, most significant byte.
079	UPN MSB-1	0 ~ 255	0	User programmable number, most significant byte - 1.
080	UPN MSB-2	0 ~ 255	0	User programmable number, most significant byte - 2.
081	UPN LSB	0 ~ 255	0	User programmable number, least significant byte.
082	CHKSM ERROR	0 / 1	1	If set to 1, enforces rigid MPI checksum.
083	HANDSHK TIME	0 ~ 5	5	Relaxes MPI timing to be compatible with PC-based Windows-controlled systems.
084	PERMANENT BLK	0 / 1	0	Removes block hours setting for Parental Control and makes block permanent.
087	REAR RGB EN.	0 / 1 / 17	1	Dependent on item 093 RJP AVAILABLE setting. Set to 0 to disable RGB input. Set to 1 to enable RGB input. Set to 17 for Auto Configure.
088	EN NOISE MUTE	0 / 1	1	If set to 1, audio is muted if no signal is present.
090	KEY LOCK	0 / 1	0	If set to 1, keyboard is locked out, IR is still functional.
091	YPrPb2 EN	0 / 1	1	Set to 1 to enable HDMI 2 input.
093	RJP AVAILABLE	0, 1, 2, 5, 6	0	Set to 0 to disable. Set to 1, 2, 5, or 6 for HDMI or DVI Mode. (See detailed descriptions.)
094	SAP MENU EN	0 / 1	1	Set to 0 to disable feature on Function Menu. Set to 1 to enable feature on Function Menu.
096	DEF. ASP. RATIO	0 ~ 4	2	Sets default aspect ratio at power up. See detailed descriptions and item 106.
098	PRO:CENTRIC	0 ~ 2	0	Set to 0 to disable Pro:Centric operation. Set to 1 for Flash Mode. Set to 2 for GEM (Java Application) Mode.
099	BACK LIGHTING	1 ~ 100, 101 ~ 200, 201, 202, 255	202	Sets the level of the TV picture back lighting. (See detailed descriptions.)
102	ATSC BAND	0 ~ 4	4	Selects ATSC band.
103	ATSC TUNE MODE	0 / 1	1	Set to 1 (default) for Physical Channel scan. Set to 0 for Virtual Channel scan.
104	START MINOR CH	0 ~ 255	0	Selects Minor Start Channel. Set to 0 for NTSC.
106	ASP RATIO LOCK	0 / 1	0	To retain set aspect ratio on power cycle, set to 1. Set to 0 for default ratio on power cycle.
116	VIDEO MUTE EN	0 / 1	0	Set to 0 for Normal. Set to 1 for Blank.
117	FACT DEFAULT	0 / 1	0	Set to 0 for Normal. Set to 1 to load presets for all Installer Menu settings.
118	POWER SAVINGS	1 / 3	3	Set to 3 (default—*b*-LAN module only powered when TV is turned ON), or set to 1 (*b*-LAN module is always powered). (See detailed descriptions.)
119	DATA CHANNEL	0 ~ 135, 253	0	Set to 0 to disable. Set to the RF channel number of the data channel for Pro:Centric or TV E-Z Installation data. (See detailed descriptions.)
121	P:C RF WAKE HR	0 ~ 23, 128	128	Sets the hour for Wake On RF. The value “128” is displayed as “OFF.” Directly entering 128 turns the Wake On RF feature OFF.
122	P:C RF WAKE MN	0 ~ 59	0	Sets the minute for Wake On RF.

Caution: Installer Menu settings may affect options available from the TV setup menus or the Function Menu.

Detailed Descriptions of Installer Menu Items

000 - INSTALLER SEQUENCE
Specifies entry sequence to the Installer Menu.

0 = 9876	1 = 4321
2 = 1478	3 = 3698

001 - POWER MANAGE (Power Management)
Determines hours of no activity before automatic shutoff. The Power Management function is for saving energy. If set to 0, Power Manage is Off. Settings range from 0 ~ 7, with 1 ~ 7 representing the hours that the unit will remain ON, unless there has been activity from either the control panel or remote control.

002 - AC ON (AC Power Switchable)
If set to 1, this allows the TV to turn ON when AC power is applied. Pressing the ON button is not necessary. This is desirable if the TV is plugged into a cable box or a power outlet controlled by a wall switch. Use the Left/Right arrow keys to choose 0 or 1, where 0 is the default (OFF), and 1 is ON.

Note: If set to 1 (ON), the TV does not respond to ON/OFF commands from either the remote or the display panel, and the SLEEP TIMER is also nonfunctional.

003 - BAND/AFC (Band/Automatic Frequency Control)
There are four possible settings for this option:

0 = Broadcast	1 = CATV (default)
2 = HRC	3 = IRC

If some channels were not found by Auto Tuning (Channel Search), select the appropriate Band setting here, and add the channels using the Channel Edit option in the Channel Menu.

004 - STRT CHANNEL (Start Channel)
If active, this function allows you to determine the initial Major Start Channel number when the TV is turned ON. This feature is useful for an in-house information channel, since the TV would always select that channel when it is turned ON. Setting this item to 255 causes the last channel viewed when the TV was turned OFF, to be the tuned to channel when the TV is turned ON again.

Note: For a digital Start Channel, always remember to set item 104 to the Minor Start Channel number.

Note: The IP Start Channel shown below can only be set in the FTG File Manager, which is used to configure TV CPUs for FTG Mode. The same applies for 2-byte tuning ranges (128 ~ 135 for Physical 2-byte tuning and 128~999 for Virtual 2-byte tuning). This means that these values, if set, will only be visible in the read-only Installer Menu when the TV is in FTG Mode via CPU. The read-only display also will show additional information about the channel, for example, the IP address and port number, etc.

0 = Aux	127 = Map to Channel 4
1 ~ 125 = Major Ch. #	253 = IP Start Channel
126 = Map to Channel 3	255 = Last Channel

005 - CHAN LOCK (Channel Lock)
Channel Lock is ideal if the system must always be on the same channel. Changing channels with the Channel Up/Down or keypad numbers is impossible. Channel Lock is inactive if set to 0 (default).

Generally, this feature is used in connection with item 004 STRT CHANNEL where the Start Channel may, for example, be set to 3 or 4. If the Start Channel is 3, then the TV will remain locked on channel 3.

NOTE: For items 007, 008, and 009
For legacy reasons, the scale used is 0 – 63. The PTC software will translate this to the 0 – 100 scale used by the TV.

To translate a TV volume level to the Installer Menu value, use the following formula:

$$\text{Installer Value} = \frac{\text{TV Value} \times 63}{100}$$

Enter only the whole number (disregard fractions).

007 - STRT VOLUME (Start Volume)
This function allows the Installer to determine the initial volume level setting when the TV is turned ON. This feature is useful for an in-house information channel, since the TV would always select that volume level when it is turned ON. The range of values are 0 - 63, 255. If 255 is selected, the current volume level will be retained in memory when the TV is turned OFF; at turn ON, the volume level will be automatically set at the previous or last level.

008 - MIN VOLUME (Minimum Volume)
This function determines the minimum volume level allowable with the Volume (VOL) Up/Down control. In this way, for example, someone cannot set the volume too low to hear. The value range is from 0 to 63. Use the Left/Right arrow keys to change values. The factory default is 0, which provides the full range of volume control, if item 009 MAX VOLUME is also set to 63. It may be best to set the same value on every TV.

Note: The minimum volume level cannot have a value setting higher than the maximum volume level (described below).

009 - MAX VOLUME (Maximum Volume)
This function determines the maximum volume level allowable with the Volume (VOL) Up/Down control. In this way, for example, someone cannot set the volume level high enough to disturb others. The value range is 0 to 63, with 63 as the default, which gives the user the full range of volume control, if item 008 MIN VOLUME is also set at 0. Use the Left/Right arrow keys to change values. It may be best to set the same value on every TV.

Note: The maximum volume level cannot have a value setting lower than the minimum volume level (described above).

010 - MUTE DISABLE
Enables or disables sound mute function. If set to 1, sound cannot be muted. If set to 0, sound can be muted.

011 - KEY DEFEAT (Keyboard Defeat)
If set to 1, KEY DEFEAT prevents the end user from accessing the on-screen menu(s) from the display panel—MENU, ENTER, and menu navigation keys do not function. If set to 0, those keys do function.

Note: Users can always access the menu(s) by pressing MENU on the remote.

015 - SLEEP TIMER
If set to 1, the Sleep Timer feature may be used. If set to 0, the Sleep Timer is not available.

016 - EN TIMER (Enable On/Off Timers)
If set to 1, the Timer function is available to the end user and enabled continuously. Set to 0 to disable On/Off timers.

Note: Clock must be set in order for timers to be used.

017 - ALARM
Gives the installer the option of making the Alarm function available to the end user. If set to 1, the Alarm function is available to the end user. Set to 0 to disable the Alarm function.

Note: Clock must be set before the Alarm function will work.

020 - FEATURE LEVEL
Determines an additional IR code scheme to which the TV will respond, allowing for the use of unique IR codes based on "bed number" in a multi-TV single room installation. First determine the IR mode; then select the bed number.

IR Mode	Bed #	Values
Legacy (Hospital)	1 – 2	0 – 1
Multi-code Remote	1 – 9	16 – 24

Note: For further information, see documentation for the accessory package that includes the multi-code remote.

021 - V-CHIP (Parental Control)
Set to 1 to activate V-Chip (Parental Control) and have it available to the end user to filter and control or otherwise restrict programming content that can appear. Set to 0 to turn the V-Chip feature Off (not available to user); no programming restrictions can be set.

022 - MAX BLK HRS (Maximum Block Hours)
Sets hours from 0 to 99 for the maximum V-Chip (Parental Control) block hours. Default setting is for 12 blocking hours.

Note: This item is not available in the Installer Menu unless item 084 PERMANENT BLK is set to 0.

023 - CAPTION LOCK
If set to 0, captions are OFF when the TV is turned ON. Set to 1 to use the caption setting configured before the TV was turned OFF when the TV is turned ON.

028 - CH. OVERIDE (Channel Override)
If set to 1, the user can select channels with either Channel Up/Down or by direct keypad entry. If set to 0, only those channels that are active in the TV's memory can be selected.

029 - OLD OCV (On Command Video™)
Set to 1 for operation with systems from On Command Corporation.

030 - ACK MASK
MPI Communication Parameter. When set to 1, enables ACK feature of MPI.

031 - POLL RATE
MPI Communication Parameter. Selects poll rate for MPI. Step size of 16 ms. Changing from default may affect communication via MPI.

032 - TIMING PULSE
MPI Communication Parameter. Sets baud rate for MPI. Step size of 4.3 uS. Changing from default may affect communication via MPI.

034 - CAMPORT EN. (Camera Port Enable)
Set to 1 to enable Video 2 input on display panel. If set to 0, Video 2 input on display panel is not functional.

035 - COMPPORT EN. (Computer Port Enable)
Enable/disable TV display panel HDMI 1 input jack. Set to 0 to disable HDMI 1. Set to 1 to enable HDMI 1.

Note: This setting is ignored if item 093 RJP AVAILABLE is set to 1.

038 - YPrPb EN. (Rear Component Video Enable)
Set to 1 to enable display panel rear Component Video input jacks. Set to 0 to disable display panel rear Component Video input jacks.

039 - REAR AUX EN. (Rear Aux Enable)
Set to 1 to enable display panel rear Aux (Video 1) input. Set to 0 to disable display panel rear Aux (Video 1) input.

040 - AUTO CAMPORT
Set to 1 to automatically switch to Camport when equipment is connected to front Video input. Set to 0 to disable front Video automatic source selection. If set to 1, STRT AUX SRCE cannot be set to 2.

Note: If set to 1, item 093 RJP AVAILABLE is automatically set to 0.

Installer Menu (Cont.)

046 - STRT AUX SRCE (Start Aux Source)
Sets the starting Aux source. When turned ON, the TV will tune to starting Aux source if item 004 STRT CHANNEL is set to 0.

If item 093 RJP AVAILABLE is set to 0 and item 040 AUTO CAMPORT is set to 0:

1 = Video 1	4 = RGB	255 = Last Aux
2 = Video 2	5 = HDMI 2	
3 = HDMI 1	6 = Component	

If item 093 RJP AVAILABLE is set to 1:

2 = Video 2	5 = HDMI 2	6 = Component

If item 040 AUTO CAMPORT is set to 1:

1 = Video 1	4 = RGB	6 = Component
3 = HDMI 1	5 = HDMI 2	

Note: This item is not available in the Installer Menu unless item 004 STRT CHANNEL is set to 0.

047 - AUX STATUS
Set to 1 for MPI Aux source to be reported as a channel number instead of channel 0. Set to 0 to disable Aux identification change. Controls MPI status channel response for Aux inputs.

053 - DIS. CH-TIME (Disable Channel-Time)
Set to 1 to disable the Channel-Time display; Channel-Time display will not appear. Set to 0 to enable the Channel-Time display.

069 - EN. CH-T COL. (Enable Channel-Time Custom Color)
Set to 1 to enable custom color for the Channel-Time display. Set to 0 to disable custom color for the Channel-Time display.

070 - FOR. CH-TIME (Channel-Time Display Foreground Color)
Set according to Color Chart:

0 = Black	3 = Cyan	6 = Yellow
1 = Blue	4 = Red	7 = White
2 = Green	5 = Violet	

Note: If foreground color and background color are the same, the menu background will be transparent.

Note: Applies only to “Channel Not Available” message if item 073 CH NOT AVBLE is set to 1 (enabled). Also, items 070 FOR. CH-TIME and 071 BCK. CH-TIME are not available in the Installer Menu when item 069 EN. CH-T COL. is set to 0.

071 - BCK. CH-TIME (Channel-Time Display Background Color)
See description for item 070 FOR. CH-TIME above. The color chart is the same for both items.

073 - CH NOT AVBLE (Channel Not Available)
If set to 1 and item 028 CH. OVERIDE is set to 0, a “NOT AVAILABLE” message is displayed when a user direct tunes a channel that is not in the channel scan list available in memory.

075 - REVERT CH (Revert to Start Channel)
If set to 1 and loss of MPI communication occurs, TV automatically tunes to the specified Start Channel.

Note: This item is not available in the Installer Menu when item 004 STRT CHANNEL is set to 255.

078 - UPN MSB (UPN Most Significant Byte)
User programmable number, most significant byte readable by MPI command. Note: Not linked to serial number.

079 - UPN MSB-1 (UPN Most Significant Byte-1)
User programmable number, most significant byte-1 readable by MPI command. Note: Not linked to serial number.

080 - UPN MSB-2 (UPN Most Significant Byte-2)
User programmable number, most significant byte-2 readable by MPI command. Note: Not linked to serial number.

081 - UPN LSB (UPN Least Significant Byte)
User programmable number, least significant byte readable by MPI command. Note: Not linked to serial number.

082 - CHKSM ERROR (Checksum Error)
Enforces rigid MPI checksum validation. Set to 1 for validation. Set to 0 to disable (does not check checksum on MPI async port). SPI is always checked.

083 - HANDSHK TIME (Handshake Time)
Adds an additional delay to the handshake time which is 64 msec, thus relaxing MPI timing requirements to be compatible with PC-based Windows controlled systems. Range is 0 - 5.
(Timeout = 25.5MS + [25.5 MS* Handshake time].)

084 - PERMANENT BLK (Permanent Block)
Allows Lock (Parental Control) blocking schemes to be permanent by disabling the blocking hours function. Set to 1 to install Parental Control restrictions permanently. Set to 0 for user-specified hours control of blocking schemes.

087 - REAR RGB EN. (Rear RGB Enable)
Controls access to rear RGB input on TV. Set to 0 to disable RGB input. Set to 1 to enable RGB input. Set to 17 to initiate a one-time automatic configuration after an AC power cycle; otherwise, automatic adjustment will be performed each time the RGB input is accessed.

088 - EN NOISE MUTE (Enable Noise Mute)
If set to 1, audio mutes when no signal is present.

090 - KEY LOCK
If set to 1, display panel Channel, Volume, and Caption buttons are disabled, Power button remains enabled. If set to 0, Channel, Volume, Caption, and Power buttons are all enabled.

091 - YPrPb2 EN. (HDMI2 Enable)
Set to 1 to enable display panel HDMI 2 input. Set to 0 to disable display panel HDMI 2 input.

093 - RJP AVAILABLE (Remote Jack Pack Available)

- 0 = Remote jack pack is not available or disabled.
- 1 = Legacy Model RJPs: HDMI Mode
  Enables RJP feature for use with full cable bundle models. In this mode, when an HDMI source is connected to the RJP, both digital video and audio are expected via the HDMI cable. If no digital audio is present, no audio will be heard.
- 2 = Legacy Model RJPs: DVI Mode
  Enables RJP feature for use with full cable bundle models. In this mode, when an HDMI/DVI source is connected to the RJP, only digital video is expected via the HDMI cable. Analog audio is provided via a separate cable, from the source, connected to an RJP AUDIO IN. If no analog audio cable is connected, tuner audio will be heard.
- 5 = Scaler Model RJPs: HDMI Mode
  Enables RJP feature for use with reduced cable bundle models. In this mode, when an HDMI source is connected to the RJP, both digital video and audio are expected via the HDMI cable. If no digital audio is present, no audio will be heard.
- 6 = Scaler Model RJPs: DVI Mode
  Enables RJP feature for use with reduced cable bundle models. In this mode, when an HDMI/DVI source is connected to the RJP, only digital video is expected via the HDMI cable. Analog audio is provided via separate cable, from the source, connected to an RJP AUDIO IN. If no analog audio cable is connected, tuner audio will be heard.

Notes:
See Reference section, “RJP Model List and Input Auto-sensing Hierarchy.” If RJP AVAILABLE is set to 1, 2, 5, or 6, item 040 AUTO CAMPORT is automatically set to 0. Settings 1, 2, 5, and 6 allow the lodge staff to customize each TV’s RJP setup based on customer requirements.

094 - SAP MENU EN (2nd Audio Program)
Set to 1 to enable SAP feature on Function Menu, if Function Menu is available (i.e., TV is not in Pass-through Mode). Set to 0 to disable SAP feature on Function Menu, if Function Menu is available.

096 - DEF. ASP. RATIO (Default Aspect Ratio)
Selects default aspect ratio at power up.

- Set to 0 for Set By System.
- Set to 1 for 4:3.
- Set to 2 for 16:9 (Factory Default).
- Set to 3 for Just Scan.
- Set to 4 for Zoom.

Note: This item is not available in the Installer Menu unless item 106 ASP RATIO LOCK is set to 0.

098 - PRO:CENTRIC
Selects the Pro:Centric Application Mode. Set to 0 (default) to disable Pro:Centric operation. Set to 1 for Flash Mode. Set to 2 for GEM (Java Application) Mode.

Note: This item is not available in the Installer Menu when item 119 DATA CHANNEL is set to 0.

Note: When both Pro:Centric items (098 PRO:CENTRIC and 119 DATA CHANNEL) are set, once you exit the Installer Menu, the Function Menu will be available to end users instead of the TV setup menus. Also, only the Learn From TV (TLX) option will be available from the USB Download Menu; the Teach to TV option will not.

099 - BACK LIGHTING
Sets the TV screen brightness at power up. Default setting is 202.

- 1 - 100 Static Back Lighting
  (1 = Dimmest picture, 100 = Brightest picture)
- 101 - 200 Dynamic Back Lighting
  (101 = Dimmest picture, 200 = Brightest picture)
- 201 Automatic Static Back Lighting
- 202 Automatic Dynamic Back Lighting

If set between 101 and 200, the TV automatically controls back lighting depending upon the picture level of the current program. If set to 201, the TV automatically controls back lighting depending upon external spectral sensitivity. If set to 202, the TV automatically controls back lighting depending upon external spectral sensitivity and the picture level of the current program. If set to 255, back lighting is controlled via the Picture settings in the TV’s setup menus.

102 - ATSC BAND
Sets up TV to receive different types of incoming signals:
0 = Broadcast, 1 = CATV, 2 = HRC, 3 = IRC, 4 = Same as NTSC.

103 - ATSC TUNE MODE
Sets ATSC tuning mode: Default set to 1 for Physical Channel scan. Set to 0 for Virtual Channel scan.

Installer Menu (Cont.)

104 - START MINOR CHANNEL
Sets Minor Start Channel number at power up. 0 = NTSC. If not 0, number selected is the digital channel's Minor Start Channel number.

Note: This item is not available in the Installer Menu when item 004 STRT CHANNEL is set to 0, 253, or 255.

106 - ASP RATIO LOCK (Aspect Ratio Lock)
Set to 1 to retain previous aspect ratio with power off. Set to 0 to retain default aspect ratio with power off. See item 096 DEF. ASP. RATIO above.

116 - VIDEO MUTE EN (Video Mute Enable)
Set to 0 for Normal. Set to 1 for Blank.

117 - FACT DEFAULT (Factory Default)
Set to 0 for normal. Set to 1 to load presets of all Installer Menu item settings.

Caution: If set to 1, this will reload the factory defaults and clear the channel lineup, including any assigned channel icons and custom text labels.

Note: See also Reference section, "Resetting Factory Defaults on the TV(s)," for further information.

118 - POWER SAVINGS
Default set to 3—the power circuitry for both the embedded *b*-LAN module and the GAME CONTROL/MPI port is only powered when the TV is turned ON. When the TV is in Standby Mode, the MPI card slot is powered by the Standby power supply and both the embedded *b*-LAN and the GAME CONTROL/MPI port are not powered. When the TV is in Power On Mode, the MPI card slot is powered by the main 12V power supply and both the embedded *b*-LAN and GAME CONTROL/MPI port are powered.

Note that the TV must be turned ON in order to communicate with the embedded *b*-LAN module for configuration and control when POWER SAVINGS is set to 3. If set to 1, the *b*-LAN module is always powered.

Similarly, if MPI communication is required for external MPI control, POWER SAVINGS should be set to 1 so that the GAME CONTROL/MPI port circuitry is always powered.

Note: MPI cards with *b*-LAN technology—LMT7Z5, LMT7Z7, LMT7Z9—are NOT supported on TVs in which *b*-LAN technology is already integrated.

Note: See Reference section, "*b*-LAN Setup & Overview," for further information.

119 - DATA CHANNEL
Set to 0 (default) to disable. Set to the RF channel number of the data channel for Pro:Centric or TV E-Z Installation (splash screen, configuration, and firmware) data.

The TV may take several minutes to load EPG data after AC power is initially applied.

Note: The data channel is automatically set to 253 if Media Type is set to IP in the Pro:Centric Menu on the TV (see "Pro:Centric Setup" on page 45) or if Data Channel is set to IP Address in the FTG File Manager, which is used to configure TV CPUs for FTG Mode operation. It is not possible to change the value to "253" directly.

121 - P:C RF WAKE HR
Set the hour from 0 to 23 for Wake On RF. This item uses the 24-hour clock format. The value "128" is displayed as "OFF." Directly entering 128 turns the Wake On RF feature OFF.

Note: This item is not available in the Installer Menu if item 119 DATA CHANNEL is set to 0 or 253.

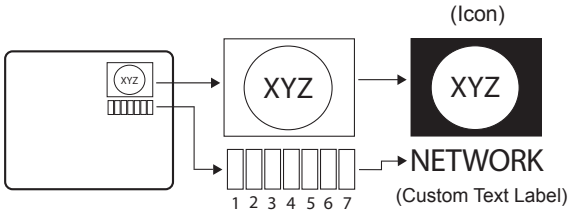
122 - P:C RF WAKE MN
Set the minute from 0 to 59 for Wake On RF.

Note: This item is not available in the Installer Menu if item 119 DATA CHANNEL is set to 0 or 253 or if item 121 P:C RF WAKE HR is set to 128/OFF.

Channel Icons / Custom Text Labels (2-5-4 + MENU Mode)

Changing Channel Icons and/or Adding or Editing Custom Text Labels in the Channel-Time Display

If there is no pre-assigned icon for a channel, you can add a custom text label of up to seven (7) characters to help identify the channel or network. Also, if desired, a custom text label can be added to the Channel-Time display in addition to a pre-assigned icon. You may also add text labels for the Aux input sources to clearly identify the devices that are connected to the Aux inputs.



Changing icons and/or adding or editing custom text labels can only be done if there are channels that have been transferred to the TV's PTC either during Master TV Setup (see pages 11 to 14) or by cloning (USB memory device / .tll file or clone programmer only).
Note: A blank letter space is available between "Z" and "!".

To perform channel editing/labeling:

1. Enter the Installer Menu: Press **MENU** repeatedly until the on-screen display of the TV setup menus no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.
2. Press **2-5-4** + **MENU** on the Installer Remote to enter the Channel Label Editing Menu.
3. Change channel icons and/or add or edit custom text labels as described in the procedures below. (You can do this more than once.)
4. To exit the menu when you are done, press **MENU**.

Changing a Channel's Icon on the Master TV

1. Use Channel Up/Down to select the desired channel.
2. Use the Left/Right arrow keys to select the thin letter "**I**" on the Channel-Time display.
3. Use the Up/Down arrow keys to select the icon with which you want to identify the channel. (If you know the icon number, enter the number, and press **ENTER**.)
4. Proceed to add/edit custom text labels, or go to the next channel.

Adding/Editing Channel Labels on the Master TV

1. Use Channel Up/Down to select the desired channel.
2. Press the Left or Right arrow repeatedly until the numbers 1 to 7 appear on the display. The number shows the position of the character that can be changed. Number 1 is the first character, number 2 the second character, etc.
3. Use the Up/Down arrow keys to select the desired character.
4. Proceed to the next number position, or go to the next channel.

Adding/Editing Source Labels on the Master TV

1. Press **INPUT** to select the desired Aux input source: AV1, AV2, RGB, Component, HDMI, or HDMI2.
2. Press the Left or Right arrow repeatedly until the numbers 0 to 9 appear on the display. The number shows the position of the character that can be changed.
3. Use the Up/Down arrow keys to select the desired character.
4. Press **INPUT** for the next Aux input, or use Channel Up/Down to return to channels.

Installer Remote Control Key Functions for Master TV Channel Label Editing Menu

- **Channel Up/Down**: Tunes to the next channel in scan.
- **Left/Right Arrows**: Select the item to change. If "I" is shown, the icon can be changed. If a number is shown, it indicates the position of the character that can be changed.
- **Up/Down Arrows**: Select the icon or the character to be displayed. Tip: Arrows can be held down for fast scrolling.
- **0 – 9**: Use to enter the index number of the icon, if known.
- **ENTER**: Changes the icon after the icon number has been entered.
- **INPUT**: Changes the Aux input label.
- **MENU**: Exits the editing process.

Cloning Overview

IMPORTANT CLONING INFORMATION

Starting with these TV models, there are now four different procedures for cloning a Master TV Setup, each with its own advantages and limitations (see also “Cloning Methods” on page 11):

- Using a USB memory device / .tlx file
- Using a USB memory device / .tll file
- Using a TLL-1100A clone programmer
- Using a LT2002 clone programmer

Each cloning method is described in further detail on the pages that follow. As you perform cloning procedures, be sure to complete each task as indicated. If a procedure or step is omitted or not performed completely, cloning may not work. At each step, pay attention to ensure the TV screen shows the proper message when cloning. If the message indicated does not appear, there is a problem with that step, and cloning may not be successful.

Caution: Copying a blank or incorrect memory into a TV from a clone programmer will cause the TV to operate erratically or become inoperable.

Caution: Do not connect a clone programmer to a PPV card installed in the Master or Target TVs. Also, if the TV is in LodgeNet PPV Mode (check with the site administrator if you are not certain), do not connect a clone programmer to the GAME CONTROL/MPI port. Either of these actions will damage the clone programmer and, if applicable, the PPV card.

Before you begin cloning:

- Complete the Master TV Setup procedure (see pages 11 to 14).
- All equipment should be connected to power and turned ON.
- Both the Master and Target TVs must be in Pass-through Mode.
- Learning and Teaching is only possible between identical model TVs.
- If using a USB memory device, ensure the USB device has been formatted with FAT format.
- If using a USB memory device / .tlx file, ensure that the Master TV Setup does not contain a Channel Map; otherwise, Teaching will result in the Target TV(s) being configured for FTG Mode via CPU.
- For both Master and Target TVs—If using a clone programmer, ensure the TV is tuned to either an Aux input or an analog (not a digital) channel.
- LT2002 only—Make sure the batteries in the clone programmer are fresh. If batteries are removed, the clone programmer clock time (if set) will be lost (see page 32 for information on the clone programmer clock).

Caution: Do not unplug the TV power cord or remove/disconnect the USB memory device/ clone programmer while Learning or Teaching, as doing so may cause the TV to malfunction or harm the USB device/clone programmer, respectively.

Learning / Teaching a Master TV Setup using a USB Memory Device / .tlx File

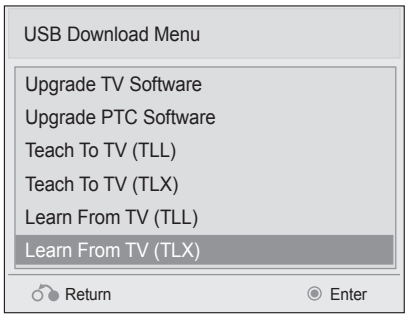
USB Cloning Notes

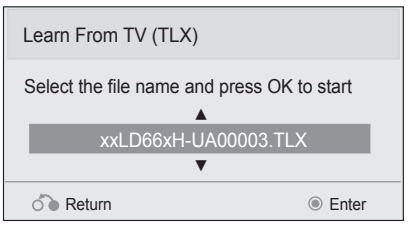
- Read the IMPORTANT CLONING INFORMATION on page 24 before beginning any cloning procedures. In particular, ensure that the Master TV Setup does not contain a Channel Map; otherwise, Teaching will result in the Target TV(s) being configured for FTG Mode via CPU.
- You may edit the filename as part of the Learning procedure; however, a file with edited contents will not be recognized.
- It is not possible to clone a Master TV's clock using a USB memory device. Either set a Target TV's clock manually, or use the Auto Clock setting in the TV setup menus.

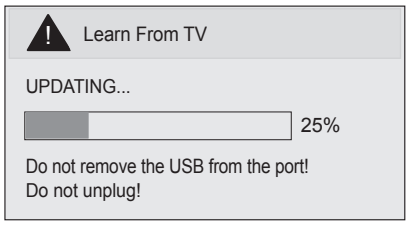
Learn Setup from Master TV

1. Ensure the Master TV is set up completely and in Pass-through Mode.
2. Plug the USB memory device into the USB IN port on the Master TV.
3. Press **MENU** on the Installer Remote to display the TV setup menus. Use the arrow navigation keys to select/highlight the **Option** menu icon, and then press the number "**7**" key a total of seven times to display the USB Download Menu.
4. To gain access to the "Learn From TV" option in the USB Download Menu, key in the password used to enter the Installer Menu (Example: Press **9**-**8**-**7**-**6**).
5. Use the Up/Down arrow keys to select **Learn From TV (TLX)**, and then press **ENTER**.
6. To differentiate this .tlx file from others, you can use the Up/Down arrow keys to change the last five digits of the filename. Press **ENTER** when you are ready to initiate Learning.

   Learning status will be shown on the progress bar. When the Learning process is complete, the USB Download menu will reappear on screen.
7. When Learning is done, remove the USB memory device from the Master TV.







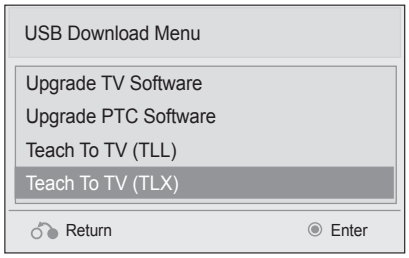
USB Cloning Procedures (Cont.)

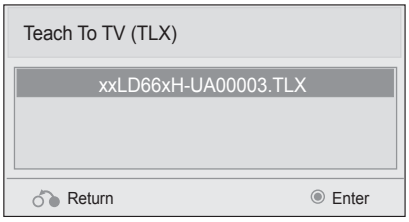
Learning / Teaching a Master TV Setup using a USB Memory Device / .tlx File (Cont.)

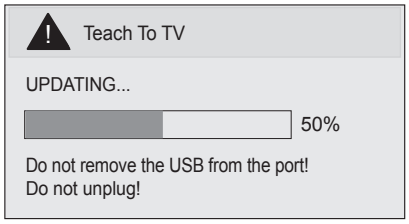
Teach Master TV Setup to Target TV

1. Ensure the Target TV is in Pass-through Mode, and then use the Installer Remote to enter the Target TV Installer Menu: Press **MENU** repeatedly until the on-screen display of the TV setup menus no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.
2. Set Installer Menu item **117 FACT DEFAULT** to **001**, and press **ENTER**. When the value changes back to 0, press **ENTER** again to exit the Installer Menu.
3. Plug the USB memory device with the .tlx file into the Target TV USB IN port.
4. Press **MENU** on the Installer Remote to display the TV setup menus. Use the arrow navigation keys to select/highlight the **Option** menu icon, and then press the number "**7**" key a total of seven times to display the USB Download Menu.
5. Use the Up/Down arrow keys to select **Teach To TV (TLX)**, and then press **ENTER**.
6. Use the Up/Down arrow keys to select the Master TV Setup you want to install, and then press **ENTER**. Note: Filenames identify the TV and the TLX version (see example at right).

   Teaching status will be shown on the progress bar. When the Teaching process is complete, the USB Download menu will reappear on screen.
7. When Teaching is done, remove the USB memory device from the Target TV, turn OFF the TV, and unplug the TV power cord for 15 seconds.
8. Reconnect the TV power cord, and turn ON the TV. The Master TV Setup should be resident on the Target TV.







Learning / Teaching a Master TV Setup using a USB Memory Device / .tll File

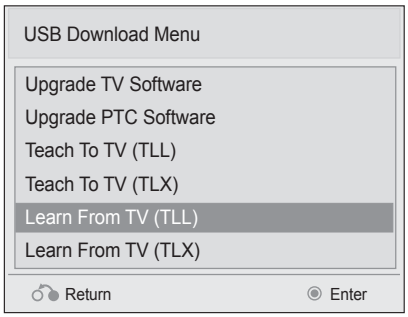
USB Cloning Notes

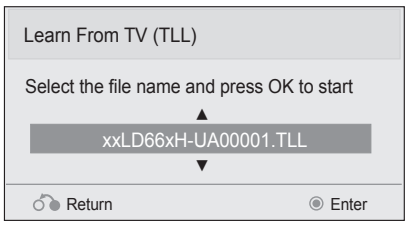
- Read the IMPORTANT CLONING INFORMATION on page 24 before beginning any cloning procedures.
- You may edit the filename as part of the Learning procedure; however, a file with edited contents will not be recognized.
- It is not possible to clone a Master TV's clock using a USB memory device. Either set a Target TV's clock manually, or use the Auto Clock setting in the TV setup menus.

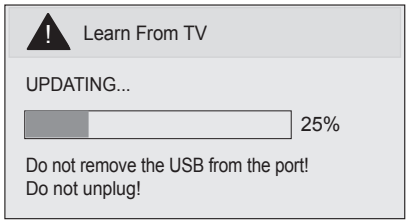
Learn Setup from Master TV

1. Ensure the Master TV is set up completely and in Pass-through Mode.
2. Plug the USB memory device into the USB IN port on the Master TV.
3. Press **MENU** on the Installer Remote to display the TV setup menus. Use the arrow navigation keys to select/highlight the **Option** menu icon, and then press the number "**7**" key a total of seven times to display the USB Download Menu.
4. To gain access to the "Learn From TV" option in the USB Download Menu, key in the password used to enter the Installer Menu (Example: Press **9**-**8**-**7**-**6**).
5. Use the Up/Down arrow keys to select **Learn From TV (TLL)**, and then press **ENTER**.
6. To differentiate this .tll file from others, you can use the Up/Down arrow keys to change the last five digits of the filename. Press **ENTER** when you are ready to initiate Learning.

   Learning status will be shown on the progress bar. When the Learning process is complete, the USB Download menu will reappear on screen.
7. When Learning is done, remove the USB memory device from the Master TV.







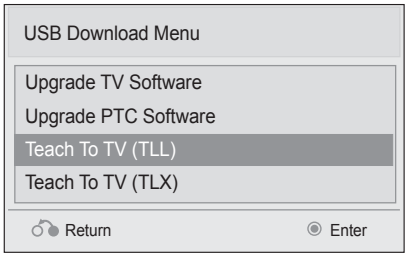
USB Cloning Procedures (Cont.)

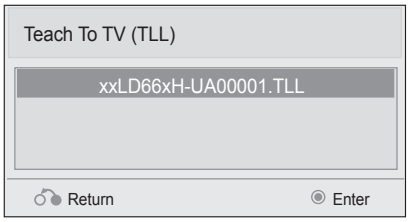
Learning / Teaching a Master TV Setup using a USB Memory Device / .tll File (Cont.)

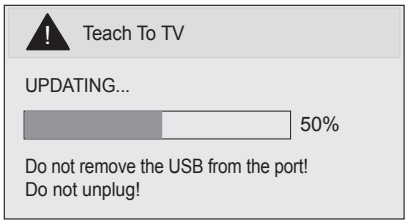
Teach Master TV Setup to Target TV

1. Ensure the Target TV is in Pass-through Mode, and then use the Installer Remote to enter the Target TV Installer Menu: Press **MENU** repeatedly until the on-screen display of the TV setup menus no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.
2. Set Installer Menu item **117 FACT DEFAULT** to **001**, and press **ENTER**. When the value changes back to 0, press **ENTER** again to exit the Installer Menu.
3. Tune/set the TV to an analog or digital channel or Aux input, (ideally the same source tuned for 2-5-5 + MENU Mode during the Master TV Setup procedure).
4. Plug the USB memory device with the .tll file into the Target TV USB IN port.
5. Press **MENU** on the Installer Remote to display the TV setup menus. Use the arrow navigation keys to select/highlight the **Option** menu icon, and then press the number "**7**" key a total of seven times to display the USB Download Menu.
6. Use the Up/Down arrow keys to select **Teach To TV (TLL)**, and then press **ENTER**.
7. Use the Up/Down arrow keys to select the Master TV Setup you want to install, and then press **ENTER**. Note: Filenames identify the TV and the TLL version (see example at right).

   Teaching status will be shown on the progress bar. When the Teaching process is complete, the USB Download menu will reappear on screen.
8. When Teaching is done, remove the USB memory device from the Target TV, turn OFF the TV, and unplug the TV power cord for 15 seconds.
9. Reconnect the TV power cord, and turn ON the TV. The Master TV Setup should be resident on the Target TV.



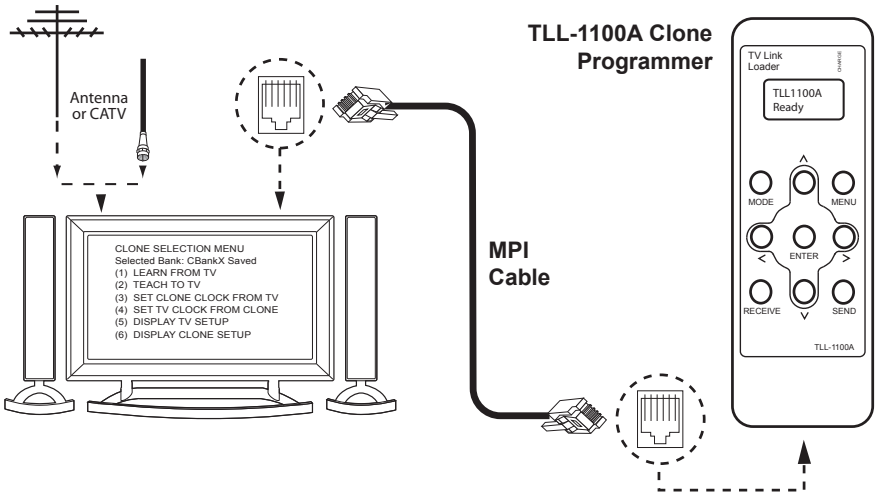




Learning / Teaching a Master TV Setup using a TLL-1100A Clone Programmer

Caution: Do not connect a clone programmer to a PPV card installed in the Master or Target TVs. Also, if the TV is in LodgeNet PPV Mode (check with the site administrator if you are not certain), do not connect a clone programmer to the GAME CONTROL/MPI port. Either of these actions will damage the clone programmer and, if applicable, the PPV card.

Cloning is accomplished using the TV/clone programmer MPI ports for communication (see figure).



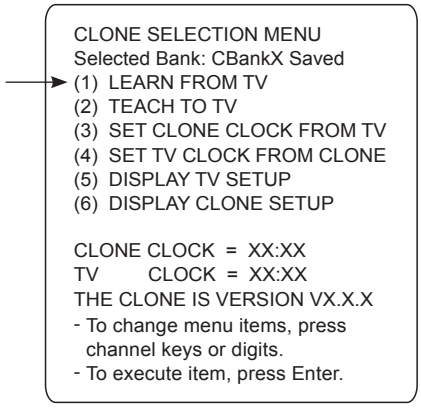
TLL-1100A Cloning Notes

- Read the IMPORTANT CLONING INFORMATION on page 24 before beginning any cloning procedures.
- Ensure the TLL-1100A is either fully charged or connected to AC power.
- Learning and Teaching is only possible between identical model TVs; however, the TLL-1100A can store up to eight different Master TV Setups.

Learn Setup from Master TV

1. Ensure the Master TV is set up completely and in Pass-through Mode.
2. Tune/set the TV to an analog channel or Aux input, and then plug one end of the MPI cable into the TV MPI port.
3. Turn ON the TLL-1100A.
4. Use the **MODE** button on the TLL-1100A to select **Clone Mode**.
5. Use the Left/Right arrows on the TLL-1100A to select the Memory CBank (1 to 8) in which to store the Master TV Setup.
6. Plug the other end of the MPI cable into the MPI port on the bottom of the TLL-1100A. The Clone Selection Menu will display on the TV screen.
7. Press **1** on the Installer Remote to select **LEARN FROM TV** from the Clone Selection Menu. Then, press **ENTER** to transfer the Master TV Setup into CBankX on the TLL-1100A.

   Learning usually takes about 90 seconds. “LEARNING IN PROGRESS” will be displayed on the screen while the TLL-1100A copies the Master Setup. When the Learning process is complete, a “LEARNING COMPLETE” message will be displayed.
8. When Learning is complete, disconnect the MPI cable from the Master TV.



Clone Programmer Cloning Procedures (Cont.)

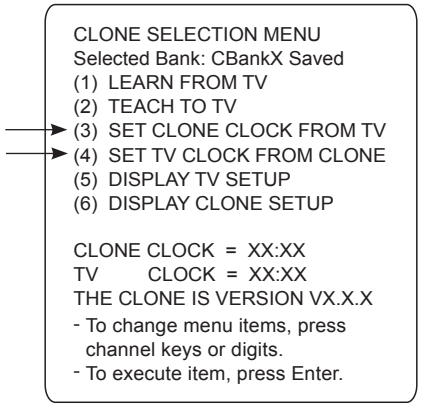
Learning / Teaching a Master TV Setup using a TLL-1100A Clone Programmer (Cont.)

(Optional) Set the Clock

Set the time on a Master TV's clock. (If the time has already been copied from a TV into the TLL-1100A clone programmer, you can set the Master TV's clock by copying the time from the clone programmer.) The TLL-1100A can copy the current time to both a Master TV and to the clone's internal clock—accurate to within one minute.

Since the TLL-1100A's time cannot be set directly, the current time needs to be copied from an LG TV equipped with an enabled MPI port.

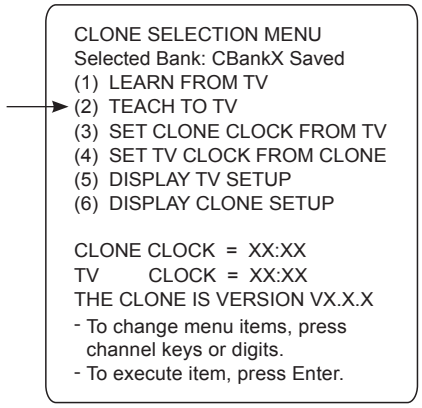
After the time is copied to the TLL-1100A clone programmer, the current time will be maintained and can then be transferred to another TV. (This can be a Master TV or another TV which has already had the features set up.)



Teach Master TV Setup to Target TV

1. Ensure the Target TV is in Pass-through Mode, and then use the Installer Remote to enter the Target TV Installer Menu: Press **MENU** repeatedly until the on-screen display of the TV setup menus no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.
2. Set Installer Menu item **117 FACT DEFAULT** to **001**, and press **ENTER**. When the value changes back to 0, press **ENTER** again to exit the Installer Menu.
3. Tune/set the TV to an analog channel or Aux input (ideally the same source tuned for 2-5-5 + MENU Mode during the Master TV Setup procedure), and then connect the MPI cable to the MPI port on the Target TV. The Clone Selection Menu will display on the TV screen.
4. Ensure the correct Memory CBank(X) is selected on the TLL-1100A.
5. Press **2** on the Installer Remote to select **TEACH TO TV** from the Clone Selection Menu. Then, press **ENTER** to transfer the Master TV Setup to the Target TV.

   Teaching usually takes 3 to 4 minutes. "TEACHING IN PROGRESS" will be displayed on the screen during Teaching. When the Teaching process is complete, a "TEACHING COMPLETE" message will be displayed.
6. When Teaching is done, disconnect the MPI cable from the Target TV, turn OFF the TV, and unplug the TV power cord for 15 seconds.
7. Reconnect the TV power cord, and turn ON the TV. The Master TV Setup should be resident on the Target TV.



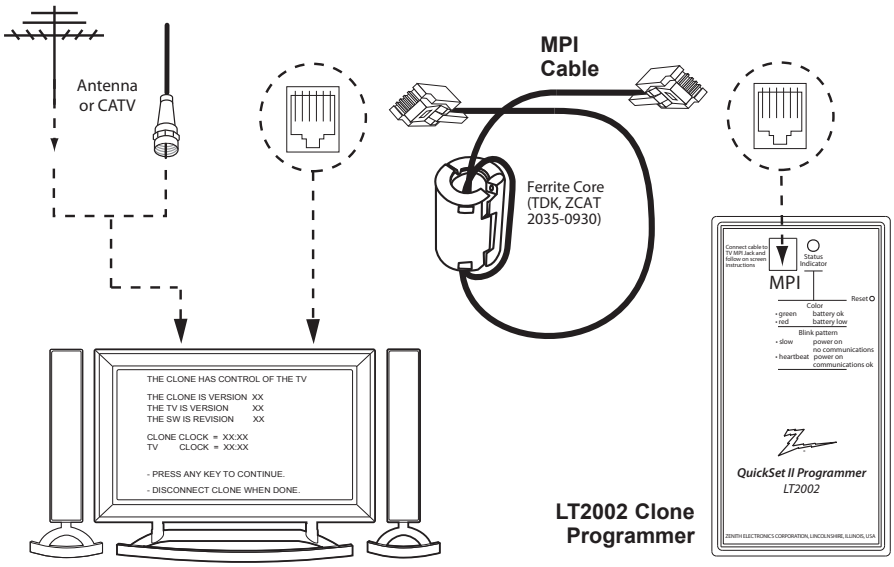
Learning / Teaching a Master TV Setup using an LT2002 Clone Programmer

Caution: Do not connect a clone programmer to a PPV card installed in the Master or Target TVs. Also, if the TV is in LodgeNet PPV Mode (check with the site administrator if you are not certain), do not connect a clone programmer to the GAME CONTROL/MPI port. Either of these actions will damage the clone programmer and, if applicable, the PPV card.

Cloning is accomplished using the TV/clone programmer MPI ports for communication (see figure).

LT2002 Cloning Notes

- Read the IMPORTANT CLONING INFORMATION on page 24 before beginning any cloning procedures.
- A slow flashing green light indicates that there are communication problems between the TV and the LT2002. If this is the case, check for a damaged cable, poor contacts, or other connection troubles.
- If the status indicator is red, the LT2002 batteries are low and should be replaced. Install four (4) high-quality alkaline AA batteries.
- Learning and Teaching is only possible between identical model TVs; however, the LT2002 can store up to three different Master TV Setups.



Learn Setup from Master TV

1. Ensure the Master TV is set up completely and in Pass-through Mode.
2. Tune/set the TV to an analog channel or Aux input, and then plug one end of the MPI cable into the TV MPI port.
3. If there is a good connection after the LT2002 is connected to the TV MPI port, “THE CLONE HAS CONTROL OF THE TV” message will appear on the TV screen. Press any key on the Installer Remote to access the LT2002 Clone Selection Menu.
4. Press **1** on the Installer Remote to select **LEARN FROM TV** from the Clone Selection Menu; then press **ENTER** to proceed to the Memory Bank Selection Menu.
5. Press 1, 2, or 3 on the Installer Remote to select the clone Memory Bank in which to store the Master Setup. Then, press **ENTER**.

   Note: If you choose a Memory Bank that already has a Master device’s setup programmed into it, that setup will be overwritten by the new Master TV Setup.
6. Verify the Learning setup information on the next screen, and then press **POWER** to transfer the Master TV Setup into the selected Memory Bank on the LT2002.

(Continued on next page)

CLONE SELECTION MENU

(1) LEARN FROM TV
(2) TEACH TO TV
(3) SET CLONE CLOCK FROM TV
(4) SET TV CLOCK FROM CLONE
(5) DISPLAY TV SETUP
(6) DISPLAY CLONE SETUP

- TO CHANGE MENU ITEMS, PRESS CHANNEL KEYS OR DIGITS.

- TO EXECUTE ITEM, PRESS ON/OFF, POWER, OR ENTER.

SAVE TV SETUP IN SELECTED CLONE MEMORY

(1) MEMORY 1 VER XX REV XX
(2) MEMORY 2 VER XX REV XX
(3) MEMORY 3 VER XX REV XX
(4) RETURN TO CLONE MENU

- TO CHANGE MENU ITEMS, PRESS CHANNEL KEYS OR DIGITS.

- TO EXECUTE ITEM, PRESS ON/OFF, POWER, OR ENTER.

Clone Programmer Cloning Procedures (Cont.)

Learning / Teaching a Master TV Setup using an LT2002 Clone Programmer (Cont.)

(Continued from previous page)

Learning usually takes about 90 seconds. “LEARNING IN PROGRESS” will be displayed on the screen while the LT2002 copies the Master Setup. When the Learning process is complete, a “LEARNING COMPLETE” message will be displayed.

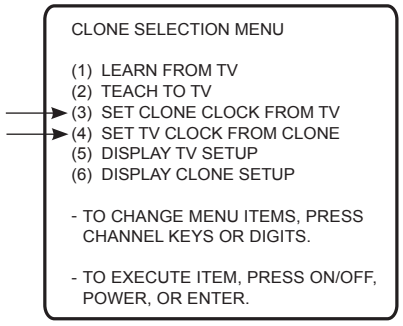
7. When Learning is complete, disconnect the MPI cable from the Master TV.

(Optional) Set the Clock

Set the time on a Master TV’s clock. (If the time has already been copied from a TV into the LT2002 clone programmer, you can set the Master TV’s clock by copying the time from the clone programmer.) The LT2002 can copy the current time to both a Master TV and to the clone’s internal clock—accurate to within one minute. (Another reason that the LT2002 should be equipped with fresh, high-quality alkaline batteries, is for it to keep the time as accurately as possible.)

Since the LT2002’s time cannot be set directly, the current time needs to be copied from an LG TV equipped with an enabled MPI port.

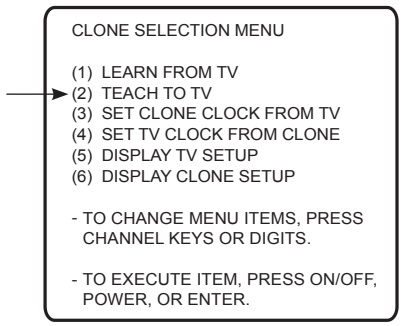
After the time is copied to the LT2002 clone programmer, the current time will be maintained and can then be transferred to another TV. (This can be a Master TV or another TV which has already had the features set up.)

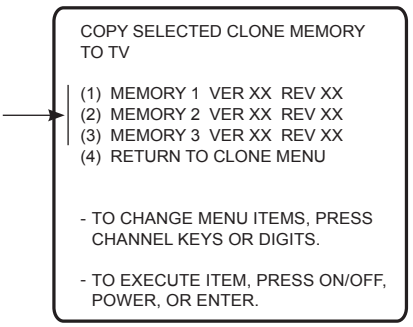


Teach Master TV Setup to Target TV

1. Ensure the Target TV is in Pass-through Mode, and then use the Installer Remote to enter the Target TV Installer Menu: Press **MENU** repeatedly until the on-screen display of the TV setup menus no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.
2. Set Installer Menu item **117 FACT DEFAULT** to **001**, and press **ENTER**. When the value changes back to 0, press **ENTER** again to exit the Installer Menu.
3. Tune/set the TV to an analog channel or Aux input (ideally the same source tuned for 2-5-5 + MENU Mode during the Master TV Setup procedure), and then connect the MPI cable to the MPI port on the Target TV.
4. With “THE CLONE HAS CONTROL OF TV” message on display, press **2** on the Installer Remote to select **TEACH TO TV** from the LT2002 Clone Selection Menu. Then, press **ENTER**.
5. Select the LT2002 Memory Bank in which the new Master TV Setup is located, and press **ENTER**.
6. Verify the Teaching setup information on the next screen, and then press **POWER** to transfer the Master TV Setup to the Target TV.

   Teaching usually takes 3 to 4 minutes. “TEACHING IN PROGRESS” will be displayed on-screen during Teaching. When the Teaching process is complete, a “TEACHING COMPLETE” message will be displayed.
7. When Teaching is done, disconnect the MPI cable from the Target TV, turn OFF the TV, and unplug the TV power cord for 15 seconds.
8. Reconnect the TV power cord, and turn ON the TV. The Master TV Setup should be resident on the Target TV.





FTG Mode via CPU or EBL

FTG Mode enables Pro:Idiom decryption and also allows logical channel mapping of physical channels.

As indicated in the introduction to this document, there are two separate and distinct methods for configuring LD660H/LD665H and LV555H TVs for FTG Mode of operation: one (new) method is to configure the TV CPU for FTG Mode operation, while the other is to configure the TV EBL for FTG Mode operation. FROM A LOCAL CONFIGURATION STANDPOINT, EACH OF THESE METHODS IS MUTUALLY EXCLUSIVE. IF THE CPU IS IN FTG MODE, THE EBL CANNOT BE SWITCHED TO FTG MODE. LIKEWISE, IF THE EBL IS IN FTG MODE, THE CPU CANNOT BE SWITCHED TO FTG MODE.

FTG Mode via CPU

This mode provides the following features:

- Logical channels mapped to either RF or IP delivered content.
- Digital RF channel minor (program) numbers up to 999.
- FTG Channel Map of up to 600 logical channels.
- Start Channel set for RF, Aux input, or IP delivered content.
- Pro:Centric data delivery over RF or IP.

FTG Mode via CPU requires LG FTG File Manager PC software to create an FTG Configuration (.tlx) file. In this mode, the CPU is the owner of the FTG Channel Map and must be configured with an FTG Channel Map and FTG Installer Menu settings using one of the following processes:

- Local: Configure an individual LD660H/LD665H/LV555H TV via its USB port using an FTG Configuration (.tlx) file on a USB memory device. The “Teach to TV (TLX)” process, along with associated procedures, is described on pages 35 to 39.
- Remote: Configure all LD660H/LD665H/LV555H TVs at the site using a Pro:Centric server head end device (Example: PCS150R). Load an FTG Configuration (.tlx) file on the Pro:Centric server using the TV E-Z Installation “Configuration” option in the Pro:Centric Server Admin Client. Refer to the ***Pro:Centric™ Server Admin Client User Guide*** for further information.

FTG Mode via EBL

This mode provides the following features:

- Logical channels mapped to RF delivered content.
- Digital RF channel minor (program) numbers up to 255.
- FTG Channel Map of up to 141 logical channels.
- Start Channel set for RF or Aux input delivered content.
- Pro:Centric data delivery over RF.

FTG Mode via EBL requires LG FTG Device Configuration Application PC software to create an FMA Configuration (.fma) file. In this mode, the EBL is the owner of the FTG Channel Map and must be configured with an FTG Channel Map and FTG Installer Menu settings using one of the following processes:

- Local: Configure an individual LD660H/LD665H/LV555H TV’s EBL via its TV-LINK CFG jack using a direct PC-to-TV connection and the FTG Device Configuration Application. The “Write” process for an FTG Channel Map and FTG Installer Menu settings is described on page 40.
- Remote: Configure all LD660H/LD665H/LV555H TV EBLs at the site using a Free-To-Guest Management Appliance (FMA) head end device (Example: FMA-LG101). Refer to the ***Free-To-Guest (FTG) Configuration Application*** manual and/or the Installation & Setup manual for the FMA device for further information.

Caution: (FTG Mode via CPU only) If applicable, IP/network settings must be completed in the IP Environment Menu before a TV is configured for FTG Mode (see page 45 for further information—the default network setting is DHCP). If IP/network requirements change after a TV has been configured for FTG Mode, the TV will need to be reset to Pass-through Mode before the settings can be modified (see Reference section, “Resetting Factory Defaults on the TV(s),” for further information).

FTG Mode of Operation Overview (Cont.)

While the TV is in FTG Mode:

- Users can still access the Installer Menu using an LG Installer Remote; however, all Installer Menu items will be read-only.
- Any FTG configuration changes must be made using either the FTG File Manager (FTG Mode via CPU) or the FTG Device Configuration Application (FTG Mode via EBL). FTG Channel Map Configuration and FTG Installer Menu Configuration Utilities enable you to make changes, respectively, to the FTG Channel Map and FTG Installer Menu settings as necessary. Based on the initial method used to configure the TV for FTG Mode operation (via CPU or EBL), all subsequent changes must be transferred to either the TV or the EBL via a process that is in accordance or compatible with that method (see information on local configuration in this document or refer to documentation for the head end device/server for information on remote management).
- If it becomes necessary to reset the TV to Pass-through Mode, there are several options that will enable you to do so. Refer to Reference section, “Resetting Factory Defaults on the TV(s),” for further information.

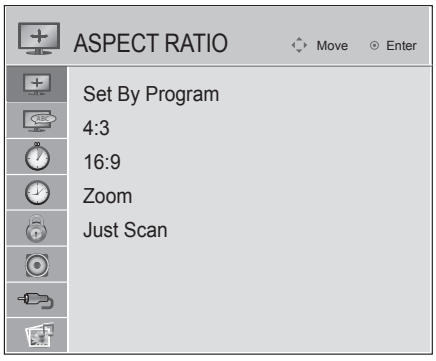
Pages 41 to 44 provide overviews of the utilities that comprise the FTG File Manager. Refer to the ***Free-To-Guest (FTG) File Manager User Guide*** for further information on the FTG File Manager. Refer to the ***Free-To-Guest (FTG) Configuration Application*** manual for information on the FTG Device Configuration Application.

Determining the TV Operating Mode

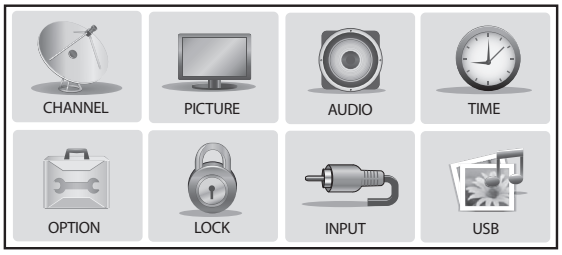
To determine the operating mode of the TV, press **MENU** on the Installer Remote. The menu display alternates based on the operating mode. See examples below.

If the end user Function Menu appears, typically the TV is in FTG Mode. If the TV setup menus appear, the TV is in Pass-through Mode.

Note: If the TV is not in FTG Mode, but both the Data Channel and the Pro:Centric Application Mode have been set in the Installer Menu or the Pro:Centric Menu, the TV is in Application Tuning Mode. In Application Tuning Mode, only the Function Menu is available to end users instead of the TV setup menus; however, Installer Menu items remain editable (not read-only).



Function Menu
Indicates the TV (CPU or EBL) is not in Pass-through Mode. While the TV is in FTG Mode, Installer Menu settings can be accessed as read-only.



TV Setup Menus
Shows that the TV is in Pass-through Mode.

Creating an FTG Configuration File using the FTG File Manager

This section describes how to create an FTG Configuration (.tlx) file that can be saved to a USB memory device. In order to enable Pro:Idiom decryption, it is recommended that you create an FTG Configuration file using the FTG File Manager.

Notes:
- FTG File Manager software is available online at: www.LGcommercial.com/FTGsoftware.
- There is also an option to save (Learn) an FTG Configuration file from a TV, which may be desirable or required in either of the following situations:
  - If you want to save customized TV setup menu settings to the FTG Configuration file (in addition to the FTG Channel Map and FTG Installer Menu settings).
  - If you do not know the RF channels at the site.

  See “Learning an FTG Configuration File from a TV” on page 38 for further information. However, if you use this option to save an FTG Configuration file, it is still highly recommended that you open the new FTG Configuration file in the FTG File Manager to verify the file contents/settings and to enable Pro:Idiom decryption by marking Encrypted channels.

The procedure below provides an overview of the steps required to create an FTG Configuration (.tlx) file. Refer to the ***Free-To-Guest (FTG) File Manager User Guide*** for further information. See also FTG File Manager sample screens on pages 41 to 44.

1. Install (if necessary) and launch the FTG File Manager (v1.0.0 or higher) on the PC that will be used to create the FTG Configuration (.tlx) file.
2. You have a number of options:
   - To view and/or base a new FTG Configuration file on an existing LD660H/LD665H or LV555H FTG Configuration (.tlx) file, click **Open** under the TLX File section of the FTG File Manager main screen, and select the desired (.tlx) file.

     A list of the file’s contents will be displayed in the TLX File Contents window. Double-click each item individually or click **Copy All** to transfer all the items listed to the FTG Configuration List and, if applicable, to the TV Setup Menu List, though note that while TV setup menu settings can be included in the new FTG Configuration file, the TV Setup Menu List is not available for editing.

     Edit the configuration of the items in the FTG Configuration List as well as the FTG Configuration List, as necessary, to create a new file, and then proceed to step 4 when you are ready to continue.
   - If applicable, you can also open an existing FTG Configuration (.rml) file created in the FTG Device Configuration Application to use its FTG Channel Map and/or FTG Installer Menu settings. Edit the channels and/or settings as necessary.
   - Otherwise, create a new FTG Channel Map using the FTG Channel Map Editor in the FTG Channel Map Configuration Utility. Then, continue with step 3.

     Note: Up to 600 logical channels (combined total of both RF and IP mapped channels) can be defined in the FTG Channel Map.
3. If necessary, click **Configure** in the FTG File Manager menu bar, and select **FTG File Manager** to return to the FTG File Manager main screen.

(Continued on next page)

FTG Mode via CPU (Cont.)

(Continued from previous page)

4. To add an FTG Channel Map, click **>>** under FTG Channel Map to copy the current Mapped RF Channels and Mapped IP Channels to the FTG Configuration List.

   Note: If you make any change(s) in the FTG Channel Map Configuration Utility to the current data to be included in the FTG Configuration List, you will need to recopy the FTG Channel Map to the FTG Configuration List.

5. (Optional) Load default FTG Installer Menu settings for the TV:
   - Click the down arrow at the right of the Chassis field under Installer Menu Templates, and select the appropriate option (depending on the TV type) from the drop-down list of available models.
   - Click the **Load** button.
   - Use the FTG Installer Menu Configuration Utility to modify settings, if necessary. Then, return to the FTG File Manager main screen.

6. To add FTG Installer Menu settings, click **>>** under FTG Installer Menu Settings to copy the current settings to the FTG Configuration List.

   Note: If you make any change(s) in the FTG Installer Menu Configuration Utility to the current data to be included in the FTG Configuration List, you will need to recopy the FTG Installer Menu settings to the FTG Configuration List.

7. Click the **Save** button above the FTG Configuration List to save its contents (including TV setup menu settings, if present) to an FTG Configuration (.tlx) file on the PC's hard drive for later use (default folder path is C:\Program Files\Zenith\FTG\TLX).

8. Transfer the FTG Configuration file to a USB memory device, and proceed to "Teaching FTG Configuration to a TV" on the following page to transfer the FTG Configuration file to an LD660H/ LD665H or LV555H TV.

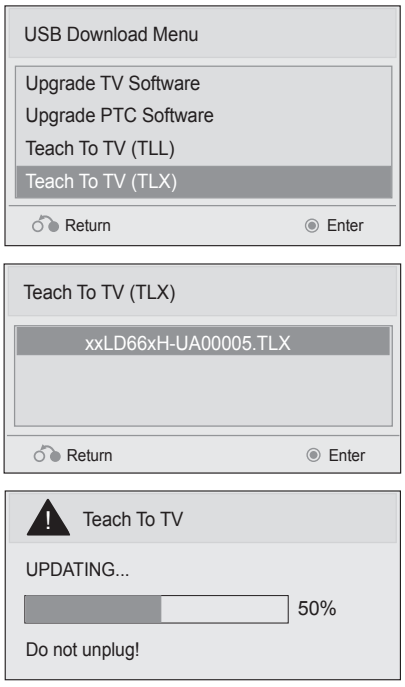
Teaching FTG Configuration to a TV

This procedure describes how to “Teach” an FTG Configuration file from a USB memory device to a TV. Ensure you have completed the procedure on the previous page to create the FTG Configuration file before proceeding with the steps below.

Notes:
- If the TV is not in FTG Mode, but both Pro:Centric items (098 PRO:CENTRIC and 119 DATA CHANNEL) have already been set in the Installer Menu on a TV, Teach to TV options will not be available from the USB Download Menu.
- If the TV EBL is already in FTG Mode, you cannot use this procedure to make changes to the FTG Channel Map and FTG Installer Menu settings. You must use a direct PC-to-TV connection as described on page 40 or an FMA head end device to reconfigure the EBL.
- If either of the preceding conditions applies, but you wish to switch the TV to FTG mode via CPU, refer to Reference section, “Resetting Factory Defaults on the TV(s),” for further information before proceeding.

1. Plug the USB memory device that contains the FTG Configuration file into the Target LD660H/LD665H or LV555H TV USB IN port.
2. Press **MENU** on the Installer Remote to display the TV setup menus (TV is in Pass-through Mode) or the Function Menu (TV is already in FTG Mode).
3. Use the arrow navigation keys to select/highlight either the **Option** menu icon from the TV setup menus or the **Lock** menu icon from the Function Menu. Then, press the number “**7**” key a total of seven times to display the USB Download Menu.
4. Use the Up/Down arrow keys to select **Teach To TV (TLX)**, and then press **ENTER**.
5. Use the Up/Down arrow keys to select the FTG Configuration file you want to install, and then press **ENTER**.

   The TV will show Teaching completion progress in a new window. Do NOT remove the USB device until Teaching is complete. When Teaching is complete, the TV will tune to the first logical channel in the FTG Channel Map.
6. When Teaching is done, remove the USB memory device. The FTG Configuration should be resident on the Target TV. Also, the Target TV CPU is now in FTG Mode (if it was previously in Pass-through Mode).



FTG Mode via CPU (Cont.)

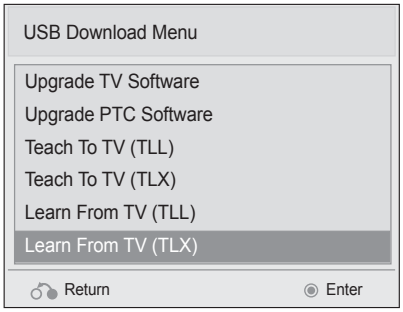
Learning an FTG Configuration File from a TV

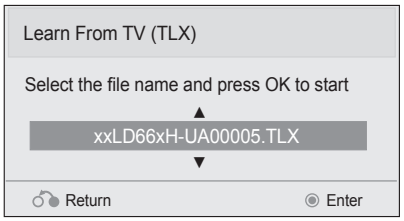
To ensure that Pro:Idiom decryption is enabled, it is recommended that you create an FTG Configuration file using the FTG File Manager as described on pages 35 to 36. However, if necessary, this option enables you to save (Learn) an FTG Configuration file from an LD660H/LD665H or LV555H TV to a USB memory device.

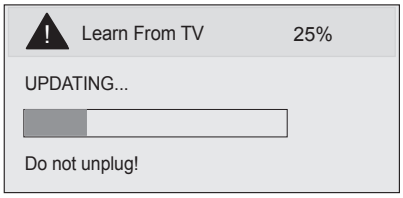
Notes:
- The option to save (Learn) an FTG Configuration file from a TV may be desirable or required in either of the following situations:
  - − If you want to save customized TV setup menu settings to the FTG Configuration file (in addition to the FTG Channel Map and FTG Installer Menu settings).
  - − If you do not know the RF channels at the site.
- If the TV is NOT already in FTG Mode, you may need to perform some manual configuration on the TV before you start this procedure (see “Optional Manual Configuration / TV Setup” on following page).

1. Plug a USB memory device into the USB IN port on the TV.
2. Press **MENU** on the Installer Remote to display the TV setup menus (TV is in Pass-through Mode) or the Function Menu (TV is already in FTG Mode).
3. Use the arrow navigation keys to select/highlight either the **Option** menu icon from the TV setup menus or the **Lock** menu icon from the Function Menu. Then, press the number “**7**” key a total of seven times to display the USB Download Menu.
4. To gain access to the Learn From TV options in the USB Download Menu, key in the password used to enter the Installer Menu (Example: Press **9**-**8**-**7**-**6**).
5. Use the Up/Down arrow keys to select **Learn From TV (TLX)**, and then press **ENTER**.
6. To differentiate this .tlx file from others, you can use the Up/Down arrow keys to change the last five digits of the filename. Press **ENTER** when you are ready to initiate Learning.

   The TV will show Learning completion progress in a new window. Do NOT remove the USB device until Learning is complete. When Learning is complete, the USB Download Menu will reappear on screen.
7. When you are finished, remove the USB memory device.







Note: It is highly recommended that you open this FTG Configuration file in the FTG File Manager—BEFORE transferring (Teaching) the file to any TVs—to verify FTG Channel Map and FTG Installer Menu settings and enable Pro:Idiom decryption by marking Encrypted channels. This will also enable you to confirm and add channel attributes, labels, etc.

Optional Manual Configuration / TV Setup

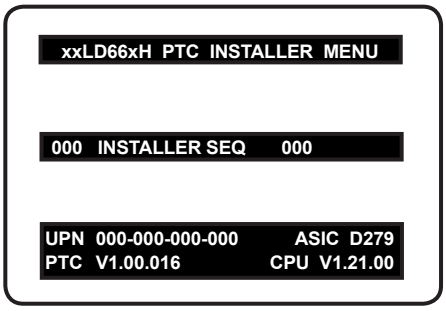
The manual configuration procedures below should only be performed if you do not know the RF channels at the site and need to “Learn” an FTG Configuration file from an LD660H/LD665H or LV555H TV as described on the previous page. Ensure the TV is in Pass-through Mode before you begin.

Set Installer Menu Items

These steps provide specific instruction only on the Installer Menu items that should be set on an LD660H/LD665H or LV555H TV. Refer to pages 15 to 22 for detailed information on all Installer Menu items.

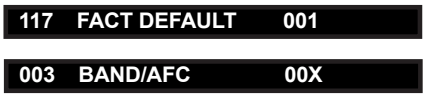
1. Make sure the TV is ON. Then, use the Installer Remote to enter the Installer Menu: Press **MENU** repeatedly until the on-screen display of the TV setup menus no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.
2. Set Installer Menu item **117 FACT DEFAULT** to **001** and press **ENTER** on the Installer Remote.

   This clears all Installer Menu custom settings, the channel lineup, etc. and reloads the factory default settings. The value will change back to 0 after the commercial controller (PTC) has been restored to factory default condition. This step ensures that the TV Channel Memory will be the active channel lineup.
3. Set Installer Menu item **003 BAND/AFC**, as appropriate.
   - Broadcast: Set to 000.
   - CATV: Set to 001 (default).
   - HRC: Set to 002.
   - IRC: Set to 003.
4. Set any other Installer Menu items that affect your TV programming network to the required configuration. For example, enable/disable Aux inputs, set a Start Channel, etc.
5. After you have adjusted all required Installer Menu item settings, press **ENTER** once on the Installer Remote to save your changes; then, press **ENTER** again to exit the menu.



Typical Installer Menu

Note: The Installer Menu header will vary depending on the TV you are setting up.



Adjust the settings for these Installer Menu items.

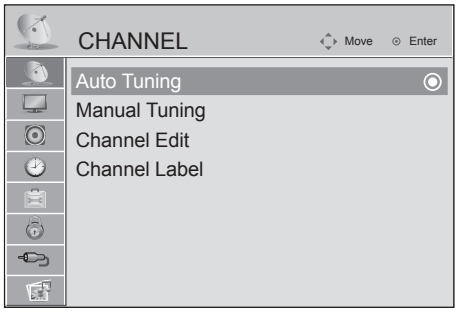
Run Auto Tuning (Channel Search)

Note: In the FTG Configuration file, Logical Channel numbers will automatically be assigned in ascending order, starting with 0 (zero), to the Physical Channels from the TV Channel Map.

Note: Pro:Idiom decryption for encrypted channels will not be enabled unless you use the FTG File Manager to set the channel attributes.

1. Search for all available analog and digital channels: Use the Installer Remote to go to the Channel Menu, select the **Auto Tuning** option, and follow the on-screen instructions.
2. Use the **Channel Edit** option in the Channel Menu to edit the channel lineup, as necessary, to include free to guest channels only. Add/delete channels per your system requirements.

Once you have completed these procedures, return to “Learning an FTG Configuration File from a TV” on the previous page to complete the Learn sequence.



Use Channel Menu options to run Auto Tuning and edit the channel lineup, as necessary.

FTG Mode via EBL (Local Configuration)

The following steps outline local FTG configuration of individual TV EBLs using a direct PC-to-TV connection. Refer to the ***Free-To-Guest (FTG) Configuration Application*** manual for further information.

Notes:
- FTG Device Configuration Application software is available online at: www.LGcommercial.com/FTGsoftware.
- If the TV CPU is already in FTG Mode, you cannot use this procedure to make changes to the FTG Channel Map and FTG Installer Menu settings. Instead, refer to and use the processes described on pages 35 to 37 to reconfigure the TV CPU.
- If the preceding condition applies, but you wish to switch the TV to FTG Mode via EBL, refer to Reference section, "Resetting Factory Defaults on the TV(s)," for further information before proceeding.

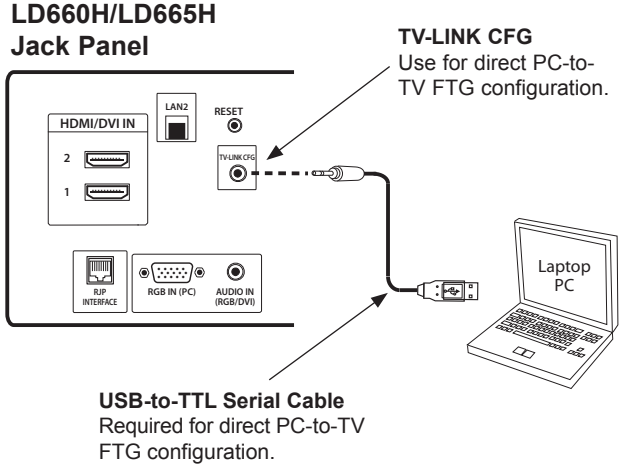
1. Install (if necessary) and launch the FTG Device Configuration Application (v5.0.0 or higher) on the PC that will be used to configure the EBL.
2. Build an FTG Channel Map using the FTG Channel Map Editor in the FTG Channel Map Configuration Utility (or, if applicable, open an existing FTG Configuration [.rml] file).

   Note: Up to 141 logical channels can be defined in the FTG Channel Map.
3. Connect the PC to the TV-LINK CFG jack on the TV's rear connections panel using a USB-to-TTL serial cable (TTL-232R-5V-AJ). If necessary, install the device driver on the PC.
4. Turn ON the TV.

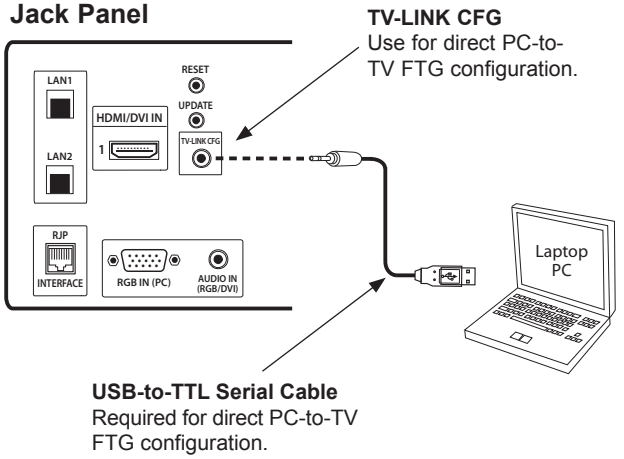
   Note: If Installer Menu item 118 POWER SAVINGS is set to 3 (default), the TV must be ON in order for steps 5 and 6 below to be successful.
5. "Write" the FTG Channel Map to the EBL (switches the EBL from Pass-through Mode to FTG Mode).

   Note: After a "Write" of new data, the TV will briefly display a green text banner that shows the EBL firmware version and release date.
6. "Read" the current FTG Installer Menu settings from the EBL using the FTG Installer Menu Configuration Utility. If necessary to make changes to Installer Menu items, "Write" them back to the EBL in FTG Mode.
7. Save the FTG Channel Map and FTG Installer Menu settings to an FTG Configuration (.rml) file for future use.
8. Tune the TV to a Logical Channel in the FTG Channel Map.

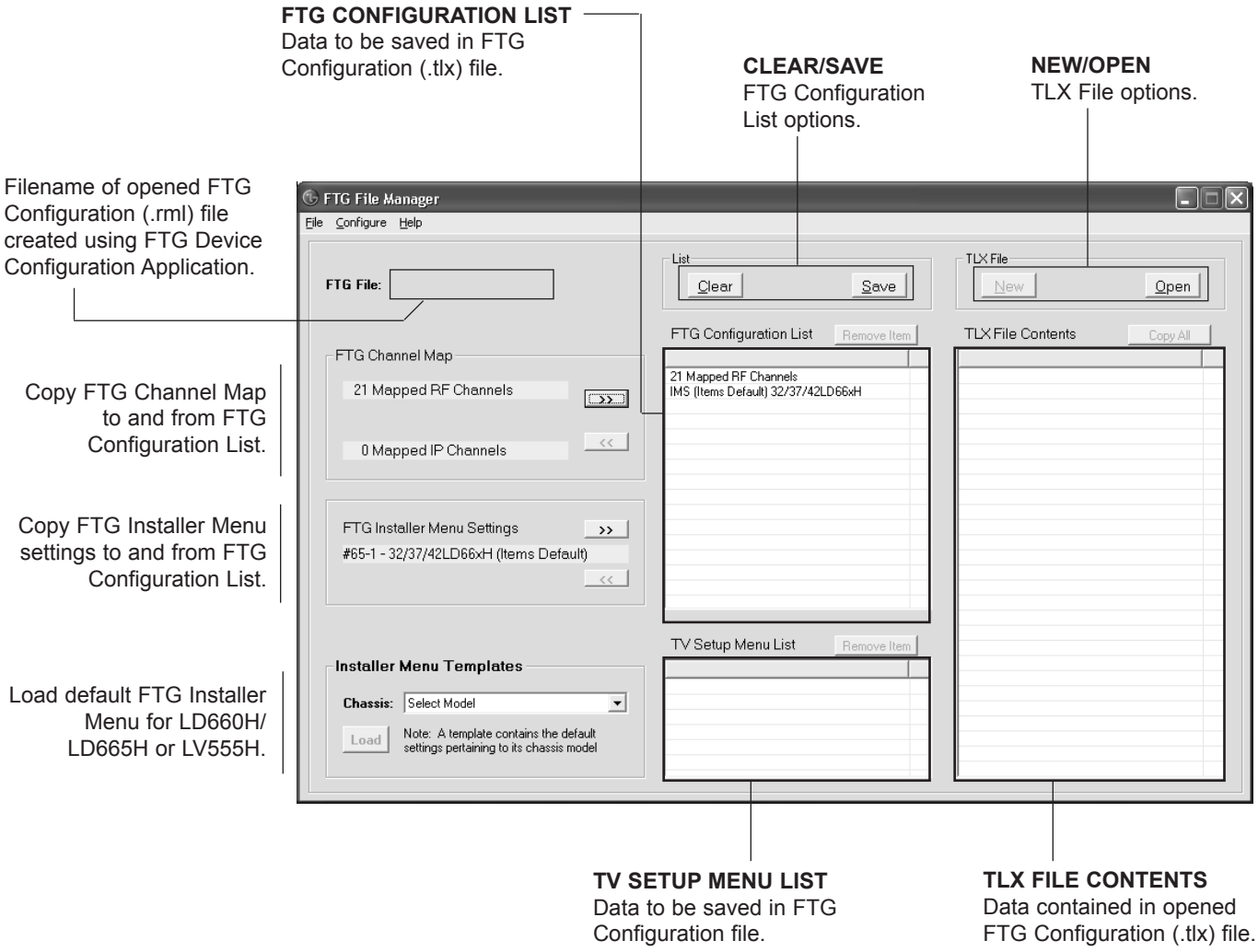
LD660H/LD665H Jack Panel



LV555H Jack Panel



FTG File Manager Main Screen



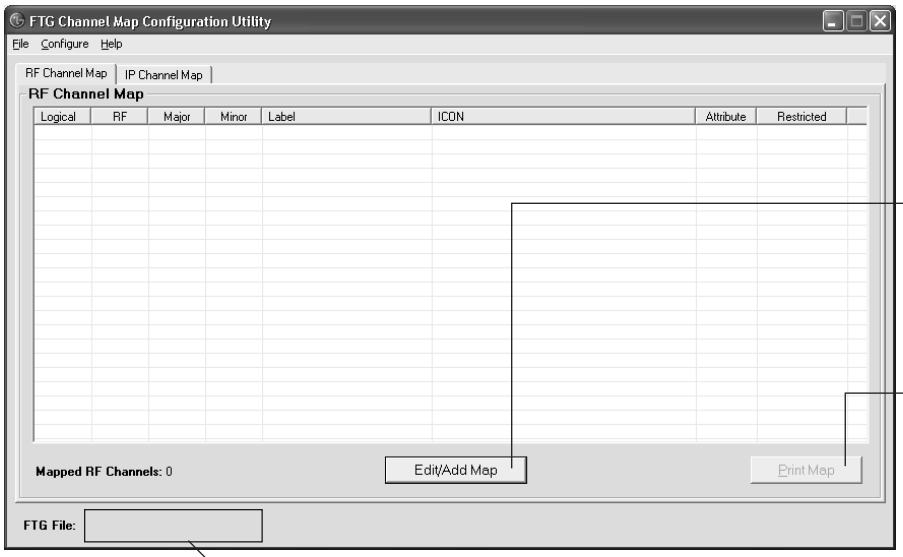
Note: The data referenced in the FTG Configuration List is only a snap-shot of the current FTG Channel Map and FTG Installer Menu settings when copied to the list. If you make any change(s) to the current data to be included in the FTG Configuration List, you will need to recopy Channel Map and Installer Menu settings to the FTG Configuration List.

FTG File Manager Utilities Overview (Cont.)

FTG Channel Map Configuration Utility

The FTG Channel Map Configuration Utility enables you to build a Channel Map with logical channel numbers. The FTG Channel Map for LD660H/LD665H and LV555H TVs may contain both RF and IP channels. Select the appropriate tab—RF Channel Map or IP Channel Map—as necessary, either in this screen, or in the Channel Map Editor (see next page).

RF Channel Map

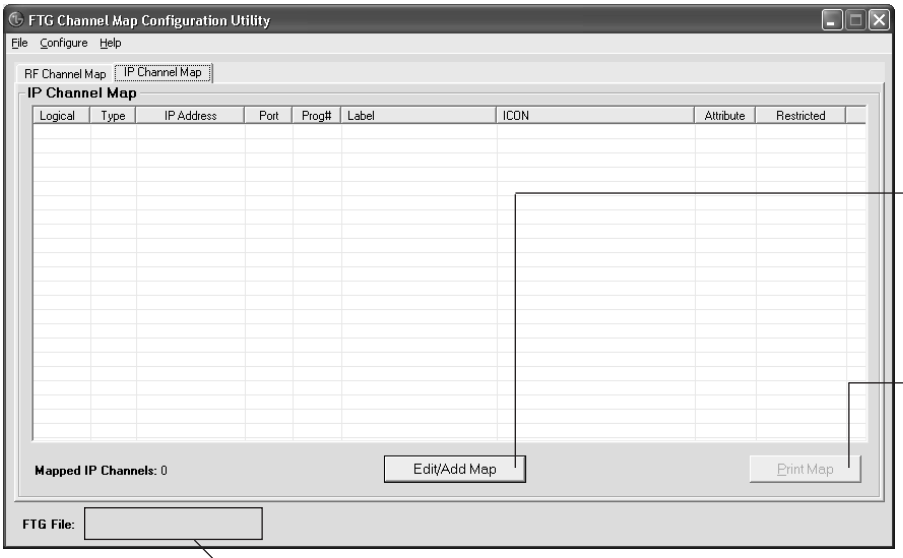


EDIT/ADD MAP
Click to open the FTG Channel Map Editor to create or edit an FTG Channel Map (see next page).

PRINT MAP
Click to display a printable FTG Channel Map Report. The report can also be exported as an HTML or Text file.

Filename of opened FTG Configuration (.rml) file created using FTG Device Configuration Application.

IP Channel Map



EDIT/ADD MAP
Click to open the FTG Channel Map Editor to create or edit an FTG Channel Map (see next page).

PRINT MAP
Click to display a printable FTG Channel Map Report. The report can also be exported as an HTML or Text file.

Filename of opened FTG Configuration (.rml) file created using FTG Device Configuration Application.

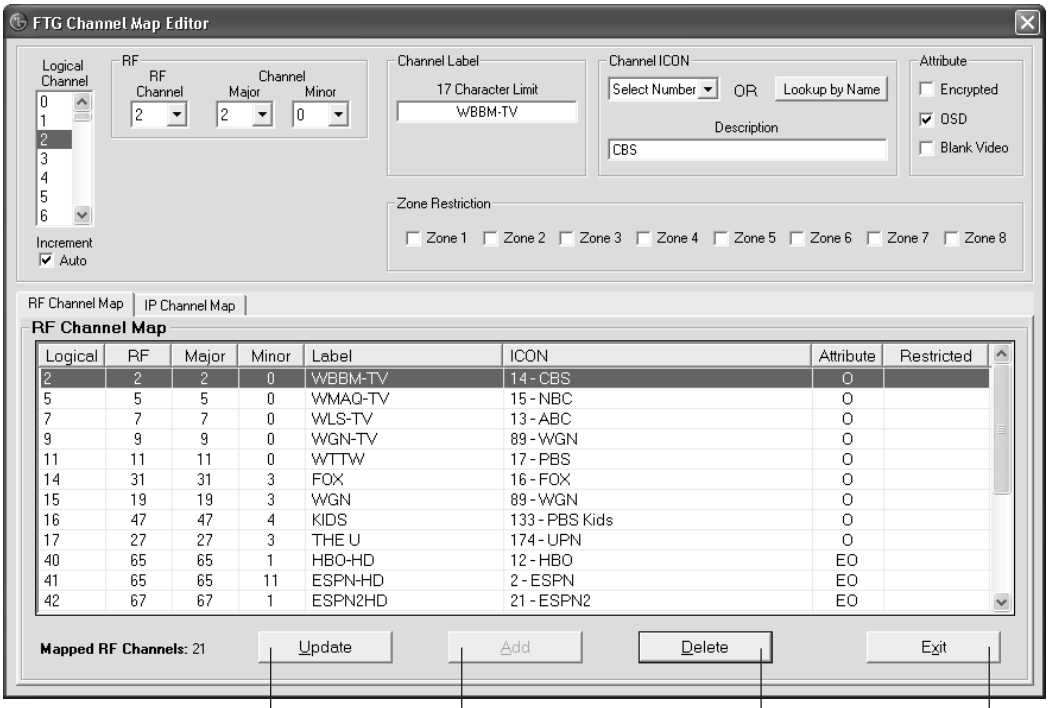
FTG Channel Map Editor

The FTG Channel Map Editor shows a single Logical Channel's data and the FTG Channel Map. Select the appropriate tab—RF Channel Map or IP Channel Map—as necessary, in the bottom panel of the screen.

LOGICAL CHANNEL MAPPING
Select a Logical Channel number. Then, for an RF channel, assign it the RF, Major, and Minor channel numbers to complete the mapping, or for an IP channel, assign it the IP Address, IP Type, Port Address, and Program # to complete the mapping.

CUSTOM CHANNEL LABELS/ICONS
Enter custom labels and select icons by name on menu or by number.

SET CHANNEL ATTRIBUTES
Check/select Encrypted, OSD, or Blank Video.



ZONE RESTRICTION
Select Zone restriction for channel. See Reference section, "TV Zone Restrictions," for further information.

ADD
After defining a new Logical Channel, click to add channel to the FTG Channel Map.

EXIT
Click to exit editor and return to FTG Channel Map Configuration Utility.

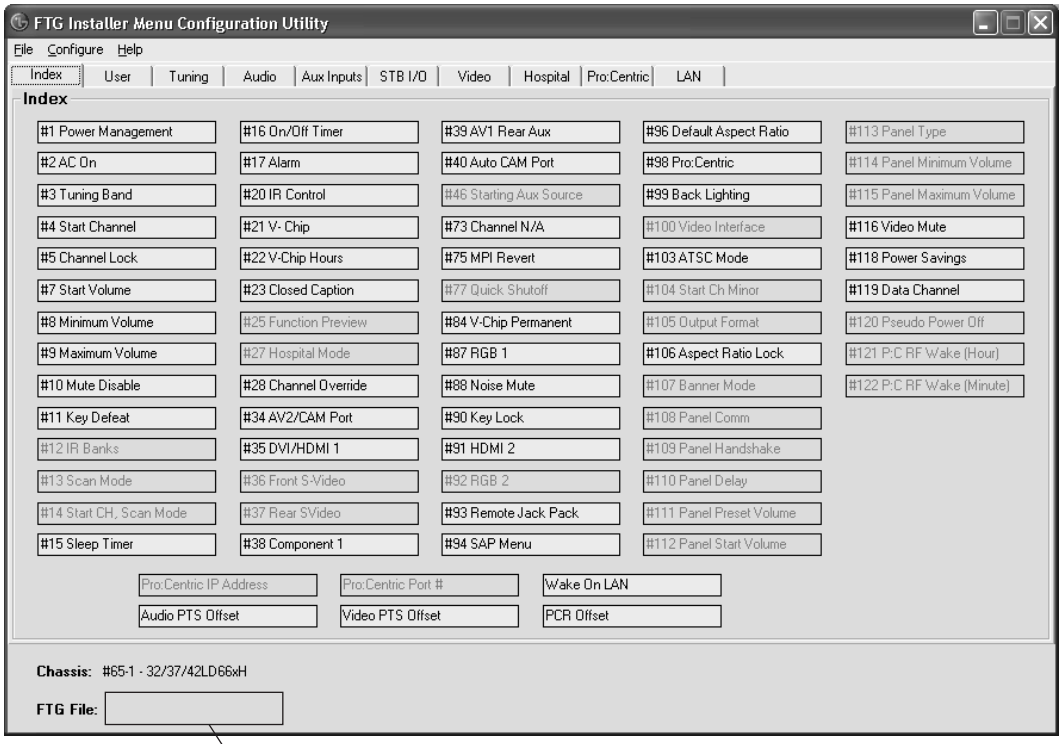
UPDATE
After editing an existing Logical Channel's data, click to commit the changes in the FTG Channel Map.

DELETE
Click to remove highlighted channel from FTG Channel Map.

FTG File Manager Utilities Overview (Cont.)

FTG Installer Menu Configuration Utility

CONFIGURATION SETTINGS
Select tabs for categories of Installer Menu items to set up TV.



Filename of opened FTG Configuration (.rml) file created using FTG Device Configuration Application.

Notes:

- Pro:Centric and LAN tabs enable you to set up parameters equivalent to the Offset Setup and Pro:Centric Menus described under “IP Environment Setup” on pages 45 and 46 of this document. Refer to the ***Free-To-Guest (FTG) File Manager User Guide*** for further information on these tabs.
- The Start Channel item (#4) in the Tuning tab for these models allows you to assign an IP start channel.
- The Hospital tab contains setup items that are applicable only for hospital-grade TV models.

The IP Environment Menu enables you to set up network features of the TV. Like the Installer Menu, the IP Environment Menu is editable (with the Installer Remote) only if the TV is in Pass-through or Application Tuning Mode and read-only when the TV is not in either of these modes.

Access the IP Environment Menu

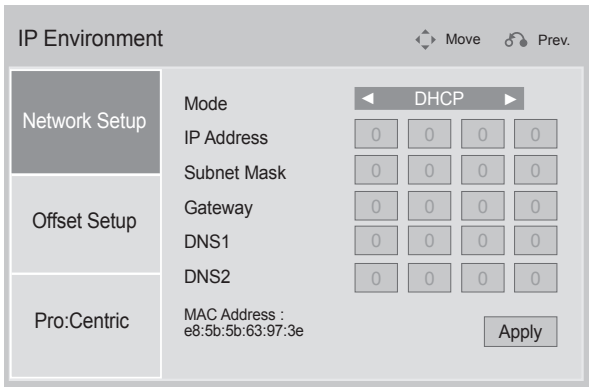
1. Use the Installer Remote to enter the Installer Menu: Press **MENU** repeatedly until the on-screen menu display no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.
2. Navigate to Installer Menu item **119 DATA CHANNEL**, and press **2**-**5**-**3** + **MENU** to launch the IP Environment Menu (see sample displays below).

Use the Up/Down arrow keys on the Installer Remote to select the desired menu option—Network Setup, Offset Setup, or Pro:Centric—and then press **ENTER**. Refer to the following sections for information on each of the IP Environment setup options.

Network Setup

If the TV is connected to a network with a DHCP server, by default the server will automatically assign an IP address to the TV. The Network Setup Menu options enable you to set up static IP/network connections or to revert from static to DHCP settings. Use the Up/Down arrow keys to navigate between fields.

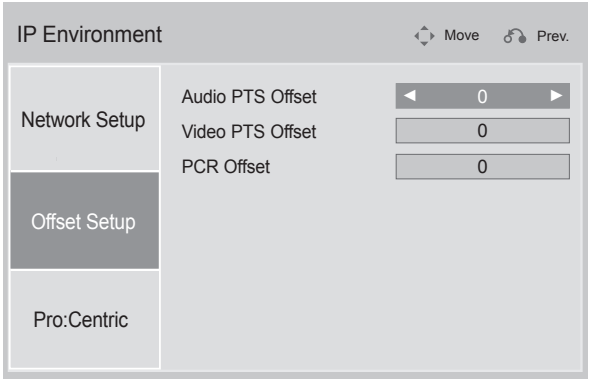
1. With Network Setup selected, use the Left/Right arrow keys on the Installer Remote to select **Static** or **DHCP** in the Mode field.
2. (Static IP/network connections only) Complete the IP Address, Subnet Mask, Gateway, DNS1, and DNS2 fields. Either key in or use the Left/Right arrow keys to select the appropriate values.
3. When you have completed all fields as necessary, navigate to **Apply**, and then press **ENTER**.
4. Press **MENU** to return to TV viewing, or press **RETURN** to return to the previous menu level.



Offset Setup

If necessary, due to an audio and/or video stream delay, the Offset Setup Menu options enable you to compensate for synchronization irregularities by allowing audio PTS, video PTS, and PCR offset modifications. Note that any offset modifications should be performed by qualified personnel only.

1. With Offset Setup selected, use the Up/Down arrow keys on the Installer Remote to navigate to the appropriate field: Audio PTS Offset, Video PTS Offset, or PCR Offset.
2. Use the Left/Right arrow keys to set the appropriate offset value for the selected field. Offset values are represented in 10 ms intervals to 500 ms or -500 ms.
3. When you have completed all modifications as required, press **MENU** to return to TV viewing, or press **RETURN** to return to the previous menu level.



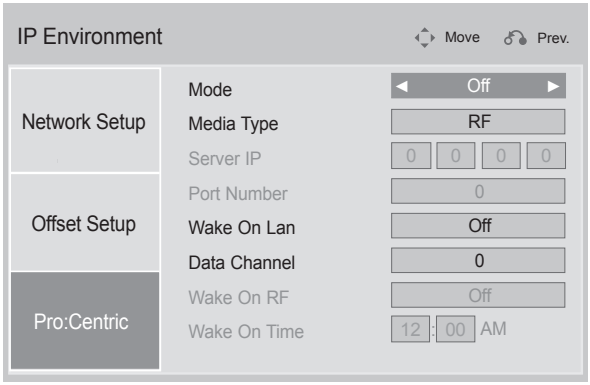
IP Environment Setup (Cont.)

Pro:Centric Setup

The Pro:Centric Menu options enable you to configure Pro:Centric server settings in the TV. With Pro:Centric selected, use the Up/Down arrow keys to navigate between fields.

Note: Options that are initially grayed out/inaccessible in the Pro:Centric Menu are dependent upon other settings in the display. For example, if “IP” is selected in the Media Type field, the Server IP and Port Number fields become accessible.

Note: For those fields that permit direct entry of numerical values (for example, Port Number, Data Channel, etc.), once you key in the maximum number of digits allowed in the highlighted field, the next available field will be highlighted.



1. To enable/disable Pro:Centric application operation on a TV, use the Left/Right arrow keys on the Installer Remote to select the appropriate setting—**Off**, **FLASH**, or **GEM**—in the Mode field.

   Note: If the mode has already been set in the Installer Menu (Installer Menu item 098 PRO:CENTRIC), the specified mode will be reflected in this field. If you change the mode in this menu, Installer Menu item 098 will now reflect the value you entered here.

2. In the Media Type field, use the Left/Right arrow keys to select **IP** or **RF**, as required.

   Note: Setting the Media Type to “IP” automatically sets the Data Channel field to “253.” You cannot alter this setting (unless you revert to RF media). It is not possible to direct enter “253” in the Data Channel field.

3. (IP media only) Complete the Server IP and Port Number fields for TV E-Z Installation (splash screen, configuration, and firmware) data. The Server IP must be an IPv4 multicast address within the designated range of 224.0.0.0 to 239.255.255.255.

   Either key in or use the Left/Right arrow keys to select the appropriate values in each field. Note that the port number (five digits maximum) must match exactly the port number that has been set in the Pro:Centric RF/IP Configuration display in the Admin Client (refer to the ***Pro:Centric™ Server Admin Client User Guide*** for further information).

4. In the Wake On LAN field, use the Left/Right arrow keys to select **On** or **Off**, as required. The Wake On LAN feature enables the TV to receive software updates via the LAN while the TV is in standby mode.

5. (RF media only) In the Data Channel field, either key in or use the Left/Right arrow keys to select the RF channel number of the data channel for Pro:Centric or E-Z Installation (splash screen, configuration, or firmware) data. The data channel must be between 0 (disabled) and 135.

   The TV may take several minutes to load EPG data after AC power is initially applied.

   Note: If the data channel has already been set in the Installer Menu (Installer Menu item 119 DATA CHANNEL), the specified channel will appear in this field. If you change the data channel in this menu, Installer Menu item 119 will now show the value you entered here.

6. (RF media only) In the Wake On RF field, use the Left/Right arrow keys to select **On** or **Off**, as required. The Wake On RF feature enables the TV to receive software updates via RF while the TV is in standby mode. If you set Wake On RF to “On,” specify the appropriate Wake On time in the Wake On Time field. Note that the Wake On time is based on a 12-hour clock. Ensure the AM/PM specification is set accordingly.

7. Once all fields are completed as required, press **MENU** to return to TV viewing, or press **RETURN** to return to the previous menu level.

Remote Jack Pack Setup

RJP Available? If you will use a Remote Jack Pack (RJP) in your system, set Installer Menu item **093 RJP AVAILABLE** appropriately (for example, on a legacy model RJP: HDMI Mode, set RJP AVAILABLE to 001). See Installer Menu detailed descriptions for further information.

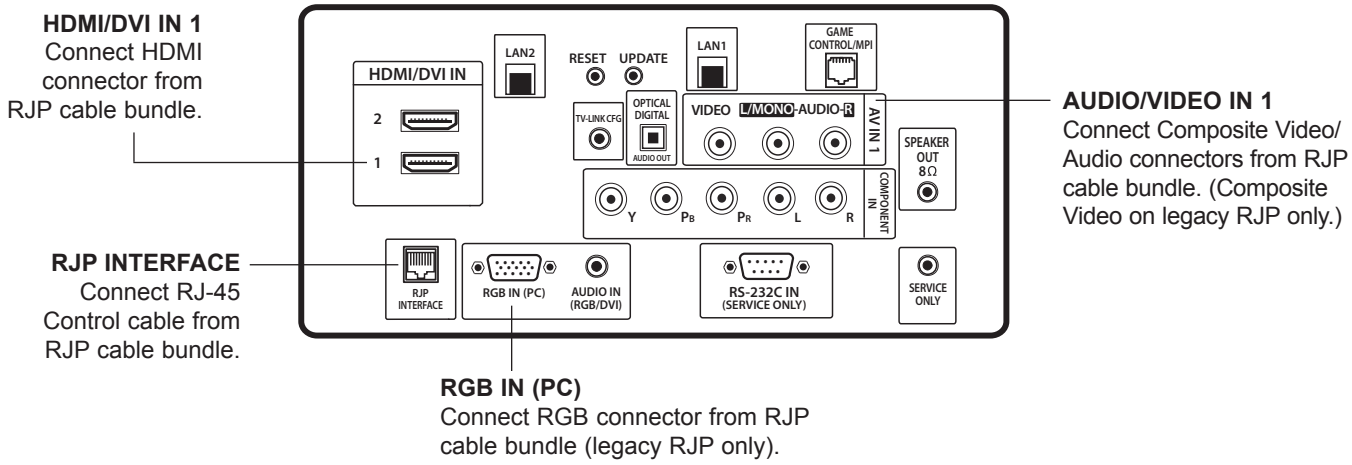
093 RJP AVAILABLE 001

TV Connections

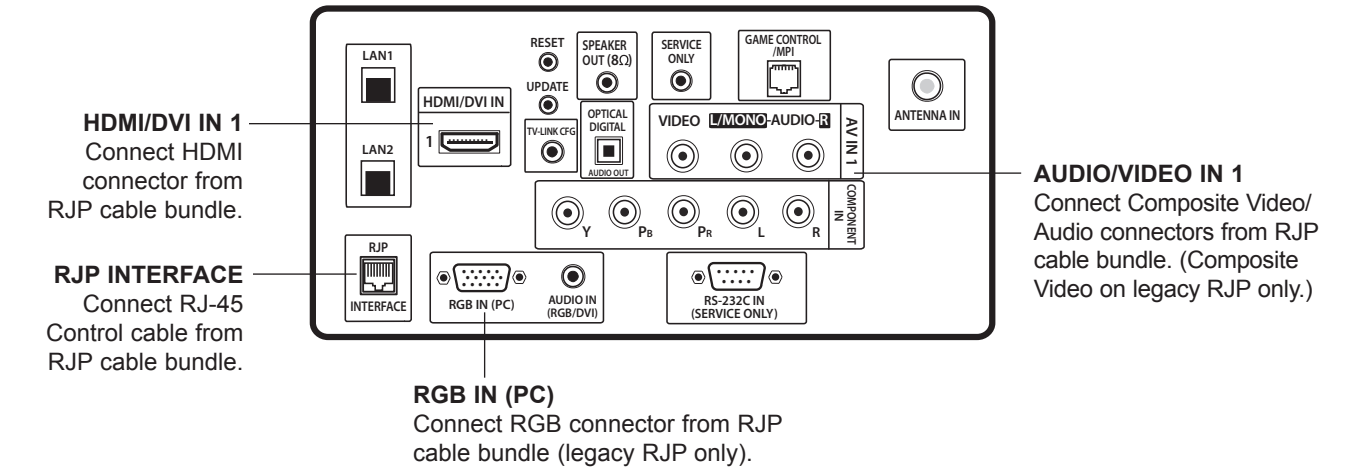
Make these connections ONLY after Master TV Setup and TV cloning procedures are complete.

Refer to the appropriate figure below, and connect the RJ-45 Control cable from the RJP cable bundle to the RJP INTERFACE port on the TV's jack panel. Then, connect HDMI, RGB, and Composite Video/ Audio connectors, as applicable, for the cable bundle.

LD660H/LD665H Jack Panel



LV555H Jack Panel

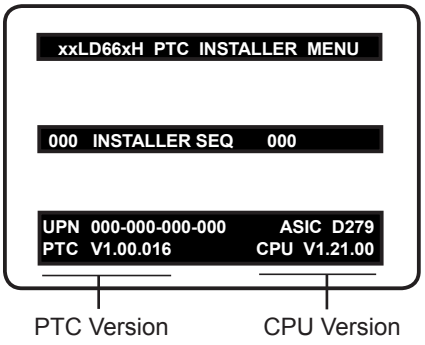


Reference: Upgrading TV/PTC Software using a USB Memory Device

Checking the Software Versions

You can check the software versions of the TV by accessing the Installer Menu with the Installer Remote: Press **MENU** repeatedly until the on-screen menu display no longer toggles, and then press **9**-**8**-**7**-**6** + **ENTER**.

When you are finished, press **ENTER** again to exit the Installer Menu.



Typical Installer Menu

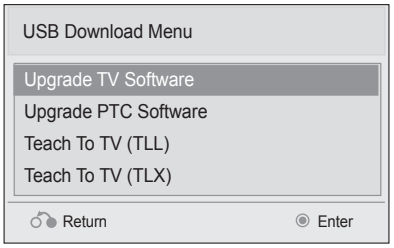
Upgrading TV/PTC Software

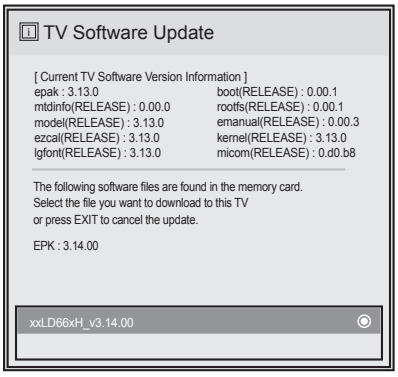
Before you begin, note that the software upgrade files must be stored in a folder named “LG_DTV” in the root directory of the USB memory device. Also, ensure the USB device has been formatted with FAT format.

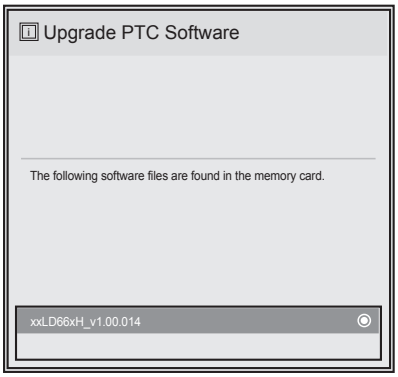
Note for TV Software Upgrade only: If the TV detects a later version of software on the USB device, it will automatically display a dialog from which you can start the software upgrade immediately. Otherwise, you can close the dialog, and access the USB Download Menu as described below.

1. Turn the TV ON.
2. Plug the USB memory device into the USB IN port on the TV.
3. Press **MENU** on the Installer Remote to display the TV setup menus (TV is in Pass-through Mode) or the Function Menu (TV is not in Pass-through Mode).
4. Use the arrow navigation keys to select/highlight either the **Option** menu icon from the TV setup menus or the **Lock** menu icon from the Function Menu. Then, press the number “**7**” key a total of seven times to display the USB Download Menu.
5. Use the Up/Down arrow keys to select **Upgrade TV Software** or **Upgrade PTC Software**, as applicable, and press **ENTER**. (See screen samples at right.)
6. Use the Up/Down arrow keys to select the upgrade to install, and then press **ENTER**.

The TV will show update completion progress in a new window. Do NOT remove the USB device until the software upgrade is complete. When a TV software upgrade is complete, the TV will reset itself with an automatic restart. When a PTC upgrade is complete, the TV will turn OFF.



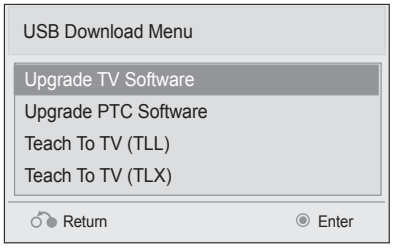


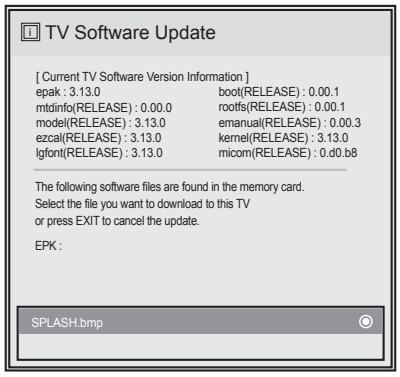


Reference: Downloading a Splash Screen using a USB Memory Device

Splash Screen Image File Guidelines

- The splash screen image must be a 24-bit (RGB 8x8x8) BMP.
- The image should be no larger than 3 MB.
- The ideal resolution for the image is 1366 x 768 pixels or under.
- The image file must be stored in a folder named “LG_DTV” in the root directory of USB memory device.
- Ensure the USB device has been formatted with FAT format.





Downloading a Splash Screen Image

1. Turn the TV ON.
2. Plug the USB memory device into the USB IN port on the TV.
3. Press **MENU** on the Installer Remote to display the TV setup menus (TV is in Pass-through Mode) or the Function Menu (TV is not in Pass-through Mode).
4. Use the arrow navigation keys to select/highlight either the **Option** menu icon from the TV setup menus or the **Lock** menu icon from the Function Menu. Then, press the number “**7**” key a total of seven times to display the USB Download Menu.
5. Use the Up/Down arrow keys to select **Upgrade TV Software**, and then press **ENTER**.
6. Use the Up/Down arrow keys to select the image file to download, and then press **ENTER**.

The TV will show download completion progress in a new window. Do NOT remove the USB device until the image download is complete. When the image download is complete, the TV will reset itself with an automatic restart. Upon the restart, you should see the new splash screen.

Reference: Power Consumption Settings

32/37/42LD660H & 32/37/42LD665H

The following tables assume that Installer Menu item 118 POWER SAVINGS is set to 3 (default) and Installer Menu item 099 BACK LIGHTING is set as shown below (default value is 202).

Item 099 Back Lighting (Static)	32LD660H / 32LD665H		37LD660H / 37LD665H		42LD660H / 42LD665H	
	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings
100	88.6	0%	100.7	0%	120.5	0%
90	84.1	5%	95.2	5%	113.1	6%
80	79.0	11%	89.1	12%	105.6	12%
70	74.2	16%	83.4	17%	98.2	19%
60	69.4	22%	77.6	23%	90.8	25%
50	64.2	28%	71.3	29%	83.4	31%
40	59.3	33%	65.5	35%	76.2	37%
30	54.6	38%	60.0	40%	69.2	43%
20	49.6	44%	54.0	46%	61.5	49%
10	45.1	49%	48.7	52%	54.8	55%
1	40.4	54%	43.5	57%	48.2	60%

Item 099 Back Lighting (Dynamic)	32LD660H / 32LD665H		37LD660H / 37LD665H		42LD660H / 42LD665H	
	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings
200	53.3	40%	61.3	39%	70.3	42%
190	51.6	42%	59.5	41%	67.6	44%
180	50.5	43%	57.5	43%	65.8	45%
170	48.6	45%	55.6	45%	63.4	47%
160	47.8	46%	53.6	47%	61.1	49%
150	46.6	47%	52.0	48%	59.2	51%
140	45.0	49%	50.2	50%	56.5	53%
130	43.9	50%	47.9	52%	54.1	55%
120	42.3	52%	46.0	54%	51.9	57%
110	41.3	53%	44.5	56%	49.8	59%
101	40.3	55%	43.0	57%	47.9	60%

Note: Values are results of controlled experiments under laboratory conditions.

Reference: Power Consumption Settings (Cont.)

32/37/42/47/55LV555H

Item 099 Back Lighting (Static)	32LV555H		37LV555H		42LV555H		47LV555H		55LV555H	
	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings
100	47.6	0%	72.5	0%	105.3	0%	113.1	0%	90.1	0%
90	46.8	2%	69.9	4%	100.3	5%	107.5	5%	87.9	2%
80	46.1	3%	67.0	8%	95.2	10%	101.1	11%	85.7	5%
70	45.4	5%	64.3	11%	90.4	14%	95.7	15%	84.2	7%
60	44.9	6%	61.6	15%	85.7	19%	90.2	20%	82.5	8%
50	43.8	8%	58.8	19%	80.6	23%	84.6	25%	79.4	12%
40	42.7	10%	56.0	23%	75.8	28%	79.2	30%	75.9	16%
30	41.5	13%	53.4	26%	71.1	32%	73.8	35%	72.6	19%
20	40.4	15%	50.6	30%	66.0	37%	68.1	40%	69.5	23%
10	39.4	17%	47.9	34%	61.2	42%	62.8	44%	66.1	27%
1	38.3	20%	45.2	38%	56.5	46%	57.6	49%	62.7	30%

Item 099 Back Lighting (Dynamic)	32LV555H		37LV555H		42LV555H		47LV555H		55LV555H	
	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings	Power Consumption (Watts)	Percent Savings
200	45.9	4%	53.2	27%	72.5	31%	75.4	33%	85.2	5%
190	45.1	5%	52.4	28%	70.8	33%	73.2	35%	82.3	9%
180	44.3	7%	51.7	29%	69.1	34%	71.4	37%	79.9	11%
170	43.4	9%	50.8	30%	67.4	36%	69.2	39%	77.5	14%
160	42.6	11%	50.2	31%	65.7	38%	67.9	40%	75.1	17%
150	41.9	12%	49.7	31%	64.3	39%	66.0	42%	73.4	19%
140	41.1	14%	48.8	33%	62.0	41%	64.2	43%	71.1	21%
130	40.2	16%	48.1	34%	60.9	42%	62.6	45%	68.7	24%
120	39.4	17%	47.0	35%	59.2	44%	60.4	47%	66.3	26%
110	38.8	18%	46.6	36%	57.9	45%	58.7	48%	64.7	28%
101	38.0	20%	46.0	37%	56.4	46%	57.4	49%	62.6	31%

Note: Values are results of controlled experiments under laboratory conditions.

Reference: TV Camport Auto Sense Operation

The Camport Auto Sense function is enabled when:
1. Installer Menu item 034 CAMPORT EN is set to 1 AND
2. Installer Menu item 040 AUTO CAMPORT is enabled (1).

Selectable: Can be accessed with INPUT key, direct access, etc.
Auto Sense: TV switches to this input when connector is inserted. The Camport (Side [AV IN 2] Video) has the highest priority and will override any commands including tuning to the Start Channel.

CAMPORT (Side Video) Functionality Control

Item 034 CAMPORT EN	Item 040 AUTO CAMPORT	Side (AV IN 2) Video Operation
0	0	Disabled
0	1	Disabled
1	0	Selectable
1	1	Auto Sense

Camport Operation (Pass-through)

When Camport Auto Sense is enabled as above, the TV will switch from its current source to the Side (AV IN 2) Video input whenever a plug is inserted into the AV IN 2 Video input.

When the video plug is removed, the TV will switch back to the previous source that was being displayed before the plug was inserted. However, if any direct access to an Aux channel or RF channel is requested while the Camport is active, then, when the video plug is removed, the TV will switch to the last requested channel. Source changes using any Source keys (INPUT) are ignored. Channel Up/Down and Flashback commands are not Direct Access tuning commands, and they are also ignored.

Previous State Before Inserting CAMPORT	Operation While CAMPORT is Active	State Upon Removal of CAMPORT
Aux or RF Channel	None	Previous Aux or RF Channel
Aux or RF Channel	Direct Access	Last Requested Aux or RF Channel
Aux or RF Channel	Ch Up/Down, Flashback, and Input Keys	Previous Aux or RF Channel

Camport Operation (FTG or PPV)

The operation will be similar to that of the Pass-through Mode. However, when the Channel Map is maintained external to the PTC (i.e., FTG and PPV), Channel Up/Down or Flashback keys are sent as Direct Access tuning commands to the PTC/TV.

Previous State Before Inserting CAMPORT	Operation While CAMPORT is Active	State Upon Removal of CAMPORT
Aux or RF Channel	None	Previous Aux or RF Channel
Aux or RF Channel	Direct Access	Last Requested Aux or RF Channel
Aux or RF Channel	Ch Up/Down, Flashback, and Input Keys	Last Requested Aux or RF Channel

Reference: TV Aux Input Configuration

DIRECT ACCESS Tuning		TV		ENABLE				MPI DATA			START AUX SOURCE ASSIGN-MENT
				Installer Menu		MPI DATA STATUS TYPE 0x41 SOURCES ENABLED (R/W)		DATA STATUS TYPE 0xD2 CURRENT AV SOURCE (R)		DATA STATUS TYPE 0x0D AUX SOURCE (R)	
OLD_ OCV = 0	OLD_ OCV = 1	Source Input	Source Mode	Number	Labeling	Value	Labeling	Value	Labeling		
130	90	Video2 (Side)	CV/SVIDEO	34	CAMPORT_EN	0x01	Video Front (Camport)	0	Video Front (Camport)	0 (VIDEO)	2
131	91	Video1 (Rear)	CV/SVIDEO	39	REAR_AUX_EN	0x02	Rear Video (Aux)	1	Rear Video (Aux)	0 (VIDEO)	1
132	92	HDMI2	DTV/PC	91	YPrPb2 EN = 1	0x04	S-Video Rear	2	S-Video Rear	0 (VIDEO)	5
133	93	HDMI1/DVI	DTV/PC	35	COMPPORT_EN = 1	0x08	Front Computer	3	Front Computer	0 (VIDEO)	3
134	94	RGB	PC	87	REAR RGB EN = 2	0x10	SVGA Rear Computer	4	SVGA Rear Computer	2 (COMPUTER)	4
136	96	Component		38	YPrPb EN	0x40	Y/UV Component	6	Rear Y/PrPb Component Video	0 (VIDEO)	6

Reference: *b*-LAN Setup & Overview

The *b*-LAN module is internal to the TV. It allows hotel/institution head end equipment with *b*-LAN technology to communicate, via the institution's RF distribution system, with the TV for configuration and control.

Note: MPI cards with *b*-LAN technology—LMT7Z5, LMT7Z7, LMT7Z9—are NOT supported in TVs in which *b*-LAN technology is already integrated.

Installer Menu item 118 POWER SAVINGS controls the power circuitry for both the embedded *b*-LAN module and the GAME CONTROL/MPI port. The default value is 003—the *b*-LAN module as well as the GAME CONTROL/MPI port circuitry is only powered when the TV is turned ON. See chart below.

POWER SAVINGS	TV Standby State	TV Power On State
	***b*-LAN & GAME CONTROL/MPI Port Power**	***b*-LAN & GAME CONTROL/MPI Port Power**
001	On	On
003 (default)	Off	On

A *b*-LAN enabled head end device, such as an LG FMA-LG101, broadcasts over the RF distribution system to communicate to multiple TVs. When the TV is first installed, it must be turned ON in order for its embedded *b*-LAN module to receive communication from the head end device. At this point, if it is desired for the *b*-LAN module to always be powered, including while the TV is in Standby, set Installer Menu item 118 POWER SAVINGS to 001.

Also, if MPI communication is required for external MPI control, set Installer Menu item 118 POWER SAVINGS to 001 so that the GAME CONTROL/MPI port circuitry is always powered.

Reference: RJP Model List and Input Auto-sensing Hierarchy

RJP Model List

Legacy Models	Scaler Models
RJP-101M	RJP-201M
RJP-101ML	N/A
RJP-110F	RJP-210F
RJP-110FW	RJP-210FW
RJP-110W	RJP-210W
RJP-110WBR	RJP-210WBR
RJP-110S	RJP-210S
RJP-120G	RJP-220G
RJP-120T	RJP-220T
RJP-201B	RJP-301B
RJP-202B	RJP-302B

RJP Input Auto-sensing Hierarchy

Priority	Video	Audio
1st (Highest)	Digital Video In	Audio In (3.5mm)
2nd	PC Video In	Audio In (L/R)
3rd	Video In	Digital Video In

Reference: Resetting Factory Defaults on the TV(s)

This section describes how to reset factory defaults either on a single TV that is currently in Pass-through or FTG Mode or on multiple TVs that are currently in FTG Mode.

Note: If the TV(s) is/are currently in FTG Mode, restoring the factory defaults also resets the TV to Pass-through Mode.

Installer Menu Item 117 FACT DEFAULT

If the TV is currently in Pass-through Mode, you can set Installer Menu item 117 FACT DEFAULT to 001 to reload the factory defaults and clear the channel lineup, including any assigned channel icons and custom text labels.

Factory "IN-STOP"

If the TV is currently in FTG Mode, a predefined value for Installer Menu item 117 FACT DEFAULT enables access to initiate a factory "IN-STOP" process that will reset the TV to Pass-through Mode in addition to restoring all factory defaults. Contact technical support for the required value for Installer Menu item 117 and for additional information on performing the IN-STOP from the Installer Menu.

Additional FTG Mode via CPU Options

There are two additional options for resetting Pass-through Mode/factory defaults on TVs that are in FTG Mode via the CPU. The first enables you to reset a single TV to Pass-through Mode, while the second enables you to reset multiple TVs to Pass-through Mode at one time.

- Using a USB memory device, "Teach" an FTG Configuration (.tlx) file that only contains a "0 Mapped Channels" FTG Channel Map to the TV. Refer to "Creating an FTG Configuration File using the FTG File Manager" and "Teaching FTG Configuration to a TV" on pages 35 to 37, respectively, for further information.
- If your system uses a Pro:Centric server for remote management/administration, use the Pro:Centric Admin Client to load an FTG Configuration (.tlx) file that only contains a "0 Mapped Channels" FTG Channel Map on the Pro:Centric server. Refer to the ***Pro:Centric™ Server Admin Client User Guide*** for further information.

Additional FTG Mode via EBL Options

There are two additional options for resetting Pass-through Mode/factory defaults on TVs that are in FTG Mode via the EBL. The first enables you to reset a single TV to Pass-through Mode, while the second enables you to reset multiple TVs to Pass-through Mode at one time.

Note: While the IN-STOP process described above will clear both the PTC and the CPU, both options below only clear the PTC. Thus, the current Channel Map and TV setup menu settings will remain in the CPU after the reset is completed.

- Using a direct PC-to-TV connection, "Write" an unpopulated Channel Map—that is, a Channel Map with zero channels—to the TV. Refer to the "FTG Mode via EBL" procedure on page 40 and/or the ***Free-To-Guest (FTG) Configuration Application*** manual for further information.
- If your system uses an FMA for remote management/broadcast configuration, configure the FMA device with an FMA Configuration file that only contains a "0 Mapped Channels" FTG Channel Map to broadcast to the TV EBL(s). Refer to the ***Free-To-Guest (FTG) Configuration Application*** manual and/or the Installation & Setup manual for the FMA device for further information.

Reference: TV Zone Restrictions

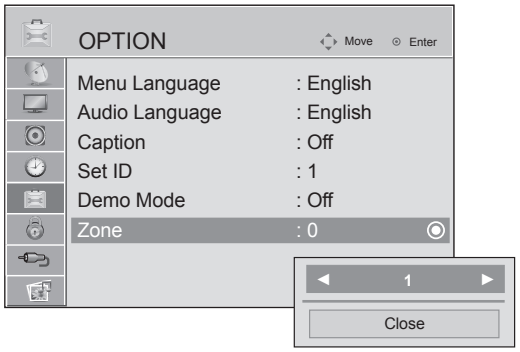
The FTG Channel Map Editor in the FTG File Manager's FTG Channel Map Configuration Utility enables you to assign Zone restrictions to channels that may be deemed unsuitable for certain locations, for example, a hotel lobby. In the FTG Channel Map Editor, a Zone # (for example, "1") must be designated for each channel that is to be restricted.

On location, set the Zone # for all the TVs in a select area, or "Zone" (for example, the lobby) so that the TVs can omit channels that have been restricted in the FTG Channel Map. However, note that while a channel can be restricted from up to eight Zones, a TV can only ever be in (set for) one Zone. TV Zone 0 is the default TV Zone #. When the TV Zone is 0, the TV will ignore any restriction that may be placed on channels in the FTG Channel Map.

See the FTG Channel Map Editor overview on page 43. Also, see the ***Free-To-Guest (FTG) File Manager User Guide*** for more detailed information on assigning Zone restrictions.

Use the following procedure to specify a Zone designation for a TV.

1. Press **MENU** on the Installer Remote, and use the arrow navigation keys to select/highlight the **OPTION** menu option. Then, press **ENTER**.
2. Use the Up/Down arrows to select **Zone**, and then press **ENTER**.
3. In the Zone pop-up window, use the Left/Right arrows to select the appropriate Zone number. Then, press **ENTER**.
4. Press **MENU** to return to TV viewing, or press **RETURN** to return to the previous menu level.



Reference: LD660H/LD665H Rear Jack Panel

UPDATE
Restricted to software updates.

RESET
Initiates a hardware reset and switches the TV to standby.

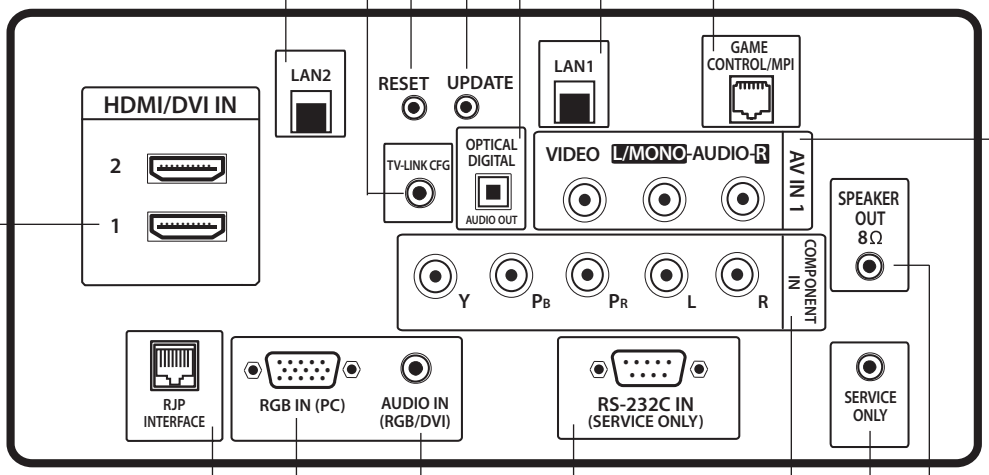
TV-LINK CFG
Use for direct PC-to-TV FTG configuration.

LAN 2
Use for video IP and/or network connections.

OPTICAL DIGITAL AUDIO OUT
Use for amps and home theater systems.
Note: In Standby Mode, this port is not enabled.

LAN 1
Use for video IP and/or network connections.

GAME CONTROL/MPI
When the TV/EBL is in Pass-through Mode, the MPI function enables an external MPI control device (i.e., clone programmer, VOD/PPV STB, etc.) to control the TV. Game Control—EBL in LodgeNet PPV Mode only.



AUDIO/VIDEO IN 1
Connection for composite audio/video output from external device.

HDMI/DVI IN
Connection for HDMI/DVI output from external device.

RJP INTERFACE
Connection for Remote Jack Pack (RJP) Control cable.

RGB IN (PC)
Connection for RGB output from PC.

AUDIO IN (RGB/DVI)
Audio connection for RGB or DVI device.

RS-232C IN
Use for downloading software updates, etc.

SPEAKER OUT (8Ω) *
Connect to 8 ohm self-powered speaker input. Intended for special applications, such as a powered bathroom speaker with volume control.

SERVICE ONLY
Restricted to software updates.

COMPONENT IN
Connection for component output from external device.

* This stereo jack provides a mono speaker fixed-level, 1 watt output (audio +, audio -, w/ground shield). Do NOT plug in a mono connector, as this may damage the TV.

Reference: LV555H Rear Jack Panel

RESET
Initiates a hardware reset and switches the TV to standby.

UPDATE
Restricted to software updates.

HDMI/DVI IN
Connection for HDMI/DVI output from external device.

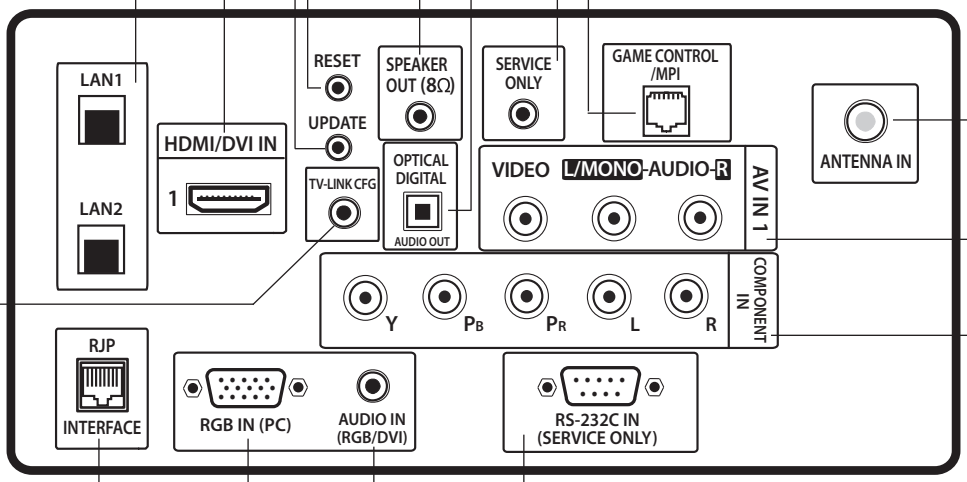
LAN1/LAN2
Use for video IP and/or network connections.

SPEAKER OUT (8Ω) *
Connect to 8 ohm self-powered speaker input. Intended for special applications, such as a powered bathroom speaker with volume control.

OPTICAL DIGITAL AUDIO OUT
Use for amps and home theater systems.
Note: In standby mode, this port is not enabled.

SERVICE ONLY
Restricted to software updates.

GAME CONTROL/MPI
When the TV/EBL is in Pass-through Mode, the MPI function enables an external MPI control device (i.e., clone programmer, VOD/PPV STB, etc.) to control the TV. Game Control—EBL in LodgeNet PPV Mode only.



ANTENNA IN
Connect to Antenna/CATV.

TV-LINK CFG
Use for direct PC-to-TV FTG configuration.

RJP INTERFACE
Connection for Remote Jack Pack (RJP) Control cable.

RS-232C IN
Use for downloading software updates, etc.

RGB IN (PC)
Connection for RGB output from PC.

AUDIO IN (RGB/DVI)
Audio connection for RGB or DVI device.

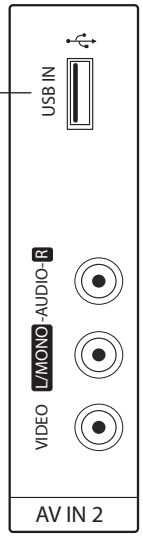
COMPONENT IN
Connection for component output from external device.

AUDIO/VIDEO IN 1
Connection for composite audio/video output from external device.

* This stereo jack provides a mono speaker fixed-level, 1 watt output (audio +, audio -, w/ground shield). Do NOT plug in a mono connector, as this may damage the TV.

Reference: Side Connections Panel

LD660H/LD665H TVs



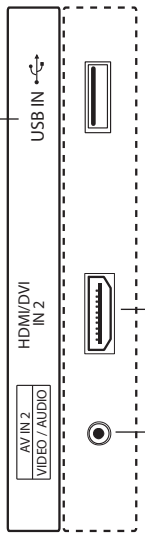
USB IN
Insert USB memory device for software updates, cloning purposes, FTG Mode via CPU configuration, picture/music entertainment, etc., as applicable.

A/V 2 Input

L/MONO-AUDIO-R IN
Connect to audio output jacks on external device. For only mono audio output, connect to Left audio input.

VIDEO IN
Connect to video output port on external device (see Reference section, “TV Camport Auto Sense Operation,” for further information).

LV555H TVs



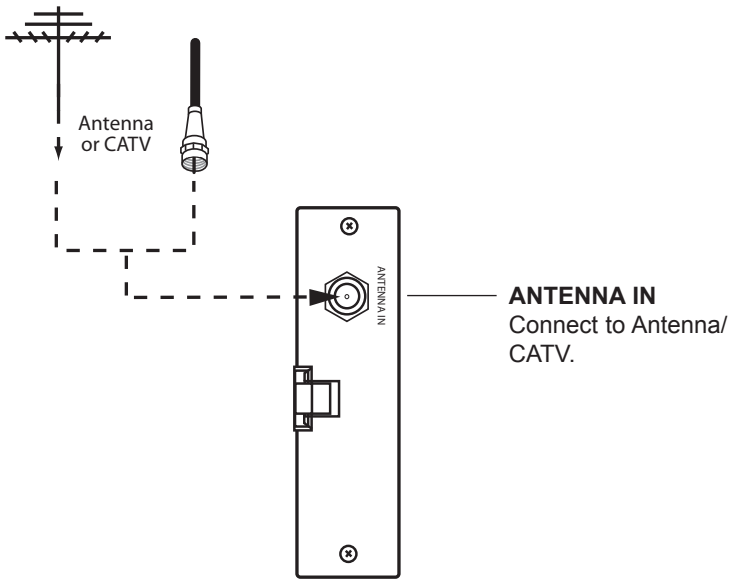
USB IN
Insert USB memory device for software updates, cloning purposes, FTG Mode via CPU configuration, picture/music entertainment, etc., as applicable.

HDMI/DVI IN 2
Connection for HDMI/DVI output from external device.

A/V 2 Input
Connect to video/audio output port on external device (see Reference section, “TV Camport Auto Sense Operation,” for further information).

LD660H/LD665H TVs only

Note: The Antenna connection for LV555H TVs is located on the rear jack panel (see page 59).



Troubleshooting

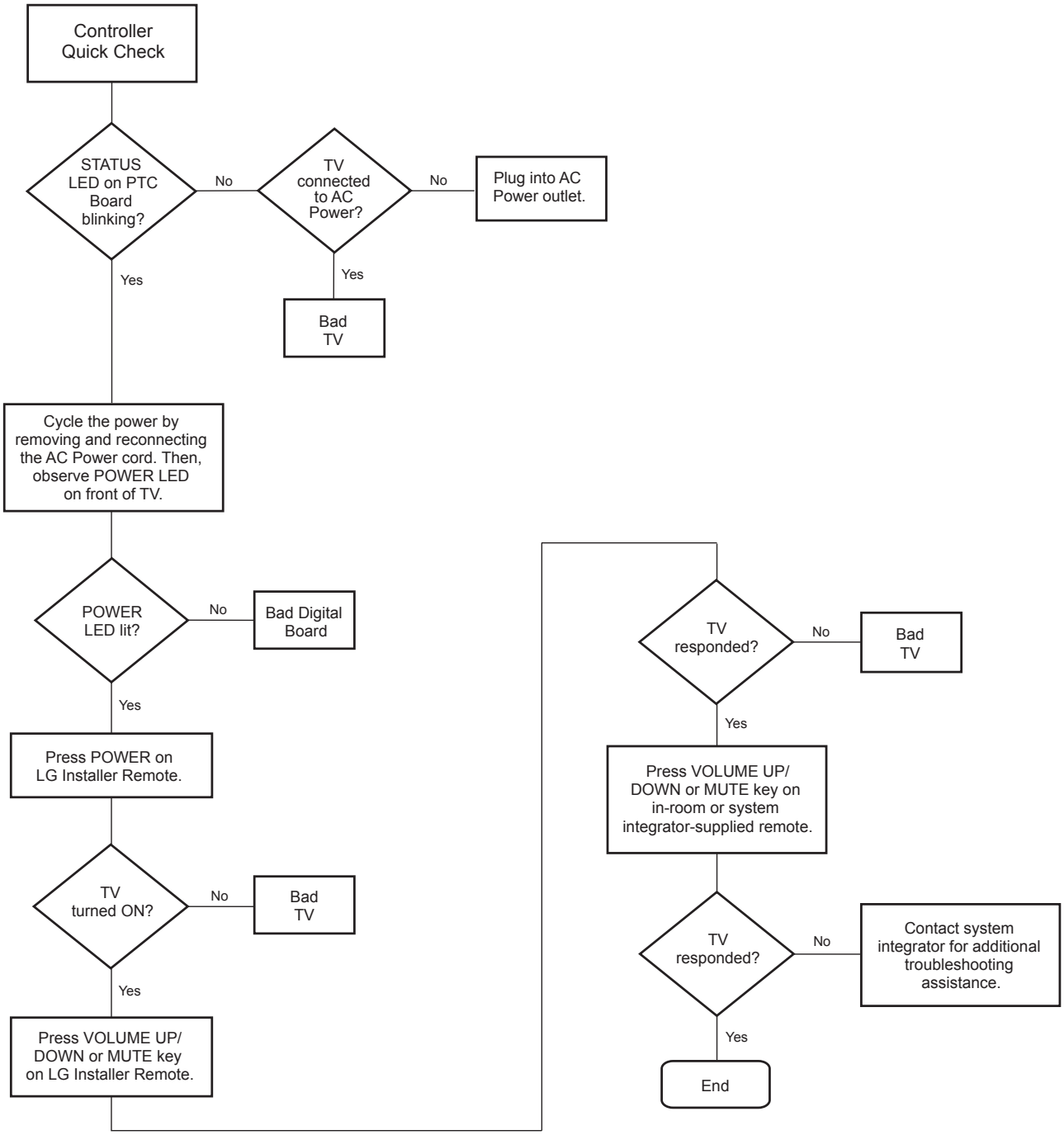
General Troubleshooting

Some Quick and Easy Tips for Resolving Problems

Symptom	Possible Cause(s)	Possible Solution(s)
Installation		
Cannot direct enter channel number.	(TV in Pass-through Mode) Installer Menu item 028 CH. OVERIDE is set to 0, i.e., disabled (recommended setting).	If Installer Menu item 028 CH. OVERIDE is set to 0, only channels that are active in the TV's channel lineup can be selected. Set CH. OVERIDE to 1 to allow access for direct keypad entry to all channels.
	(TV in FTG Mode) The channel entered is not part of the FTG Channel Map.	Channel access is restricted to channels included in the FTG Channel Map. If necessary, make changes to the FTG Channel Map using the FTG File Manager or the FTG Device Configuration Application, as appropriate.
Power		
No power.	See troubleshooting flow chart on following page.	
Display Panel Picture		
No picture.	Display panel is turned OFF.	• Turn TV ON. • Power failure?
	Antenna/cable not connected.	Connect antenna/cable signal to TV.
	Connections incorrect.	Check connections on TV.
	MPI not connected.	If applicable, connect MPI cable to MPI device.
	Encrypted program.	Try another channel.
	Wrong tuning band.	Adjust Installer Menu settings.
Erratic Operation		
Installer Menu setup.	Wrong Installer Menu settings.	Adjust Installer Menu settings as required.
Installer Remote		
Remote doesn't work.	Remote not in TV Mode.	Use MODE key to select "TV"; puts remote into TV Mode.
	Not aimed at IR remote sensor.	Point remote at IR receiver on TV.
	Remote too far from IR sensor.	Move remote closer to IR receiver on TV or darken room.
	MPI not connected.	If applicable, connect MPI cable to MPI device.
	IR path to TV's receiver obstructed.	Remove obstructions.
	Weak batteries.	Replace batteries.
	Wrong battery polarity.	Check that "+" and "-" match in battery compartment.
	Too much light in room.	Dim room light.
	Wrong Installer Remote.	Requires compatible Installer Remote. Contact your LG dealer.
Picture Reception		
Normal picture, poor or no sound.	Audio muted.	Press MUTE or use Volume Up key to increase sound level.
	Broadcast problem.	Try a different channel.

Note: For other problems not caused by the TV, refer to the other devices' operating guide(s).

Troubleshooting Flowchart

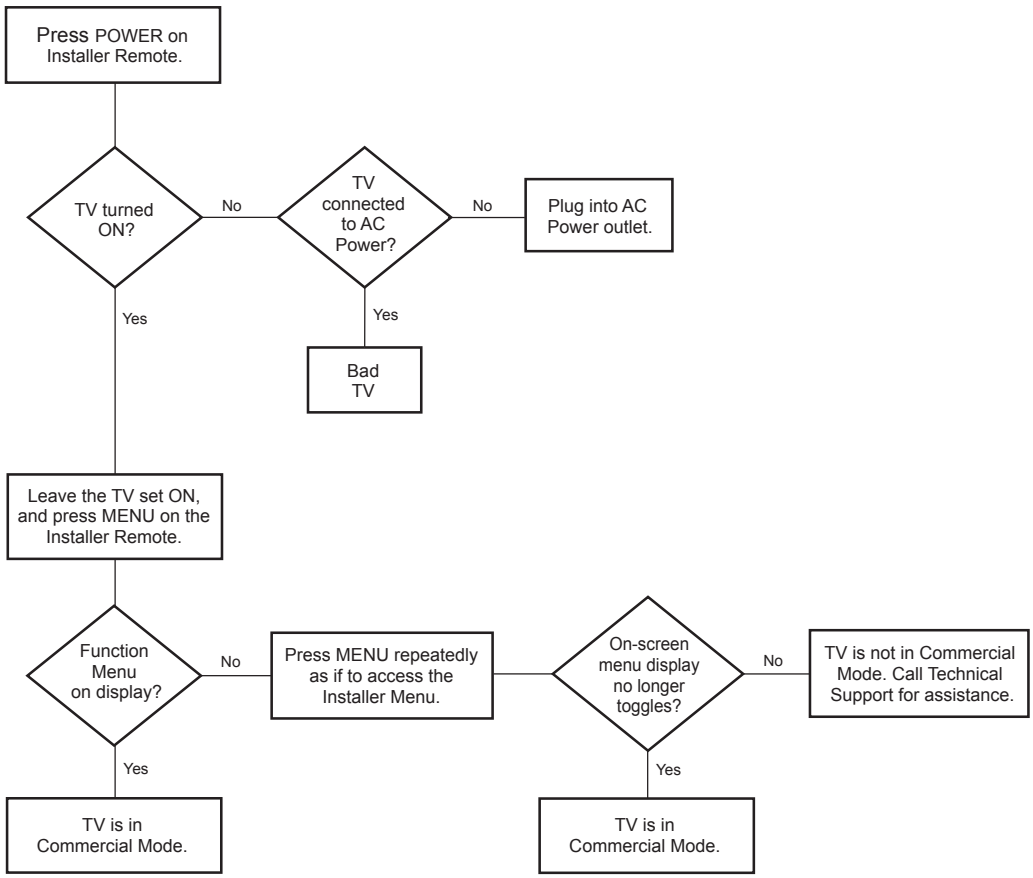


Troubleshooting (Cont.)

Commercial Mode Check / FTG Operation Troubleshooting

Commercial Mode Check

Use this flowchart to determine whether the TV is currently in Commercial Mode.



FTG Operation Troubleshooting

The following table provides troubleshooting information for when the EBL is configured in the FTG Mode of operation.

Symptom	Possible Cause(s)	Solution(s)
Communication Error (“Communications Timeout”)	Cable(s) not connected.	Check and connect communication cables.
	TV not powered.	Check/connect the TV power cord.
	TV not turned ON.	TV needs to be turned ON (default FTG Mode).
	Wrong COM (communication) port.	In the FTG Device Configuration Application, select the correct COM port for the cable being used.

Clone Programmer Troubleshooting

Caution: Do not connect a clone programmer to a PPV card installed in the Master or Target TVs. Also, if the TV is in LodgeNet PPV Mode (check with the site administrator if you are not certain), do not connect a clone programmer to the GAME CONTROL/MPI port. Either of these actions will damage the clone programmer and, if applicable, the PPV card.

Reset Clone Programmer After Static Shock

After replacing exhausted batteries (LT2002 only), or if the clone programmer behaves strangely after a static shock:

- TLL-1100A: Turn the TLL-1100A OFF and then ON.
- LT2002: Use a paper clip or similar instrument inserted through the small hole marked RESET to activate the internal reset switch and restore normal operation.

After a reset, check the real-time clock setting. It may be necessary to set the clone programmer clock from a TV containing the correct time.

Note: Both the Master and Target TVs must be in Pass-through Mode for cloning purposes. See also IMPORTANT CLONING INFORMATION on page 24.

Clone Programmer

Symptom	Possible Cause(s)	Possible Solution(s)
Clone copies setup in less than 30 seconds.	Not enough time to copy entire TV setup.	TLL-1100A: Turn the TLL-1100A OFF and then ON. LT2002: Press RESET on clone programmer. Then redo Learn/Teach. (Learning usually takes about 90 seconds; Teaching usually takes 3 to 4 minutes.)
Remote does not operate clone programmer.	Wrong Installer Remote.	Only use an LG Installer Remote to operate clone programmer with TV.
Clone menu does not display on TV screen, TLL-1100A shows error message, or LT2002 LED does not blink.	MPI cord not connected.	Connect MPI cord properly, and ensure good connection.
	TV not turned ON.	TV must be powered ON for clone programmer to work.
	(LT2002 only) Weak batteries.	Install four (4) fresh AA high-quality alkaline batteries.
	(TLL-1100A only) No charge.	Ensure the TLL-1100A is fully charged or connected to AC power.
Clone menu hard to read.	Weak signal.	Connect TV to a reliable analog channel signal source.
No time set.	Time not available.	Set time on a TV, and copy time to clone programmer.
Clone not working.	Clone programmer problem.	• Try a different clone programmer. • Reset the clone programmer.
Clone scans channels more than once.	Clone should only scan channels once.	Ensure TV is set up correctly, and try cloning again.

Master and Target TVs

Symptom	Possible Cause(s)	Possible Solution(s)
Cloning did not work.	Procedure interrupted.	Wait until procedure complete message is displayed.
	Different TV models.	Cloning is only possible with identical model TVs.
	Step(s) omitted or not performed.	Refer to the applicable cloning procedure(s), and make sure all tasks were performed.
(LT2002 only) Clone time disappeared.	Batteries were removed.	Batteries must remain installed to retain time settings.
New setup not present.	Target TV not reset.	Disconnect Target TV from AC power for 15 seconds.

- After cloning operations are complete, unplug the TLL-1100A/LT2002 from the TV.
- If the TV does not display a picture (blank screen) after a few seconds, just change channels.

Glossary of Terms

A list of definitions for some of the words found in this guide.

75 OHM RF CABLE
The wire that comes from an off-air antenna or cable service provider. The end looks like a hex-shaped nut with a wire through the middle. It screws onto the Antenna/Cable threaded jack on the back of the TV.

300 TO 75 OHM ADAPTER
A small device that connects a 2-wire 300 ohm antenna to a 75 ohm RF jack. It is usually about an inch long with two screws on one end and a round opening with a wire extending out the other end.

A/V CABLES
Audio/Video cables. Three cables bunched together—right audio (red), left audio (white), and video (yellow). A/V cables are used for stereo playback of videocassettes and for higher quality picture and sound from other A/V devices.

A/V DEVICE
Any device that produces video or sound (VCR, DVD, cable box, or television).

AMPLIFIER
An electronic device that amplifies sound from a television, CD player, VCR, DVD player, or other audio/video device.

ANTENNA
The physical receiver of television signals sent over the air. A large metal piece of equipment does not always have to be visible to be using an antenna.

***b*-LAN**
LodgeNet Interactive Corporation proprietary RF communication system used to configure/control TV via RF distribution system.

CABLE
Cable service box. Refers to the descrambler box cable subscribers use to receive cable programming signals.

CATV
Programming provided by a cable service.

COMPONENT VIDEO
Uses three wires for transporting three-color video signals. The end result is usually better video quality.

COMPOSITE VIDEO
Typical video jack, uses one wire for transporting three-color video signals.

DELETE
Lets you remove channels from the list that the end user can scroll through using Channel Up/Down.

DIGITAL TELEVISION
High-resolution, cinema-quality television signals transmitted digitally.

DVI
Digital Video Interface. Accommodates analog and digital interfaces with a single connector.

HDMI
High-definition multi-media interface.

HDSTB
High-definition set top box. Refers to a tuner device that receives high-definition television signals which have higher resolution than ordinary analog TV signals.

HDTV
High-definition television. Refers to television signals that have higher resolution than ordinary analog TV signals.

INPUT
Refers to the input jack that receives a signal from a TV, VCR, DVD player, or other audio/video device.

JACK
An input or output connector on the back of a TV, VCR, DVD player, or other audio/video device.

MONO SOUND
Mono (monaural) sound is one channel of sound. On more than one speaker, all the speakers play the same audio.

OUTPUT
Refers to the output jack that sends a signal out of a VCR, DVD player, or other audio/video device.

PHYSICAL CHANNEL NUMBER
The actual channel number. Analog channels use the Physical Channel number and digital channels can use a Virtual Channel number.

RGB (RED, GREEN, BLUE)
Connection input or output port available for producing a video image using three separate colors: Red, Green, and Blue.

RS-232
Serial communication port through which firmware is downloaded.

2ND AUDIO PROGRAMMING/SAP
Second Audio Programming (SAP) is another, separate audio channel available with some programming. Choosing SAP often refers to listening to audio in another language, such as Spanish or French.

SIGNAL
Picture and sound traveling through a cable, or over the air, to the TV.

STEREO SOUND
Stereo (Stereophonic) sound refers to audio that's divided into right and left sides.

TUNER
Device that picks up the broadcast signal and turns it into picture and sound.

VIRTUAL CHANNEL NUMBER
A re-mapped channel number. Analog channels use the Physical Channel number; however digital channels use a Virtual (or false) Channel number.

XDS
Extended Data Service. Additional program information included on the signal provided at the discretion of the broadcaster.

Note: Refer to www.atsc.org for further information.

Document Revision History

Date	Description
October 2011	Revision A: New document
November 2011	Revision B: Updates for external MPI control

Product documentation is available online at: **www.LGsolutions.com/products**. From the Products page, select **TVs, Systems & Solutions**, then **LCD TVs**, then the applicable TV. Click the **Literature & Downloads** tab at the bottom of the TV page, and select the required document(s) from the Downloads list.

Notes

For Customer Support/Service, please call:

1-888-865-3026

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