LG
Life's Good

FMA-LG101

Free-To-Guest Management Appliance

Installation & Configuration Guide
Warranty

For Customer Support/Service, please call:
1-888-865-3026

The latest product information and documentation is available online at:
www.LGsolutions.com/products

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

Model No._____ Serial No._____

⚡ **WARNING**
RISK OF ELECTRIC SHOCK
DO NOT OPEN ⚠

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.

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 into 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.
2000 Millbrook Drive, Lincolnshire, IL 60069, USA • Phone: 1-847-941-8000

Marketed and Distributed in the United States by LG Electronics U.S.A., Inc.
2000 Millbrook Drive, Lincolnshire, IL 60069

206-4124

IMPORTANT SAFETY INSTRUCTIONS

Important safeguards for you and your new product

THIS PRODUCT HAS BEEN MANUFACTURED AND TESTED WITH SAFETY IN MIND. IMPROPER USE, HOWEVER, CAN RESULT IN POTENTIAL ELECTRICAL SHOCK OR FIRE HAZARDS. TO AVOID DEFEATING THE SAFEGUARDS THAT HAVE BEEN BUILT INTO THE NEW PRODUCT, PLEASE READ AND OBSERVE THE FOLLOWING SAFETY POINTS WHEN INSTALLING AND USING THIS PRODUCT.

1. **Read these instructions.**
   Read all safety and operating instructions before operating the product.

2. **Keep these instructions.**
   Retain the safety and operating instructions for future reference.

3. **Heed all warnings.**
   Adhere to all warnings on the product and in the operating instructions.

4. **Follow all instructions.**
   Follow all operating and use instructions.

5. **Do not use this apparatus near water.**
   Do not use this product near water or moisture or in an area, such as a basement, that might become flooded.

6. **Clean only with dry cloth.**
   Unplug this product before cleaning. Do not use liquid cleaners or aerosol cleaners.

7. **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.**
   This product is designed to fit in a rack. The ventilation slots and openings in the cabinet are provided to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered.

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.**
    Do not place this product on a slippery or tilted surface, or on an unstable cart, stand, tripod, bracket, or table. Any mounting of the product should follow the manufacturer's instructions.

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. **Wall or Ceiling Mounting**
    This product should be mounted to a wall or ceiling only as recommended by the manufacturer. The product may slide or fall, causing serious injury to a child or adult and serious damage to the product.

15. **Transporting Product**
    A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

16. **Disconnect Device**
    The AC mains plug is used as the disconnect device. The disconnect device must remain readily operable. Be sure to grasp the plug when unplugging the power cord.

IMPORTANT SAFETY INSTRUCTIONS

(Continued from previous page)

17. Object and Liquid Entry
Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

18. Power Sources
This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your installation, consult your product dealer or local power company.

19. Overloading
Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

20. Outdoor Use/Wet Location
Warning: To prevent fire or electrical shock hazards, do not expose this product to rain, moisture, or other liquids.
Do not touch the product with wet hands. Do not install this product near flammable objects such as gasoline or candles or expose it to direct air conditioning. Do not expose the product to dripping or splashing, and do not place objects filled with liquids, such as vases, on or over the apparatus.
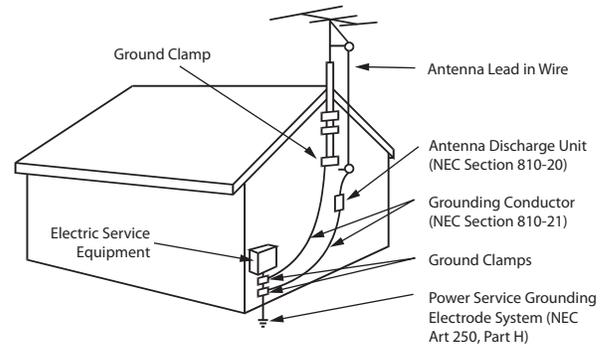
21. Outdoor Antenna Grounding
If an outside antenna or cable system is connected to the product, follow the precautions below.

An outside 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. When installing an outside antenna system, use extreme care to keep from touching such power lines or circuits as contact with them might be fatal.

Be sure the antenna or cable 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.), ANSI/NFPA 70 provides information with regard 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

Ground Clamp
Antenna Lead in Wire
Antenna Discharge Unit (NEC Section 810-20)
Grounding Conductor (NEC Section 810-21)
Electric Service Equipment
Ground Clamps
Power Service Grounding Electrode System (NEC Art 250, Part H)

22. Servicing
Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

23. Damage Requiring Service
Unplug this product from the wall outlet, and refer servicing to qualified service personnel under the following conditions:
a. If the power-supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the product.
c. If the product has been exposed to rain or water.
d. If the product does not operate normally per the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
e. If the product has been dropped or the cabinet has been damaged.
f. If the product exhibits a distinct change in performance.

24. Replacement Parts
When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or the have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

25. Safety Check
Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Table of Contents

Setup Checklist

Installation and configuration of the Free-To-Guest (FTG) Management Appliance (FMA-LG101) requires the following hardware, equipment, and software.

At the Head End

__ Contents of FMA-LG101 carton:

- FMA-LG101 unit (with attached rack mount brackets)
- Power supply (12V DC 1.25A)
- 75 ohm coaxial terminator (FMA-LG101 RF IN port termination)
- 7-foot Ethernet crossover cable (direct connect PC to configure FMA-LG101)
- 50 MHz low pass filter (6MLP-50)

__ Configuration of the FMA-LG101 requires a PC with an Ethernet port and the FTG Device Configuration Application v5.0.0 or higher installed. FTG Device Configuration Application software is available online at: **www.LGsolutions.com/ftgsoftware**.

At the Room

__ An LG TV must be equipped with one of the following FTG devices:

- EBL (Embedded *b*-LAN™)
- LMT7Z9 MPI card
- LMT7Z7 MPI card (requires firmware update—see note below)

Note: Please contact the LG Sales team to obtain a Firmware Update (.mot) file. You can then use the Firmware Downloader Utility available from the FMA-LG101 software web page to upload the latest firmware to the FTG device(s). See Reference section, "FTG Device Firmware RF Downloader," for detailed instructions.

Note: An HCS1410 FTG card is not compatible with the FMA-LG101.

The FMA-LG101 facilitates the delivery of the channel lineup and Installer Menu settings to guest room TVs via the RF distribution system, such that the channel lineup or Installer Menu settings can be updated without individual room visits. Every LG TV capable of receiving the Channel Map broadcast from the FMA-LG101 will be configured with the same channel lineup. Installer Menu settings are dependent on chassis model IDs; only the model(s) whose Installer Menu settings are being broadcast will be affected. The FMA-LG101 can broadcast multiple Installer Menu profiles to support the different chassis models connected to the RF distribution system.

FTG Management Appliance (FMA) Configuration File

An FMA Configuration (.fma) file is required to update the FMA-LG101's broadcast data. The file must contain data from one FTG Channel Map and may also contain FTG Installer Menu profile data from one or more TV/STB models. Users can create an FMA Configuration file at any time on any PC on which the FTG Device Configuration Application v5.0.0 or higher is installed (see next page). The FMA Configuration Utility also enables you to set the FMA's date and time and broadcast rate.

FMA-LG101 Date and Time

• When the FMA-LG101 has been powered for at least 30 minutes, its current date and time will be maintained during power loss for a minimum of nine hours.

• If the DST (US Daylight Saving Time) option is enabled during configuration, the FMA-LG101 will automatically set the clock forward one hour at 2:00 AM on the second Sunday in March and set the clock back one hour at 2:00 AM on the first Sunday in November. These dates were established by Congress in the Energy Policy Act of 2005.

FMA-LG101 Broadcast

⚠ **Note: The RF distribution system must support 50.5 MHz RF transmission (downstream) from the head end to the FTG device(s).**

The FMA-LG101 will broadcast the date & time, the FTG Channel Map, and any FTG Installer Menu profiles every five minutes (300 seconds) by default. The broadcast rate is adjustable, as described later in this document. If an FTG device or TV is replaced in a room, the replacement, when connected to the RF distribution system, will automatically be configured by the current data being broadcast and will not require additional configuration. *

* Replacement TV only: For the FTG Installer Menu to be configured, the replacement TV must be either the same model or a model whose Installer Menu profile is already included in the broadcast.

Creating an FMA Configuration File

The procedure below provides an overview of the steps required to create an FMA Configuration (.fma) file. Refer to the ***Free-To-Guest (FTG) Device Configuration Application User Guide*** for further information. For a visual representation of the procedure, see the flowchart at the end of this document. See also the FMA Configuration Utility sample screen on the following page.

1. Install (if necessary) and launch the FTG Device Configuration Application (v5.0.0 or higher) on the PC that will be used to create the FMA Configuration (.fma) file.

2. You have several options at this time:

   • To view and/or base a new FMA Configuration file on an existing FMA Configuration file, click the **Open** button in the FMA File command section of the FMA Configuration Utility, and select the desired (.fma) file.

     A list of the file's contents will be displayed in the FMA Configuration List window. Edit the configuration of the items in the FTG Configuration List as well as the FTG Configuration List itself, as necessary, to create a new file. Then, proceed to step 3 when you are ready to continue.

   • To open an existing FTG Configuration (.rml) file to use its FTG Channel Map and/or FTG Installer Menu settings, click **File** and then **Open** from the FTG Device Configuration Application menu bar, and select/double-click on the desired ".rml" file.

     Edit channels and/or settings as necessary, and then proceed to step 3 when you are ready to continue.

   • Create a new FTG Channel Map using the FTG Channel Map Editor in the FTG Channel Map Configuration Utility. Up to 141 logical channels can be defined in the channel lineup to be broadcast by the FMA-LG101.

     When you are ready to continue, click **Configure** and then **FMA** from the FTG Device Configuration Application menu bar to return to the FMA Configuration Utility, and then proceed to step 3.

   Note: Existing FMA or FTG Configuration files should be appropriate to the site for which you are creating the new FMA Configuration file. Otherwise, build the new file from scratch.

   Note: To remove an individual item from the FMA Configuration List, click on/highlight the item to be removed, and then click the **Remove Item** button directly above the FMA Configuration List window. To clear the current FMA Configuration List contents, click the **New** button in the FMA File command section of the screen (above the FMA Configuration List window).

3. To add the current FTG Channel Map to the FMA Configuration List, click ⟩⟩ under FTG Channel Map. This will copy the current mapped channels to the FMA 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 FMA Configuration List, you will need to recopy the FTG Channel Map to the FMA Configuration List.

4. (Optional) Load default FTG Installer Menu settings by model.

   • Click the down arrow at the right of the Chassis field in the Installer Menu Templates section of the FMA Configuration Utility screen, and select the appropriate chassis 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 FMA Configuration Utility.

(Continued from previous page)

5. To add the current FTG Installer Menu settings to the FMA Configuration List, click ⌐ >> ⌐ under FTG Installer Menu Settings. This will copy the currently selected model's settings to the FMA 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 FMA Configuration List, you will need to recopy the FTG Installer Menu settings to the FMA Configuration List.

6. Click the **Save** button in the FMA File command section of the FMA Configuration Utility screen (above the FMA Configuration List) to save the FMA Configuration List contents to an FMA Configuration (.fma) file on the PC's hard drive for later use.

   Note: To remove an individual item from the FMA Configuration List before saving the new file, click on/highlight the item to be removed, and then click the **Remove Item** button directly above the FMA Configuration List window. To clear the current FMA Configuration List contents, click the **New** button in the FMA File command section of the FMA Configuration Utility.

FMA Configuration List
Data to be saved in FMA Configuration (.fma) file or ready for transfer to FMA.

New/Open/Save
FMA File options.

Filename of opened FTG Configuration (.rml) file.

Copy FTG Channel Map to and from FMA Configuration List.

Copy FTG Installer Menu settings to and from FMA Configuration List.

Load default FTG Installer Menu for selected model(s).

Set the FMA clock to the PC's clock.

Set the FMA broadcast rate.

Write/Read
FMA Configuration Transfer options.

Confirm IP address for FMA IP Communication.

Note: The data referenced in the FMA Configuration List is a only 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 FMA Configuration List, you will need to recopy the FTG Channel Map and FTG Installer Menu settings to the FMA Configuration List.

FMA-LG101 Installation

Refer to the following diagrams, and install the FMA-LG101 in the equipment rack as described on page 11.
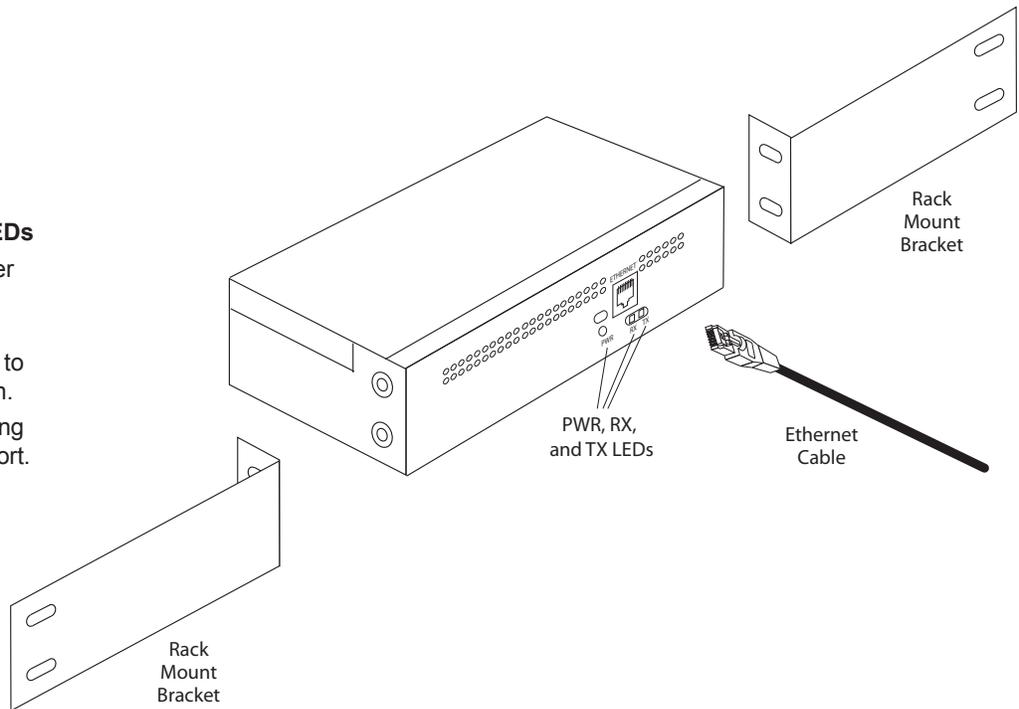
FMA-LG101
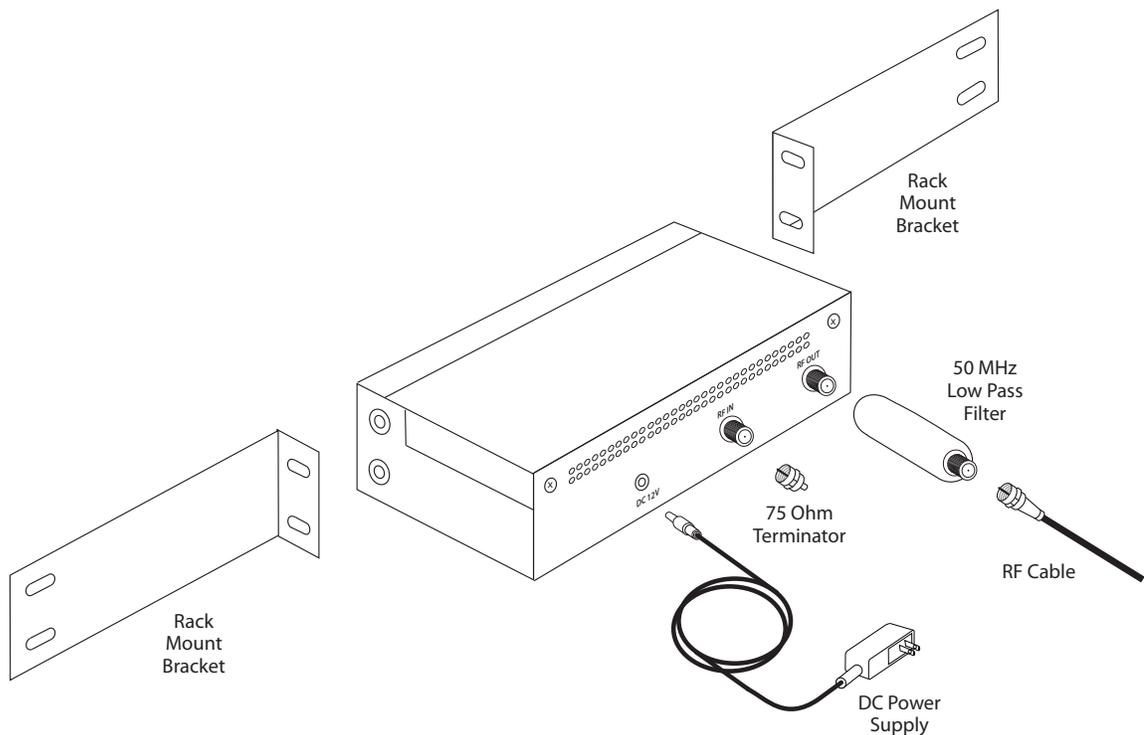## Front View

FMA-LG101 Front Panel LEDs

PWR: Illuminates when power is applied to the unit.

RX: Illuminates when stored configuration has been reset to default due to data corruption.

TX: Flashes when data is being transmitted on the RF OUT port.

Rack Mount Bracket

PWR, RX, and TX LEDs

Ethernet Cable

Rack Mount Bracket

FMA-LG101
Rear View

Rack Mount Bracket

50 MHz Low Pass Filter

RF IN

RF OUT

DC 12V

75 Ohm Terminator

RF Cable

Rack Mount Bracket

DC Power Supply

FMA-LG101 Installation Notes

• The AC outlet providing power must be installed near the FMA-LG101 and be easily accessible.

• The FMA-LG101 should be installed in a restricted access location.

FMA-LG101 Rack Installation

Refer to the FMA-LG101 diagrams on page 10, and complete the following steps to install the FMA-LG101 in the equipment rack.

1. As shipped, the FMA-LG101 rack mount brackets are attached inward, covering the front panel of the FMA-LG101 unit. Detach and then re-attach the rack mount brackets to the FMA-LG101 as shown in the diagrams on the previous page.

2. Mount the FMA-LG101 in the equipment rack.

3. Complete all connections as indicated in the FMA-LG101 Rear and Front Panel Connections table below.

4. Plug the power supply for the FMA-LG101 in to an AC outlet (or the rack power strip, if applicable), and then connect the 12V DC output to the FMA-LG101.

5. Wait at least 30 seconds for the FMA-LG101 to power ON and obtain network settings from a DHCP server or load its default network settings.

6. Configure the FMA-LG101 as described on the pages that follow.

FMA-LG101 Rear and Front Panel Connections

Port Name		Connection
Rear Panel	RF OUT	Connect the 50 MHz low pass filter and coaxial RF cable from the RF distribution system combiner. (The 50 MHz low pass filter protects RF channels 2 and 3 from any potential RF interference produced by the FMA-LG101.)
	RF IN	Not applicable; connect the 75 ohm terminator.
	DC 12V	Connect the 12V DC power supply shipped with the FMA-LG101.
Front Panel	ETHERNET	Make the appropriate connection based on the system setup: • Network Ethernet connection: Connect an Ethernet straight-through cable (not supplied) from the network. The FMA-LG101 must be connected to a network with a DHCP server *before* power is applied. • Direct Ethernet connection: Connect the supplied Ethernet crossover cable from a PC. Refer to "FMA-LG101 Ethernet Connection/Network Options" on the next page for further information.

Network Connection Settings for FMA-LG101 Configuration

FMA-LG101 Ethernet Connection/Network Options

(see also Ethernet connection information on previous page, as necessary)

- The FMA-LG101 can operate as a DHCP client if a network DHCP server assigns it a valid IP address for that network. Otherwise, the FMA-LG101 uses its factory default IP address. In order to operate as a DHCP client, the FMA-LG101 must be connected via a straight-through Ethernet cable to a network with a DHCP server before power is applied.

- If there is no DHCP server, or if the FMA-LG101 is connected directly to a PC via an Ethernet crossover cable, the FMA-LG101 will default to its factory IP address and subnet mask of 10.20.1.120 / 255.255.248.0. When the FMA-LG101 is using its default IP address, the configuring PC must be on the same subnet as the FMA-LG101. For example, the PC's network connection settings can be set as 10.20.1.90 / 255.255.248.0.

PC Network Connections

If the FMA-LG101 is connected to the network (i.e., the FMA-LG101 is a DHCP client), consult the network administrator for proper network settings. Set the PC's network connections to provide access to the network, and then proceed to configure the FMA-LG101.

If you are using a direct Ethernet connection between the FMA-LG101 and the configuring PC, you must complete the following procedure to set the PC network connections before you proceed to configure the FMA-LG101.

1. On the PC, navigate to Network Connections options, as applicable, per your operating system, e.g., Windows XP, Windows 7, etc. Refer to IT personnel or Windows documentation for further information.

2. Right-click on the **Local Area Connection** icon in the Network Connections window, and select **Properties**.

3. Double-click on **Internet Protocol (TCP/IP)** in the Local Area Connection Properties window.

4. In the Internet Protocol Properties window, select the **Use the following IP address:** radio button. Then:

   - In the IP Address field, type an IP address from the following range: 10.20.1.81 to 10.20.1.92.

   - In the Subnet Mask field, type **255.255.248.0**.

5. Click **OK** to close the Internet Protocol Properties window. (You can also close any additional network connections windows at this time.)

Overview

Once you have completed the required steps to set the PC's network connections, you can update the FMA-LG101 using either the FTG Device Configuration Application software (v5.0.0 or higher) or the FMA-LG101 software web page.

Experienced installers can refer to the FMA-LG101 configuration quick reference overviews below if extended directions are not required. Otherwise, proceed to the appropriate section depending on whether you are using the FTG Device Configuration Application software or the FMA-LG101 software web page.

FMA-LG101 Configuration Prerequisites

• The FMA-LG101 must be installed in the equipment rack prior to configuration (see FMA-LG101 installation and cabling information on previous pages).

• You will need to know the IP address of the FMA-LG101 (see "FMA-LG101 Ethernet Connection/Network Options" on previous page).

  Network Ethernet connection: Consult the network administrator to obtain the IP address that has been assigned by a DHCP server to the FMA-LG101.

  Direct Ethernet connection: The FMA-LG101 uses its default IP address (10.20.1.120).

• Create a new or identify an existing FMA Configuration (.fma) file to use for updating the FMA-LG101 (see "Creating an FMA Configuration File" on pages 8 and 9, as necessary).

FMA-LG101 Configuration Quick Reference (FTG Device Configuration Application Software)

1. Launch the FTG Device Configuration Application (v5.0.0 or higher), and access the FMA Configuration Utility. *

2. Set the FMA Utility's IP address.

3. "Write" the appropriate FMA Configuration file to the FMA-LG101.

4. Set the FMA clock. (Note that date and time must be set on the PC running the FTG Device Configuration Application prior to an attempt to set the FMA clock.)

5. Set the FMA broadcast rate.

6. Connect the FMA-LG101 to the RF distribution system as described on page 16.

FMA-LG101 Configuration Quick Reference (FMA-LG101 Software Web Page)

1. Launch a web browser.

2. Type the appropriate IP address in the browser's address bar and press **Enter**.

3. Set the date and time parameters and the broadcast rate, and then update the FMA-LG101.

4. Update the FMA-LG101 with an FMA Configuration file.

5. Connect the FMA-LG101 to the RF distribution system as described on page 16.

* If the configuring PC is running Windows Home Premium software, you must run the FTG Device Configuration Application as an administrative user in order to communicate with and configure the FMA-LG101.

FMA-LG101 Configuration (Cont.)

FMA-LG101 Configuration using the FTG Device Configuration Application Software

1. Launch the FTG Device Configuration Application (v5.0.0 or higher). *

2. Click **Configure** and then **FMA** from the FTG Device Configuration Application menu bar to access the FMA Configuration Utility (see screen sample on page 9). Then, set the FMA Utility's IP address, update the FMA-LG101 configuration, and configure the FMA clock and broadcast rate as described below.

Set the FMA Utility's IP Address

The IP address specified in the FMA IP Communication section at the bottom right of the screen must be set to the FMA's current IP address (see "FMA Configuration Prerequisites" on previous page).

   a. If you need to modify the FMA Utility's IP address, double-click anywhere within the IP Address field.

   b. In the pop-up window, type the appropriate IP address, and then click **OK**. Or, to restore the IP address to the default value (10.20.1.120), click **Default** and then **OK**.

Update the FMA-LG101 with an FMA Configuration File

   a. Use the current contents of the FMA Configuration List, or click the **Open** button above the FMA Configuration List window to open an existing FMA Configuration (.fma) file.

   Note: When opening an existing FMA file, reconfirm the FMA Utility's IP address, since the FMA file when saved, had an IP address associated with it.

   b. Click the **Write** button in the FMA Configuration Transfer command section of the screen (below the FMA Configuration List window) to transfer the current contents of the FMA Configuration List to the FMA-LG101.

   c. Once the system processes the request, a pop-up report message indicates success. Click **OK** to close the pop-up window and continue.

Set the FMA Clock

The facility for setting the FMA clock is located on the right side of the FMA Configuration Utility screen. Date and time must be set on the PC running the FTG Device Configuration Application prior to an attempt to set the FMA clock.

   a. If desired, click the Auto DST checkbox. When checked, the FMA's clock automatically observes Daylight Saving Time.

   b. Click the **Set Clock** button to set the date and time of the FMA to the PC's date and time.

   c. In the Date & Time pop-up window (displays a snapshot of the PC's current date and time), confirm the settings, and then click **Yes** to synchronize the FMA's clock with the PC's clock.

   d. Once the system processes the request, a pop-up report message indicates success. Click **OK** to close the pop-up window and continue.

Set the FMA Broadcast Rate

The facility for setting the FMA broadcast rate is located on the right side of the FMA Configuration Utility screen. The broadcast rate determines the interval, in seconds, at which to repeat the broadcast of the date & time, the FTG Channel Map, and the FTG Installer Menu profile(s). (FMA-LG101 factory default broadcast rate is 300 seconds.)
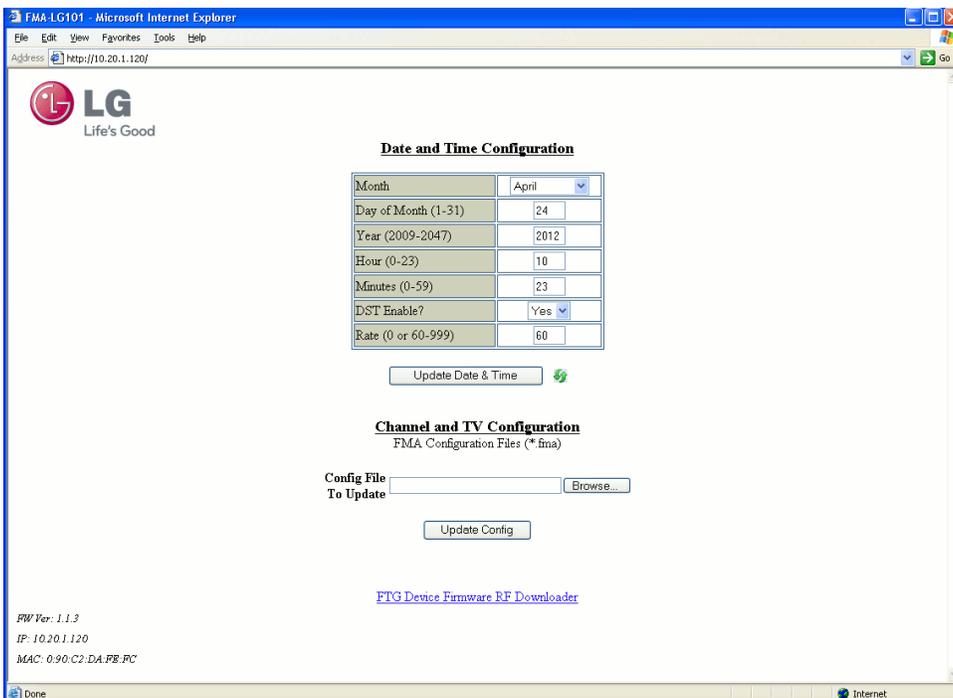
* If the configuring PC is running Windows Home Premium software, you must run the FTG Device Configuration Application as an administrative user in order to communicate with and configure the FMA-LG101.

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    a. Click the down arrow at the right of the FMA Broadcast field, and select the number of seconds (60–999) for the broadcast rate ("0" disables data broadcasting).

    b. Click the **Set Rate** button to set the selected rate of broadcast in the FMA.

    c. Once the system processes the request, a pop-up report message indicates success. Click **OK** to close the pop-up window.

3. Click **File** and then **Exit** from the FTG Device Configuration Application menu bar to exit the FMA Configuration Utility.

4. Connect the FMA-LG101 to the RF distribution system as described on page 16.

FMA-LG101 Configuration using the FMA-LG101 Software Web Page

1. Launch a web browser, and type *http://ipaddress* in the browser's address bar, where *ipaddress* is either the network IP address assigned by a DHCP server to the FMA-LG101 or the FMA-LG101's default IP address (see "FMA-LG101 Configuration Prerequisites" on page 13). Then, press **Enter**.

FMA-LG101 Software Web Page Main Screen

Fields at the bottom left corner of the screen identify the FMA-LG101 firmware version, IP address, and MAC address.

2. Once you have accessed the FMA-LG101 web page, configure the FMA clock and broadcast rate and update the FMA-LG101 configuration as described below.

FMA-LG101 Configuration (Cont.)

(Continued from previous page)

Set the Date and Time Configuration for the FMA-LG101

a. Complete the following fields, as required:

   • Month: Click the down arrow at the right of the field, and select the appropriate month from the drop-down list of options.

   • Day of Month (1–31); Year (2009–2047); Hour (0–23); and Minutes (0–59): Type the appropriate values in these fields. Note that the Hour field is based on a 24-hour clock.

   • DST Enable?: Click the down arrow at the right of the field, and select the appropriate option. "Yes" (default) enables or "No" disables automatic US Daylight Saving Time observance.

b. The Rate (0 or 60–999) field determines the interval, in seconds, at which to repeat the broadcast of the date & time, the FTG Channel Map, and the FTG Installer Menu profile(s). (FMA-LG101 factory default broadcast rate is 300 seconds.) Type the number of seconds (60–999) for the broadcast rate ("0" disables data broadcasting). Note that an error message will be displayed if the broadcast rate is set to any value from 1 to 59.

c. Click the **Update Date & Time** button.

⚠ **Note: After you click the Update Date & Time button, the screen will begin to refresh/ reload. Wait for the screen to completely reload before proceeding. To refresh the date and time to the current settings, click the green Refresh button to the right of the Update Date & Time button. Do NOT use the web browser Refresh button!**

Update the FMA-LG101 Channel and TV Configuration (with an FMA Configuration File)

a. Click the **Browse** button at the right of the Config File to Update field.

b. Browse to the desired FMA Configuration (.fma) file, select the file, and click the **Open** button.

c. Confirm that the path shown in the Config File To Update field is correct for the FMA Configuration file selected, and then click the **Update Config** button to update the configuration on the FMA-LG101.

   Note: After you click the Update Config button, the screen will begin to refresh/reload. This process may take a few seconds to completely transfer and save the file to memory. Wait for the screen to completely reload before proceeding.

3. Connect the FMA-LG101 to the RF distribution system as described below.

Connect the FMA-LG101 to the RF Distribution System

⚠ **Note: The RF distribution system must support 50.5 MHz RF transmission (downstream) from the head end to the FTG device(s).**

1. Connect the FMA-LG101 RF OUT to the RF distribution system.

   Note: The 50 MHz low pass filter (6MLP-50) provided should be installed to protect RF channels 2 and 3 from any potential RF interference produced by the FMA-LG101.

2. Verify that the 50.5 MHz RF signal level is between +3 dBmV and +10 dBmV at the FTG device(s). Note that additional equipment may be required to adjust the signal level. If the signal level is not within the recommended range, communications will be negatively affected, resulting in a partial or missing channel lineup and/or Installer Menu settings data.

The following table provides information on general troubleshooting symptoms and solutions related to the FMA-LG101.

For many of the troubleshooting steps, you will need to know the IP address of the FMA-LG101. Refer to "FMA-LG101 Ethernet Connection/Network Options" on page 12 for further information.

Symptom	Solution
The OSD/call letters do not display in the guest room(s).	If the issue affects all rooms, verify that the FMA Configuration (.fma) file uploaded to the FMA-LG101 was properly configured.
	If the issue is restricted to a single room:
	• Wait five minutes (default broadcast rate) for the FMA-LG101 to re-broadcast the channel lineup, and then re-test.
	• Check the coaxial connections and RF signal levels in the room.
	• Replace the FTG device or TV, if possible.
When the TV is turned ON, it is in split screen mode.	Always configure Installer Menu item 004 STRT CHANNEL (Start Channel) to a channel or Installer Menu item 046 STRT AUX SRCE (Start Aux Source) to a non-RJP Aux input.
	If an LG TV is accompanied by a Remote Jack Pack (RJP) system, Installer Menu item 093 RJP AVAILABLE is NOT set to 0 (zero). If the Start Channel is set to 0 (zero), which indicates to reference the Start Aux Source, and the Start Aux Source is set to an RJP Aux, when the TV is turned ON, it will be in split screen mode.
The date/time of the TV(s) is incorrect.	• Verify that the FMA-LG101 is connected to a steady and reliable power source. The FMA-LG101 will retain the current date and time settings for at least nine hours after losing power. Beyond nine hours of power loss, the date and time settings may need to be reconfigured.
	• Verify that the DST (US Daylight Saving Time) option is set appropriately.
	• Set the FMA clock (date and time settings) using the FTG Device Configuration Application or the FMA-LG101 software web page.
The PC cannot access the FMA-LG101 via the Ethernet interface.	• Verify that the PC's network settings are properly set for a direct connection or a network connection.
	• Verify that the appropriate Ethernet cable is connected properly and in good condition.
	• If the configuring PC is running Windows Home Premium software, and you intend to use the FTG Device Configuration Application to communicate with and configure the FMA-LG101, you must run the FTG software as an administrative user.
	• If the configuring PC is running Windows Vista or Windows 7, resetting the power on the FMA-LG101 while the PC is connected may cause a network conflict issue. To correct a network conflict, disable and then enable the network interface on the PC, or disconnect and reconnect network cables.
	• Ping the FMA-LG101 IP address ("10.20.1.120" for direct connection or consult network administrator for network connection). If the FMA-LG101 does not respond, the FMA-LG101 will need to be replaced.

Specifications

Dimensions

Height: 1.75 inches (44.45 mm)
Width: 7.25 inches (184.15 mm) (19 inches with rack mount brackets attached)
Depth: 4.5 inches (114.3 mm)
Weight: 2 pounds (0.91 kgrms) (with mounting brackets)

Environmental Storage Conditions

Temperature: -20° to 70° Celsius
                    -4° to 158° Fahrenheit
Humidity: 20% to 80%

Environmental Operating Conditions

Temperature: 0° to 45° Celsius
                    32° to 113° Fahrenheit
Humidity: 10% to 90% RH, non-condensing

Inputs/Outputs

Rear

DC 12V: 2.1 mm jack
RF IN: Type "F" female
RF OUT: Type "F" female

Front

Ethernet Port: 10BaseT, RJ-45

RF Output

Modulation: FSK
Data Rate: 62.5 Kbps
Frequency for Data Low: 49.5 MHz +/- 50 kHz
Frequency for Data High: 50.5 MHz +/- 50 kHz
Impedance: 75 ohms +/- 5%
RF Output Level: 50 dBmV +/- 2 dBmV

Power Supply

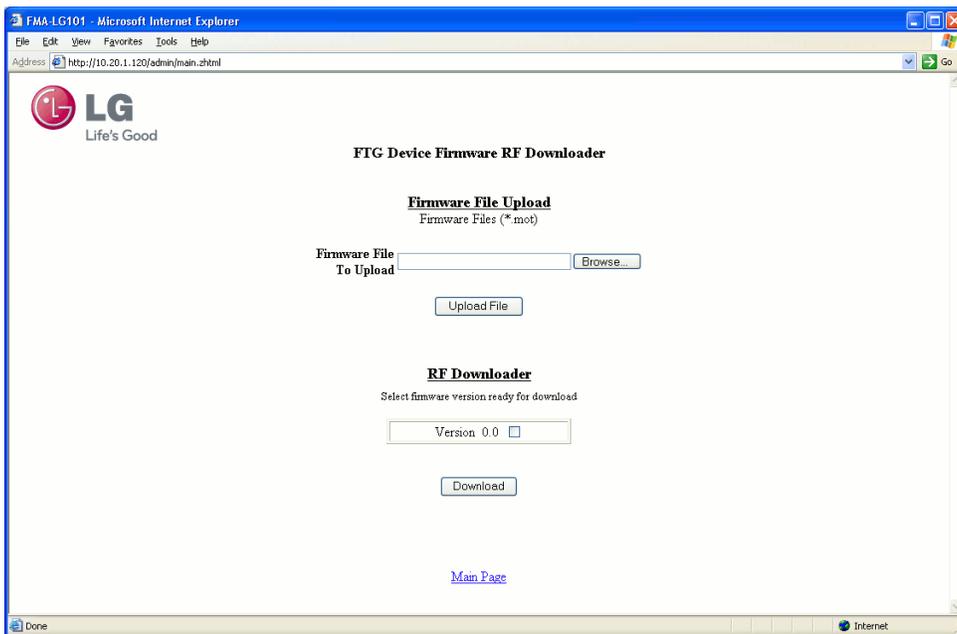Input: 100 to 240 VAC @ 50 to 60 Hz
Output: +12V DC @ 1.25 Amps

Note: Design and specifications subject to change without prior notice.

The FMA-LG101 software web page provides a utility to download FTG device (EBL, LMT7Z9, or LMT7Z7) firmware via the RF distribution system. Use this procedure to update the firmware on the FTG device(s).

Note: TVs with FTG device(s) will not be operable during firmware download and update (approximately five minutes).

1. Launch a web browser, and type ***http://ipaddress*** in the browser's address bar, where *ipaddress* is either the network IP address assigned by a DHCP server to the FMA-LG101 or the FMA-LG101's default IP address (see "FMA-LG101 Configuration Prerequisites" information on page 13). Then, press **Enter**.

2. Click the **FTG Device Firmware RF Downloader** link at the bottom of the FMA-LG101 software web main page.

3. The system will display a login pop-up window. In the User Name field, type **lg**; in the Password field, type **service**. Then, click **OK** to continue to the FTG Device Firmware RF Downloader web page.
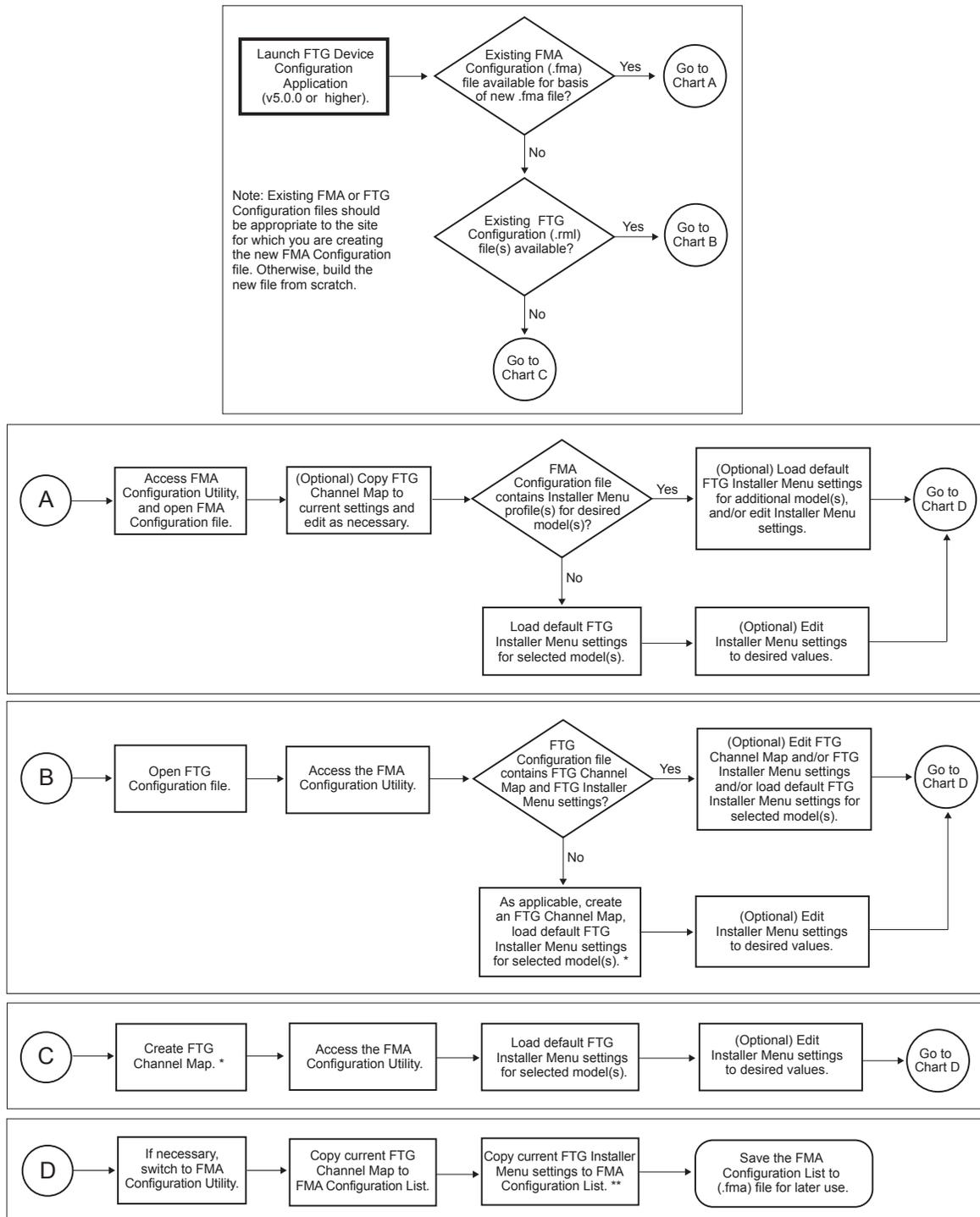

4. Click the **Browse** button at the right of the Firmware File To Upload field in the Firmware File Upload section of the screen.

5. Browse to the desired Firmware (.mot) file, select the file, and click the **Open** button.

6. Confirm that the path shown in the **Firmware File To Upload** field is correct for the Firmware file selected, and then click the **Upload File** button to upload the file to the FMA-LG101.

   Note: After you click the Upload File button, the screen will begin to refresh/reload. The upload process may take a few seconds. Wait for the screen to completely reload before proceeding.

7. In the RF Downloader section of the screen, the Version indicator should now show the firmware version number that corresponds to the Firmware file you just uploaded. Click the check box at the right of the Version number to confirm its accuracy, and then click the **Download** button.

The broadcast of firmware completes in approximately two minutes, and the FTG device will require an additional two minutes to update firmware, after which the TV will become operable again.

Flowchart: Creating an FMA Configuration File

This flowchart provides a visual overview of the steps to create an FMA Configuration (.fma) file. Refer to the *Free-To-Guest (FTG) Device Configuration Application User Guide* for further procedural information.

* Up to 141 logical channels can be defined in the channel lineup to be broadcast by the FMA-LG101.

** (Optional) Repeat this step to add FTG Installer Menu settings for additional models.

Document Revision History

Date	Description
April 2010	Revision A: New document
April 2012	Revision B: FTG Device Configuration Application and software web page updates

Documentation is available online at: **www.LGsolutions.com/products**. From the Products page, select **TVs, Systems & Solutions**, then **Head End Systems**, then **FMA Series** (click Show [+] to view the list of products), then **FMA-LG101**. Click the **Literature & Downloads** tab at the bottom of the FMA-LG101 page, and select the required document(s) from the Downloads list.

Notes

LG FMA-LG101 Warranty

Broadcast Products Welcome to the LG family! We believe that you will be pleased with your new FMA-LG101. Please read this warranty carefully, it is a "LIMITED WARRANTY" as defined under Federal Law. This warranty gives you specific legal rights, and you may also have other rights that vary from state-to-state within the U.S.A.

LG's RESPONSIBILITY

Warranty Term One year parts and labor from date of purchase or delivery date.

Parts New or remanufactured replacements for factory-defective parts may be used. Such replacement parts are warranted for the remaining portion of the original warranty period.

Warranty Service Warranty service is provided at LG. Customer pays for shipping charges to LG; LG pays for return shipping charges to return FMA-LG101 to customer. Call 1-888-865-3026 for further information.

Not Covered This warranty covers manufacturing defects and does not cover installation, adjustment of customer controls, installation or repair of antenna systems, cable converters or cable company-supplied equipment; it also does not cover damage due to misuse, abuse, negligence, acts of God or other causes beyond the control of LG. Any alteration of the product after manufacture voids this warranty in its entirety.

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND LG SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, OR INCIDENTAL DAMAGES OF ANY KIND, INCLUDING LOST REVENUES OR PROFITS IN CONNECTION WITH THIS PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

OWNER'S RESPONSIBILITY

Effective Warranty Date Warranty begins on the date of delivery of the FMA-LG101.
For your convenience, keep the dealer's dated bill of sale or delivery ticket as evidence of the purchase date.

Installation Guide Read the Installation & Configuration Guide carefully so that you will understand the operation of the FMA-LG101 and how to configure it.

Antenna Reception problems caused by inadequate antenna or faulty antenna connections are the owner's responsibility.

Warranty Service **For warranty service information,** call **1-888-865-3026**. Parts and service labor that are LG's responsibility (see above) will be provided without charge. Other service is at the owner's expense. If you have any problem in obtaining satisfactory warranty service, call **1-888-865-3026**.
You must provide the model number, serial number and date of purchase or date of original installation.

For Customer Support/Service, please call:

1-888-865-3026

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