

LG FMA-LG102 Warranty



Broadcast Products Welcome to the LG family! We believe that you will be pleased with your new FMA-LG102. 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 the FMA-LG102 to customer. Call 1-888-865-3026 for further information.
Not Covered	<p>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.</p> <p>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.</p>

OWNER'S RESPONSIBILITY

Effective Warranty Date	Warranty begins on the date of delivery of the FMA-LG102 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-LG102 and how to adjust the settings.
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

www.lg.com/us/commercial


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FMA-LG102


Installation & Configuration Quick Reference | Warranty

The latest product information and documentation is available online at:
www.lg.com/us/commercial







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.

WARNING:
This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. ***Wash hands after handling.***

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, including safety instructions, is: SONIFI Solutions, Inc.
3900 West Innovation Street, Sioux Falls, SD 57107, USA • Phone: 1-605-988-1000

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


Dimensions
Height: 1.75 inches (44.45 mm)
Width: 19 inches (482.6 mm)
Depth: 6 inches (152.4 mm)
Weight: 1.25 pounds (0.57 kg)

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
DC 9V: 2.5 mm jack
RF IN*: Type “F” female
RF OUT: Type “F” female
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: +9V DC @ 1.25 Amps 

* RF IN connector should remain terminated with attached 75 ohm terminator.

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

Once you have completed the required steps to set the PC's network connections, you can update the FMA-LG102 using either the FTG Device Configuration Application software (v5.5.0 or later) or the FMA-LG102 software web page.

This section provides an overview the FMA configuration requirements. For detailed directions, refer to the extended FMA-LG102 Installation & Configuration Guide.

FMA-LG102 Configuration Prerequisites

- The FMA-LG102 must be installed and set up in the equipment rack prior to configuration (see FMA-LG102 installation and cabling information on previous pages).
- You will need to know the IP address of the FMA-LG102 (see "FMA-LG102 Ethernet Connection/Network Options" on previous page).

Network Ethernet connection: Consult the network administrator to obtain the IP address that has been assigned by the DHCP server to the FMA-LG102.

Direct Ethernet connection: The FMA-LG102 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-LG102.

FMA-LG102 Configuration Overview (FTG Device Configuration Application)

1. Launch the FTG Device Configuration Application (v5.5.0 or later), and access the FMA Configuration Utility.*
2. Set the FMA Utility's IP address.
3. "Write" the appropriate FMA Configuration file to the FMA-LG102.
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-LG102 to the RF distribution system as described on page 8.

FMA-LG102 Configuration Overview (FMA-LG102 Software Web Page)

1. Launch a web browser, type the appropriate IP address in the browser's address bar, and press **Enter**.
2. Set the date and time parameters and the broadcast rate, and then update the FMA-LG102 with an FMA Configuration file.
3. Connect the FMA-LG102 to the RF distribution system as described on page 8.

* 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-LG102.

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.
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.

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. Unplug this product before cleaning. Do not use liquid cleaners or aerosol cleaners.


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 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.

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Do not use this product near water or moisture or in an area, such as a basement, that might become flooded. Do not expose the product to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc., on or over the apparatus.

21. Outdoor Antenna Grounding

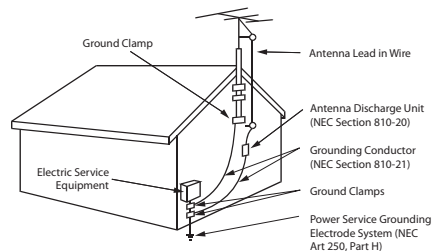
If an outside antenna or cable system is connected to the product, follow the precautions below.

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 as death or serious injury can occur.

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. 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



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 power outlet, and refer servicing to qualified service personnel under the following conditions:

- If the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- 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.
- If the product has been dropped or the cabinet has been damaged.
- 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 that have the same characteristics as the original parts. 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.

FMA-LG102 Ethernet Connection/Network Options

(see also Ethernet connection information on page 8, as necessary)

- The FMA-LG102 can operate as a DHCP client if a network DHCP server assigns it a valid IP address for that network. Otherwise, the FMA-LG102 uses its factory default IP address. In order to operate as a DHCP client, the FMA-LG102 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-LG102 is connected directly to a PC via an Ethernet crossover cable, the FMA-LG102 will default to its factory IP address and subnet mask of 10.20.1.120 / 255.255.248.0. When the FMA-LG102 is using its default IP address, the configuring PC must be on the same subnet as the FMA-LG102. 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-LG102 is connected to the network (i.e., the FMA-LG102 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-LG102.

If you are using a direct Ethernet connection between the FMA-LG102 and the configuring PC, you must complete the following procedure to set the PC network connections before you proceed to configure the FMA-LG102.

- On the PC, navigate to the Local Area Connection Properties window, as applicable, per your operating system, e.g., Windows XP, Windows 7, etc. Refer to IT personnel or Windows documentation for further information.
- In the Local Area Connection Properties window, double-click on **Internet Protocol (TCP/IP)**.
- 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**.
- Click **OK** to close the Internet Protocol Properties window. (You can also close any additional network connections windows at this time.)


Complete the following steps to connect and configure the FMA. See also FMA-LG102 Front View diagram on previous page.

1. Use the appropriate Ethernet cable to connect the ETHERNET port on the FMA-LG102 front panel to either the institution's network or the configuring PC, as applicable.
 - Network Ethernet connection: Connect an Ethernet straight-through cable (not supplied) from the network. The FMA-LG102 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.

See "FMA-LG102 Ethernet Connection/Network Options" on the following page for further information.
2. Connect the FMA-LG102 power supply to the DC 9V connector on the FMA-LG102 front panel. Then, plug the AC adapter into a powered AC line receptacle.
3. Wait at least 30 seconds for the FMA-LG102 to power ON and obtain network settings from a DHCP server or load its default network settings.
4. Using the FMA Configuration Utility in the FTG Device Configuration Application or the FMA software web page, complete the FMA configuration. See "FMA-LG102 Configuration" on page 10 for further information.

Note: If you will use the FMA software web page for configuration purposes, make sure you have an appropriate FMA Configuration (.fma) file with the FTG Channel Map and FTG Installer Menu settings available for uploading.

5. Connect the FMA-LG102 to the RF distribution system, as follows:

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

- Connect a coaxial RF cable from RF OUT on the FMA-LG102 front panel to the RF distribution system.

Note: A 50 MHz low pass filter built in to the FMA protects RF channels 2 and 3 from any potential RF interference produced by the 50.5 MHz RF signal that is being generated by the FMA-LG102.

- 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 Free-To-Guest (FTG) Management Appliance (FMA-LG102) 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-LG102 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-LG102 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-LG102'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 v5.5.0 or later is installed (see the extended FMA-LG102 Installation & Configuration Guide for further information). The FTG Device Configuration Application's FMA Configuration Utility also enables you to set the FMA's date and time and broadcast rate.

FMA-LG102 Date and Time

- When the FMA-LG102 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-LG102 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-LG102 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-LG102 will broadcast the date and 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.

Setup Checklist

Installation and configuration of the FMA-LG102 requires the following hardware, equipment, and software.

At the Head End

- ___ Contents of FMA-LG102 carton:
 - FMA-LG102 unit
 - Power supply (9V DC 1.25A)
 - 75 ohm coaxial terminator (FMA-LG102 RF IN port termination)
 - 7-foot Ethernet crossover cable (direct connect PC to configure FMA-LG102)
- ___ Configuration of the FMA-LG102 requires a PC with an Ethernet port and the FTG Device Configuration Application v5.5.0 or later installed. The FTG software is available online at: www.lg.com/us/commercial/display-solutions/ftg.

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, as necessary, for use with an LMT7Z7 MPI card. You can then use the Firmware Downloader Utility available from the FMA-LG102 software web page to upload the latest firmware to the FTG device(s). Refer to the extended FMA-LG102 Installation & Configuration Guide for detailed instructions.

Note: An HCS1410 FTG card is not compatible with the FMA-LG102.

Refer to the **FMA-LG102 Installation & Configuration Guide** for further installation and configuration information.




Product documentation is available online at: www.lg.com/us/commercial.

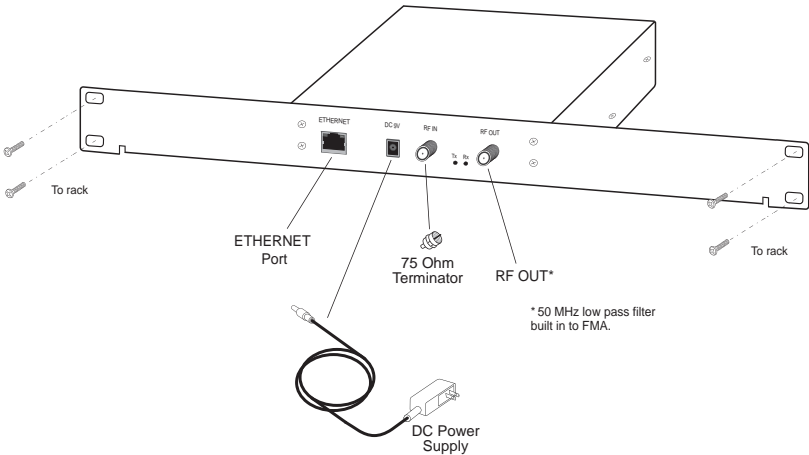
Note: Design and specifications subject to change without prior notice.

FMA-LG102 Front Panel Overview / Rack Installation

Refer to the following diagram, and install the FMA-LG102 in the equipment rack as described below.

FMA-LG102 Front View

-  **Access Location**
The FMA-LG102 should be installed in a restricted access location.
-  **AC Power**
The AC outlet providing power must be installed near the FMA-LG102 and be easily accessible.
-  **RF IN Connector**
Not applicable. This connector should remain terminated with the attached 75 ohm terminator.



FMA-LG102 Front Panel LEDs

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.

Typical Rack Installation

Complete the following steps to install the FMA-LG102 in the equipment rack.

1. To avoid causing electrostatic (ESD) damage to the FMA-LG102 during installation, attach an antistatic wrist strap to a properly grounded rack/object and put it on.
2. Carefully slide the FMA-LG102 into a standard 19-inch equipment rack, and then use all four mounting screws to secure the FMA to the rack.