Crestron **MLX-2**
InfiNET EX™ LCD Handheld Remote

Operations & Installation Guide

CRESTRON®

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Preliminary

Contents

InfiNET EX™ LCD Handheld Remote: MLX-2

Introduction

Features and Functions

- Ergonomic handheld design

- Elegant high-gloss finish

- infiNET EX™ 2-way RF wireless technology

- 57 programmable buttons with blue EL backlight

- Backlit LCD screen w/dynamic text display

- Operates on four AAA alkaline batteries

The MLX-2 is a state-of-the-art handheld remote featuring Crestron® infiNET EX™ 2-way RF wireless communications. Its backlit LCD screen is capable of displaying dynamic text with true feedback capability, supporting scrolling menus of channels, media titles, and numerous other commands. An array of 57 individual pushbuttons provides intuitive, tactile control over everything from home theater to whole-house automation as part of a complete Crestron system. Its compact size and ergonomic design offer easy one-handed operation, while infiNET EX technology affords reliable 2-way wireless operation.

The large, easy-to-read LCD screen supports the creation of numerous pages of custom menu functions, with electroluminescent backlighting for optimal visibility in a range of lighting environments. Bidirectional communication with the control system and other devices enables menu items to be updated dynamically, supporting anything from AV sources and TV channels, to lighting and climate control presets, to artist names and song titles. Each menu item is executable simply using a set of ten corresponding pushbuttons. In addition to menu commands, the LCD can also display the time and date, lighting levels, room temperature, and other real-time information synched to the central control system.

An optimized button layout enables easy access to every system function, with 44 of the 57 programmable buttons labeled for power, volume, mute, channel selection,

onscreen menu navigation, transport control, and alphanumeric entry. Electroluminescent blue button backlighting creates an alluring appearance while facilitating control in a darkened room.

Specifications

Specifications for the MLX-2 are listed in the following table.

MLX-2 Specifications

SPECIFICATION	DETAILS
LCD Display	Monochrome 1.5 in LCD screen (102 x120 Resolution); Displays static and dynamic text in 5 lines plus header and footer (7 lines total) with horizontal and vertical scrolling, dual-state text, and gauge/bargraph objects support
Backlight	
LCD Screen	White EL
Buttons	Blue EL
RF Wireless	
RF Transceiver	InfiNET EX™ 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.6 MHz), IEEE 802.15.4 compliant
Range (typical)	100 feet indoor, subject to site-specific conditions
Gateway	Requires a CEN-RFGW-EX infiNET EX Gateway (sold separately)
Battery Power	Four (4) disposable 1.5V AAA alkaline batteries (included)
Default RFID	03
Minimum 2-Series Control System Update File[1, 2]	TBD
Environmental	
Temperature	32 to 104° F (0 to 40° C)
Humidity	10% to 90% RH (non-condensing)
Enclosure	Injection-molded plastic, high-gloss black finish
Dimensions	
Height	9.18 in (23.3 cm)
Width	2.56 in (6.5 cm)
Depth	1.11 in (2.8 cm)
Weight	6 oz (168 gm) without batteries
Available Accessories	
CEN-RFGW-EX	infiNET EX™ Gateway

1. The latest software versions can be obtained from the Crestron website. Refer to the NOTE following these footnotes.
2. Crestron 2-Series control systems include the AV2 and PRO2. Consult the latest Crestron Product Catalog for a complete list of 2-Series control systems.
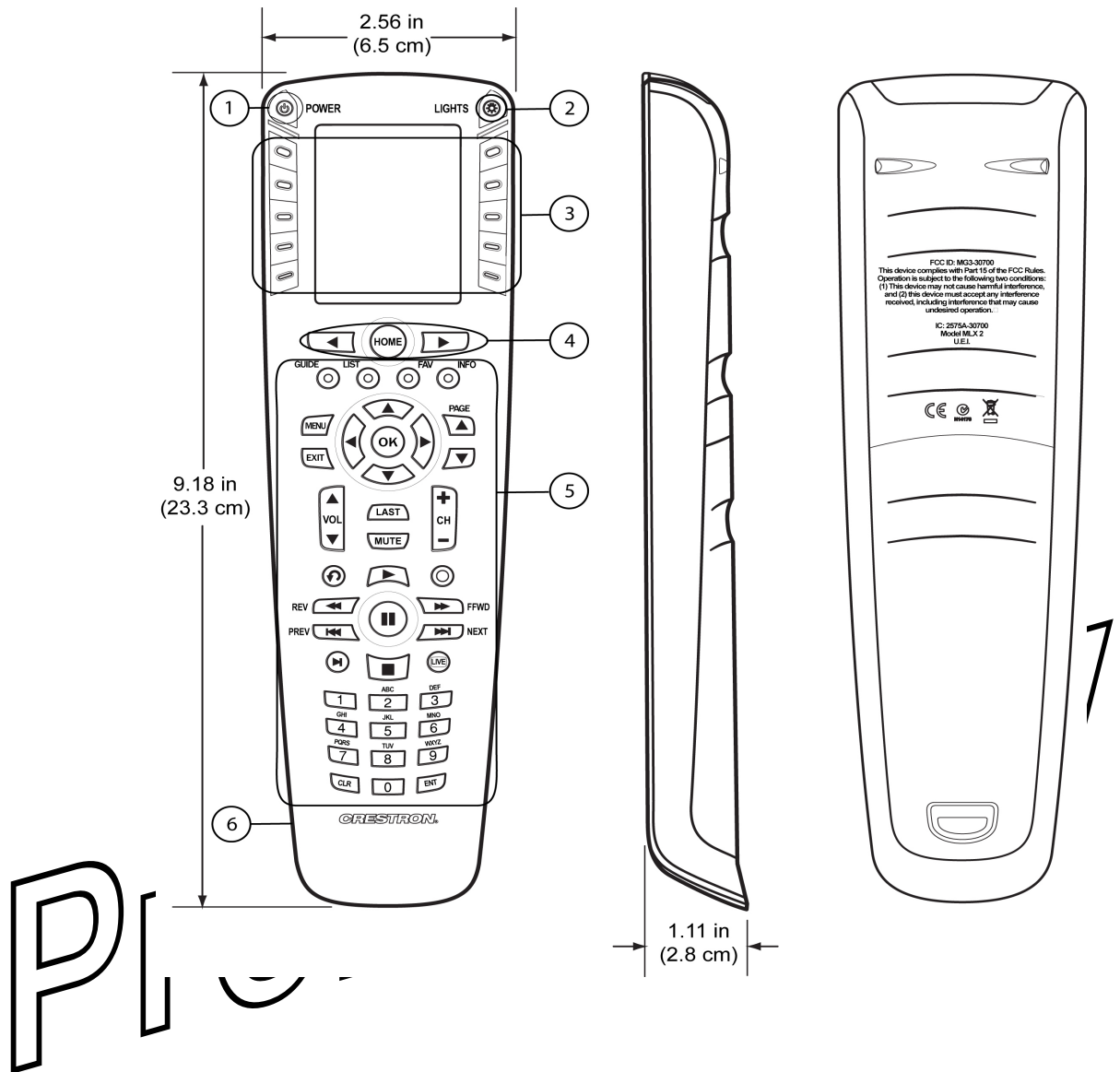
Physical Description

This section provides information on the connections, controls, and indicators available on your MLX-2.

MLX-2 Physical View

MLX-2 Overall Dimensions

MLX-2 Controls, Connectors, & Indicators

#	CONNECTORS, CONTROLS, & INDICATORS	DESCRIPTION
1	POWER	(1) programmable button for power functions.
2	LIGHTS	(1) programmable button for lighting functions.
3	Menu Buttons	(10) programmable buttons to actuate LCD menu commands.
4	◀, HOME, ▶	(3) programmable buttons to select LCD menu pages
5	Device Control	(42) programmable function buttons labeled for volume, mute, channel, onscreen menu navigation, transport control, and alphanumeric entry.
6	USB Port	(1) USB port used for uploading programs, projects, and firmware, using supplied USB cable.

Industry Compliance

As of the date of manufacture, the MLX-2 has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.

$$CE \quad C$$

NOTE: This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, 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 or on, the user should:

- Relocate or reorient the TV or radio antenna

- Increase the separation between the device and the 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.

In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's right to operate this equipment.

Any changes or modifications to the equipment without Crestron's express consent will void the user's right to operate this equipment.

FCC ID: MG3-30700
Compliance with IC Rules and Regulations
IC: 2575A-30700
Model: MLX-2

Object is subject to the following two conditions:

1. This device may not cause interference, and

2. This device must accept any interference, including interference that may cause undesired operation of the device.

Setup

Battery Installation

Refer to the following illustration and install the four supplied AAA batteries.

Battery Installation

Install Four
AAA Batteries

Observe polarity
indicated in case.

Lift up on tab
to remove cover
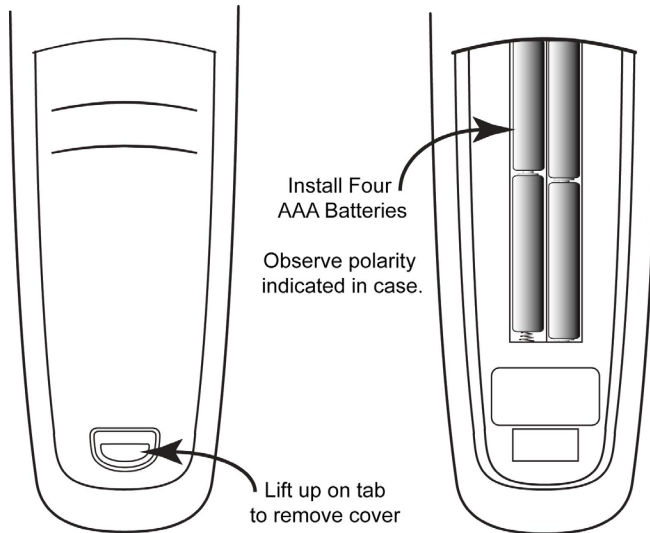
Identity Code

The RF ID of the MLX-2 has been factory set to **03**. The RF IDs of multiple MLX-2 devices in the same system must be unique. RF IDs can be changed from the "Setup Mode" on page 7, or from a personal computer (PC) via the Crestron Toolbox. When setting the RF ID, consider the following:

- The RF ID of each unit must match an ID code specified in the SIMPL Windows program.

- Each network device must have a unique RF ID.

For more details, refer to the Crestron Toolbox help file.

Configuring the MLX-2

Startup Screen

> Welcome to
> Crestron's
> MLX-2 remote.
>
> Please press
> the > key to
> enter the remote
> setup mode.
>
> PAGE 1/1

When power is first applied to the MLX-2, the startup screen, shown to the left, is displayed. From this screen, press the ▶ key to enter the remote setup mode.

NOTE: If the unit has already been programmed, enter setup mode by pressing the CLR (clear) and ENT (enter) buttons simultaneously for about three seconds.

The MLX-2 is shipped from the factory with firmware already installed. Prior to normal operation, it is necessary to configure the unit using the series of screens provided in the setup mode, which begins on the next page.

The infiNET EX™ gateway, CEN-RFGW-EX, is required for the MLX-2 to communicate with a Crestron infiNET-EX network. The gateway must be installed and operational before beginning the remote setup mode procedures. Refer to the Operations & Installation Guide, DOC. 6706, for details.
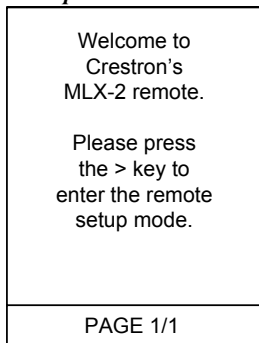
"PROGRAM DEVICE" Screen

PROGRAM DEVICE
BASIC SETUP
VIEW TSID
SET RFID
RF CHANNEL
ACQUIRE
PAGE 1/1

Setup Mode

In Setup Mode, use the keys on either side of the function name displayed on the *PROGRAM DEVICE* screen to select that function.

The following paragraphs describe each of the setup options in the order listed in the menus.

NOTE: Before beginning Setup Mode procedures, verify that the CEN-RFGW-EX gateway is connected to the infiNET-EX network, and that the network is operational.

To begin Setup Mode, press one of the keys on either side of the **ACQUIRE** option. The screen displays navigation instructions that apply throughout the setup process.

ACQUIRE Function

This function permits you to add the MLX-2 to your infiNET-EX network. From the basic navigation screen, shown to the left, press ▶ to enter the acquire function, and press ▶ again to start the process to add the MLX-2 to the network.

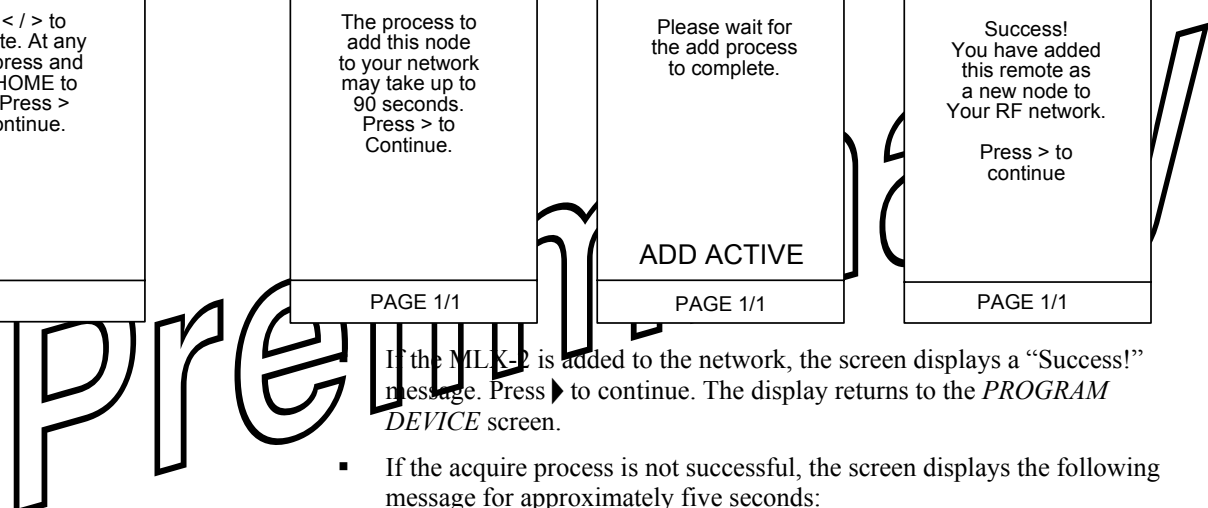*Basic Navigation Screen*

Use < / > to navigate. At any time, press and hold HOME to exit. Press > to continue.
PAGE 1/1

The process to add this node to your network may take up to 90 seconds. Press > to Continue.
PAGE 1/1

Please wait for the add process to complete.
ADD ACTIVE
PAGE 1/1

Success! You have added this remote as a new node to Your RF network. Press > to continue
PAGE 1/1

If the MLX-2 is added to the network, the screen displays a "Success!" message. Press ▶ to continue. The display returns to the *PROGRAM DEVICE* screen.

- If the acquire process is not successful, the screen displays the following message for approximately five seconds:
  "The node addition failed. Try again or reference the manual for more assistance. Press ▶ to continue."
- If you press ▶ in time, the display returns to the *PROGRAM DEVICE* screen. Otherwise, the display returns to the startup screen.

"BASIC SETUP" Screen

BASIC SETUP
VERSION INFO
CONTRAST
DISPLAY T/O
LIGHT T/O
PAGE 1/1

BASIC SETUP Functions

From the *PROGRAM DEVICE* screen, select BASIC SETUP. The *BASIC SETUP* screen, shown to the left, allows you to select and review the version information of the software and firmware programs currently loaded on the MLX-2 remote, and to review/adjust the contrast, display timeout, and backlight timeout settings.

Version Info

From the *BASIC SETUP* screen, select VERSION INFO. The **Version Info** screen displays the version numbers of the software and firmware programs currently loaded on the MLX-2 remote.
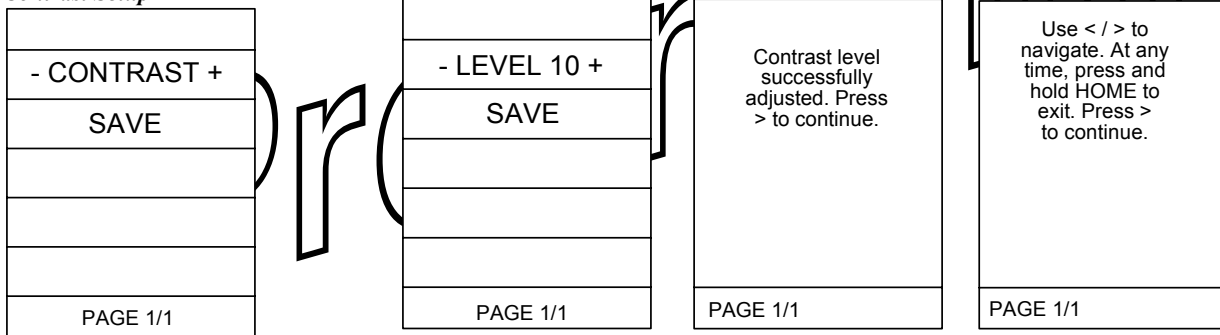
Version Info
Bootloader Ver: 3.0.0.3 Application Ver: 3.1.1.11 RF Firmware Ver: 3201 Setup File Ver: 0.0.2.1 Press > to continue.
PAGE 1/1

Use < / > to navigate. At any time, press and hold HOME to exit. Press > to continue.
PAGE 1/1
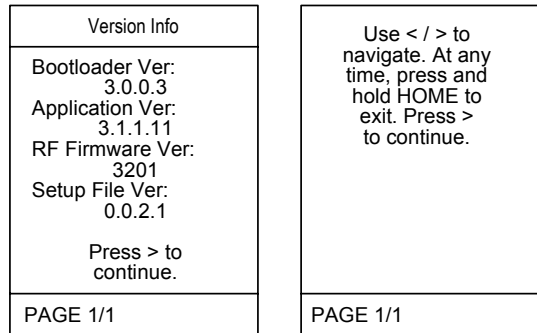
Follow the instruction to press the ▶ key to continue, and from the general navigation screen, press the ▶ key again. The display returns to the *BASIC SETUP* screen, permitting you to set the screen contrast, display timeout, and backlight timeout levels, described in the following paragraphs.

Screen Contrast

From the *BASIC SETUP* screen, press one of the keys on either side of the **CONTRAST** menu option to select the Contrast Setup function.

Contrast Setup

- CONTRAST +
SAVE
PAGE 1/1

- LEVEL 10 +
SAVE
PAGE 1/1

Contrast level successfully adjusted. Press > to continue.
PAGE 1/1

Use < / > to navigate. At any time, press and hold HOME to exit. Press > to continue.
PAGE 1/1

Press one of the keys on either side of the **– CONTRAST+** display to show the current setting value. Use the side keys to adjust the contrast as desired. The range is from **MIN Level +** (0), to **-MAX Level** (12) in single digit steps. When the desired setting is reached, press a key on either side of the **SAVE** menu option to accept the setting. The screen display confirms the adjustment. Press ▶ to continue. The display returns to the *BASIC SETUP* screen.

Display Timeout

From the *BASIC SETUP* screen, press one of the keys on either side of the **DISPLAY T/O** menu option to select the Display Timeout Setup function.

Display Timeout Setup

-DISPLAY T/O+
SAVE
PAGE 1/1

-   5.0   +
SAVE
PAGE 1/1

Display Timeout successfully adjusted. Press > to continue.
PAGE 1/1

Use < / > to navigate. At any time, press and hold HOME to exit. Press > to continue.
PAGE 1/1

Press one of the keys on either side of the **– DISPLAY T/O+** display to show the current setting value. Use the side keys to adjust the timeout value. The range is from **MIN Timeout +** (1 second), to **-MAX Timeout** (30 seconds) in 0.5 second steps. Default setting is 5.0 seconds. When the desired setting is reached, press a key on either side of the **SAVE** menu option to accept the setting. The screen display confirms the adjustment. Press ▶ to continue. The display returns to the *BASIC SETUP* screen.

Backlight Timeout

From the *BASIC SETUP* screen, press one of the keys on either side of the **LIGHT T/O** menu option to select the Backlight Timeout adjustment function.

Backlight Timeout Setup

- LIGHT T/O +
SAVE
PAGE 1/1

-   5.0   +
SAVE
PAGE 1/1

Backlight Timeout successfully adjusted. Press > to continue.
PAGE 1/1

Press one of the keys on either side of the **– LIGHT T/O+** display to show the current setting value. Use the side keys to adjust the timeout value. The range is from **Light Off +** (0.0 seconds), to **-MAX Timeout** (30 seconds) in 0.5 second steps. Default setting is 5.0 seconds. When the desired setting is reached, press a key on either side of the **SAVE** menu option to accept the setting. The screen display confirms the adjustment. Press ▶ to continue. The display returns to the *BASIC SETUP* screen.

Once you are finished with the basic setup functions, press the HOME key to return to the *PROGRAM DEVICE* screen

"VIEW TSID" Screen

VIEW TSID
0x0034ad97
Press > to continue.
PAGE 1/1

View TSID

From the *PROGRAM DEVICE* screen, press one of the keys on either side of the **VIEW TSID** option. The display shows the TSID number (32-bit number derived from the unit serial number).

Press ▶ to continue. The display returns to the "*PROGRAM DEVICE*" screen.

"NETWORK INFO" Screen

NETWORK INFO
CHANGE RFID
READ INFO
PAGE 1/1

Set RFID

From the *PROGRAM DEVICE* screen, press one of the keys on either side of the **SET RFID** option. The display shows the *NETWORK INFO* screen.

From the *NETWORK INFO* screen, press one of the keys on either side of the **CHANGE RFID** menu option to display the *RFID Adjustment Screen*.

RFID Adjustment Screen

Press keys to Either side of RFID value to Adjust it. Press and hold keys for quick adjustments.
0x03 +
SAVE
PAGE 1/1

Follow the screen instructions to adjust the RFID value. The value is a two-digit hexadecimal number ranging from 0x03 to 0xfe. The default value is 03. When the desired setting is reached, press a key on either side of the **SAVE** menu option to accept the setting. The screen display confirms the adjustment. Press ▶ to continue. The display returns to the *NETWORK INFO* screen.

RFID value successfully adjusted. Press > to continue.
PAGE 1/1

READ INFO Screen

Network Info
Stored RFID: 0x03
Network ID: 0xffff
Short Address: 0xffff
RFChannel: 255
Press > to continue.
PAGE 1/1

From the *NETWORK INFO* screen, press one of the keys on either side of the **READ INFO** menu option to display the stored information. In addition to the stored RFID, the screen displays the Network ID, the Short Address, and the RF Channel.

Press ▶ to continue. The display returns to the *NETWORK INFO* screen.

Press the HOME key. The display returns to the "*PROGRAM DEVICE*" screen

RF Channel Screen

```
To block a RF
channel, press
the key to the
right of that
channel in the
following list.
To unblock a
channel, press the
key to the left.

Press > to
Continue.

PAGE 1/1
```

RF Channel

From the *PROGRAM DEVICE* screen, press one of the keys on either side of the **RF CHANNEL** option. This option allows you to block or unblock the available channels. The display, shown to the left, provides basic instructions.

Press ▶ to continue. The display provides a listing of the available channels (11-26).

Use the ◀ and ▶ keys to scroll through the list of channels. Follow the screen instructions to block/unblock a channel.

Channel Listing Screen

```
UNBLKD        BLKD

11

12

13

14
        SAVE

PAGE 1/4
```

```
You have selected
a channel already
in the desired
state, or the
maximum number of
blocked channels
has been reached.

Press > to
continue

PAGE 1/1
```

```
Success!
You have updated
the blocked RF
channels.

Press > to
Continue.

PAGE 1/1
```

If you try to block or unblock a channel that is already in that state, the above message appears. Press the ▶ key to continue. When you have finished blocking channels, press one of the buttons to either side of the **SAVE** option to accept the settings. The screen display confirms the operation. Press the ▶ key to return to the *PROGRAM DEVICE* screen.

Programming Software

Have a question or comment about Crestron software?

Answers to frequently asked questions (FAQs) can be viewed in the Online Help section of the Crestron website. To post a question or view questions you have submitted to Crestron's True Blue Support, log in at http://support.crestron.com. First-time users will need to establish a user account.

Earliest Version Software Requirements for the PC

NOTE: Crestron recommends that you use the latest software to take advantage of the most recently released features. The latest software is available from the Crestron website.

Crestron has developed an assortment of Windows®-based software tools to develop an infiNET system. For the minimum recommended software versions, visit the Version Tracker page of the Crestron website (www.crestron.com/versiontracker).

Programming with Crestron SystemBuilder

Crestron SystemBuilder is the easiest method of programming a Crestron system. For additional details, download SystemBuilder from the Crestron website and examine the extensive help file.

Programming with SIMPL Windows

NOTE: While SIMPL Windows can be used to program the MLX-2, it is recommended to use SystemBuilder for configuring a system that contains the MLX-2.

SIMPL Windows is Crestron's premier software for programming Crestron control systems. It is organized into two separate, but equally important "Managers."

*Configuration Manager*

Configuration Manager is the view where programmers "build" a Crestron control system by selecting hardware from the *Device Library*.
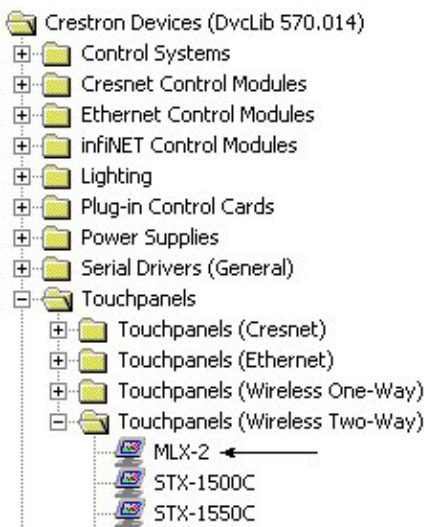
- To incorporate the MLX-2 into the system, first drag a CEN-RFGW-EX gateway icon from the Wireless Receivers | Wireless Receivers (RF) folder of the *Device Library* and drop it in the *System Views* panel. Then, drag the MLX-2 icon from the Touchpanels | Touchpanels (Wireless Two-Way) folder and drop it on the CEN-RFGW-EX icon.
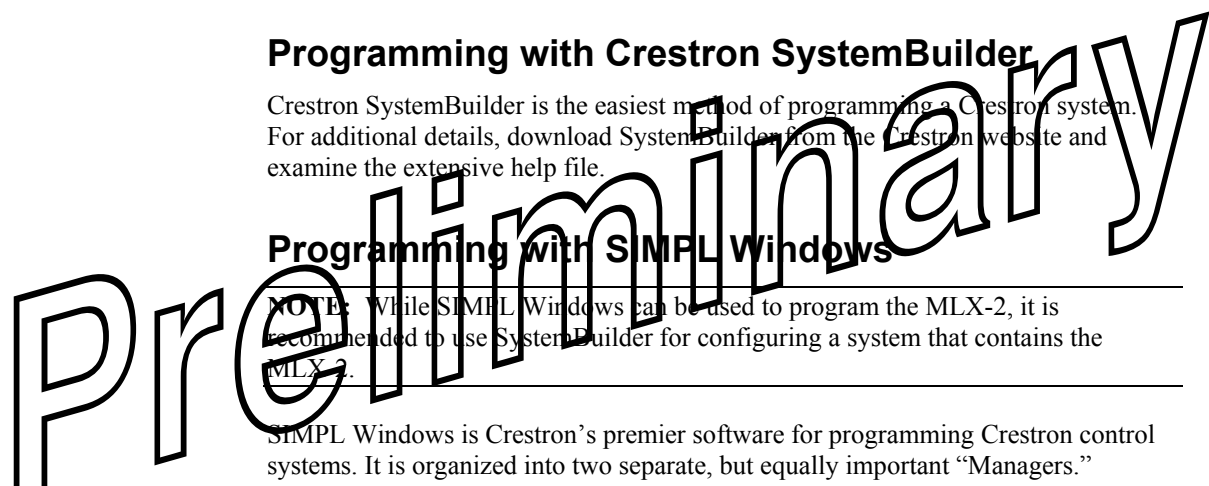
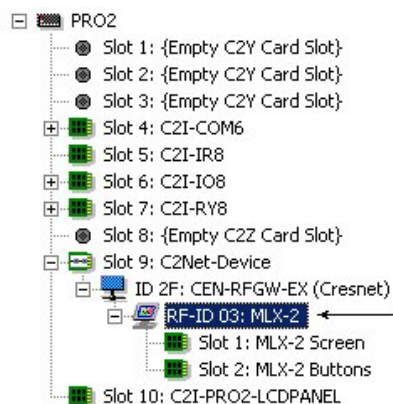*Locating the CEN-RFGW-EX in the Device Library*
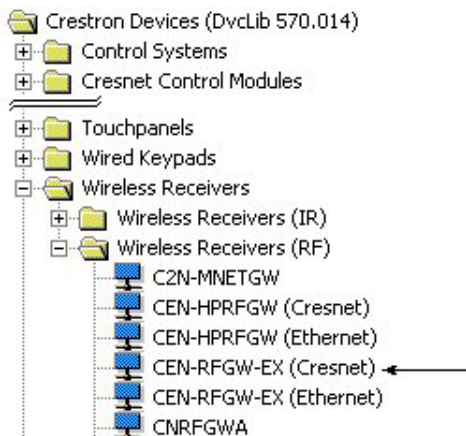

Locating the MLX-2 in the Device Library

- The system tree of the control system displays the device in the appropriate slot with a default RF ID as shown in the following illustration.

C2Net Device, Slot 9

- Additional MLX-2 devices are assigned different RF ID numbers as they are added.

- If necessary, double click a device to open the "Device Settings" window and change the RF ID, as shown in the following figure.

"MLX-2 Device Settings" Window
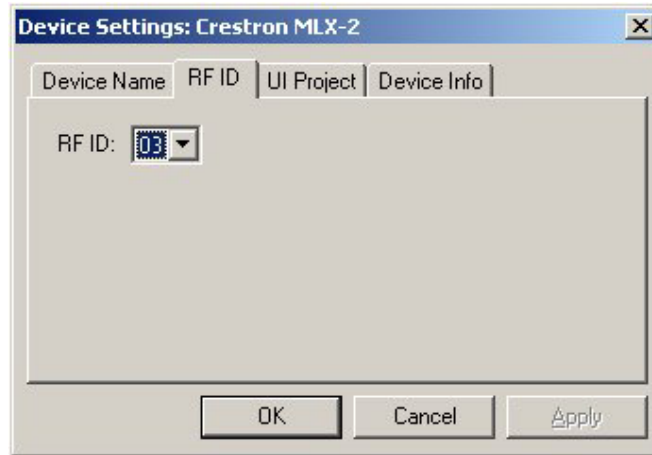
- The ID code specified in the SIMPL Windows program must match the RF-ID of each unit.

Programming Manager

Programming Manager is the view where programmers "program" a Crestron control system by assigning signals to symbols. The symbol can be viewed by double clicking on the icon or dragging it into *Detail View*. A description for each signal in the symbol is described in the SIMPL Windows help file (F1).

Programming with VisionTools Pro-e

The MLX-2 LCD screens should be created in VisionTools Pro-e to allow selection of functions and control of system devices. Note that the MLX-2 design permits the 57 buttons to be programmed individually per project or for each page in a project. The result is almost limitless functionality, with real time feedback of commands.

Example Program

An example program for the MLX-2 is available from the Crestron website (http://www.crestron.com/exampleprograms).

Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade, it is necessary to establish communication.

Establishing Communication

Use Crestron Toolbox for communicating with the MLX-2; refer to the Crestron Toolbox help file for details. There is a single method of communication: USB communication.

USB Communication
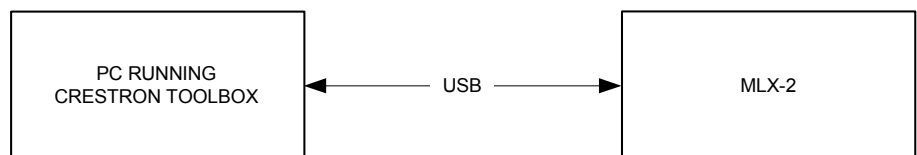
- The computer port on the MLX-2 connects to the PC via the supplied USB cable.

- Use the Address Book in Crestron Toolbox to create an entry using the expected communication protocol (USB). When multiple USB devices are connected, identify the MLX-2 by entering "MLX-2" in the *Model* textbox, the unit's serial number in the *Serial* textbox or the unit's hostname in the *Hostname* textbox. The hostname can be found in the "System Info" window in the section marked *Ethernet* however, communications must be established in order to see this information in the "System Info" window.

- Display the MLX-2's "System Info" window (click the [i] icon); communications are confirmed when the device information is displayed.

Projects and Firmware

Projects and Firmware files may be distributed from programmers to installers or from Crestron to dealers. Firmware upgrades are available from the Crestron website as new features are developed after product releases. One has the option to upload programs and projects via the programming software or to upload and upgrade via the Crestron Toolbox. For details on uploading and upgrading, refer to the VT Pro-e help file or the Crestron Toolbox help file.

VisionTools Pro-e

Upload the VT Pro-e file to the CEN-RFGW-EX gateway using VT Pro-e or Crestron Toolbox.

Firmware

Check the Crestron website to find the latest firmware. (New users may be required to register to obtain access to certain areas of the site, including the FTP site.)

Upgrade MLX-2 firmware via Crestron Toolbox.

- Establish communication with the MLX-2 and display the "System Info" window.

- Select **Functions** | **Firmware…** to upgrade the MLX-2 firmware.

Program Checks

infiNET Connections   For infiNET connections, using Crestron Toolbox, display the network device tree (**Tools | Network Device Tree**) to show all network devices connected to the control system and all infiNET devices that have been acquired by the MLX-2 (CEN-RFGW-EX). Right-click on the MLX-2 (CEN-RFGW-EX) to display actions that can be performed on the MLX-2 (CEN-RFGW-EX).

Operation

Operation of the MLX-2 is determined by the program developed for the system in which it is used.

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

MLX-2 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The MLX-2 does not function.	Batteries are not installed properly, or need replacement.	Check battery orientation. If necessary, install new batteries following the polarity marks in the battery compartment.
Display screen is difficult to read	Contrast setting is inappropriate.	Refer to "Configuring the MLX-2" starting on page 6 for instructions.
Connection to the CEN-RFGW-EX gateway cannot be established.	Interference is blocking the signal.	Move away from possible sources of interference
	Channel blocking not properly set	Refer to "Configuring the MLX-2" starting on page 6 for instructions.

Check Network Wiring

Use the Right Wire

In order to ensure optimum performance over the full range of your installation topology, Crestron Certified Wire, and only Crestron Certified Wire, may be used. Failure to do so may incur additional charges if support is required to identify performance deficiencies because of using improper wire.

Calculate Power

CAUTION: Use only Crestron power supplies for Crestron equipment. Failure to do so could cause equipment damage or void the Crestron warranty.

CAUTION: Provide sufficient power to the system. Insufficient power can lead to unpredictable results or damage to the equipment. Please use the Crestron Power Calculator to help calculate how much power is needed for the system (http://www.crestron.com/calculators).

When calculating the length of wire for a particular Cresnet run, the wire gauge and the Cresnet power usage of each network unit to be connected must be taken into consideration. Use Crestron Certified Wire only. If Cresnet units are to be daisy-chained on the run, the Cresnet power usage of each network unit to be daisy-chained must be added together to determine the Cresnet power usage of the entire chain. If the unit is a home-run from a Crestron system power supply network port, the Cresnet power usage of that unit is the Cresnet power usage of the entire run. The wire gauge and the Cresnet power usage of the run should be used in the following equation to calculate the cable length value on the equation's left side.

Cable Length Equation

$$L < \frac{40,000}{R \times P}$$

Where: L = Length of run (or chain) in feet.
R = 6 Ohms (Crestron Certified Wire: 18 AWG (0.75 MM^2))
P = Cresnet power usage of entire run (or chain).

Make sure the cable length value is less than the value calculated on the right side of the equation. For example, a Cresnet run drawing 20 watts should not have a length of

run more than 333 feet.

NOTE: All Crestron certified Cresnet wiring must consist of two twisted pairs. One twisted pair is the +24V conductor and the GND conductor, and the other twisted pair is the Y conductor and the Z conductor.

Strip and Tin Wire

When daisy-chaining Cresnet units, strip the ends of the wires carefully to avoid nicking the conductors. Twist together the ends of the wires that share a pin on the network connector, and tin the twisted connection. Apply solder only to the ends of the twisted wires. Avoid tinning too far up the wires or the end becomes brittle. Insert the tinned connection into the Cresnet connector and tighten the retaining screw. Repeat the procedure for the other three conductors.

Add Hubs

For larger networks (i.e., greater than 28 network devices), it may become necessary to add a Cresnet Hub/Repeater (CNXHUB) to maintain signal quality throughout the network. Also, for networks with lengthy cable runs, it may be necessary to add a Hub/Repeater after only 20 devices.

Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron website (http://www.crestron.com/manuals). This link will provide a list of product manuals arranged in alphabetical order by model number.

List of Related Reference Documents

DOCUMENT TITLE
CEN-RFGW-EX Operations & Installation Guide

Further Inquiries

If you cannot locate specific information or have questions after reviewing this guide, please take advantage of Crestron's award winning customer service team by calling the Crestron corporate headquarters at 1-888-CRESTRON [1-888-273-7876]. For assistance in your local time zone, refer to the Crestron website (http://www.crestron.com/) for a listing of Crestron worldwide offices.

You can also log onto the online help section of the Crestron website to ask questions about Crestron products. First-time users will need to establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the MLX-2, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange, or service without prior authorization from CRESTRON. To obtain warranty service for CRESTRON products, contact an authorized CRESTRON dealer. Only authorized CRESTRON dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number, and return address.

2. Products may be returned for credit, exchange, or service with a CRESTRON Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to CRESTRON, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. CRESTRON reserves the right in its sole and absolute discretion to charge a 15% restocking fee, plus shipping costs, on any products returned with an RMA.

3. Return freight charges following repair of items under warranty shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

CRESTRON Limited Warranty

CRESTRON ELECTRONICS, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from CRESTRON, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touchscreen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from CRESTRON or an authorized CRESTRON dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

CRESTRON shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended, or if it has been subjected to misuse, accidental damage, modification, or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced, or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall CRESTRON be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. CRESTRON is not liable for any claim made by a third party or made by the purchaser for a third party.

CRESTRON shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, CRESTRON makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

Trademark Information
All brand names, product names, and trademarks are the sole property of their respective owners. Windows is a registered trademark of Microsoft Corporation. Windows95/98/Me/XP and WindowsNT/2000 are trademarks of Microsoft Corporation.

Preliminary

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www.crestron.com change without notice.