MEDIUM DUTY DOOR OPERATOR
MODELS MJ5011U, MH5011U, MHS5011U, & MGJ5011U
INSTALLATION MANUAL

Your model may look different than the model illustrated in this manual.

2 YEAR WARRANTY
Serial # ______________________
(located on electrical box cover)
Installation Date ______________________

THIS PRODUCT IS TO BE INSTALLED AND SERVICED BY A TRAINED DOOR SYSTEMS TECHNICIAN ONLY.
Visit www.liftmaster.com to locate a professional installing dealer in your area.

OPERATOR RATING: 12 cycles per hour, 50 cycles per day; maximum

NOT FOR RESIDENTIAL USE
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SAFETY INFORMATION

⚠ WARNING

Mechanical

⚠ WARNING

Electrical

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of serious injury or death if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock. Read the warnings carefully.

IMPORTANT NOTES:
• BEFORE attempting to install, operate or maintain the operator, you must read and fully understand this manual and follow all safety instructions.
• DO NOT attempt repair or service of your commercial door and gate operator unless you are an Authorized Service Technician.

IMPORTANT INSTALLATION INSTRUCTIONS

⚠ ⚠ WARNING

To reduce the risk of SEVERE INJURY or DEATH:

1. READ AND FOLLOW ALL INSTALLATION WARNINGS AND INSTRUCTIONS.
2. Install door operator ONLY on properly balanced and lubricated door. An improperly balanced door may NOT reverse when required and could result in SEVERE INJURY or DEATH.
3. ALL repairs to cables, spring assemblies and other hardware MUST be made by a trained door systems technician BEFORE installing operator.
4. Disable ALL locks and remove ALL ropes connected to door BEFORE installing operator to avoid entanglement.
5. Install door operator 8 feet (2.44 m) or more above floor.
6. NEVER connect door operator to power source until instructed to do so.
7. NEVER wear watches, rings or loose clothing while installing or servicing operator. They could be caught in door or operator mechanisms.
8. Install control station:
   • within sight of the door.
   • out of reach of children at minimum height of 5 feet (1.5 m).
   • away from ALL moving parts of the door.
9. Install the control station far enough from the door to prevent the user from coming in contact with the door while operating the controls.
10. Install the entrapment warning placard on wall next to the control station in a prominent location that is visible from the door.
11. Place manual release/safety reverse test label in plain view on inside of door.
12. Upon completion of installation, test entrapment protection device.
13. SAVE THESE INSTRUCTIONS.
This operator includes a number of features that will provide years of reliable and safe operation.

**FEATURES:**

- **Supports both monitored and non-monitored entrapment protection devices:** Entrapment protection devices detect obstructions in the door’s path and automatically reverse a closing door.

- **Radio receiver:** A factory installed radio receiver allows remote controls, keyless entries and other remote command devices to be programmed to the operator.

- **Timer-To-Close:** The Timer-to-Close feature allows the door to automatically close after a preset time (only available with B2 wiring and a monitored entrapment protection device).

- **Wiring Types:** The functionality of the operator is based on the wiring type. The operator is shipped from the factory in standard C2 wiring type (factory default). Some wiring types will require an optional monitored entrapment protection device. Refer to Basic Programming Section for descriptions of wiring types, requirements and programming.

Intended for use on vertical or high-lift sectional doors, or rolling door products. The MHS operator is recommended for rolling sheet doors. **Not recommended for use on a standard lift sectional door.**

<table>
<thead>
<tr>
<th>ROLLING DOOR</th>
<th>MAXIMUM DOOR AREA (SQUARE FEET)</th>
<th>SECTIONAL DOOR</th>
<th>MAXIMUM DOOR AREA (SQUARE FEET)</th>
</tr>
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<tbody>
<tr>
<td>Aluminum Grilles</td>
<td>24 ga. Steel 22 ga. Steel ---</td>
<td>---</td>
<td>24 ga. Steel Insulated 16 ga. Steel Insulated</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>20 ga. Steel</td>
<td>---</td>
</tr>
<tr>
<td>Aluminum Doors</td>
<td>---</td>
<td>24 ga. Steel 20 ga. Steel ---</td>
<td>---</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>16 ga. Steel ---</td>
</tr>
<tr>
<td>---</td>
<td>24 ga. Steel Insulated</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Fiberglass</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>---</td>
<td>24 ga. Steel Insulated</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>20 ga. Steel Insulated 16 ga. Steel Insulated</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** On steel insulated doors, a 24 ga. Back panel is assumed.
OPERATOR SPECIFICATIONS

WEIGHTS AND DIMENSIONS

MODELS MH, MJ, AND MHS
Hanging Weight: 60-70 LBS. (27.22-31.75 kg)

MODEL MGJ ONLY
Hanging Weight: 60 LBS. (27.22 kg)
OPERATOR SPECIFICATIONS

MOTOR
TYPE: ................................................. Limited duty
HORSEPOWER: ...................................... 1/2 HP
VOLTAGE: ............................................ 115 Vac, Single Phase, 60 Hz

OPERATOR
CURRENT (Amperage):
Voltage-Phase ....................................... 1/2 HP
115-1Ø, 60Hz ...................................... 11.2

MECHANICAL
DOOR SPEED: ..................................... Approximately 9" (23 cm) / second depending on door setup
OUTPUT FORCE: ................................. 125 ft. lbs / sec.
  MGJ ONLY ...................................... 40 ft. lbs / sec.
OUTPUT RPM:
  MJ .................................................... 80 RPM
  MH .................................................... 80 RPM
  MHS ............................................... 38.6 RPM
  MGJ ............................................... 23 RPM
LIMIT ADJUST: ..................................... Fully adjustable up to 14' door Max
DUTY: ............................................... 12 Cycles per Hour Max
  50 Cycles per Day Max
DRIVE TRAIN: .................................... Maintenance Free Bearings
  MGJ ONLY ....................................... Maintenance Free Bearings
                                Wormgear-in-Oil-Bath Reducer
FINISH: ................................. Powder coated, Corrosion Resistant Steel

ELECTRICAL
OPERATOR VOLTAGE: .......................... 115 Vac, Single Phase, 60 Hz
WIRING TYPE: .............................. C2 (Standard) B2 Configurable
(See Basic Programming Section)
CONTROL WIRING: ............................ 16-22 AWG

SAFETY
DISCONNECT:
  MH ............................................... Floor level chain hoist for manual chain hoist operation.
  MJ ............................................... Floor level disconnect for manual operation.
  MHS ........................................... Both MH and MJ type disconnects described above.
  MGJ ........................................... Floor level disconnect for manual operation.
ENTRAPMENT PROTECTION:
LiftMaster Monitored Entrapment Protection (LMEP)
  Photoelectric Sensors (CPS-U): ................. Through beam used to provide non-contact safety protection.
Safety Edge (Optional): ...................... Electric or pneumatic sensing device attached to the bottom edge of door.
                                       (see Accessory Page 27)
ENVIRONMENTAL
LOCATION: ...................................... Indoor, dry location
OPERATING TEMPERATURE: ................... -4˚ F to + 122˚ F
                                       (-20˚ C to + 50˚ C)
UL Listed to 40˚ C: Chamberlain tested to 50˚ C

CARTON INVENTORY

Before beginning your installation check that all components were provided. Your model may look different than the model illustrated.

NOT SHOWN
Installation Manual
Quickstart Guide
User’s Guide
Entrapment Warning Placard
Installation Hardware Bag, Complete with: Master links (2), Wall bracket (1), Fastener Bag (1)
Door sprocket
PREPARATION

PREPARING YOUR DOOR
The manufacturer recommends 3 feet (91.4 cm) of clearance in front of operator for serviceability. Before you begin:
- Disable locks.
- Remove any ropes connected to door.
- Before the operator is installed, be sure the door has been properly aligned and is working smoothly. Although each installation will vary due to particular building characteristics, refer to the following general procedures to install the operator.

HANDING IDENTIFICATION
For MH and MHS models with manual hoist hand chain systems, the handing of the operator must be determined at the time of order. The handing is indicated by last letter of the model name (R or L). The illustration shown is a right-handed operator for models MJ and MHS series only. Left-handed operator will have hoist chain on the left side.
The hand chain wheel can not be switched on site. If your installation causes the hand chain to hang in the door opening, hook the chain off to the side near the top of the door jamb.

ASSEMBLY
1 Install operator drive sprocket.

RIGHT-HAND ASSEMBLY

LEFT-HAND ASSEMBLY
TYPICAL INSTALLATION

NOTE: The illustrations may not depict your installation.

DETERMINE MOUNTING LOCATION FOR OPERATOR

The operator may be mounted on the wall, shelf or bracket (not provided, see accessories or door manufacturer). The optimum distance between the door shaft and operator drive shaft is 12-15 inches.

WALL MOUNT

SHELF OR BRACKET MOUNTING

INSTALL THE OPERATOR

1 Place door sprocket on door shaft.

2 Place operator door sprocket on operator.
**TYPICAL INSTALLATION**

**INSTALL THE OPERATOR**

3 Wrap drive chain around door sprocket.

4 Wrap drive chain around operator sprocket.

5 Position the operator until chain is taut (not tight). If chain is too tight, it may cause damage to operator.

6 Keep door sprocket and operator door sprocket aligned. If sprockets are not aligned, they may cause premature wear on the chain.

7 Secure both sprockets with key and set screw. If sprockets are not secure, they may drift and cause damage to operator.

8 Secure operator to mounting surface using appropriate method and hardware. Mounting template can be found on carton.
TYPICAL INSTALLATION

INSTALL EMERGENCY DISCONNECT SYSTEM

MODELS MH AND MHS ONLY

The MHS operator includes both a floor level disconnect sash chain to disconnect the door from the door operator that allows manual push up operation and an additional sash chain to engage the manual chain hoist that also electrically disables the operator controls.

1. Secure chain retaining bracket to wall 4 feet above the floor.
2. Wrap hand chain around hand chain wheel and through chain guide.
3. Connect the ends of the hand chain.

MODELS MJ AND MGJ ONLY

1. Secure keyhole bracket to wall 4 feet above the floor.
### WARNING

To reduce the risk of SEVERE INJURY or DEATH:
- ANY maintenance to the operator or in the area near the operator MUST NOT be performed until disconnecting the electrical power and locking-out the power. Upon completion of maintenance the area MUST be cleared and secured, at that time the unit may be returned to service.
- Disconnect power at the fuse box BEFORE proceeding. Operator MUST be properly grounded and connected in accordance with local electrical codes. The operator should be on a separate fused line of adequate capacity.
- ALL electrical connections MUST be made by a qualified individual.
- DO NOT install ANY wiring or attempt to run the operator without consulting the wiring diagram.
- ALL power wiring should be on a dedicated circuit and well protected. The location of the power disconnect should be visible and clearly labeled.
- ALL power and control wiring MUST be run in separate conduit.

### NOTE

Power and control wiring must be run in separate conduit in accordance with national and local electrical codes. Must use 14 AWG or heavier wire for power wiring. Use conduit knockouts for wiring as indicated on the electrical box labels.

**IMPORTANT NOTE:** Operator must be properly grounded. Failure to properly ground the operator could result in electric shock and serious injury.

**DO NOT** turn power on until you have finished making ALL power and control wiring connections.

### POWER WIRING CHART

<table>
<thead>
<tr>
<th>DISTANCE</th>
<th>GAUGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 feet</td>
<td>14 AWG</td>
</tr>
<tr>
<td>100 feet</td>
<td>12 AWG</td>
</tr>
<tr>
<td>200 feet</td>
<td>8 AWG</td>
</tr>
<tr>
<td>350 feet</td>
<td>6 AWG</td>
</tr>
<tr>
<td>500 feet</td>
<td>4 AWG</td>
</tr>
<tr>
<td>1000 feet</td>
<td>2 AWG</td>
</tr>
</tbody>
</table>

* Maximum wire gauge that can be connected to the operator’s terminal is 12 AWG. When a larger wire gauge is required, the wire must be gauged down to 12 AWG. USE COPPER WIRE ONLY.

1. Remove cover.

2. Run power wires to electrical box according to national and local electrical codes.
TYPICAL INSTALLATION

POWER AND GROUND WIRING CONNECTIONS

3 Attach power and ground wires to terminals.

INSTALL 3-BUTTON CONTROL STATION

<table>
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<th>WARNING</th>
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</thead>
<tbody>
<tr>
<td>To prevent possible SERIOUS INJURY or DEATH from electrocution:</td>
</tr>
<tr>
<td>• Be sure power is NOT connected BEFORE installing door control.</td>
</tr>
<tr>
<td>To prevent possible SERIOUS INJURY or DEATH from a closing door:</td>
</tr>
<tr>
<td>• Install door control within sight of door, out of reach of children at a minimum height of 5 feet (1.5 m) and away from ALL moving parts of door.</td>
</tr>
<tr>
<td>• Install the control station far enough from the door to prevent the user from coming in contact with the door while operating the controls.</td>
</tr>
<tr>
<td>• Install the entrapment warning placard on wall next to the control station in a prominent location that is visible from the door.</td>
</tr>
<tr>
<td>• NEVER permit children to operate or play with door control push buttons or remote controls.</td>
</tr>
<tr>
<td>• Activate door ONLY when it can be seen clearly, is properly adjusted and there are no obstructions to door travel.</td>
</tr>
<tr>
<td>• ALWAYS keep door in sight until completely closed. NEVER permit anyone to cross path of closing door.</td>
</tr>
</tbody>
</table>

1 Remove the control station cover.

2 Fasten the control station to the wall at least 5 feet above the ground. The installation surface must be smooth and flat.

3 Select appropriate knockout and run the wires to the operator.
TYPICAL INSTALLATION

INSTALL 3-BUTTON CONTROL STATION

4 Connect wires to the control station and replace the control station cover.

5 Fasten the entrapment warning placard next to the control station.

SETUP RADIO ANTENNA

OPTION A

1 Locate the wire antenna on the outside of the electrical box. Cut the wire tie closest to the edge of the electrical box.

2 Press the plastic standoff into the hole in the side of the electrical box.
TYPICAL INSTALLATION

SETUP RADIO ANTENNA

OPTION B

1. Locate the wire antenna on the outside of the electrical box. Cut wire ties and discard standoff.

2. Attach the antenna to the electrical box using the wire tie holes. Bend antenna across the front of the electrical box, ensuring that the antenna is 4 inches away from the front of the electrical box.

NOTICE: To comply with FCC and or Industry Canada (IC) rules, adjustment or modifications of this receiver and/or transmitter are prohibited, except for changing the code setting or replacing the battery. THERE ARE NO OTHER USER SERVICEABLE PARTS.

Tested to Comply with FCC Standards FOR HOME OR OFFICE USE. 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.

IMPORTANT SAFETY INSTRUCTIONS

⚠️ WARNING

To reduce the risk of SEVERE INJURY or DEATH:

1. READ AND FOLLOW ALL WARNINGS AND INSTRUCTIONS.
2. ALWAYS keep remote controls out of reach of children. NEVER permit children to operate or play with door control push buttons or remote controls.
3. ONLY activate door when it can be seen clearly, it is properly adjusted and there are no obstructions to door travel.
4. ALWAYS keep door in sight until completely closed. NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.
5. NO ONE SHOULD GO UNDER A STOPPED, PARTIALLY OPENED DOOR.
6. If possible, use manual release handle to disengage door ONLY when door is CLOSED. Weak or broken springs or unbalanced door could result in an open door falling rapidly and/or unexpectedly.
7. NEVER use manual release handle unless doorway is clear of persons and obstructions.
8. After ANY adjustments are made, the entrapment protection device MUST be tested.
9. Entrapment Protection device MUST be tested every month.
10. ALWAYS KEEP DOOR PROPERLY BALANCED. An improperly balanced door may NOT reverse when required and could result in SEVERE INJURY or DEATH.
11. ALL repairs to cables, spring assemblies and other hardware, ALL of which are under EXTREME tension, MUST be made by a trained door systems technician.
12. ALWAYS disconnect electric power to door operator BEFORE making ANY repairs or removing covers.
13. SAVE THESE INSTRUCTIONS.
ADJUSTMENT

ADJUST THE LIMITS

WARNING

To avoid SERIOUS personal INJURY or DEATH from electrocution:
- Disconnect electric power BEFORE performing ANY adjustments or maintenance.

1 Crush retaining plate.
2 Adjust OPEN limit.
3 Adjust CLOSE limit.

NOTE: When retaining plate is released, verify that the retaining plate is fully seated with the notches of the limit nut.

ADJUST THE CLUTCH

FOR MODELS MJ, MH, AND MHS ONLY

1 Apply power to operator.
2 Turn clutch nut to release tension.
3 Re-tighten nut until there is just enough tension to permit smooth operation.
4 Replace cotter pin. Bend ends of cotter pin to secure clutch nut.
**ENTRAPMENT PROTECTION**

**LIFTMASTER MONITORED ENTRAPMENT PROTECTION (LMEP)**

**IMPORTANT INFORMATION ABOUT THE LIFTMASTER MONITORED ENTRAPMENT PROTECTION DEVICES**

A LiftMaster Monitored Entrapment Protection (LMEP) device is required for most wiring types. If a LiftMaster Monitored Entrapment Protection device is not installed, constant pressure to close will be required from the control station.

When properly connected and aligned, the photoelectric sensors will detect an obstruction in the path of its invisible light beam. If an obstruction breaks the light beam while the door is closing, the door will stop and typically reverse to the full open position.

The photoelectric sensors must be installed facing each other across the door, no more than 6" (15 cm) above the floor.

Each photoelectric sensor has an LED that will glow steady when the sensor is properly connected and aligned. The LEDs on both photoelectric sensors will flicker rapidly when obstructed or misaligned.

---

**WARNING**

To prevent possible SERIOUS INJURY or DEATH from a closing door:

- Be sure power is NOT connected to the door operator BEFORE installing the photoelectric sensor.
- The door MUST be in the fully opened or closed position BEFORE installing the LiftMaster Monitored Entrapment Protection device.

To prevent SERIOUS INJURY, DEATH, ENTRAPMENT, or PROPERTY DAMAGE:

- Correctly connect and align the photoelectric sensor.
- Install the photoelectric sensor beam NO HIGHER than 6" (15 cm) above the floor.
- This is a required safety device for B2, TS, T, and FSTS wiring types and MUST NOT be disabled. For D1, C2, and E2 wiring the installation of an entrapment device is recommended.
- LiftMaster Monitored Entrapment Protection devices are for use with LiftMaster Commercial Door Operators ONLY. Use with ANY other product voids the warranty.
- If an edge sensor is being used on a horizontal slide door, then place one or more edge sensors on both the leading and trailing edge.
- If an edge sensor is being used on a vertically moving door, then place one or more edge sensors on the bottom edge of the door.
ENTRAPMENT PROTECTION
INSTALL THE PHOTOELECTRIC SENSORS

The following instructions show recommended assembly of the bracket(s) and “C” wrap based on the wall installation of the photoelectric sensors on each side of the door or on the door tracks themselves. There are also alternate mounting methods which may fit your installation requirements better.

Make sure the wraps and brackets are aligned so the photoelectric sensors will face each other across the door.

1 Fasten the “C” wraps to the mounting brackets having square holes, using hardware shown.

WALL INSTALLATION
2 Connect each assembly to a slotted bracket, using the hardware shown. Note alignment of brackets for left and right sides of the door.

3 Finger tighten the lock nuts.

4 Use bracket mounting holes as a template to locate and drill (2) 3/16” diameter pilot holes on both sides of the garage door, 4-6 inches (10-15 cm) above the floor. Do not exceed 6 inches (15 cm).

5 Attach bracket assemblies with 1/4”x1-1/2" lag screws.

6 Adjust right and left side bracket assemblies to the same distance out from mounting surface. Make sure all door hardware obstructions are cleared. Tighten the nuts securely.

DOOR TRACK INSTALLATION
2 Discard slotted bracket. Drill 3/8” holes in each track and fasten securely with hardware.

ALTERNATE WALL INSTALLATION

ALTERNATE FLOOR INSTALLATION
ENTRAPMENT PROTECTION

MOUNT THE PHOTOELECTRIC SENSORS

1. Center each sensor in the bracket with the lenses pointing toward each other across the door.

2. Attach the sensors to the brackets with the provided hardware. Finger tighten the receiving sensor wing nut. Securely tighten the sending sensor wing nut.

3. Run the wires from both sensors to the operator. Use insulated staples to secure wire to the wall and ceiling.

4. Connect the sensor wires to the operator.

ENTRAPMENT PROTECTION WIRING OPTIONS

PRIMARY INSTALLATION: CPS-U PHOTOELECTRIC SENSORS

NOTE: When installing model CPS-UN4, connect the brown wire to terminal 1 and the blue wire to terminal 2.
**LOGIC BOARD LAYOUT**

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<th>ITEM</th>
<th>DESCRIPTION</th>
<th>FUNCTION</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Open Button</td>
<td>Open Door</td>
</tr>
<tr>
<td>2</td>
<td>Close Button</td>
<td>Close Door</td>
</tr>
<tr>
<td>3</td>
<td>Stop Button</td>
<td>Stop Door</td>
</tr>
<tr>
<td>4</td>
<td>Learn Button</td>
<td>Programs the remote controls and performs additional programming</td>
</tr>
<tr>
<td>5</td>
<td>Timer-to-Close Button</td>
<td>Programs the Timer-to-Close</td>
</tr>
<tr>
<td>6</td>
<td>Purple Wire Antenna</td>
<td>Primary Antenna</td>
</tr>
<tr>
<td>7</td>
<td>Auxiliary Antenna Connection</td>
<td>For use with external antenna kit -EXT-ANT. Not Provided</td>
</tr>
<tr>
<td>8</td>
<td>LED</td>
<td>Used during programming and diagnosing error codes</td>
</tr>
<tr>
<td>9</td>
<td>Field Wiring Terminal</td>
<td>Field wiring connections</td>
</tr>
<tr>
<td>10</td>
<td>Factory Wiring Connector</td>
<td>Factory wiring harness connection</td>
</tr>
</tbody>
</table>
DETERMINE THE WIRING TYPE

The functionality of this operator is based on the wiring type. The operator is shipped from the factory in standard C2 wiring type (factory default). LIFTMASTER MONITORED ENTRAPMENT PROTECTION (LMEP) DEVICE IS RECOMMENDED.

A LiftMaster Entrapment Protection (LMEP) device is required for any momentary contact to close mode of operation including B2, TTC and remote controls.

NOTES:

• The LED on the logic board will blink once when in C2 and twice when in B2.
• The operator will automatically convert to B2 wiring when Monitored Entrapment Protection Device is installed. If the Monitored Entrapment Protection Device is blocked or removed, the operator will go into a Restricted Close mode **.

** Restricted close mode requires a constant pressure close command. The operator will begin closing after a 5 second delay and will continue to close to the close limit switch. The operator will stop if the pressure to close is released before reaching the close limit.

RECOMMENDED INSTALLATION: B2 WIRING TYPE WITH MONITORED ENTRAPMENT PROTECTION DEVICE

• Momentary contact to open, close and stop.
• Open override that reverses when closing by any opening device.
• Wiring for entrapment protection device to reverse. **NOTE: The operator will automatically convert to B2 wiring when Monitored Entrapment Protection Device is installed. (See accessories page for Monitored Entrapment Protection Devices.)
• Timer-to-Close (TTC) feature available.

No Programming Required

MONITORED ENTRAPMENT PROTECTION DEVICE

Photoelectric Sensor
**BASIC PROGRAMMING**

**DETERMINE THE WIRING TYPE**

**ALTERNATE INSTALLATION: C2 WIRING TYPE WITH MONITORED ENTRAPMENT PROTECTION DEVICE**

- Momentary contact to open and stop with constant pressure to close.
- Open override that reverses when closing by any opening device.
- Wiring for entrapment protection device to reverse.  
  **NOTE:** The operator will automatically convert to B2 wiring when Monitored Entrapment Protection Device is installed.  
  (See accessories page for Monitored Entrapment Protection Devices.)
- Timer-to-Close (TTC) feature not available.

**MONITORED ENTRAPMENT PROTECTION DEVICE**

To Program:
1. Press and hold the LEARN and CLOSE buttons until the LED goes out (approximately 3 seconds).

To Reset to B2 with Monitored Entrapment Protection Device:
1. Press and hold the LEARN and STOP buttons until the LED goes out (approximately 3 seconds).

**ALTERNATE INSTALLATION: C2 WIRING TYPE WITHOUT MONITORED ENTRAPMENT PROTECTION DEVICE (FACTORY DEFAULT)**

- Momentary contact to open and stop with constant pressure to close.
- Open override that reverses when closing by any opening device.
- Wiring for entrapment protection device to reverse.  
  **NOTE:** The operator will automatically convert to B2 wiring when Monitored Entrapment Protection Device is installed.  
  (See accessories page for Monitored Entrapment Protection Devices.)
- Timer-to-Close (TTC) feature not available.

**NON-MONITORED ENTRAPMENT PROTECTION DEVICE**

Reset to FACTORY DEFAULT (C2) when the Monitored Entrapment Protection Device has been learned and then removed:
1. Remove any monitored entrapment protection devices.
2. Turn the main power OFF and then ON to restore the operator to the FACTORY DEFAULT setting.

**REMOTE CONTROLS**

<table>
<thead>
<tr>
<th>MODE</th>
<th>OPEN</th>
<th>CLOSE</th>
<th>STOP</th>
<th>REVERSE WHILE CLOSING</th>
<th>TTC RESET</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>B2 with TTC</td>
<td>✗</td>
<td>✗ (3-button remote)</td>
<td>✗</td>
<td>✗</td>
<td>✗ when open</td>
</tr>
<tr>
<td>C2</td>
<td>✗</td>
<td></td>
<td>✗</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RADIO OPERATION**
BASIC PROGRAMMING

REMOTE CONTROLS

⚠️ WARNING

To prevent possible SEVERE INJURY or DEATH:
- Install a LiftMaster Monitored Entrapment Protection (LMEP) device.
- NEVER permit children to operate or play with door control push buttons or remote controls.
- Activate door ONLY when it can be seen clearly, is properly adjusted and there are no obstructions to door travel.
- ALWAYS keep door in sight until completely closed. NEVER permit anyone to cross the path of closing door.

Built in 315 MHz radio receiver permits as many as 20 Security® remote controls or dip switch remote controls in any combination.

SINGLE BUTTON REMOTE CONTROL

1. Press and release the LEARN button (LED will light).

2. Press and hold the button on the remote control until the LED flashes rapidly, then release to complete programming (LED will go out).

TO ERASE ALL REMOTE CONTROLS

1. Press and hold the LEARN button (over 5 seconds) until the LED goes out. All programmed remote controls will be erased.

Repeat steps 1 and 2 for additional remote controls.

3-BUTTON REMOTE CONTROL TO OPERATE AS A WIRELESS 3-BUTTON CONTROL STATION

NOTE: The feature will use 3 of the 20 memory channels in the operator.

1. Press and hold the LEARN button (LED will light).

2. Press the desired button on the logic board (OPEN, CLOSE or STOP). Release both buttons.

3. Press and hold the desired button of the remote control until LED flashes rapidly, then release.

Repeat steps 1 through 3 to program additional buttons.

TIMER-TO-CLOSE (TTC)

Timer-to-close feature enables the operator to close from the open limit after a preset time, adjustable from 5 to 60 seconds. Requires LiftMaster Monitored Entrapment Protection (LMEP) device.

TO PROGRAM

Begin with door in fully closed position.

1. Press and release the LEARN button (LED will light).

2. Press and release the TTC button.

3. Every press and release of the STOP button will add 5 seconds to the Timer-to-close. Example: 30 second TTC = 6 presses of the STOP button.

4. Press and release the TTC button to exit programming mode. The LED will flash once per 5 seconds of timer setting.

The TTC will become active after completion of the next open cycle. NOTE: The LED does not indicate that timer is running.

TO VERIFY TIMER-TO-CLOSE (TTC) SETTING

1. Press and hold the LEARN button (LED will light).

2. Press and release the TTC button.

3. Press and release the TTC button a second time. The LED will flash once per 5 seconds of timer setting.
BASIC PROGRAMMING

TIMER-TO-CLOSE (TTC)

CLEAR THE TIMER-TO-CLOSE (TTC)

1. Press and hold the TTC button for 6 seconds.
2. Release the TTC button (LED will go out). The TTC will no longer be active.

TIMER DEFEAT
The TTC can be temporarily disabled by pressing a STOP button. TTC will become enabled after the next open command.

TESTING

⚠️ WARNING
To avoid SERIOUS personal INJURY or DEATH:
- Disconnect electric power BEFORE performing ANY adjustments or maintenance.
- ALL maintenance MUST be performed by a trained door systems technician.

Turn on power, LED will flash 4 times on power up. Test all controls and entrapment protection devices to make sure they are working properly. It may be necessary to refer back to the Adjustment section for adjustment of the limits.

IMPORTANT NOTES:
- Do not leave power to the operator on unless all entrapment protection devices have been tested and are working properly.
- Be sure you have read and understand all safety instructions included in this manual.
- Be sure the owner or person(s) responsible for operation of the door have read and understand the safety instructions, know how to electrically operate the door in a safe manner and how to manually disconnect the door from the operator.

TEST 3-BUTTON CONTROL STATION

1. Press OPEN button. (The door should move in the open direction.)
2. Press STOP button. (The door should stop.)
3. Press CLOSE button. (The door should move in the close direction.)
4. Release CLOSE button. Door should stop if in C2 mode. (The door should continue closing if in B2 mode.)
5. Press STOP button. (The door should stop.)

TEST LIMIT ADJUSTMENT

1. Press OPEN button. (The door should open.)
2. Allow the door to fully open.
3. Press CLOSE button. (The door should close.)
4. Allow the door to fully close.

If the limits are not set properly, remove power and adjust limits (refer to Adjustment section).

TEST THE ENTRAPMENT PROTECTION DEVICES

1. Open the door.
2. Place an obstruction in the path of the photoelectric sensors or sensing edge.
3. Press the CLOSE button. The door should not close if photoelectric sensors are installed. The door should close to obstruction and reverse if sensing edge is installed.
4. Remove the obstruction.
5. Press CLOSE button. Door should close.

If door did not reverse from obstruction, check entrapment protection devices.

TEST REMOTE CONTROL
Requires B2 wiring type and compatible LiftMaster remote control. In C2 wiring the remote control will open the door only.
1. Press remote control button.
2. Door should open. Allow the door to fully open.
3. Press remote control button.
4. Door should close. Allow door to fully close.
**WARNING**

To prevent possible SERIOUS INJURY from a moving chain:

- DISCONNECT electric power to the operator BEFORE manually operating your door.
- If possible, use emergency disconnect ONLY when door is CLOSED. Weak or broken springs or unbalanced door could result in an open door falling rapidly and/or unexpectedly.
- NEVER use emergency disconnect unless doorway is clear of persons and obstructions.

This operator has provisions for manually operating the door in case of emergency or power failure. Refer to the appropriate instructions below for your model operator.

**MODEL MH**

These operators are equipped with a manual hoist. An electrical interlock will disable the electrical controls when the hoist is used.

1. Pull the disconnect chain (sash chain) to engage the hoist mechanism. The disconnect chain may be locked in position by slipping the end through the keyhole of the chain keeper mounted on the wall.

2. Operate the door in the desired direction by pulling on one side or the other of the continuous loop hoist chain.

3. The disconnect chain must be released from the chain keeper before the door will operate again electrically.

**MODEL MHS**

The MHS operator includes both a floor level disconnect sash chain to disconnect the door from the door operator that allows manual push up operation and an additional sash chain to engage the manual chain hoist that also electrically disables the operator controls.

1. Refer to Model MH instructions for hoist operation.

2. Refer to Model MJ instructions for manual operation.

When the manual chain hoist sash chain is engaged, electrical operation will not function.

**MODELS MJ AND MGJ**

This operator has a floor level disconnect chain to disconnect the door from the door operator.

1. To disengage, pull the chain and secure in the disengaged position by slipping the end through the keyhole bracket mounted on the wall. Or if emergency egress device is used, pull handle to disengage operator from door.

2. The door may now be pushed up or pulled down manually.

3. Release the disconnect chain or reset the emergency egress device to operate the door again electrically.
<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATOR WILL NOT RESPOND TO ANY COMMANDS</td>
</tr>
<tr>
<td>A) No power</td>
</tr>
<tr>
<td>B) Stop circuit not complete</td>
</tr>
<tr>
<td>C) Stuck button on 3-button control station</td>
</tr>
<tr>
<td>D) Interlock input activated</td>
</tr>
<tr>
<td>E) Motor overload tripped</td>
</tr>
<tr>
<td>F) Accessory failure</td>
</tr>
<tr>
<td>G) Possible component failure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATOR MAKES NOISE BUT DOOR DOES NOT MOVE</td>
</tr>
<tr>
<td>A) Clutch slipping</td>
</tr>
<tr>
<td>B) Brake not releasing (if present)</td>
</tr>
<tr>
<td>C) Door operation problem</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATOR MOVES IN THE WRONG DIRECTION</td>
</tr>
<tr>
<td>OPEN and CLOSE button wiring connection reversed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOOR DRIFTS AFTER OPERATOR STOPS</td>
</tr>
<tr>
<td>A) Door not balanced properly</td>
</tr>
<tr>
<td>B) Clutch slipping</td>
</tr>
<tr>
<td>C) Brake not functioning properly</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOOR OPENS/ CLOSES TOO FAR</td>
</tr>
<tr>
<td>Limits not adjusted properly</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOOR REVERSES UNEXPECTEDLY</td>
</tr>
<tr>
<td>Intermittent Entrapment Protection Device activation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTC NOT FUNCTIONING</td>
</tr>
<tr>
<td>A) Monitored Entrapment Protection Devices</td>
</tr>
<tr>
<td>B) TTC temporarily disabled</td>
</tr>
<tr>
<td>C) TTC not programmed properly</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADIO FUNCTIONALITY</td>
</tr>
<tr>
<td>NOTE: Built in radio receiver compatible with all LiftMaster 315 MHz remote control devices.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO RESPONSE</td>
</tr>
<tr>
<td>A) Remote control is not programmed</td>
</tr>
<tr>
<td>B) Remote control not compatible</td>
</tr>
<tr>
<td>C) Low battery</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>REMOTE CANNOT BE LEARNED</td>
</tr>
<tr>
<td>A) Low battery</td>
</tr>
<tr>
<td>B) Remote control not compatible</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>POOR RADIO RANGE</td>
</tr>
<tr>
<td>A) Low battery in remote</td>
</tr>
<tr>
<td>B) Antenna not configured</td>
</tr>
<tr>
<td>C) Ambient radio interference or building structural issue</td>
</tr>
</tbody>
</table>
TROUBLESHOOTING

The status of the operator can be determined by counting the number of flashes of the LED on the logic board.

<table>
<thead>
<tr>
<th># OF LED FLASHES</th>
<th>STATUS</th>
<th>FIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>System OK. Operating in C2 mode</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>System OK. Operating in B2 mode</td>
<td>None</td>
</tr>
<tr>
<td>3</td>
<td>Stuck CLOSE button</td>
<td>Check for stuck close button or shorted close wire</td>
</tr>
<tr>
<td>4</td>
<td>Monitored Entrapment Protection Device failure</td>
<td>Check for: 1) Misaligned or blocked Photoelectric Sensors. 2) Issue with Monitored Sensing Edge and/or wiring.</td>
</tr>
<tr>
<td>5</td>
<td>Incorrect motor direction</td>
<td>Reverse the yellow and red motor wires on the capacitor.</td>
</tr>
<tr>
<td>6</td>
<td>Maximum run timer has timed out</td>
<td>Check clutch adjustment. Door height or speed may exceed the range the operator can travel. Call Technical Support for assistance.</td>
</tr>
<tr>
<td>7</td>
<td>Logic Board Failure</td>
<td>Replace Logic Board. <strong>NOTE</strong>: It is normal for the logic board LED to flash 4 times when power is applied or cycled to the operator. (Not a logic board failure.)</td>
</tr>
</tbody>
</table>

**RESTRICTED CLOSE**

This method will allow you to close the door when LMEP device(s) are no longer working. Press and hold the CLOSE button until the door reaches the closed limit. If the CLOSE button is released before the door reaches the closed limit the operator will stop and the procedure will need to be repeated to fully close the door.

**DIAGRAM**
ACCESSORIES

REMOTE CONTROLS 315 MHZ

LiftMaster offers a variety of SECURITY+® Remote Controls for your application needs. Single to 4-Button, visor or key chain. Contact your authorized dealer.

371LM
1-Button SECURITY+® Remote Control:
Includes visor clip.

373LM
3-Button SECURITY+® Remote Control:
Includes visor clip.

333LM
3-Button Tri-Colored Dip Switch Remote Control:
Open/Close/Stop functionality. Includes visor clip.

WPB1LM3
Wireless Single Push Button Control SECURITY+®:
Rugged composite housing. (Wireless controls cannot be used in place of hard wired controls.)

WPB3LM3
Wireless 3 Button Control Station SECURITY+®:
Rugged composite housing. (Wireless controls cannot be used in place of hard wired controls.)

WKPSLM3 (5 4-digit entry codes)
WKPSLM3 (250 4-digit entry codes)

Wireless Access Control Keypads SECURITY+®:
Rugged composite housing. (Wireless controls cannot be used in place of hard wired controls.)

CONTROL STATIONS

02-102
2-Button Control Station:
Steel enclosure.

02-103
3-Button Control Station:
Steel enclosure.

02-109
Key Control Station:
Indoor flush mount, NEMA 1.

CHAIN TENSIONERS

71-6023
Chain Tensioner:
For 1" shafts

71-6125
Chain Tensioner:
For 1-1/2" shafts

ENTRAPMENT PROTECTION DEVICES

CPS-UN4
Commercial Protector System:
LiftMaster Monitored Entrapment Protection (LMEP) provides protection on doors up to 45’ wide. NEMA-4 rated.

CPS-U
Commercial Protector System:
LiftMaster Monitored Entrapment Protection (LMEP) provides protection on doors up to 30’ wide.

CPS-EI
Monitored Sensing Edge Interface:
Requires 4-wire monitored sensing edge.

65ME1234
Miller ME123 4-Wire Monitored Safety Edge:
For sectional or rolling doors.

65ME110
Miller ME110 4-Wire Monitored Safety Edge:
For rolling grilles and counter shutters.

MOUNTING BRACKETS

10-12360
Mounting Brackets:
Angle mounting bracket, Painted steel, for MJ, MH, and MHS.

10-9095
Medium Duty Angle Mounting Bracket:
Heavy-gauge steel bracket. May be welded. For use with MJ, MGJ, and MH operators.

ANTENNA

EXT-ANT
Antenna:
External kit for medium duty.

86LM (15’)
86LM (25’)

Antenna Extension Kit:
The antenna extension kit can be used with EXT-ANT for maximum radio receiver range.

FIELD MODIFICATION KITS

71MLSBC
Single Button Control:
Provides additional input for Single Button Control functionality. Input functions as Close input when the operator is stopped at the Open limit. Input functions as Open input at all other times. Also used with external radio controls.

71 MLMOTION
Door-In-Motion:
Provides dry contact and a terminal block with contacts switched to power an auxiliary device while the door is in motion.
IMPORTANT NOTES:
1. The 3-Button Control Station provided must be connected for operation.
2. If a STOP button is not used, a jumper must be placed between terminals 3 and 5.
3. If INTERLOCK is not used a jumper must be placed between terminals 3 and 4.
4. When adding accessories, install them one at a time and test each one after it is added to ensure proper installation and operation with the Commercial Door Operator.

### 3 BUTTON STATION OR 3 POSITION KEYSWITCH WITH SPRING RETURN TO CENTER AND STOP BUTTON

<table>
<thead>
<tr>
<th>STANDARD</th>
<th>2 OR MORE</th>
<th>KEY LOCKOUT</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
<td><img src="image3" alt="Diagram" /></td>
</tr>
</tbody>
</table>

### 2 BUTTON STATION OR 3 POSITION KEYSWITCH WITH SPRING RETURN TO CENTER

<table>
<thead>
<tr>
<th>STANDARD</th>
<th>2 OR MORE</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4" alt="Diagram" /></td>
<td><img src="image5" alt="Diagram" /></td>
</tr>
</tbody>
</table>

**Note:** For photoelectric sensors connection options see ENTRAPMENT PROTECTION section.

### DEVICE TO REVERSE

- ![Diagram](image6)

### EXTERNAL INTERLOCK

- Remove Factory Installed Jumper When Interlock is Used
- ![Diagram](image7)

All Wiring Types