

JDC/JHDC Installation (continued)

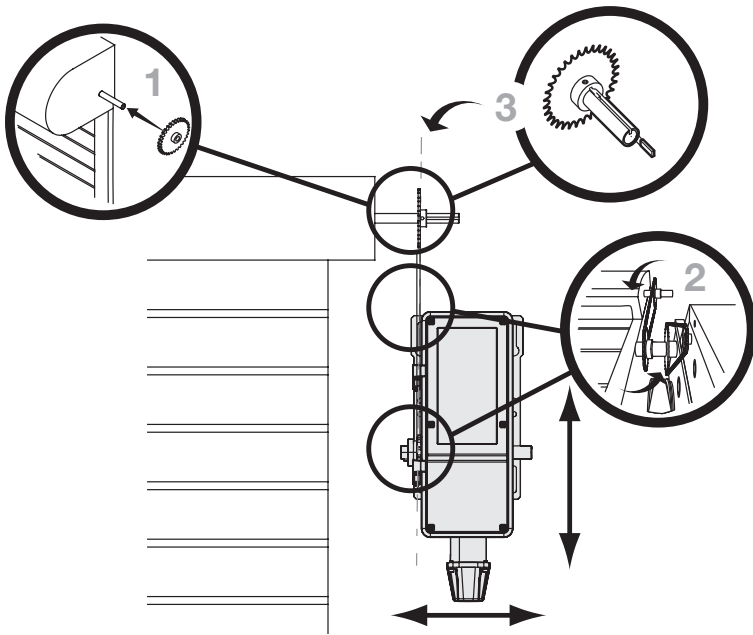
Mount the Operator

The wall or mounting surface **MUST** provide adequate support for the operator.

The surface must:

- Be rigid to prevent play between the operator and the door shaft.
 - Provide a level base.
 - Permit the operator to be fastened securely and with the drive shaft parallel to the door shaft.
1. Mount the operator to the wall or mounting plate with the appropriate hardware (not supplied).
 2. Place the door sprocket on the door shaft.
 3. Wrap the drive chain around the door sprocket and the drive sprocket then secure with the master link.
 4. Align the door and the drive sprockets. Insert keys and fasten the sprockets with the set screws (recommended torque for the set screws is 34-45 in/lb).

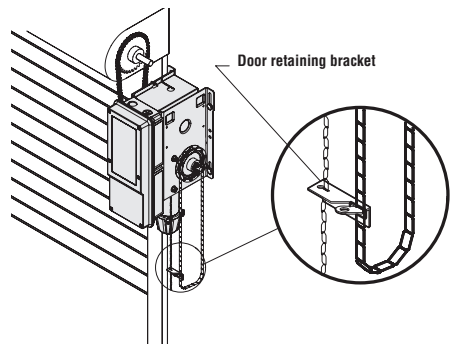
NOTE: It is highly recommended to add a thread adhesive to secure the set screws in place.



Secure the Chain Hoist

1. Fasten the door retaining bracket 4 feet (1.2 m) above the floor.

NOTE: If the position of the operator causes the hand chain to hang in the door opening hook the chain to the side near the top of the door jamb.



Cable Tension Monitors

Install the Cable Tension Monitor(s) (Optional)

TWO CABLE TENSION MONITORS MAY BE CONNECTED TO THIS OPERATOR.

THE CABLE TENSION MONITORS DETECT ANY SLACK THAT MAY OCCUR IN THE CABLES AND WILL RESPOND ACCORDINGLY.

NOTE: ONLY USE THE LIFTMASTER CABLE TENSION MONITORS, AS THEY HAVE BEEN TESTED AND APPROVED FOR THIS SYSTEM. See "Accessories" on page 52.

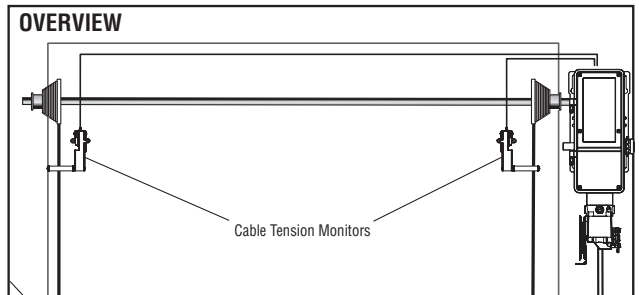
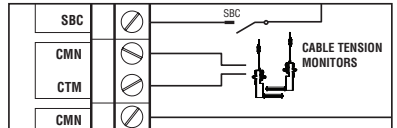
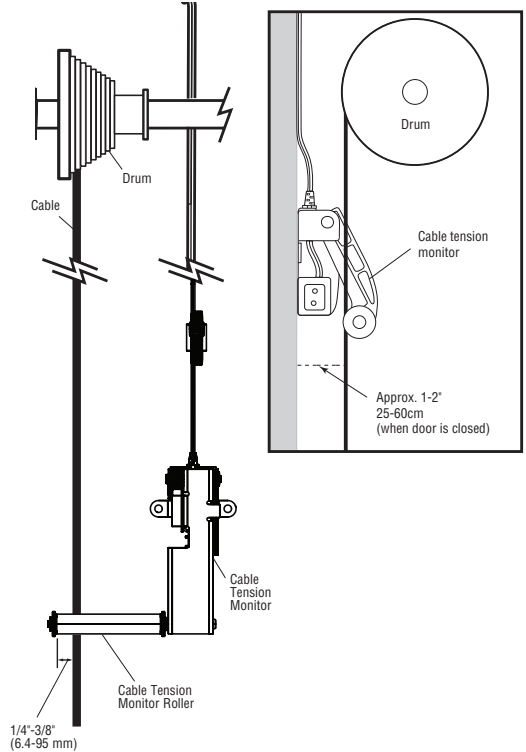
1. Make sure the door cable is approximately 1"-2" (25-50 mm) from the mounting surface. Door adjustments or shimming may be required to achieve proper depth for the door cable. The bracket must be flush with the mounting surface.
2. Position the cable tension monitor as close to the drum as possible. The optimal distance of the cable from the wall surface is no more than 2.5" (6.35 cm), and be sure the roller extends 1/8"-1/4" past the cable. Make sure the cable tension monitor and roller is free from any obstructions in all positions of operation.

NOTE: There must be no obstructions in the installation area that prevent the cable tension monitor from closing completely when slack is detected.

NOTE: Cable tension monitors must either be anchored to concrete, or a wood stud with appropriate fasteners. If neither are available, toggle bolt style drywall anchors with at least a 50 lbs rating are acceptable.

3. Run bell wire to the door operator junction box, and down to the control box through conduit as shown on the right.
4. Once the controller is installed, connect the bell wires parallel to the CTM and CMN terminals on the terminals on the controller (polarity is not important). See "Wall Controller Installation" on page 22 for installation information. Once installed, follow these steps to connect the wiring.
5. Connect the bell wires in parallel to the CTM and CMN terminals on the controller (polarity is not important). To simplify installation, the cable tension monitors can be wired together in the operator junction box, with only one pair of bell wires running down to the controller.
6. Repeat steps 1-5 for the opposite side of the door. Both cable tension monitors must be installed for proper operation.

NOTE: Cable must have tension through entire door travel. Make sure there is no slack in cable on opposite side of door during normal operation. If slack occurs during door travel, adjust cables as required.



Manual Release

Emergency Disconnect System Model TDC

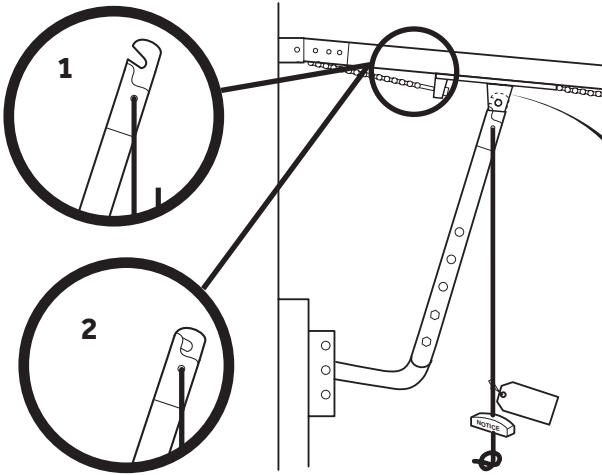
TO DISCONNECT DOOR FROM OPERATOR

The door should be in the fully closed position if possible.

1. Pull emergency release handle straight down. Emergency disconnect will open.

TO RECONNECT DOOR ARM TO TROLLEY

2. Lift free end of door arm to trolley. Pull emergency release handle to allow arm to engage roll pin. Release handle. Emergency disconnect will close.



WARNING

To prevent possible **SERIOUS INJURY** or **DEATH** from a falling door or arm:

- **DISCONNECT** electric power to the operator **BEFORE** manually operating your door.
- **DO NOT** stand under the door arm when pulling the emergency release.
- 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 release handle unless doorway is clear of persons and obstructions.

Emergency Disconnect System Model JHDC

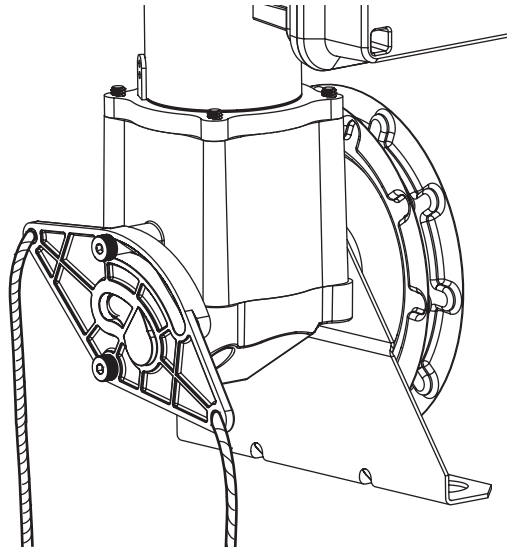
These operators have provisions for manually operating the door in case of emergency or power failure. These operators are equipped with a manual hoist. An electrical interlock will disable the electrical controls when the hoist is used.

This operator includes Engage rope (green) and a disengage rope (red) with manual hoist to electrically disable the operator controls.

1. To disengage, pull the disconnect rope (red).
2. Operate the door in the desired direction by pulling on one side or the other of the continuous loop hoist chain.
3. Pull the engage rope (green) to operate the door again electrically.

OPERATE A MANUAL HOIST

1. Pull down on the hoist engagement rope, engaging the hoist/interlock.
NOTE: F96 SAFETY CIRC will be displayed.
2. Operate the door in the desired direction by pulling on one side or the other of the continuous loop chain.
3. To restore standard electrical operation to the operator, pull the hoist disengagement rope to disengage the hoist/interlock.



Wiring

WARNING

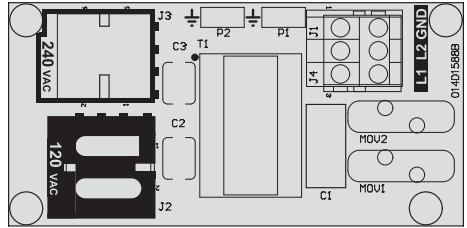
To prevent possible SERIOUS INJURY or DEATH:

- 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 national and 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 separately.

Power and Ground

Power and control wiring must be run in separate conduit to comply with national and local electrical codes. For power wiring, use the appropriate wire gauge. Use conduit knockouts, conduit fittings, and appropriate conduit fittings for wiring as indicated on the electrical box label.

1. Open the operator cover.
2. Run power wires to electrical box according to national and local electrical codes. ON THREE PHASE POWER only use two of the power legs cap off the third leg: Incoming power leads go to L1 and L2. Ground is on the EMI board.
3. Attach power and ground wires to appropriate terminals. Incoming power leads go to L1 and L2. Ground is on the EMI filter board.

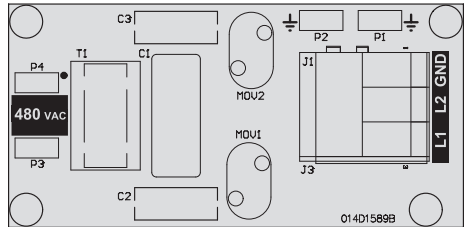


NOTE: The operator must be properly grounded. Failure to properly ground the operator could result in electric shock and serious injury.

* 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.

Voltage Selection

1. Locate EMI filter board inside of the electrical box (there is one board for 120/240V and one board for 480V). Remove the sticker and plug in the connector to either the 120V or 240V depending on your line voltage. Replace the sticker once you have plugged your connector into the right location.
2. On the POWER BOARD find the appropriate receptacle matching the incoming line voltage. Remove the voltage label and apply to the inside of the electrical box for future reference. Insert the EMI power harness fully until locked in place.



Wall Controller Installation

WARNING

To prevent possible **SERIOUS INJURY** or **DEATH** from electrocution:

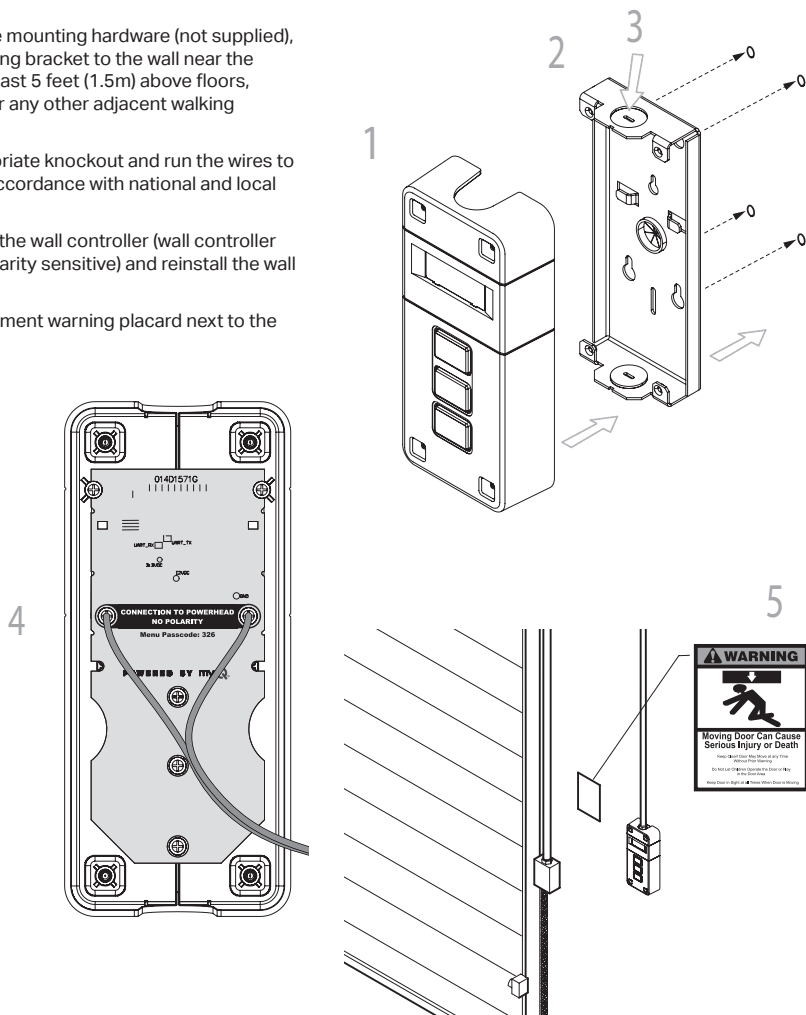
- Be sure power is **NOT** connected **BEFORE** installing the door control.

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

- Install the door control within sight of the door, out of reach of small children, at a minimum height of 5 feet (1.5 m) above landings, steps, or any other adjacent walking surface, and away from **ALL** moving parts of the door.
- Install the control station far enough from the door to prevent the user from coming in contact with the door while operating the controls.
- Install the entrapment warning placard on the wall next to the control station in a prominent location visible from the door.
- **NEVER** permit children to operate or play with door control push buttons or remote controls.
- Activate a door **ONLY** when it can be seen clearly, is properly adjusted and no obstructions exists in the path the door will travel.
- **ALWAYS** keep the door in sight until completely closed. **NEVER** permit anyone to cross path of a closing door.

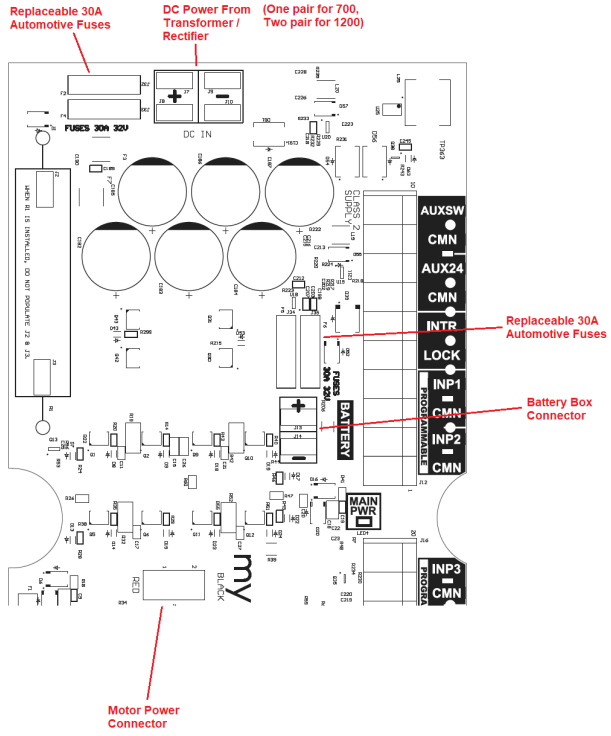
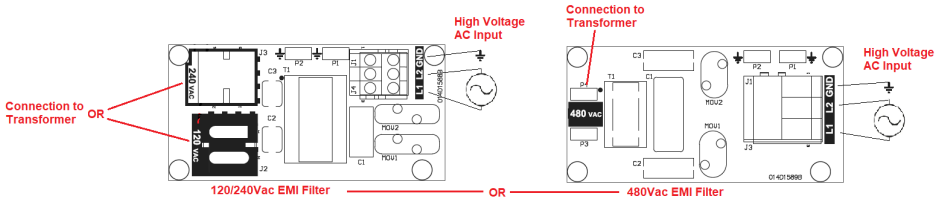
NOTE: The field wiring terminals are rated for 14-22 AWG wire Stranded and 12-22 AWG Solid.

1. Remove wall control cover from mounting bracket by loosening the four Philips screw at each corner of the housing.
2. Using appropriate mounting hardware (not supplied), fasten the mounting bracket to the wall near the operator and at least 5 feet (1.5m) above floors, landings, steps, or any other adjacent walking surface.
3. Select the appropriate knockout and run the wires to the operator (in accordance with national and local electrical codes).
4. Connect wires to the wall controller (wall controller wires are **NOT** polarity sensitive) and reinstall the wall controller cover.
5. Fasten the entrapment warning placard next to the wall control.

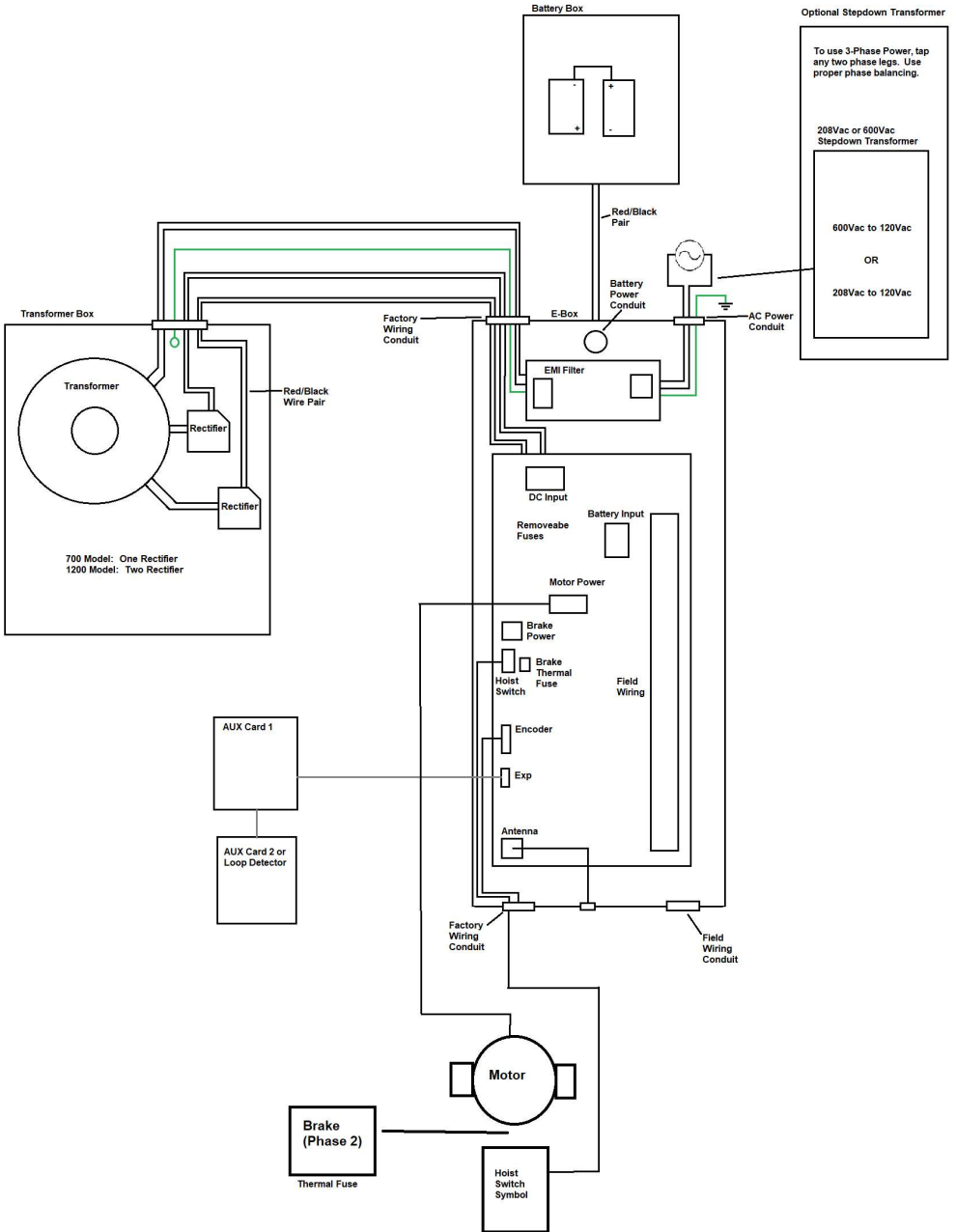


Factory Wiring Diagram

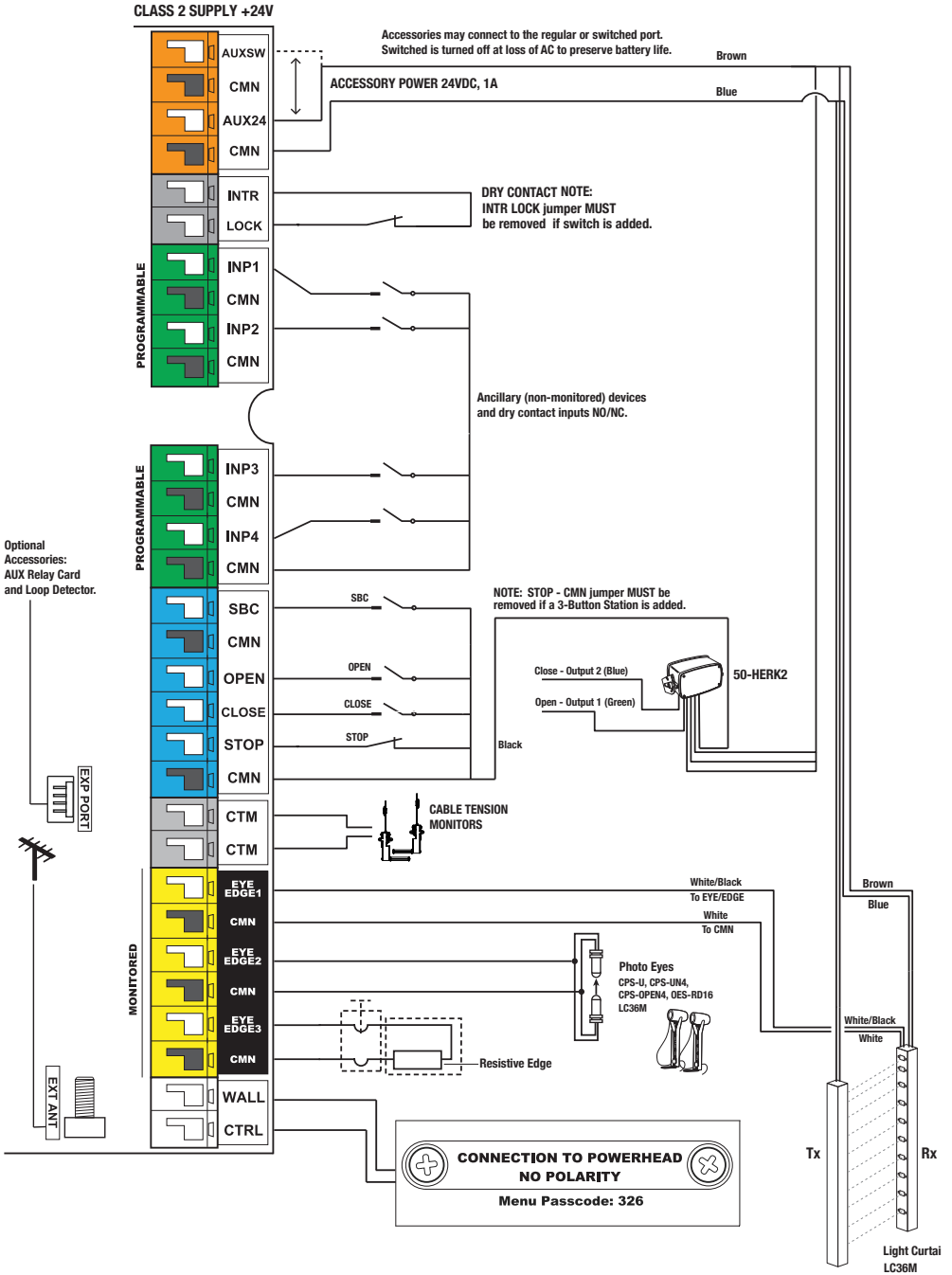
HIGH VOLTAGE AC DANGER!!!



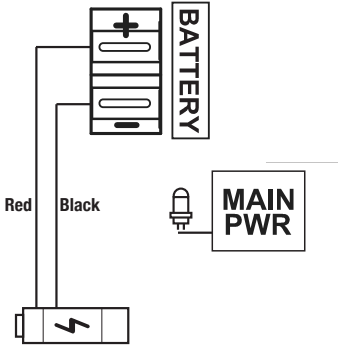
Factory Wiring Diagram (continued)



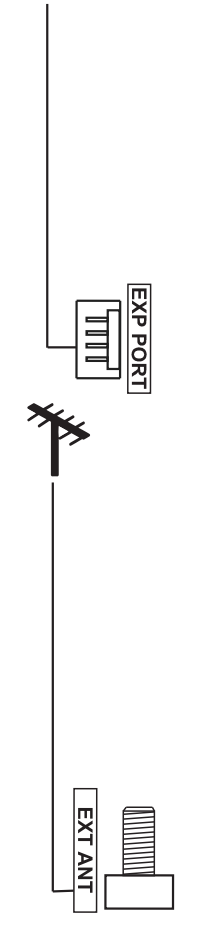
Accessory Wiring Diagram



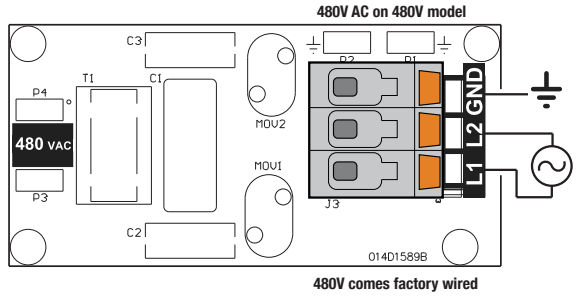
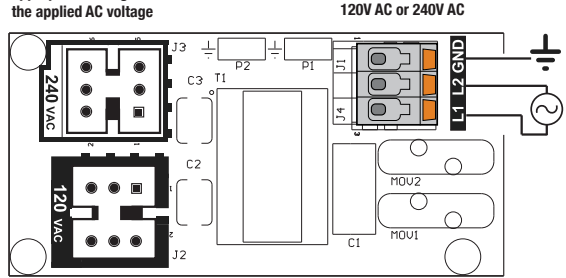
Power Wiring Diagram



Optional Accessories:
AUX Relay Card
and Loop Detector.



Plug transformer connector into the appropriate voltage that matches the applied AC voltage



Entrapment Protection

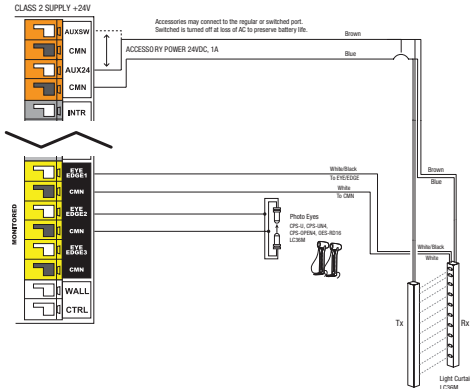
Monitored Entrapment Protection

IMPORTANT INFORMATION ABOUT THE MONITORED ENTRAPMENT PROTECTION DEVICES

A monitored entrapment protection device is required for most operation modes (see "Monitored Eyes/ Edge Configuration" on page 32). If a monitored entrapment protection device is not installed, constant pressure to close will be required from the wall controller.

See "Accessories" on page 52 for a complete list of monitored entrapment protection devices.

Three EYE/EDGE terminals are provided. Each terminal can accept ONE device. For easy identification during installation, the correct terminals are yellow.



WARNING

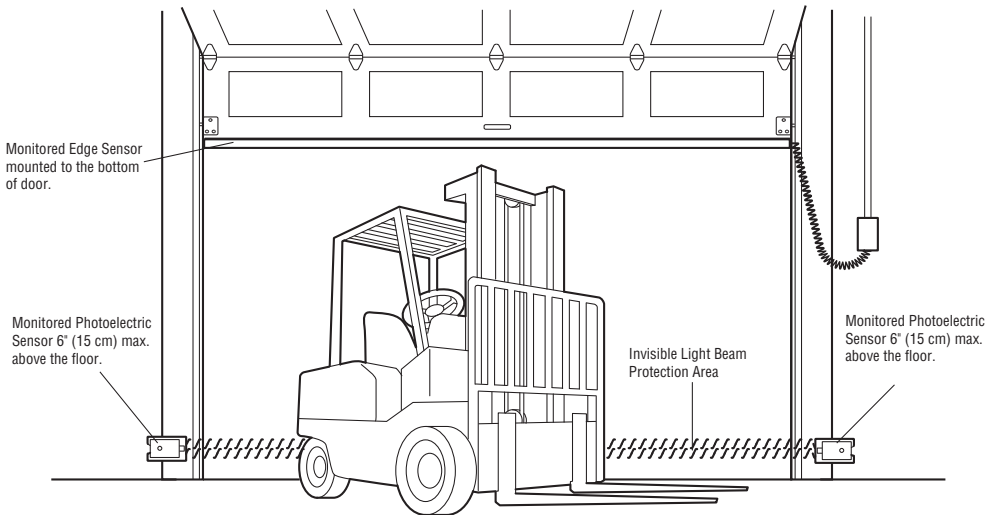
To prevent possible **SERIOUS INJURY** or **DEATH** from a closing door:

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

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

- Correctly connect and align the photoelectric sensor.
- Install the primary monitored photoelectric sensor beam **NO HIGHER** than 6" (15 cm) above the floor.
- This is a required LMEP 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 protection 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, place one or more edge sensors on both the leading and trailing edge.
- If an edge sensor is being used on a vertical moving door, place edge sensors on the bottom edge of the door.

Typical Entrapment Protection Device(s) Overview



Entrapment Protection (continued)

Install the Monitored Light Curtain

This step includes directions to install one set of monitored light curtains as a standalone primary entrapment protection device.

The mounting brackets must be securely fastened to a solid surface such as a wall framing. If installing the mounting brackets in masonry construction, add a piece of wood at each location to avoid drilling extra holes in the masonry.

NOTE: If the Monitored Light Curtain is installed with coil cord, the coil cord needs to be secured so it will not interrupt the light beams.

1. Fasten the mounting brackets loosely to both Monitored Light Curtain with the screws provided.
2. Measure a maximum of 6 inches above the floor. Mark this location. The lowest optical sensor of the Monitored Light Curtain must be installed at or below this point. In this application, in order to assure that the lowest optical sensor is mounted no higher than 6" above the ground, the light curtain wires must be oriented at the top of the light curtain in this application.
3. Hold the Monitored Light Curtain up to the desired mounting location with the cable end pointing upward. Secure the bottom mounting bracket to the mounting surface.
4. Make sure the Monitored Light Curtain is level and secure the upper mounting bracket to the mounting surface.
5. Tighten the screws to secure the Monitored Light Curtain to the mounting bracket.
6. Secure the other Monitored Light Curtain to the opposite side of the door following steps 2–5, making sure they are aligned.
7. Run wires to the operator.
8. Twist like colored wires together, brown to brown and blue to blue.

WARNING

To prevent possible product damage and incorrect operation:

- NEVER scratch or paint the optical sensors.
- DO NOT drill ANY additional holes into the Monitored Light Curtain.
- Correctly connect and align the Monitored Light Curtain transmitter and receiver.
- DO NOT bend or twist the Monitored Light Curtain.
- Oil may damage the Monitored Light Curtain cable so contamination MUST be avoided at ALL times.
- DO NOT mount the Monitored Light Curtain where sunlight or other external infrared light sources will shine directly into the optical sensors of the Monitored Light Curtain receiver. If necessary, switch the mounting side of the Monitored Light Curtain transmitter and receiver.

POWER WIRING

Do not run wiring in the same conduit with AC power.

1. Disconnect power to the operator.
2. Connect the wires from the Monitored Light Curtain LC36M to the following.
 - d. Brown wire to + Aux24 power
 - e. Blue wired to – Aux24 CMN
 - f. White wire to eye/edge input –
 - g. Black wired to eye/edge input +
3. Reconnect power to the operator.

ALIGNMENT

The Monitored Light Curtain transmitter and receiver must be aligned. When properly wired and aligned the amber and green LEDs will be ON. The amber LED is located on the Monitored Light Curtain Transmitter and the green LED is located on the Monitored Light Curtain Receiver. If the amber and green LEDs are not on, see the table below.

1. Open and close the door for one complete cycle to let the operator register the Monitored Light Curtain.

Amber LED	Green LED	Status	Solution
OFF	OFF	No power	Check wiring.
ON	Blinks	<ul style="list-style-type: none">• Monitored Light Curtain receiver and transmitter are not aligned• Obstructed light beam• Defective Monitored Light Curtain Receiver	<ul style="list-style-type: none">• Adjust the Monitored Light Curtains to correct alignment• Remove the obstruction• Replace Monitored Light Curtain receiver and transmitter (Model LC36M)

NOTE: For more detailed information, please refer to Monitored Light Curtain manual 114-5541.

Battery Backup Wiring



1. Locate the Battery Box and the Red/Black wires.
2. Remove the circular knockout at the bottom of the E-Box, above the EMI Filter Board. Install a grommet.
3. Route the Red/Black wires through the grommet.
4. Install the Battery Box on the Operator.
5. Plug the Red wire into the Battery (+) Terminal.
6. Plug the Black wire into the Battery (-) Terminal.

Testing

Apply power to the operator. When power is applied to the operator, the LCD display will illuminate, relay A, relay B, and the Timer Defeat.

Test all Entrapment Protection Devices

It is the responsibility of the specifier, purchaser, installer, and property owner to ensure that, on completion, the installation of the entrapment protection devices comply with all relevant federal, state, and local codes and regulations.

  WARNING
To avoid SERIOUS personal INJURY or DEATH :
<ul style="list-style-type: none">• Disconnect electric power BEFORE performing ANY adjustments or maintenance.• ALL maintenance MUST be performed by an Authorized Service Technician.

TEST THE MONITORED LIGHT CURTAIN (IF APPLICABLE)

1. With the door in the full open position, press the close button.
2. While the door is closing, obstruct any of the light beams on the Monitored Light Curtain (the green LED on the Monitored Light Curtain Receiver will blink when the light beam is obstructed). The door should stop and reverse.

TEST THE PHOTOELECTRIC SENSORS (IF APPLICABLE)

1. Open the door.
2. Place an obstruction in the path of the photoelectric sensors. The LMEP LED will blink on the logic board.
3. Press and hold the CLOSE button. The door should not close.
4. Remove the obstruction.
5. Press and hold the CLOSE button. Door should close. If the LMEP is activated while closing, the door should reverse.

TEST THE EDGE SENSORS (IF APPLICABLE)

1. Open the door
2. Place an obstruction in the path of the door.
3. Press and release the CLOSE button. The door should stop and/or reverse.
4. Remove the obstruction. Press and release the CLOSE button. The door should fully close.

Test Wall Controller Menu Access

1. Press OPEN button. (The door should move in the open direction.)
2. Press STOP button. (The door should stop.)
3. Press and hold the CLOSE button. (The door should move in the close direction.)
4. Release CLOSE button. Door should stop if in C2 or D1 mode. Door will reverse to full open position in E2 mode. The door should continue closing in all other modes.
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 and hold the CLOSE button. (The door should close.)
4. Allow the door to fully close.
5. If the limits are not set properly, remove power and adjust limits (see "Set Limits" on page 32).

NOTE: Door travel should stop when the OPEN or CLOSE limits are reached. If door drifting is occurring, spring tension on the door.

Programming

Quick Start Commissioning

Follow the below instructions to provision the JHT operator out-of-the-box or after factory reset:

Quick Start Commissioning Menu

Follow device menu prompt to select DOOR HANGING

Follow device menu prompt to select DOOR DRUM

Follow device menu prompt to select DOOR SPROCKET (J/H ONLY)

Follow device menu prompt to set OPEN LIMIT

Follow device menu prompt to set CLOSE LIMIT

Follow device menu prompt to LEARN WIFI

The operator will be in WiFi Learn Mode for 10 minutes if "YES" is selected.



WARNING

To prevent possible **SERIOUS INJURY** or **DEATH**:

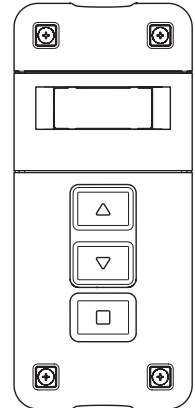
- Disconnect electric power **BEFORE** performing **ANY** adjustments or maintenance.
- **ALL** maintenance **MUST** be performed by a trained door systems technician.
- Please wait several seconds for capacitors to discharge and for display to go out.

Quick Exit of Menu

Hold down the "UP" and red "Stop" buttons for 3 seconds until the screen goes blank and it will exit you out of the menu you are in.

Quick Enter into the Menu

Hold down the "Down" and red "Stop" buttons for 3 seconds until the screen goes blank and it will take you to the main menu.



Manual Commissioning Program Flow

IMPORTANT: All entrapment protection devices will be disconnected during the manual commissioning steps.

The System Settings menus are password-protected.

ENTER PROGRAMMING

1. Press the "STOP/ENTER" and "DOWN" buttons on the inside of the controller at the same time for 3+ seconds to enter the operator menu. If the controller is closed, press the "Stop" then "Close" then "Open" until the unit goes into program mode.
2. Scroll down to "SYSTEMS SETTINGS" with the "UP" and "DOWN" buttons and press "ENTER." You will be prompted to enter the password for the operator.
3. Enter 326 as the password.



Programming (continued)

SELECT DOOR SETTINGS

- To select Door Hanging and Cable Drum settings, navigate to the SYSTEM SETTINGS > DOOR SETTINGS submenu.
- Select The Drum Type. Correct Drum types are needed for the correct door profile to run the system.
Standard lift drum choices are: D400-144, D525-216
Full vertical lift drum choices are: d850-132, D1100-216
High lift choices are: 48° HL, D400-54, D525-54, 60° HL: D5575-120, 144° HL: D6375-165

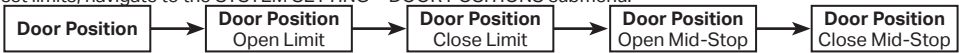
IMPORTANT: Once you choose your drum, allow inverter parameter to update. Once the inverter is updated, you can re-enter the menu to set limits and learn force.

SET LIMITS

IMPORTANT: When setting limit positions, it is important that the door runs in the direction of the intended limit.

Example: When setting the close limit, only use the CLOSE button. When setting the open limit, only use the OPEN button. Using the opposite direction button will cause the limit positions to drift over time.

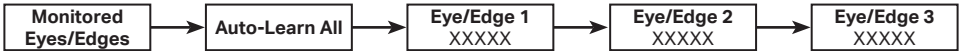
To set limits, navigate to the SYSTEM SETTING > DOOR POSITIONS submenu.



MONITORED EYES/EDGE CONFIGURATION

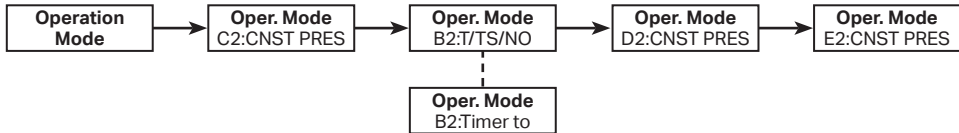
If monitored entrapment protection devices are wired to the system during the initial power-up, they will be learned to the system, and the operating mode will automatically switch to B2.

If no monitored sensor is attached, the system will default to C2 mode. To manually program an entrapment protection device, navigate to the SYSTEM SETTINGS > MONITORED EYES/EDGES submenu, otherwise it will Auto-Learn the monitored device.



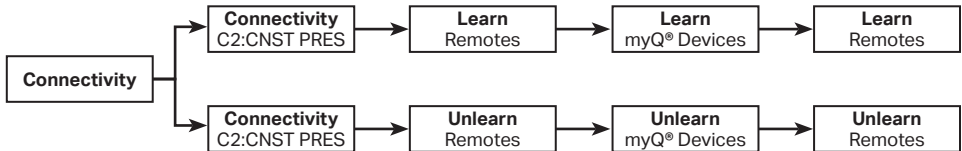
OPERATION MODE (RECOMMENDED)

To change the operating mode from the defaults B2 or C2, navigate to the SYSTEM SETTINGS > OPERATION MODE submenu.



CONNECTIVITY (RECOMMENDED)

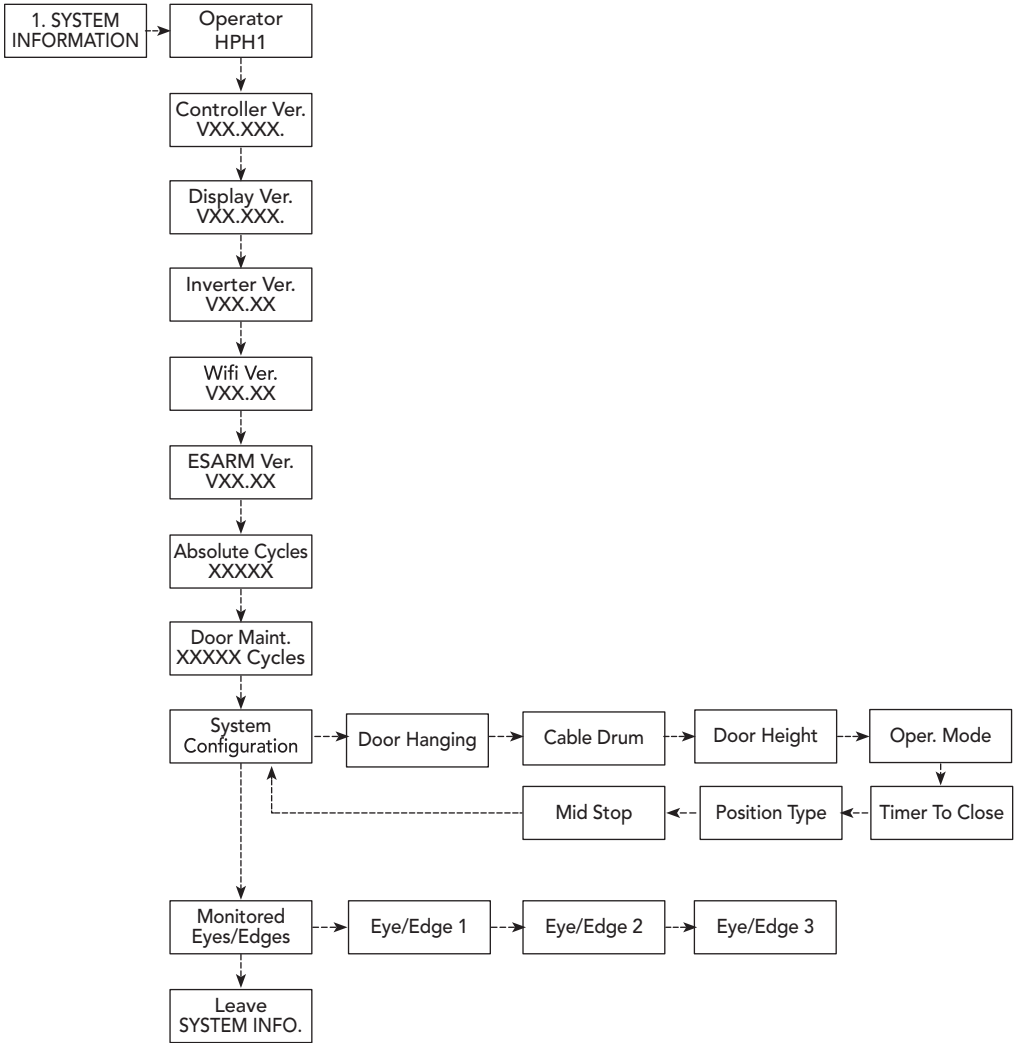
To connect the operator to a network, navigate to SYSTEM SETTINGS > CONNECTIVITY > LEARN > LEARN WIFI submenu. See the "myQ® Smart Facility Access" on page <?> to connect your devices to myQ® Business Facility.



Programming (continued)

Hold ENTER and DOWN for three seconds to open the System Information Menu.

NOTE: This menu tree is only for informational purposes. These settings cannot be changed by the user.



Programming (continued)

Operating Modes

This operator is programmed to function in one of four different operating modes. See the rest of this section for more detailed information.

B2 MODE

- Works with buttons on wall controller, myQ Facility®, wired 3-Button Wall Controller, and 3-Button Transmitter; momentary to open, stop, and close.
- Works with Single Button Control and Single Button Transmitter; momentary to open, stop, close, and stop & reverse.
- A Monitored Entrapment Protection device is required to be connected for downward movement. Monitored Safety devices are Auto-Learned or manually configured through the wall control menu..
- A Monitored Entrapment Protection device activation will reverse the door to its Open limit. An activated Monitored Entrapment Protection device can be overridden with 5 seconds of constant pressure on the Close button.

Timer To Close is available in B2 Mode with two settings. The user can select a desired Timer to Close (TTC) timer under the Timers menu. See [XXX] for Timer setting details.

In B2 the Car Dealer feature is available. The Car Dealer input (typically a treadle switch, loop detector, or motion sensor) will open the door to mid-stop, and TTC will be enabled. Repeated Car Dealer Input will not open the door beyond the mid-stop and will reset the TTC timer. TTC can be set either to one time close or timer secure

In B2 the All Fly feature is available. (FSTS Mode)

- The All Fly input (typically a mushroom button) will open the door to its Open limit, bypassing a mid-stop, and TTC will be enabled.
- The CLOSE button immediately closes the door.
- The STOP button resets the TTC timer (held button will pause, releasing the button will reset).
- The OPEN button resets the TTC timer.
- The controller will make infinite attempts to close the door until the safety obstruction is cleared.
- TTC will be enabled after Monitored Entrapment Protection activation reverses the door to its Open limit.
- Timer Defeat Input will stop TTC timer

B2 / T ONE TIME CLOSE)

- After the TTC timer elapses operator will close the door.
- TTC Timer will be active at the Open Limit or at a defined mid-stop.
- The CLOSE button immediately closes the door.
- The STOP button cancels the TTC for that cycle (no automatic motion).
- The OPEN button resets the TTC timer.
- TTC will be disabled if the door reverses from an obstruction.
- Timer Defeat Input will stop the TTC timer

B2 / TS (TIMER SECURE)

- After TTC timer elapses operator will close door.
- TTC Timer will be active anywhere above close limit. The CLOSE button immediately closes the door.
- The STOP button resets the TTC timer (held button will pause, release resets)
- The OPEN button resets the TTC timer.
- LMPEP activation resets the timer
- TTC will be enabled after Monitored Entrapment Protection device activation reverses the door to its Open limit. The controller will make infinite attempts to close the door until it reaches close limit.
- Timer Defeat Input will stop the TTC timer

C2 MODE (DEFAULT)

- Works with buttons on wall controller, wired 3-Button Wall Controller, and 3-Button Transmitter*; momentary to open, stop, and constant pressure to close.
- Works with Single Button Control and Single Button Transmitter*; momentary to open, stop, and stop & reverse.
- Works without a Monitored Entrapment Protection device learned, but can operate if a Monitored Entrapment Protection device is learned and connected for downward movement.
- Monitored Entrapment Protection device activation will reverse the door to its Open limit. The safety activation can be overridden with 5 seconds constant pressure on the Close button.

*Constant Pressure to Close is not available from a remote control device (transmitter or myQ® Business™).

Programming (continued)

Determine Operating Mode

Read the descriptions of the different wiring types to determine which setting will be correct for each application. Once the wiring type is determined, set the selector dial accordingly.

LIFTMASTER MONITORED ENTRAPMENT PROTECTION (LMPE) DEVICE IS REQUIRED

A LiftMaster Entrapment Protection Device is required for the following wiring types.

B2

Momentary contact to open, close and stop, plus wiring for sensing device to reverse and auxiliary devices to open and close with open override. Programmable mid stop available with this wiring type. Compatible with 3-Button Station, 1-Button Station, 1 and 3-Button Remote Control.

B2 / T

Momentary contact to open, close, and stop, with open override and Timer-To-Close. Every device that causes the door to open, except any sensing edge input device, activates the Timer-To-Close. Auxiliary controls can be connected to open input to activate the Timer-To-Close.

If the Timer-To-Close has been activated, the open button and radio control can recycle the timer. The stop button will deactivate the timer until the next command input. The Timer-To-Close will function from the programmable mid stop with this wiring type. Compatible with 3-Button Station, 1-Button Station and 1 and 3-Button Remote Control.

NOTE: Programmable "Car Dealer Mode" available.

B2 / TS

This mode will attempt to close the door from any position except when fully closed, or when a safety input is present. The stop button will not disable the Timer-To-Close at any position. To disable the Timer-To-Close in this mode, installation of a defeat switch is required (see "Power Wiring Diagram" on page 26).

Momentary contact to open, close, and stop with open override and Timer-To-Close. Every device that causes door to open, including a reversing device, activates the Timer-To-Close. Auxiliary controls can be connected to open input to activate the Timer-To-Close. If the timer has been activated, the open button and radio control can recycle the timer. The Timer-To-Close will function from the programmable mid stop with this wiring type. Compatible with 3-Button Station, 1-Button Station and 1 and 3-Button Remote Control.

NOTE: A Programmable "Car Dealer Mode" available.

FSTS

Momentary button contact for open, close and stop programming. User set mid stop. User set Timer-To-Close. The single button station opens the door to the full open limit bypassing the mid stop and activates the

Timer-To-Close, putting the operator in B2/TS mode until the door reaches the down limit, or is stopped in travel. At which time the operator enters the B2 mode. Compatible with 3-Button Station, 1-Button Station, 1 and 3-Button Remote Control. A 1-Button remote control in FSTS mode will open only with the Timer-To-Close, bypassing a programmed mid stop. The Timer-To-Close will reset and reverse when closing.

LIFTMASTER MONITORED ENTRAPMENT PROTECTION DEVICE IS RECOMMENDED.

A LiftMaster Entrapment Protection Device is recommended for the following wiring types.

C2

Momentary contact to open and stop with constant pressure to close, open override plus wiring for sensing device to reverse. Programmable mid stop available with this wiring type. Compatible with 3-Button Station and 1-Button Station.

E2

Momentary contact to open with override and constant pressure to close. Release of close button will cause door to reverse (roll-back feature) plus wiring for sensing device to reverse. Compatible with 3-Button Station.

D1

Constant pressure to open and close with wiring for sensing device to stop. Compatible with 2 or 3-Button Station.

IMPORTANT NOTES:

1. External interlocks may be used with all functional modes.
2. Auxiliary devices are any devices that have only dry contacts. Examples: loop detector, pneumatic or electrical treadles, radio controls, one button stations, pull cords, etc.
3. Open override means that the door may be reversed while closing by activating an opening device without the need to use the stop button first.
4. When the door is in a stopped position other than fully closed, and an LMPE or EDGE input is activated, the Restricted Close(RC) feature will allow a close command when the close button is pressed and held. The operator will begin closing after 5seconds. If the close button is released the door will stop. When in E2 mode, the door will move to the fully open position.

Programming (continued)

Determine and Set Operating Mode

Select the operating mode for your application from the menu in the Wall Controller.

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE
<p>B2 - Momentary contact to open, close and stop, plus wiring for sensing device to reverse and auxiliary devices to open and close with open override. Programmable Mid-Stops available with this wiring type. Close Mid Stop available but not shown in table.</p> <p>Compatible with 3-Button Station, 1-Button Station, 1 and 3-Button Remote Control. Monitored Entrapment Protection (LMEP) Device required.</p>	<p>Front panel buttons (membrane) and 3-Button Wall Controller</p>	<p>OPEN button is pressed momentarily</p>	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop
			Door opening	No change in state
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop
			Door at Open Mid-Stop	Door opens to the OPEN limit
		Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop	
		<p>CLOSE button is pressed momentarily</p>	Operator at OPEN limit	Door closes to the CLOSE limit
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	Door closes to the CLOSE limit
		Door stopped during open or close cycle	Door closes to the CLOSE limit	
		<p>STOP button is pressed momentarily</p>	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	Door stops
			Door closing	Door stops
			Door at Open Mid-Stop	No change in state
		Door stopped during open or close cycle	No change in state	
		<p>OPEN button is held (constant pressure)</p>	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	Door opens to the OPEN limit (bypasses Mid-Stop)
	Door opening		No change in state (bypasses Mid-Stop)	
	Door closing		Door will auto reverse to OPEN limit (bypasses Mid-Stop)	
	Door at Open Mid-Stop		Door opens to the OPEN limit	
	Door stopped during open or close cycle	Door opens to the OPEN limit (bypasses Mid-Stop)		
	<p>CLOSE button is held (constant pressure)</p>	Operator at OPEN limit	Door closes to the CLOSE limit	
		Operator at CLOSE limit	No change in state	
		Door opening	No change in state	
		Door closing	No change in state	
		Door at Open Mid-Stop	Door closes to the CLOSE limit	
	Door stopped during open or close cycle	Door closes to the CLOSE limit		
	<p>3-Button Remote Control Programmed as OPEN/CLOSE/STOP</p>	<p>OPEN button is pressed momentarily</p>	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	Door opens to closest OPEN limit or Mid-Stop
			Door opening	No change in state
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop
			Door at Open Mid-Stop	Door opens to the OPEN limit
		Door stopped during open or close cycle	Door opens to the OPEN limit	
		<p>CLOSE button is pressed momentarily</p>	Operator at OPEN limit	Door closes to the CLOSE limit
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	Door closes to the CLOSE limit
		Door stopped during open or close cycle	Door closes to the CLOSE limit	
		<p>STOP button is pressed momentarily</p>	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	Door stops
	Door closing		Door stops	
	Door at Open Mid-Stop		No change in state	
	Door stopped during open or close cycle	No change in state		
	<p>Single Button Remote Control Programmed as SBC</p>	<p>Button is pressed</p>	Operator at OPEN limit	Door closes to the CLOSE limit
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop
			Door opening	Door stops
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop
Door at Open Mid-Stop			Door opens to the OPEN limit	
Door stopped during the open cycle			Door closes to the CLOSE limit	
Door stopped during the close cycle			Door opens to the OPEN limit or Mid-Stop	

Programming (continued)

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE		
B2 (continued)	Single Button Wall Controller (Wired)	Button is pressed	Operator at OPEN limit	Door closes to the CLOSE limit		
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop		
			Door opening	Door stops		
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop		
			Door at Open Mid-Stop	Door opens to the OPEN limit		
			Door stopped during the open cycle	Door closes to the CLOSE limit		
			Door stopped during the close cycle	Door opens to the OPEN limit or Mid-Stop		
		Button is held (constant pressure)	Door Opening	No change in state (bypasses Mid-Stop)		
			myQ® Smart Facility Access	Open is pressed	Operator at OPEN limit	No change in state
					Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop
	Door opening	No change in state				
	Door closing	Door will auto reverse to OPEN limit or Mid-Stop				
	Door at Open Mid-Stop	Door opens to the OPEN limit				
	Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop				
	Close is pressed:	Operator at OPEN limit		Door closes to the CLOSE limit		
		Operator at CLOSE limit		No change in state		
		Door opening		No change in state		
		Door closing		No change in state		
		Door at Open Mid-Stop	Door closes to the CLOSE limit			
		Door stopped during open or close cycle	Door closes to the CLOSE limit			

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE	
C2 Momentary contact to open and stop with constant pressure to close (wired devices ONLY), open override plus wiring for sensing device to reverse. Open Mid-Stop available with this mode type. Compatible with 3-Button Station and Single-Button Station	Front panel buttons (membrane) and 3-Button Wall Controller	OPEN button is pressed momentarily	Operator at OPEN limit	No change in state	
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop	
			Door opening	No change in state	
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop	
			Door at Open Mid-Stop	Door opens to the OPEN limit	
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop	
		CLOSE button is pressed momentarily	Operator at OPEN limit	Door closes and stops when button is released	
			Operator at CLOSE limit	No change in state	
			Door opening	No change in state	
			Door closing	No change in state	
			Door at Open Mid-Stop	Door closes and stops when button is released	
		Door stopped during open or close cycle	Door closes and stops when button is released		
			STOP button is pressed momentarily	Operator at OPEN limit	No change in state
				Operator at CLOSE limit	No change in state
				Door opening	Door stops
				Door closing	Door stops
		Door at Open Mid-Stop		No change in state	
		Door stopped during open or close cycle	No change in state		
			OPEN button is held (constant pressure)	Operator at OPEN limit	No change in state
				Operator at CLOSE limit	Door opens to OPEN limit (bypasses Mid-Stop)
				Door opening	No change in state (bypasses Mid-Stop)
				Door closing	Door will auto reverse to OPEN limit (bypasses Mid-Stop)
		Door at Open Mid-Stop		Door opens to the OPEN limit	
		Door stopped during open or close cycle	Door opens to the OPEN limit (bypasses Mid-Stop)		
			CLOSE button is held (constant pressure)	Operator at OPEN limit	Door closes to the CLOSE limit
				Operator at CLOSE limit	No change in state
				Door opening	No change in state
				Door closing	No change in state
Door at Open Mid-Stop	Door closes to the CLOSE limit				
Door stopped during open or close cycle	Door closes to the CLOSE limit				

Programming (continued)

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE	
C2 (continued)	3-Button Remote Control Programmed as OPEN/CLOSE/STOP	OPEN button is pressed momentarily	Operator at OPEN limit	No change in state	
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop	
			Door opening	No change in state	
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop	
			Door at Open Mid-Stop	Door opens to the OPEN limit	
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop	
		CLOSE button is pressed momentarily	Operator at OPEN limit	No change in state	
			Operator at CLOSE limit	No change in state	
			Door opening	No change in state	
			Door closing	No change in state	
			Door at Open Mid-Stop	No change in state	
			Door stopped during open or close cycle	No change in state	
		STOP button is pressed momentarily	Operator at OPEN limit	No change in state	
			Operator at CLOSE limit	No change in state	
			Door opening	Door stops	
			Door closing	Door stops	
			Door at Open Mid-Stop	No change in state	
			Door stopped during open or close cycle	No change in state	
	Single Button Remote Control Programmed as SBC	Button is pressed	Operator at OPEN limit	No change in state	
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop	
			Door opening	Door stops	
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop	
			Door at Open Mid-Stop	Door opens to the OPEN limit	
			Door stopped during open cycle	No change in state	
			Door stopped during close cycle	Door opens to the OPEN limit or Mid-Stop	
			Operator at OPEN limit	Door closes and stops when button is released	
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop	
			Door opening	Door stops	
	Single Button Wall Controller (Wired)	Button is pressed	Door closing	Door will auto reverse to OPEN limit or Mid-Stop	
			Door at Open Mid-Stop	Door opens to the OPEN limit	
			Door stopped during open cycle	Door closes and stops when button is released	
			Door stopped during close cycle	Door opens to the OPEN limit or Mid-Stop	
			Button is held (constant pressure)	Door Opening	No change in state or Mid-Stop
			myQ® Smart Facility Access	Open is pressed	Operator at OPEN limit
	Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop			
	Door opening	No change in state			
	Door closing	Door will auto reverse to OPEN limit or Mid-Stop			
	Door at Open Mid-Stop	Door opens to the OPEN limit			
	Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop			
	Close is pressed	Operator at OPEN limit		No change in state	
		Operator at CLOSE limit		No change in state	
		Door opening		No change in state	
Door closing		No change in state			
Door at Open Mid-Stop		No change in state			
Door stopped during open or close cycle		No change in state			

Programming (continued)

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE
E2 - Momentary contact to open with override and constant pressure to close. Release of close button will cause door to reverse (roll-back feature) plus wiring for sensing device to reverse. Compatible with 3-Button Station.	3-Button Wall Controller	OPEN button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop
			Door opening	No change in state
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop
			Door at Open Mid-Stop	Door opens to the OPEN limit
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop
		CLOSE button is pressed momentarily	Operator at OPEN limit	Door closes and auto reverses when button is released
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	Door closes and auto reverses when button is released
			Door stopped during open or close cycle	Door closes and auto reverses when button is released
		STOP button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	Door stops
			Door closing	Door stops
			Door at Open Mid-Stop	No change in state
			Door stopped during open or close cycle	No change in state
		OPEN button is held (constant pressure)	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	Door opens to the OPEN limit (bypasses Mid-Stop)
			Door opening	No change in state (bypasses Mid-Stop)
			Door closing	Door will auto reverse to OPEN limit (bypasses Mid-Stop)
			Door at Open Mid-Stop	Door opens to the OPEN limit
			Door stopped during open or close cycle	Door opens to the OPEN limit (bypasses Mid-Stop)
	CLOSE button is held (constant pressure)	Operator at OPEN limit	Door closes to the CLOSE limit	
		Operator at CLOSE limit	No change in state	
		Door opening	No change in state	
		Door closing	No change in state	
		Door at Open Mid-Stop	Door closes and auto reverses when button is released	
		Door stopped during open or close cycle	Door closes and auto reverses when button is released	
	3-Button Remote Control Programmed as OPEN/ CLOSE/ STOP	OPEN button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop
			Door opening	No change in state
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop
			Door at Open Mid-Stop	Door opens to the OPEN limit
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop
		CLOSE button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	No change in state
			Door stopped during open or close cycle	No change in state
		STOP button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	Door stops
			Door closing	Door stops
			Door at Open Mid-Stop	No change in state
			Door stopped during open or close cycle	No change in state
	Single Button Remote Control	Button is pressed	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
Door at Open Mid-Stop			No change in state	
Door stopped during open or close cycle			No change in state	
Single Button Wall Controller (Wired)	Button is pressed:	Operator at OPEN limit	No change in state	
		Operator at CLOSE limit	No change in state	
		Door opening	No change in state	
		Door closing	No change in state	
		Door at Open Mid-Stop	No change in state	
		Door stopped during the open cycle	No change in state	
myQ	Door image is pressed:	Operator at OPEN limit	No change in state	
		Operator at CLOSE limit	Door opens to the OPEN limit	
		Door opening	No change in state	
		Door closing	No change in state	
		Door at Open Mid-Stop	No change in state	
		Door stopped during open or close cycle	No change in state	

Programming (continued)

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE
D1 - Constant pressure to open and close with wiring for sensing device to stop. Compatible with 2 or 3-Button Station	3-Button Wall Controller	OPEN button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	Door opens and stops when button is released
			Door opening	No change in state
			Door closing	Door stops
			Door at Open Mid-Stop	Door opens and stops when button is released
			Door stopped during open or close cycle	Door opens and stops when button is released
		CLOSE button is pressed momentarily	Operator at OPEN limit	Door closes and stops when button is released
			Operator at CLOSE limit	No change in state
			Door opening	Door stops
			Door closing	No change in state
			Door at Open Mid-Stop	Door closes and stops when button is released
			Door stopped during open or close cycle	Door closes and stops when button is released
		STOP button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	Door stops
			Door closing	Door stops
		OPEN button is held (constant pressure)	Door at Open Mid-Stop	No change in state
			Door stopped during open or close cycle	Door stops only in the closed position
			Operator at OPEN limit	No change in state
			Operator at CLOSE limit	Door opens to the OPEN limit
			Door opening	No change in state
			Door closing	Door stops
			Door at Open Mid-Stop	Door opens to the OPEN limit
			Door stopped during open or close cycle	Door stops only in the closed position
	CLOSE button is held (constant pressure)	Operator at OPEN limit	Door closes to the CLOSE limit	
		Operator at CLOSE limit	No change in state	
		Door opening	No change in state	
		Door closing	No change in state	
		Door at Open Mid-Stop	Door closes to the CLOSE limit	
		Door stopped during open or close cycle	Door stops only in the open position	
	3-Button Remote Control Programmed as OPEN / CLOSE / STOP	OPEN button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	No change in state
			Door stopped during open or close cycle	No change in state
		CLOSE button is pressed momentarily	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	No change in state
			Door stopped during open or close cycle	No change in state
	STOP button is pressed momentarily	Operator at OPEN limit	No change in state	
		Operator at CLOSE limit	No change in state	
		Door opening	No change in state	
		Door closing	No change in state	
		Door at Open Mid-Stop	No change in state	
		Door stopped during open or close cycle	No change in state	
	Single Button Remote Control	Button is pressed	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	No change in state
			Door stopped during open or close cycle	No change in state
	Single Button Wall Controller (Wired)	Button is pressed:	Operator at OPEN limit	No change in state
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	No change in state
			Door stopped during the open cycle	No change in state
myQ	Door image is pressed:	Door stopped during the close cycle	No change in state	
		Operator at OPEN limit	No change in state	
		Operator at CLOSE limit	No change in state	
		Door opening	No change in state	
		Door closing	No change in state	
		Door at Open Mid-Stop	No change in state	
		Door stopped during open or close cycle	No change in state	

Programming (continued)

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE	
<p>T - Momentary contact to open, close, and stop, with open override and Timer-To-Close (TTC). Every device that causes the door to open, except any sensing edge input device, activates the TTC. Auxiliary controls can be connected to open input to activate the TTC. If the TTC has been activated, the open button and radio control can recycle the timer. The stop button will deactivate the timer until the next command input. The TTC will function from the Open limit stop and Open Mid-Stop available with this mode type. Compatible with 3-Button Station, 1-Button Station and 1 and 3-Button Remote Control. Close Mid-Stop is available but not shown in table. Monitored Entrapment Protection (LMEP) Device required.</p>	<p>Front panel buttons (membrane) and 3-Button Wall Controller</p>	<p>OPEN button is pressed momentarily</p>	Operator at OPEN limit	No change in state (Recycle timer)	
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop (and activates TTC)	
			Door opening	No change in state	
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop (and activates TTC)	
			Door at Open Mid-Stop	Door opens to the OPEN limit (and activates TTC)	
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop (and activates TTC)	
		<p>CLOSE button is pressed momentarily</p>	Operator at OPEN limit	Door closes to the CLOSE limit	
			Operator at CLOSE limit	No change in state	
			Door opening	No change in state	
			Door closing	No change in state	
			Door at Open Mid-Stop	Door closes to the CLOSE limit	
			Door stopped during open or close cycle	Door closes to the CLOSE limit	
		<p>STOP button is pressed momentarily</p>	Operator at OPEN limit	No change in state (Deactivate timer)	
			Operator at CLOSE limit	No change in state	
			Door opening	Door stops	
			Door closing	Door stops	
			Door at Open Mid-Stop	No change in state (Deactivate timer)	
			Door stopped during open or close cycle	No change in state	
		<p>OPEN button is held (constant pressure)</p>	Operator at OPEN limit	No change in state (Recycle & hold timer)	
			Operator at CLOSE limit	Door opens to the OPEN limit (bypasses Mid-Stop) and activates TTC	
			Door opening	No change in state (bypasses Mid-Stop)	
	Door closing		Door will auto reverse to OPEN limit (bypasses Mid-Stop) and activates TTC		
	Door at Open Mid-Stop		Door opens to the OPEN limit and activates TTC		
	Door stopped during open or close cycle		Door opens to the OPEN limit (bypasses Mid-Stop) and activates TTC		
	<p>CLOSE button is held (constant pressure)</p>	Operator at OPEN limit	Door closes to the CLOSE limit		
		Operator at CLOSE limit	No change in state		
		Door opening	No change in state		
		Door closing	No change in state		
		Door at Open Mid-Stop	Door closes to the CLOSE limit		
		Door stopped during open or close cycle	Door closes to the CLOSE limit		
	<p>3-Button Remote Control Programmed as OPEN/ CLOSE/ STOP</p>	<p>OPEN button is pressed momentarily</p>	Operator at OPEN limit	No change in state (Recycle timer)	
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop and activates TTC	
			Door opening	No change in state	
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop and activates TTC	
			Door at Open Mid-Stop	Door opens to the OPEN limit and activates TTC	
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop and activates TTC	
		<p>CLOSE button is pressed momentarily</p>	Operator at OPEN limit	Door closes to the CLOSE limit	
			Operator at CLOSE limit	No change in state	
			Door opening	No change in state	
			Door closing	No change in state	
			Door at Open Mid-Stop	Door closes to the CLOSE limit	
			Door stopped during open or close cycle	Door closes to the CLOSE limit	
		<p>STOP button is pressed momentarily</p>	Operator at OPEN limit	No change in state (Deactivate timer)	
			Operator at CLOSE limit	No change in state	
			Door opening	Door stops	
			Door closing	Door stops	
			Door at Open Mid-Stop	No change in state (Deactivate timer)	
			Door stopped during open or close cycle	No change in state	
		<p>Single Button Remote Control Programmed as SBC</p>	<p>Button is pressed</p>	Operator at OPEN limit	Door closes to the CLOSE limit
				Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop and activates TTC
				Door opening	Door stops
	Door closing			Door will auto reverse to OPEN limit or Mid-Stop and activates TTC	
	Door at Open Mid-Stop			Door opens to the OPEN limit and activates TTC	
	Door stopped during the open cycle			Door closes to the CLOSE limit	
Door stopped during the close cycle	Door opens to the OPEN limit or Mid-Stop and activates TTC				

Programming (continued)

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE	
T (continued)	Single Button Wall Controller (Wired)	Button is pressed	Operator at OPEN limit	Door closes to the CLOSE limit	
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop	
			Door opening	Door stops	
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop and activates TTC	
			Door at Open Mid-Stop	Door opens to the OPEN limit and activates TTC	
			Door stopped during the open cycle	Door closes to the CLOSE limit	
			Door stopped during the close cycle	Door opens to the OPEN limit or Mid-Stop and activates TTC	
			Button is held (constant pressure)	Door opening	No change in state
		myQ® Smart Facility Access	Open is pressed	Operator at OPEN limit	No change in state (Recycle timer)
				Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop and activates TTC
	Door opening			No change in state	
	Door closing			Door will auto reverse to OPEN limit or Mid-Stop and activates TTC	
	Door at Open Mid-Stop			Door opens to the OPEN limit and activates TTC	
	Door stopped during open or close cycle			Door opens to the OPEN limit or Mid-Stop and activates TTC	
	Close is pressed		Operator at OPEN limit	Door closes to the CLOSE limit	
			Operator at CLOSE limit	No change in state	
			Door opening	No change in state	
			Door closing	No change in state	
			Door at Open Mid-Stop	Door closes to the CLOSE limit	
			Door stopped during open or close cycle	Door closes to the CLOSE limit	

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE
TS - This mode will attempt to close the door from any position except when fully closed, or when a safety input is present. The stop button will recycle the Timer-To-Close (TTC) at any position. To disable the TTC in this mode, installation of a defeat switch is required (see wiring diagram). Momentary contact to open, close, and stop with open override and TTC. Every device that causes door to open, including a reversing device, activates the TTC. Auxiliary controls can be connected to open input to activate the TTC. If the timer has been activated, the open button and radio control can recycle the timer. The TTC will function from the Open limit and Open mid stop with this operating mode type. Close Mid Stop available but not shown in table. Compatible with 3-Button Station, 1-Button Station and 1 and 3-Button Remote Control. Monitored Entrapment Protection (LMEP) Device required.	Front panel buttons (membrane) and 3-Button Wall Controller	OPEN button is pressed momentarily	Operator at OPEN limit	No change in state (Recycle TTC)
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop and activates TTC
			Door opening	No change in state
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop and activates TTC
			Door at Open Mid-Stop	Door opens to the OPEN limit and activates TTC
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop and activates TTC
		CLOSE button is pressed momentarily	Operator at OPEN limit	Door closes to the CLOSE limit
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	Door closes to the CLOSE limit
			Door stopped during open or close cycle	Door closes to the CLOSE limit
		STOP button is pressed momentarily	Operator at OPEN limit	No change in state (Recycle TTC)
			Operator at CLOSE limit	No change in state
			Door opening	Door stops and activates TTC
			Door closing	Door stops and activates TTC
			Door at Open Mid-Stop	No change in state (Recycle TTC)
			Door stopped during open or close cycle	No change in state (Recycle TTC)
		OPEN button is held (constant pressure)	Operator at OPEN limit	No change in state (Recycle & hold TTC)
			Operator at CLOSE limit	Door opens to the OPEN limit (bypasses Mid-Stop) and activates TTC
			Door opening	No change in state (bypasses Mid-Stop) and activates TTC
			Door closing	Door will auto reverse to OPEN limit (bypasses Mid-Stop) and activates TTC
			Door at Open Mid-Stop	Door opens to the OPEN limit and activates TTC
			Door stopped during open or close cycle	Door opens to the OPEN limit (bypasses Mid-Stop) and activates TTC
CLOSE button is held (constant pressure)	Operator at OPEN limit	Door closes to the CLOSE limit		
	Operator at CLOSE limit	No change in state		
	Door opening	No change in state		
	Door closing	No change in state		
	Door at Open Mid-Stop	Door closes to the CLOSE limit		
	Door stopped during open or close cycle	Door closes to the CLOSE limit		

Programming (continued)

WIRING TYPE	DEVICE	ACTION	STATE	RESPONSE
TS (continued)	3-Button Remote Control Programmed as OPEN/ CLOSE/STOP	OPEN button is pressed momentarily	Operator at OPEN limit	No change in state (Recycle TTC)
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop and activates TTC
			Door opening	No change in state
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop and activates TTC
			Door at Open Mid-Stop	Door opens to the OPEN limit and activates TTC
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop and activates TTC
		CLOSE button is pressed momentarily	Operator at OPEN limit	Door closes to the CLOSE limit
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	Door closes to the CLOSE limit
			Door stopped during open or close cycle	Door closes to the CLOSE limit
		STOP button is pressed momentarily	Operator at OPEN limit	No change in state (Recycle TTC)
			Operator at CLOSE limit	No change in state
			Door opening	Door stops and activates TTC
			Door closing	Door stops and activates TTC
			Door at Open Mid-Stop	No change in state (Recycle TTC)
			Door stopped during open or close cycle	No change in state (Recycle TTC)
	Single Button Remote Control Programmed as SBC	Button is pressed	Operator at OPEN limit	Door closes to the CLOSE limit
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop and activates TTC
			Door opening	Door stops and activates TTC
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop and activates TTC
			Door at Open Mid-Stop	Door opens to the OPEN limit and activates TTC
			Door stopped during the open cycle	Door closes to the CLOSE limit
		Door stopped during the close cycle	Door opens to the OPEN limit or Mid-Stop and activates TTC	
		Button is pressed	Operator at OPEN limit	Door closes to the CLOSE limit
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop and activates TTC
			Door opening	Door stops and activates TTC
	Door closing		Door will auto reverse to OPEN limit or Mid-Stop and activates TTC	
	Button is held (constant pressure)	Door at Open Mid-Stop	Door opens to the OPEN limit	
		Door stopped during the open cycle	Door closes to the CLOSE limit	
	myQ® Smart Facility Access	Open is pressed	Operator at OPEN limit	No change in state (Recycle TTC)
			Operator at CLOSE limit	Door opens to the OPEN limit or Mid-Stop (activates TTC)
			Door opening	No change in state
			Door closing	Door will auto reverse to OPEN limit or Mid-Stop and activates TTC
			Door at Open Mid-Stop	Door opens to the OPEN limit and activates TTC
			Door stopped during open or close cycle	Door opens to the OPEN limit or Mid-Stop and activates TTC
		Close is pressed	Operator at OPEN limit	Door closes to the CLOSE limit
			Operator at CLOSE limit	No change in state
			Door opening	No change in state
			Door closing	No change in state
			Door at Open Mid-Stop	Door closes to the CLOSE limit
			Door stopped during open or close cycle	Door closes to the CLOSE limit

Programming (continued)

Programmable Inputs

- The controller contains three programmable inputs that may be configured to accept several different input devices.
- Navigate through the menus to SYSTEM SETTINGS (enter password) to PROG INPUTS. Select INP1, INP2 or INP3.
- Select a Function from the list. Press Enter.
- Select a Polarity from the list. Press Enter.

Function Options:

- Non-monitored Eye/Edge Input
- Car Dealer Input (typically loop detector, treadle hose, card reader)
- Timer Defeat
- All Fly (previously known as FSTS)

Radio

The controller has a built in Security+ 2.0® radio receiver, that can program up to 90 remote control devices and up to 30 keyless entry devices.

Programming Remote Controls and myQ® Devices

1. Select SYSTEM SETTINGS from the main menu (enter passcode.)
2. Select CONNECTIVITY.
3. Select one of: Learn myQ Devices, Wi-Fi, or Remotes.
4. The operator will indicate the selected accessory is being learned.
5. Repeat as needed for any other devices and remotes.

Erasing Programmed Devices

1. Select Connectivity from the main menu (enter passcode).
2. Select Erase.
3. Select the type of device to be erased or select "Erase all".
4. Press "UP" button to erase the selected device.
5. Display will confirm erasing selected device.

Reset Defaults

Parameter	Default Value
Operating Mode	B2
Frequency Profile	Maximum Speed
Open Frequency	10HZ
Close Frequency	10HZ
Limits	Must Relearn Limits
Timer to Close	120 sec.
Delay to Open	0
Delay to Close	0
INP1 Function	No Function
INP1 Logic	N.O.
INP2 Function	No Function
INP2 Logic	N.O.
INP3 Function	No Function
INP3 Logic	N.O.
Eye/Edge	Unlearned
Service Counter Interval	5000
Service Counter Value	Is not reset
Absolute Cycle Counter	Is not reset

NOTICE: This device complies with part 15 of the FCC rules and Innovation, Science and Economic Development Canada license-exempt RSSs. 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device must be installed to ensure a minimum 20 cm (8 in.) distance is maintained between users/bystanders and device.

This device has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules and Industry Canada ICES standard. These limits are designed to provide reasonable protection against harmful interference in a commercial

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 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.

Programming (continued)

myQ® Smart Facility Access

One Platform allows you to manage access for unlimited facilities, users and vehicles.

The myQ® Smart Facility Access allows you to control all your access points in the facility from the myQ® website application from anywhere. Monitor and control your vehicular access doors, gated entry locations, and even dock positions from a universal platform. myQ® technology uses a 900Mhz signal or a Wi-Fi connection to communicate securely from your connected devices to myQ® enabled accessories or directly to a Wi-Fi network.

Setup a myQ® Smart Facility Access Account

NOTE: *If you have an existing myQ® account, your myQ® Business™ account will have the same password.*

We have made the account setup process easier than ever. It's completely self-service. Go to Account.myQ.com and begin the process.

1. Select Country, Name, email, and create password.
2. Verify the email with a 4-digit code.
3. Select property manager or partner.
4. To create a myQ® Facility, select property type, property name, property manager information. You are now ready to access your dashboard and all other myQ® features.
5. Set up the Facility and add users and groups to provide access to the Facility (refer to the available Help in myQ® Business™).
6. You will get a welcome email from LiftMaster. Accept the invitation and register or login to your account.
7. Set up the Facility and add users & groups to provide access to the Facility (refer to the available Help in myQ® Business™).
8. Follow on-screen prompts to get your Variable Speed Door Operator and additional devices connected.

Provisioning Wi-Fi

Follow the below instructions to pair the operator:

1. Press the "STOP/ENTER" and "DOWN" buttons at the same time for 3+ seconds to enter the operator menu.
2. Scroll down to "SYSTEM SETTINGS" with the "UP" and "DOWN" buttons and press "ENTER". You will be prompted to enter the password for the operator.
3. Enter 326 as the password.
4. Scroll down to "CONNECTIVITY" and press "ENTER".
5. Press "ENTER" again to select "CONNECTIVITY LEARN".
6. Scroll down to "LEARN WIFI" and press "ENTER". The operator will now be in Learn Mode.
7. Using your own device (laptop, tablet, or smart phone) go to your device's Wi-Fi setting and search for the Wi-Fi network called myQ-*nnn* where the *nnn* is the last 3 serial numbers of your controller. Select that Wi-Fi network.
8. Once your device (laptop, tablet, or smart phone) is connected to the operator, go to setup.myqdevice.com on your device and follow the instructions.

Auxiliary Relays Accessory Kit ([XXXXXX])

Configure the Relay Adapter

This operator allows for the programming of a single mid-stop door position.

To set the open mid-stop position:

1. In Programming Mode, go to Door Position => Open Mid-Stop or Close Mid-Stop.
2. Use the Up/Down buttons to move the door to the desired position.
3. Select Save = Enter

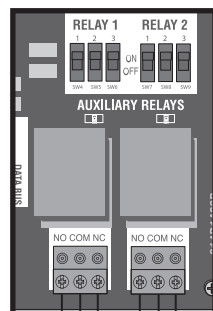
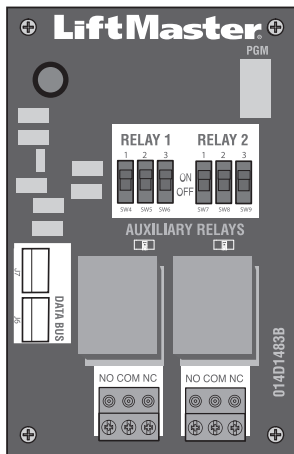
To erase the mid-stop, select Erase Open Mid-Stop or Erase Close-Mid Stop option, then select Save=Enter.

NOTE: Restoring defaults or resetting limits will erase the mid-stop position.

AUXILIARY RELAYS

- **Aux Relay Switches:** Set the AUX RELAY switches as needed to obtain the desired function as shown below.
- **J6 Input:** Communicator bus connects control board, expansion board, or relay adapter board.
- **J7 Input:** Communicator bus connects control board, expansion board, or relay adapter board.
- **AUX24:** Supplies +24Vdc up to 1AMP to wired accessories.

RELAY ADAPTER BOARD



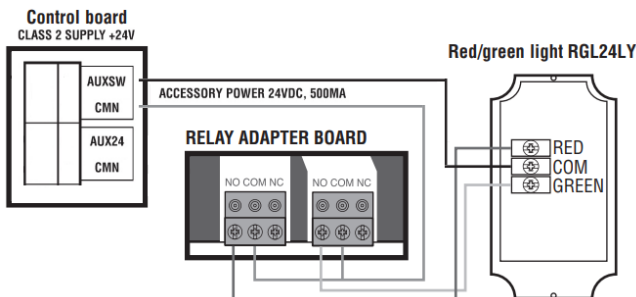
RELAY ADAPTER BOARD

RED/GREEN LIGHT FUNCTIONALITY

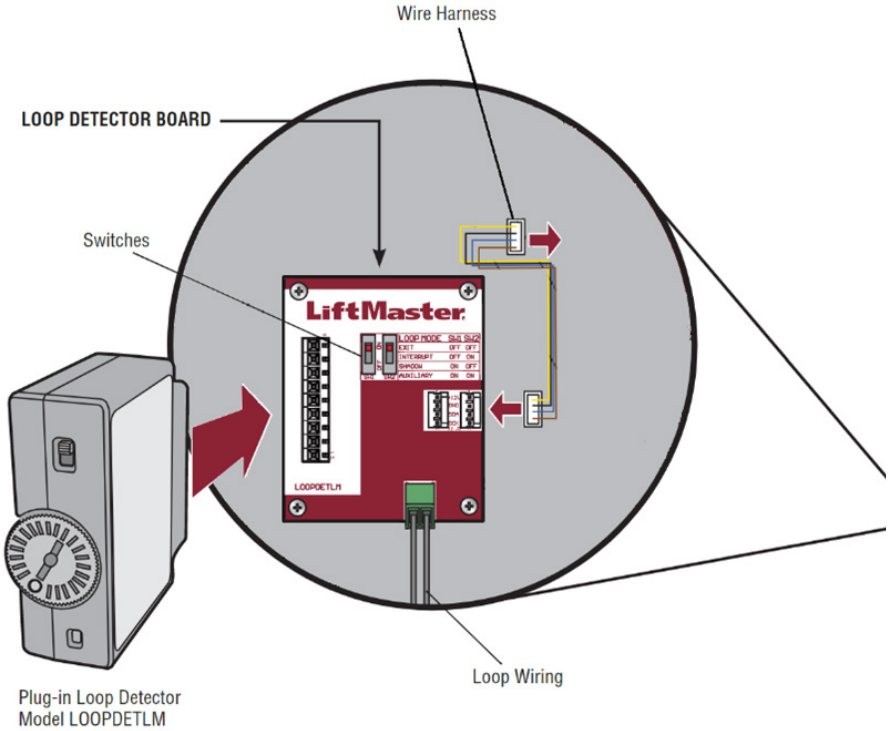
Red light wired to AUX RELAY 1. Green light wired to AUX RELAY 2.

DOOR STATE	AUX RELAY 1 SWITCHES			AUX RELAY 2 SWITCHES		
	1 OFF	2 OFF	3 OFF	1 ON	2 ON	3 ON
Closed	Red light OFF*			Green light OFF		
Opening	Red light ON/Flash			Green light OFF		
Open	Red light OFF			Green light ON		
Closing	Red light ON/Flash			Green light OFF		
Defined Mid Stop	N/A			N/A		
Undefined Mid Stop	Red light ON			Green light OFF		
Timer more than 5 seconds	Red light OFF			Green light ON		
Timer less than 5 seconds	Red light ON/Flash			Green light OFF		

* For red light ON when gate is closed, set switch 1 on AUX RELAY 1 to ON.



Loop Detector Board



Need better installation images this is just a reference.

Loop Mode	SW1	SW2
EXIT	?	?
INTERRUPT	?	?
SHADOW	?	?
AUXILIARY	ON	ON

Disconnect power BEFORE making electrical connections. The Loop Detector Board (model LPEXP, not provided) combined with the LOOPDETLM, provides (What functionality) functionality that is available through the auxiliary switch setting.

The LPEXP and LOOPDETLM can be purchased together as a kit (LPEXPKIT).

1. Secure the Loop Detector Board (model LPEXP) to the standoffs in the DC Logic NTX cover on the motor side with the provided screws.
2. Connect the wire harness from the Loop Detector Board to the AUX Relay Board or Main Board (Need to show images).
3. Connect the loop wires to the input on the Loop Detector Board.
4. Plug in the loop detector (model LOOPDETLM).
5. Set switches on the Loop Detector Board to desired settings (Don't know the settings).
6. Activate the loop detector to validate desired functionality.

Troubleshooting

If an error occurs, the idle screen is replaced by a screen showing the error code and a description of the error. An example error code display is shown below.

Error messages originate in one of three categories:

- Inverter (power faults)
- Door control codes related to the motor and encoder
- Option codes related to accessories used with the MC11 or MC21 controllers.

Consult the Table of Error Codes below to determine the cause and corrective action. Depending on the type of error, user interaction may be required to clear the error. The error window closes when the error has been cleared/corrected.

Code	UI Display Text	Fault	Possible Causes
F01	F01 CLOSE LIMIT	Door has moved beyond the lower end position	<ol style="list-style-type: none"> 1. End positions not correctly set 2. Direction of rotation incorrect 3. Brake failure/door falls
F02	F02 OPEN LIMIT	Door has moved beyond upper end position	<ol style="list-style-type: none"> 1. End positions not correctly set 2. Direction of rotation incorrect 3. Brake failure
F03	F03 DIRECTION	Door has moved in the wrong direction.	<ol style="list-style-type: none"> 1. Direction of rotation incorrect 2. Sagging when starting a door with high weight.
F04	F04 UNAUTH. STOP	Obstruction or operator fault triggered system to stop	<ol style="list-style-type: none"> 1. Door moved onto obstacle. If needed check force parameters. 2. Encoder malfunction (e.g. encoder no longer connected) 3. Inverter has triggered stop by itself (e.g. due to temperature, internal error) 4. Inverter has triggered stop due to over voltage, missing brake chopper on imbalanced door. 5. Door cable stretch. Reset limits.
F05	F05 UNAUTH. MOVE	Door did not stop on time while moving or made an unauthorized move while standing.	<ol style="list-style-type: none"> 1. Brake sash chain disengaged. 2. Brake worn-out. 3. Stop command not transmitted 4. Encoder shows ghost movement
F08	F08 NO CONFIG	Configuration not found. Was reset to factory setting.	<ol style="list-style-type: none"> 1. No stored configuration could be found in memory. (Normal for instance with new controller, and/or after certain tests with the test system.) 2. The stored configuration is outdated and no longer compatible with the current software. Can occur after update to a new version.
F09	F09 BUTTON CABLE	Ribbon cable connecting front panel buttons to display is not detected.	Check to ensure that the ribbon cable from the front panel to the display board is attached properly.
F10	F10 UP FORCE	UPWARD force curve is missing	Force sensing in UPWARD direction is activated, but force curve in UPWARD direction is not stored. Execute force learn.
F11	F11 DOWN FORCE	DOWNWARD force curve is missing	Force sensing in DOWNWARD direction is activated. But force curve in DOWNWARD direction is not stored. Execute force learn.
F14	F14 SET LIMITS	End positions are not set or stored.	<ol style="list-style-type: none"> 1. Door positions not set due to new product. 2. Door positions lost due to total reset.
F26	F26 OVER VOLT	Overvoltage on the inverter board	The controller received a message from the inverter of overvoltage.
F41	F41 EYE/ EDG1 BLK	Monitored Eyes/Edge Input 1 Blocked for 3 minutes or more.	The Monitored Eyes/Edge input 1 has a device connected and sensing blocked for 3 minutes or longer.

Troubleshooting (continued)

Code	UI Display Text	Fault	Possible Causes
F42	F42 EYE/ EDG1 MIS	Monitored Eyes/Edge Input 1 learned, but no longer present	The Monitored Eyes/Edge input 1 was learned to the controller, but no longer found.
F43	F43 EYE/ EDG1 BLK	Command to move door received, but Monitored Eyes/Edge Input 1 blocked.	<ol style="list-style-type: none"> 1. A command to move the door was received, but the Monitored Eyes/Edge input 1 is sensing blocked. 2. Door reversed during travel due to Monitored Eyes/Edge Input 1 blocked.
F44	F44 EYE/ EDG2 BLK	Monitored Eyes/Edge Input 2 Blocked for 3 minutes or more.	The Monitored Eyes/Edge input 2 has a device connected and sensing blocked for 3 minutes or longer.
F45	F45 EYE/ EDG2 MIS	Monitored Eyes/Edge Input 2 learned, but no longer present	The Monitored Eyes/Edge input 2 was learned to the controller, but no longer found.
F46	F46 EYE/ EDG2 BLK	Command to move door received, but Monitored Eyes/Edge Input 2 blocked.	<ol style="list-style-type: none"> 1. A command to move the door was received, but the Monitored Eyes/Edge input 2 is sensing blocked. 2. Door reversed during travel due to Monitored Eyes/Edge input 2 blocked.
F47	F47 EYE/ EDG3 BLK	Monitored Eyes/Edge Input 3 Blocked for 3 minutes or more.	The Monitored input 3 has a device connected and sensing blocked for 3 minutes or longer.
F48	F48 EYE/ EDG3 MIS	Monitored Eyes/Edge Input 3 learned, but no longer present	The Monitored Eyes/Edge input 3 was learned to the controller, but no longer found.
F49	F49 EYE/ EDG3 BLK	Command to move door received, but Monitored Eyes/Edge Input 3 blocked.	<ol style="list-style-type: none"> 1. A command to move the door was received, but the Monitored Eyes/Edge input 3 is sensing blocked. 2. Door reversed during travel due to Monitored Eyes/Edge Input 3 blocked.
F51	F51 INP1 BLOCK	Device triggered for 3 minutes or more on Input 1.	A device connected to Programmable Input 1 is triggered or blocked for 3 minutes or longer.
F52	F52 INP1 CMND	Command to move door received, but device triggered on Programmable Input 1.	<ol style="list-style-type: none"> 1. Command to move door received, but Non Monitored device triggered on Input 1. 2. Door reversed during travel due to Programmable Input 1 blocked.
F53	F53 INP2 BLOCK	Device triggered for 3 minutes or more on Input 2.	A device connected to Programmable Input 2 is triggered or blocked for 3 minutes or longer.
F54	F54 INP2 CMND	Command to move door received, but device triggered on Programmable Input 2.	<ol style="list-style-type: none"> 1. Command to move door received, but Non Monitored device triggered on Input 2. 2. Door reversed during travel due to Programmable Input 2 blocked.
F55	F55 INP3 BLOCK	Device triggered for 3 minutes or more on Input 3.	A device connected to Programmable Input 3 is triggered or blocked for 3 minutes or longer.
F56	F56 INP3 CMND	Command to move door received, but device triggered on Programmable Input 3.	<ol style="list-style-type: none"> 1. Command to move door received, but Non Monitored device triggered on Input 3. 2. Door reversed during travel due to Programmable Input 3 blocked.
F61	F61 CTM FAULT	Cable Tension monitor/s triggered	<ol style="list-style-type: none"> 1. One or both of the cable tension monitors is not connected. 2. One or both of the cable tension monitors has faulty wiring (shorted). 3. One or both of the cable tension monitors is triggered by a slack door cable.

Troubleshooting (continued)

Code	UI Display Text	Fault	Possible Causes
F91	F91 ENCODER	Error in position encoder message. Door position outside of valid range.	<ol style="list-style-type: none"> 1. Error in communication cable. 2. Cable shorted, cut, connector disconnected. 3. Loose encoder wires connected to controller.
F92	F92 ENCODER	Time-out error when receiving position encoder message. Message incomplete.	<ol style="list-style-type: none"> 1. Error in communication cable. 2. Cable shorted, cut, connector disconnected. 3. Loose encoder wires connected to controller.
F93	F93 ENCODER	Time-out error when receiving position encoder message. No signals received.	<ol style="list-style-type: none"> 1. Error in communication cable. 2. Cable defect / not connected. 3. Loose encoder wires connected to controller.
F96	F96 SAFETY CIRC	Safety chain circuit was interrupted.	<ol style="list-style-type: none"> 1. Check the status of all devices connected to the INTR LOCK terminals. If no devices are connected a jumper must be placed. 2. Check that the chain hoist mechanism is fully engaged. 3. Check the Data Cable connections at Control Board and Inverter Board. Ensure S+ is connected to S+ and S- is connected to S-. 4. Check the hoist switch connection to the Inverter Board.

WIRELESS EDGE FAULTS

Error Code	Text	Description
n/a	WLESS EDGE BLOK	Edge is triggered
62	F62 WLESS BLK	Edge has been triggered for 3+ minutes
63	F63 WE BLE MISS	Wireless edge lost BLE communication with open edge
64	F64 WE BLE MISS	Wireless edge lost BLE communication with close edge
65	F65 WE I2C MISS	Wireless edge can't communicate with the board with an open edge
66	F66 WE I2C MISS	Wireless edge can't communicate with the board with a close edge
68	F68 WE CRIT BATT	Wireless edge battery is critical

Maintenance

Maintenance Schedule

For use with Maintenance Alert System. Check at the intervals listed in the following chart.



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.

Item	Procedure	Every Month	Every 3 Months or 5,000 Cycles	Every 6 Months or 10,000 Cycles
Drive Chain	<ul style="list-style-type: none"> • Check for excessive slack. • Check and adjust as required. • Lubricate. 		●●	
Sprockets	Check set screw tightness.		●	
Fasteners	Check and tighten as required.			●
Manual Hoist (if applicable)	Check and operate.			●
Shafts	Check for wear and lubricate.		●●	
LiftMaster Monitored Entrapment Protection	Check alignment and functionality.	●		

- Use SAE 30 Oil (Never use grease or silicone spray)
 - Do not lubricate motor. Motor bearings are rated for continuous operation.

- Inspect and service whenever a malfunction is observed or suspected.

How to order repair parts: LiftMaster.com

Accessories

ENTRAPMENT PROTECTION DEVICES (MONITORED)

CPS-U - Dual-Sided Infrared Photoelectric Sensors



- NEMA 1 general purpose enclosure.
- Dual-sided infrared sensors.
- For indoor use.
- Maximum range of 30 feet (9.1 m).

K41-0157-000 - HPH1 & HPH2 Cable Tension Monitor (Right)

K41-0156-000 - HPH1 & HPH2 Cable Tension Monitor (Left)

LMTBUL - Monitored Thru-Beam Photoelectric Sensors



- Max Range: 90 ft. (27.4 m)
 - Cable Length: 10 ft. (3 m)
 - Operating Temperature: -40°C to 65°C (-40°F to 149°F)
 - Outdoor Rating: Nema 4X
 - Heater: Thermostatically controlled
 - Input Voltage:
- Sensor: Black/red wires 6.8 VDC, 20mA
 - Heater: Green/white wires 10-40VDC or 8-28 VAC, 4 watts max., 170mA per pair @ 24 VDC/VAC, 340mA per pair @ 12 VDC/VAC

LMRRUL - Monitored Retro-Reflective Photoelectric Sensors



- Max Range: 50 ft. (15.2 m)
 - Cable Length: 10 ft. (3 m)
 - Operating Temperature: -40°C to 65°C (-40°F to 149°F)
 - Outdoor Rating: Nema 4X
 - Heater: Thermostatically controlled
 - Input Voltage:
- Sensor: Black/red wires 6.8 VDC, 20mA
 - Heater: Green/white wires 10-40VDC or 8-28 VAC, 4 watts max., 170mA per pair @ 24 VDC/VAC, 340mA per pair @ 12 VDC/VAC

CPS-UN4 - Monitored Thru-Beam Photoelectric Sensors



- Heavy-duty housing for industrial applications.
- NEMA 4 enclosure protects against direct spray.
- Dual-sided infrared sensors.
- For indoor/outdoor use.
- Maximum range of 45 feet (13.7 m).

CPS-RPEN4 - Monitored Retro-Reflective Photoelectric Sensors



- Polarized reflector for use in applications with highly reflective surfaces.
- NEMA 4X enclosure protects against direct water spray and corrosion.
- Retro-reflective sensor.
- For indoor/outdoor use.
- Maximum range of 50 feet (15 m).

CPS-OPEN4 - Monitored Dual-Sided Photoelectric Sensors



- Flexible housings maintain alignment in areas with a high propensity for sensor contact.
- NEMA 4X enclosure protects against direct water spray and corrosion.
- Dual-sided infrared sensors.
- For indoor/outdoor use.
- Maximum range of 45 feet (13.7 m).

LMWEKITU - Wireless Edge Kit



- [XXX]
- Approved for US/CAN/MX, Puerto Rico, Columbia, Costa Rica.

LMWETXU - Wireless Edge Kit



- [XXX]
- Approved for US/CAN/MX, Puerto Rico, Columbia, Costa Rica.

OES-SD16 - Optical Edge System



16 feet (4.9 m) Sectional 2-Wire Door Edge Kit with infrared optical sensors, rubber door edge and all mounting hardware (channel sold separately).

OES-SD24 - Optical Edge System



24 feet (7.3 m) Sectional 2-Wire Door Edge Kit with infrared optical sensors, rubber door edge and all mounting hardware (channel sold separately).

OES-RD16 - Optical Edge System



16 feet (4.9 m) Rolling 2-Wire Door Edge Kit with infrared optical sensors, rubber door edge and all mounting hardware (door channel not required).

Optical Edge System (OES)

- Rubber door edge is durable, flexible and easy to install.
- Premium rubber can be cut to length for exact fit.
- NEMA 6 rating protects against moisture and standing water.
- Infrared optical sensors eliminate the need for electrical contacts.
- Maximum range of 33 feet (10 m).
- Sectional and rolling door edges are also available in 50 foot (15 m) bulk rolls, along with individual components for additional savings on large installation jobs.

S50, L50 - Monitored Edge Sensors

[XXX]

CPS-EI - Edge Interface 4-Wire Monitored

For use with approved 4-wire sensing edges listed on this Accessory page.

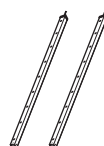
ASO Monitored 4-Wire, 2-Wire Sentir Series 45.30

[XXX]

ASO Monitored 4-Wire, 2-Wire Sentir Series 35.55

[XXX]

LC36M - Monitored Light Curtain



Monitored, primary entrapment protection device that forms a 3-foot cross pattern of invisible light beams for maximum personnel and property protection.

Accessories (continued)

ENTRAPMENT PROTECTION DEVICES (NON-MONITORED)

65-8202 - Vehicle Detection System



Pneumatic Sensing Edge Kit with exterior air switch, 2-wire coil cord and 14 foot (4.3 m) air hose.

65-5202 - Vehicle Detection System



Pneumatic Sensing Edge Kit with exterior air switch, 2-wire take-up reel (20 feet [6 m] extended) and 14 foot (4.3 m) air hose.

100MAPS - Plug-In Power Supply



Provides power to the LC-36A Light Curtain.

NOTE: Use if main board accessory power is consumed and additional power is required.

MYQ ACCESSORIES

828LM - LiftMaster® Internet Gateway



Enables owners of Commercial Door Operators to open and close their doors and turn on/off lights in or around their facility using a mobile device or computer from anywhere in the world.

REMOTE CONTROLS WITH SECURITY+ AND CONNECTIVITY

811LMX - Programmable DIP Switch Single-Button Remote Control



Ideal for commercial door applications requiring a large number of remotes for a common space.

Approved for US/CAN/MX, Puerto Rico, Columbia, Costa Rica.

891LMC - Programmable DIP Switch Three-Button Remote Control



Includes Red, Yellow and Green markings which Indicates Open, Close, Stop.

Approved for US/CAN/MX, Puerto Rico, Columbia, Costa Rica.

893LMC - Programmable DIP Switch Three-Button Remote Control



Approved for US/CAN/MX, Puerto Rico, Columbia, Costa Rica.

877LM - Wireless Keypad



Able to be programmed with temporary access codes for visitors or delivery personnel.

RADIO

STAR1000 - Commercial Access Control Receiver



Connects up to 1000 LiftMaster® remote controls. Supports suspending and unsuspending remote controls to withhold and reinstate access.

850LM - Universal Receiver



Featuring Security+ 2.0® technology. Designed for both gated communities and commercial buildings to support and manage multiple access points multiple remote controls.

WALL CONTROLLER

DCWALLCTL



Floor Level Wall Controller with LCD display.

NOTE: The door operator will only support a single DCWALLCTL display

02-101 - 1-Button Wall Controller



Steel enclosure.

02-102 - 2-Button Wall Controller



Steel enclosure.

02-103L - 3-Button Wall Controller



Steel enclosure with Maintenance Alert System.

02-110 - Key Wall Controller



Indoor flush mount, NEMA 1 with Stop button.

02-401M - 1-Button Wall Controller



Indoor/outdoor surface mount, single button to activate opening one commercial door.