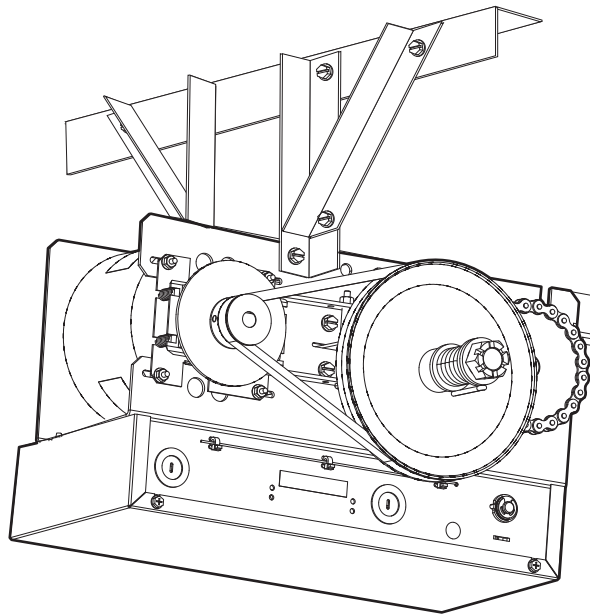


INSTALLATION MANUAL

MODEL MT5011E/BMT5011E MEDIUM DUTY DOOR OPERATOR



**Now with
Built in
Radio Receiver**

INTENDED FOR PROFESSIONAL INSTALLATION ONLY

Visit www.LiftMaster.com to locate a professional installing dealer in your area.

2 YEAR WARRANTY

Serial # _____
(located on electrical box)

Installation Date _____

**Radio Receiver
Built on Board**



315MHz

NOT FOR RESIDENTIAL USE



A SAFETY DEVICE IS HIGHLY RECOMMENDED.

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SAFETY INFORMATION

WARNING

Mechanical

WARNING

Electrical

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

CAUTION

When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your door and/or the door operator if you do not comply with the cautionary statements that accompany it. Read them carefully.

IMPORTANT NOTES:

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

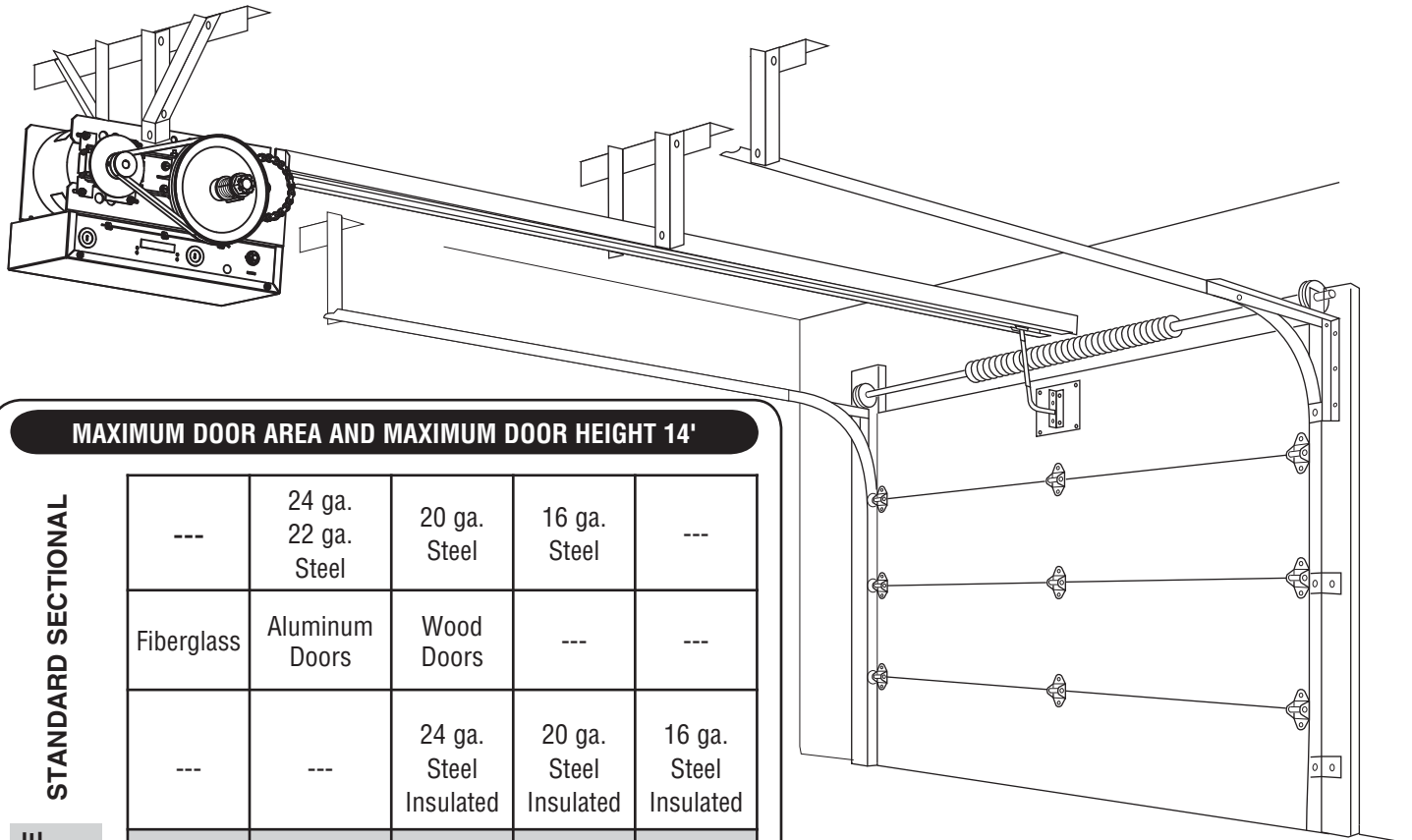
APPLICATION

INTRODUCTION

This Medium Duty Commercial Door Operator includes a number of features that will provide years of reliable and safe operation.

Features:

- **Supports both monitored and non-monitored safety devices:** Safety devices detect obstructions in the door's path and automatically reverse a closing door. Safety devices are highly recommended by the manufacturer.
- **Radio receiver:** A factory installed radio receiver allows remote controls, keyless entries and other remote command devices to be programmed to the operator.
- **Timer To Close:** The Timer To Close feature allows the door to automatically close after a preset time (only available with B2 wiring and a monitored safety device).
- **Wiring Types:** The functionality of the operator is based on the wiring type. The operator is shipped from the factory in standard C2 wiring type (factory default). Some wiring types will require an optional safety device. Refer to Basic Programming Section for descriptions of wiring types, requirements and programming.



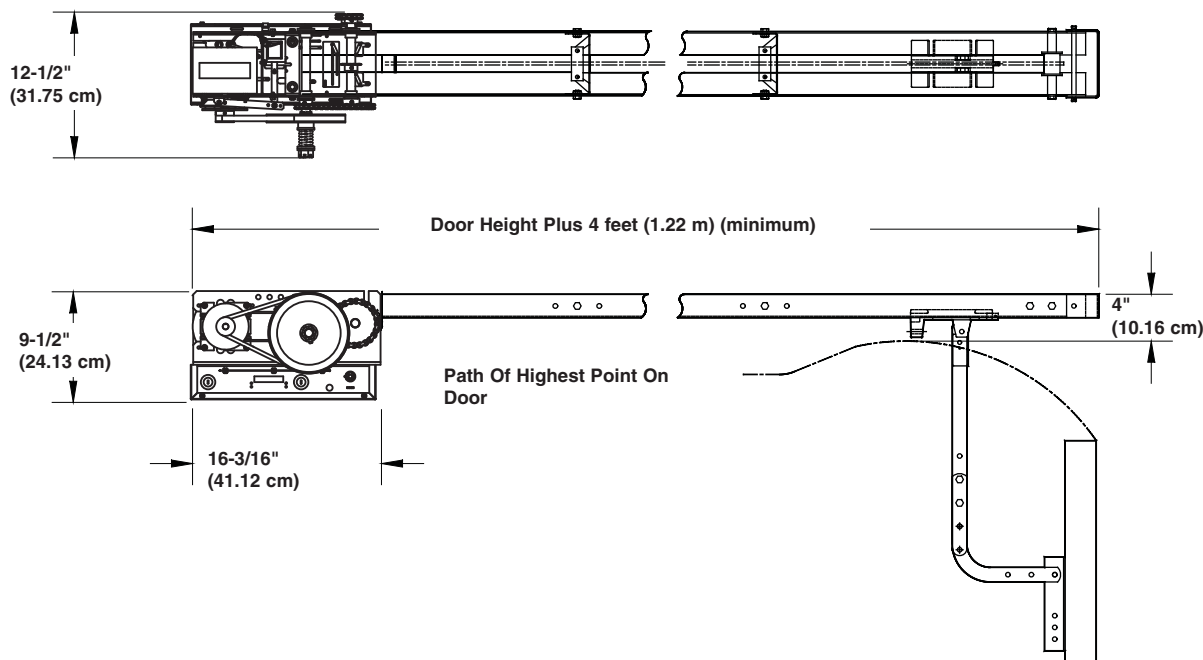
MAXIMUM DOOR AREA AND MAXIMUM DOOR HEIGHT 14'

STANDARD SECTIONAL SQUARE FEET	---	24 ga. 22 ga. Steel	20 ga. Steel	16 ga. Steel	---
	Fiberglass	Aluminum Doors	Wood Doors	---	---
	---	---	24 ga. Steel Insulated	20 ga. Steel Insulated	16 ga. Steel Insulated
	310	260	225	150	100

NOTE: Actual track length will exceed door height by 2'.

WEIGHTS AND DIMENSIONS

HANGING WEIGHT:80-110 LBS. (36.29-49.9 kg) (Including Track)



OPERATOR SPECIFICATIONS

MOTOR

TYPE: Limited duty
HORSEPOWER: 1/2 Horsepower
VOLTAGE: 115Vac, Single Phase, 60Hz
FULL LOAD AMPS: 6.0 Amps

ELECTRICAL

OPERATOR VOLTAGE: 115 Vac, Single Phase, 60 Hz
WIRING TYPE: C2 Standard B2 configurable (see Basic
 Programming section)
CONTROL WIRING: 16-22 AWG

MECHANICAL

DOOR SPEED:..... 12" (30.48 cm) / second
OUTPUT FORCE:.....125 ft. lbs/ sec.
BRAKE (BMT ONLY): Solenoid actuated disc brake
LIMIT ADJUST:.....Fully adjustable up to 14' door maximum
DUTY:.....12 Cycles per hour maximum
 50 Cycles per day maximum
BEARINGS:..... Maintenance Free
FINISH:..... Powder coated, Corrosion Resistant Steel

SAFETY

DISCONNECT Quick disconnect door arm for emergency manual door operation.

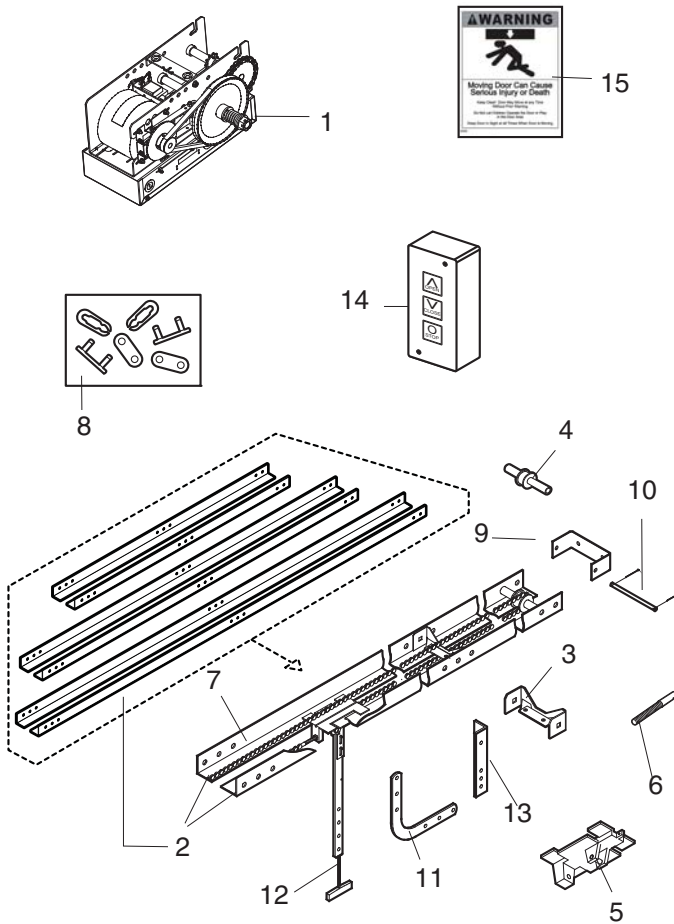
ENTRAPMENT PROTECTION: . . . Supports both monitored and non-monitored safety devices including LiftMaster CPS photo-eyes and industry standard sensing edges.

ENVIRONMENTAL

LOCATION: Indoor, dry location
OPERATING TEMPERATURE: -4° F to +122°F (-20C° to + 50°C)

CARTON INVENTORY

Before beginning your installation check that all components were provided.



ITEM	DESCRIPTION	QTY
1	Operator	1
2	Track (left & right)	2
3	Track Spacers	2
4	Front Idler	1
5	Trolley	1
6	Take-up Bolt	1
7	Chain	1
8	Master Links	2
9	Header Bracket	1
10	Header Pivot Shaft	1
11	Curved Door Arm	1
12	Straight Arm	1
13	Door Bracket	1
14	3-Button Station	1
15	Warning Sign	2

NOT SHOWN

Installation Manual	1
Quickstart Guide	1
User's Guide	1
Caution Label	1
Installation Hardware Bag	1
Complete with: Bolts 3/8"-16 x 3/4" (10), Flanged Hex Nuts 3/8"-16 (14), Bolt 3/8"-16 x 1 (3), Lockwashers 3/8" (3), Cotter Pins (2) and Carriage Bolts (2)	

NOTE: Depending on door height, the quantity of track spacers and hardware may vary.

NOTE: The tracks are shipped separately. Actual track length will exceed door height by 2'. Example: The track for 12' door will be 14'.

PREPARATION

PREPARING YOUR DOOR

The manufacturer recommends 3' (91.4 cm) of clearance around the operator for serviceability. Before you begin:

- Disable locks.
- Remove any ropes connected to door.
- Before the operator is installed, be sure the door has been properly aligned and is working smoothly. Although each installation will vary due to particular building characteristics, refer to the following general procedures to install the operator.

⚠ WARNING

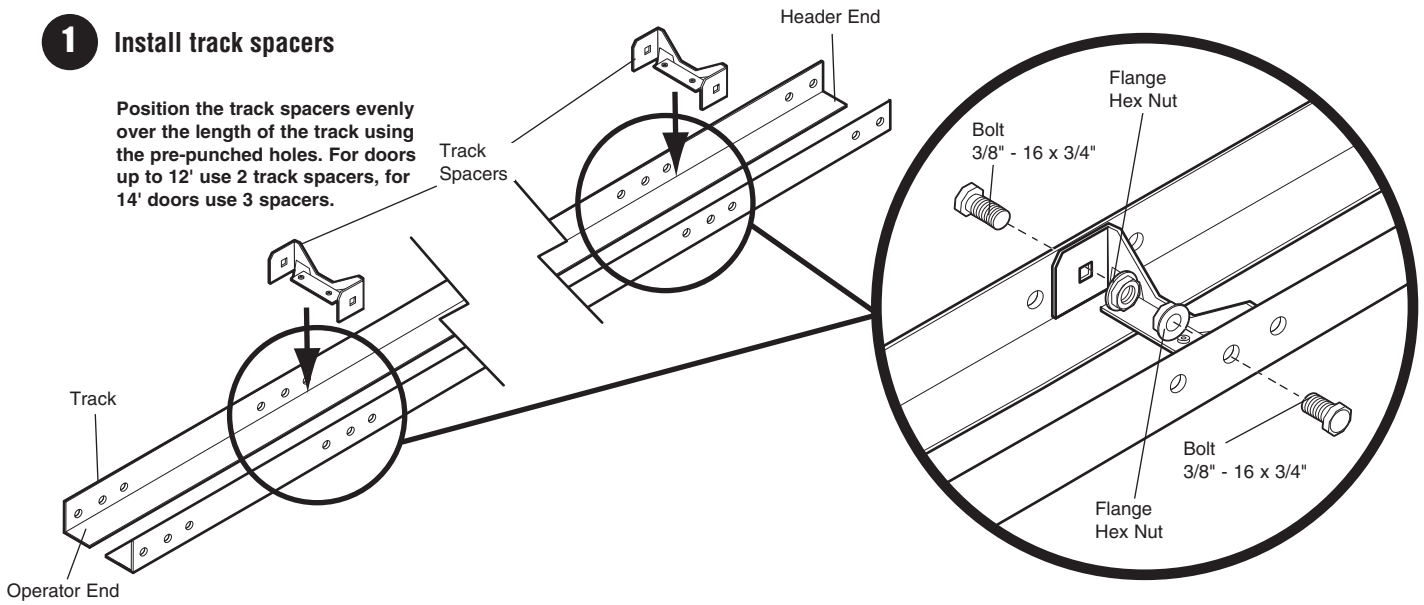
To prevent possible **SERIOUS INJURY** or **DEATH**:

- **DO NOT** connect electric power until instructed to do so.
- If the door lock needs to remain functional, install an interlock switch.
- **ALWAYS** call a trained professional door serviceman if door binds, sticks or is out of balance. An unbalanced door may not reverse when required.
- **NEVER** try to loosen, move or adjust doors, door springs, cables, pulleys, brackets or their hardware, **ALL** of which are under extreme tension and can cause **SERIOUS** personal **INJURY**.
- Disable **ALL** locks and remove **ALL** ropes connected to door **BEFORE** installing and operating door operator to avoid entanglement.

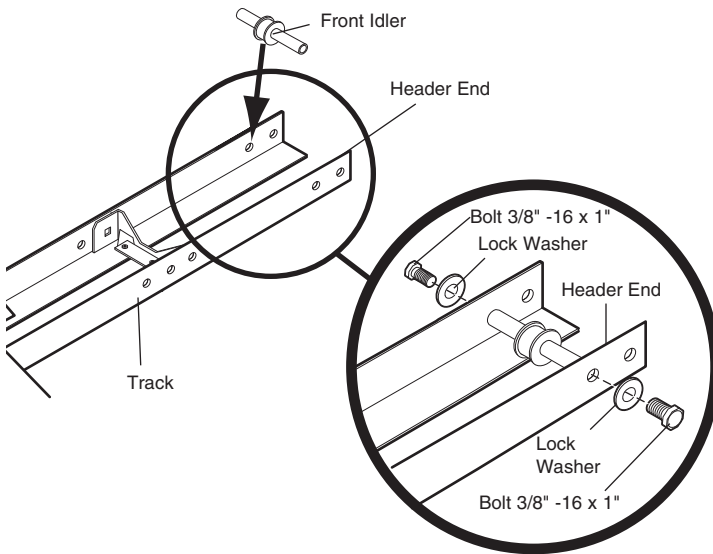
ASSEMBLY

1 Install track spacers

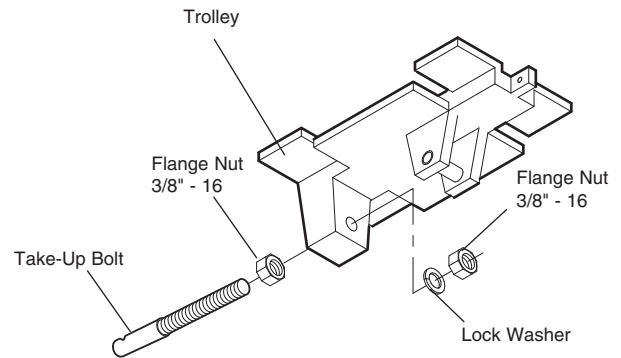
Position the track spacers evenly over the length of the track using the pre-punched holes. For doors up to 12' use 2 track spacers, for 14' doors use 3 spacers.



2 Install front idler

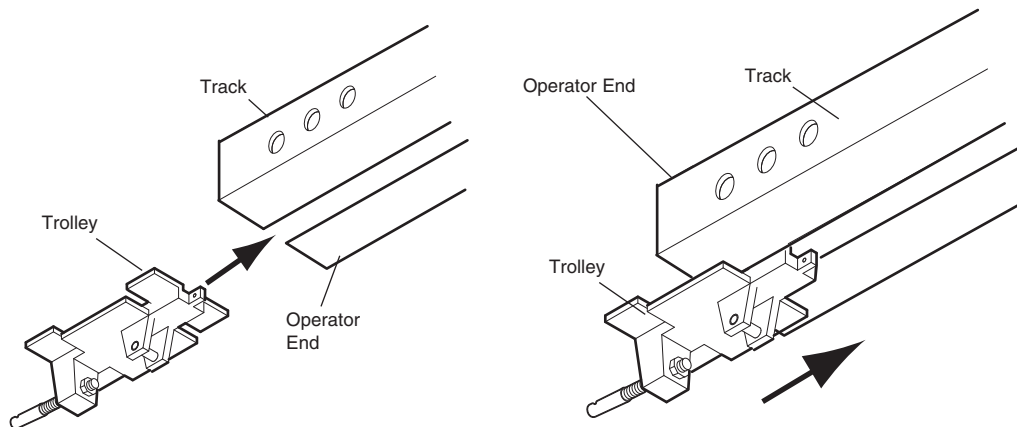


3 Assemble trolley

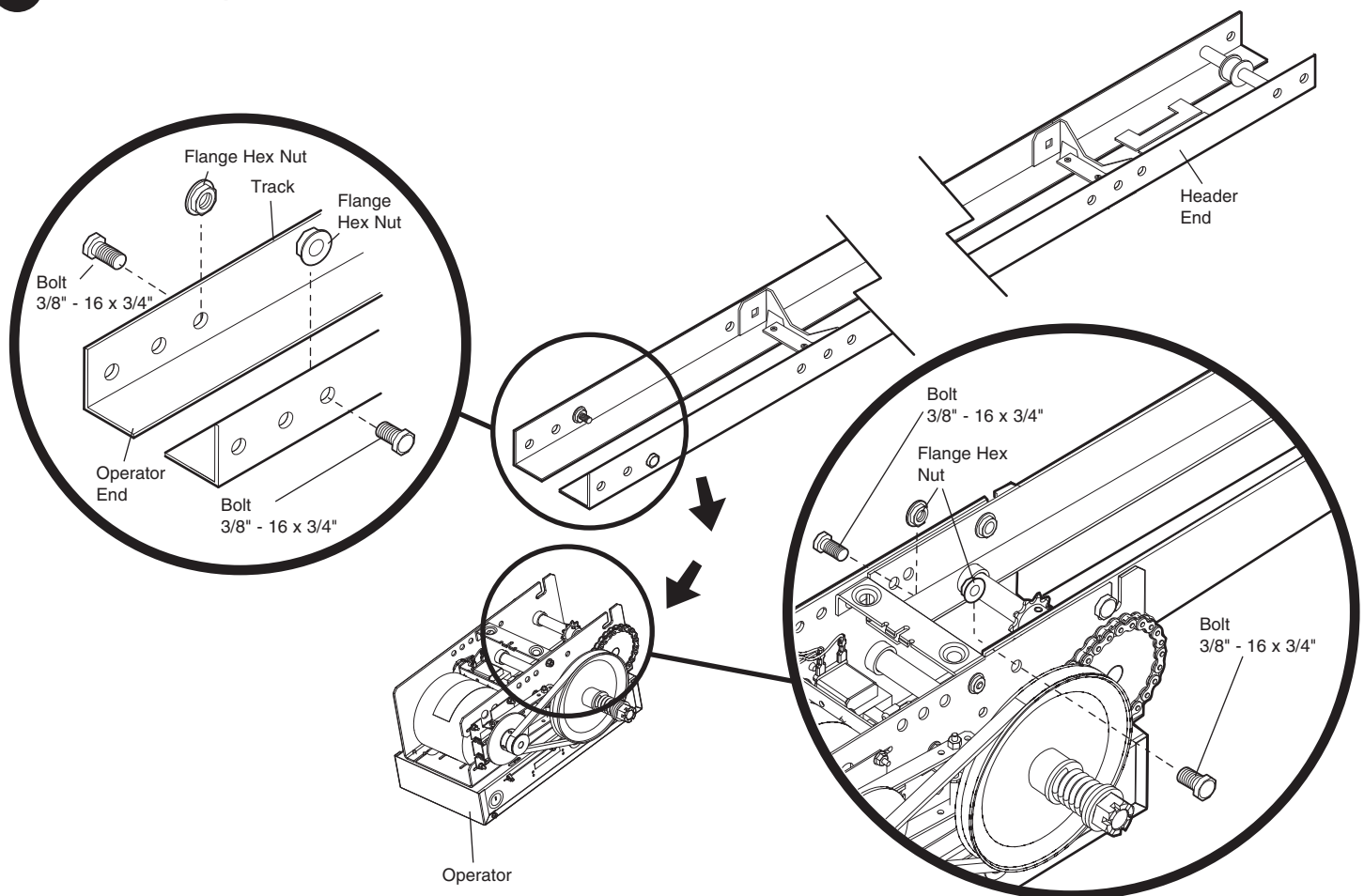


ASSEMBLY

4 Slide trolley onto the track

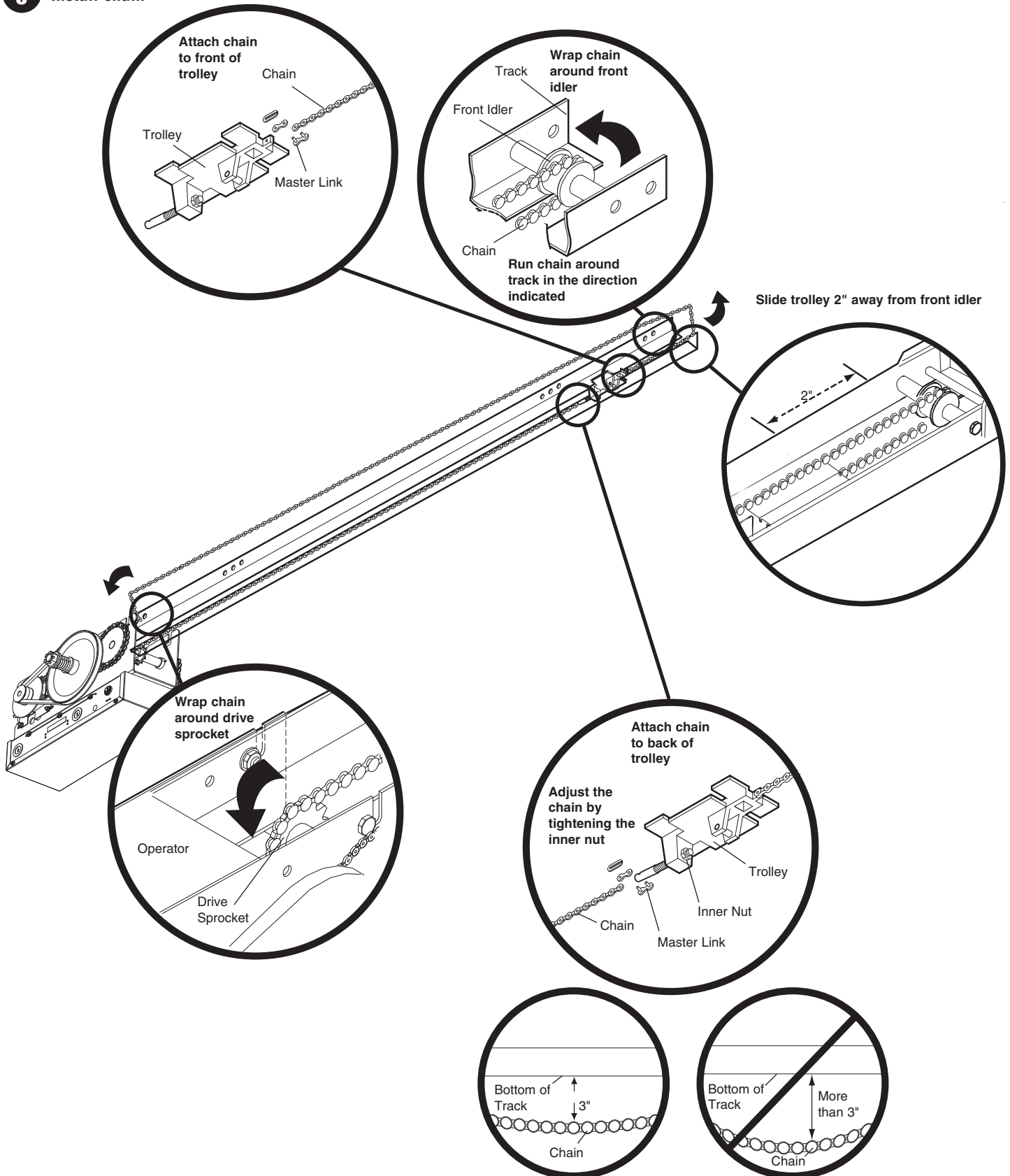


5 Attach track to operator



ASSEMBLY

6 Install chain

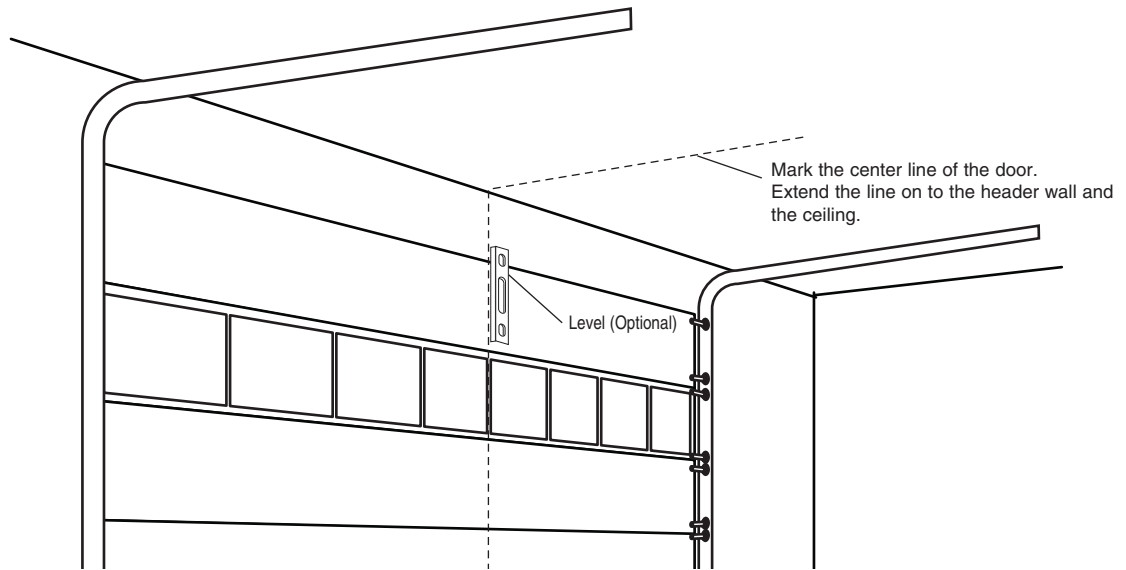


TYPICAL INSTALLATION

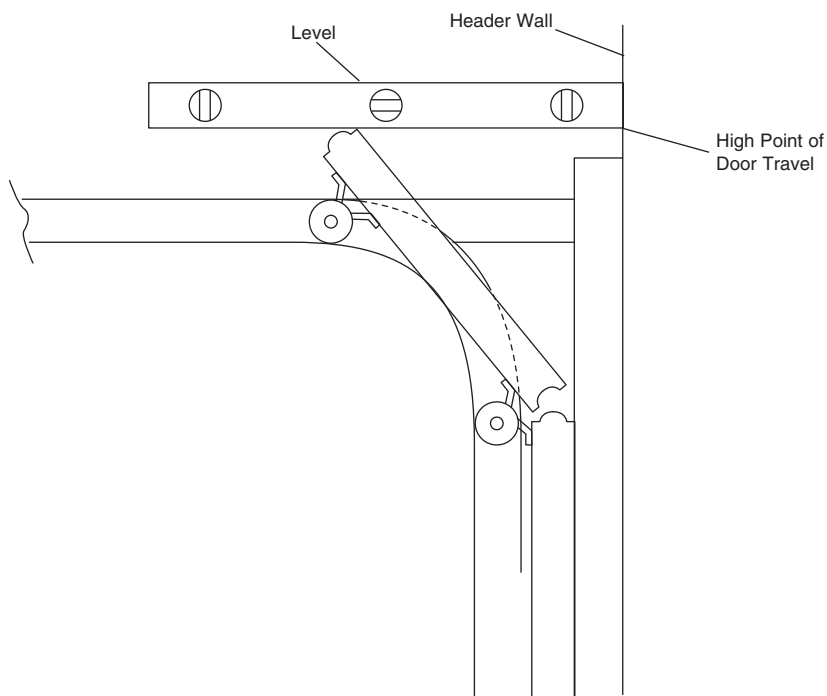
DETERMINE HEADER BRACKET MOUNTING LOCATION

The trolley operator is generally mounted over the center of the door. However, off center mounting may be required due to interfering structures or location of door stile / top section support. Typically, the operator may be mounted up to 24" (60.96 cm) off center on torsion spring doors. Extension springs require center mounting.

1 Mark the center of the door



2 Determine and mark the highest point of door travel

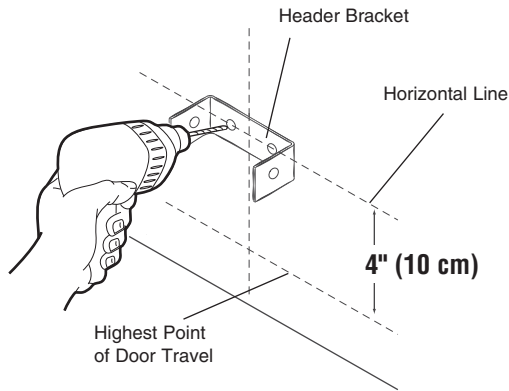


TYPICAL INSTALLATION

3 Position header bracket

Center header bracket over vertical center line and horizontal line created in step 2.

Drill appropriate pilot holes to accommodate mounting hardware.

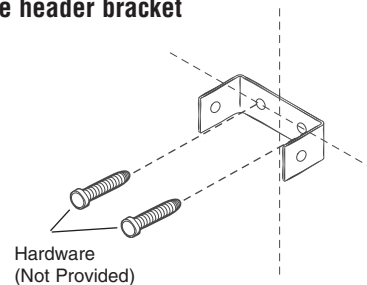


CAUTION

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

- Header bracket **MUST** be **RIGIDLY** fastened to structural support on header wall or ceiling, otherwise door might not reverse when required. **DO NOT** install header bracket over drywall.
- Concrete anchors **MUST** be used if mounting header bracket or 2x4 into masonry.
- **NEVER** try to loosen, move or adjust door, springs, cables, pulleys, brackets, or their hardware, **ALL** of which are under **EXTREME** tension.
- **ALWAYS** call a trained door systems technician if door binds, sticks, or is out of balance.

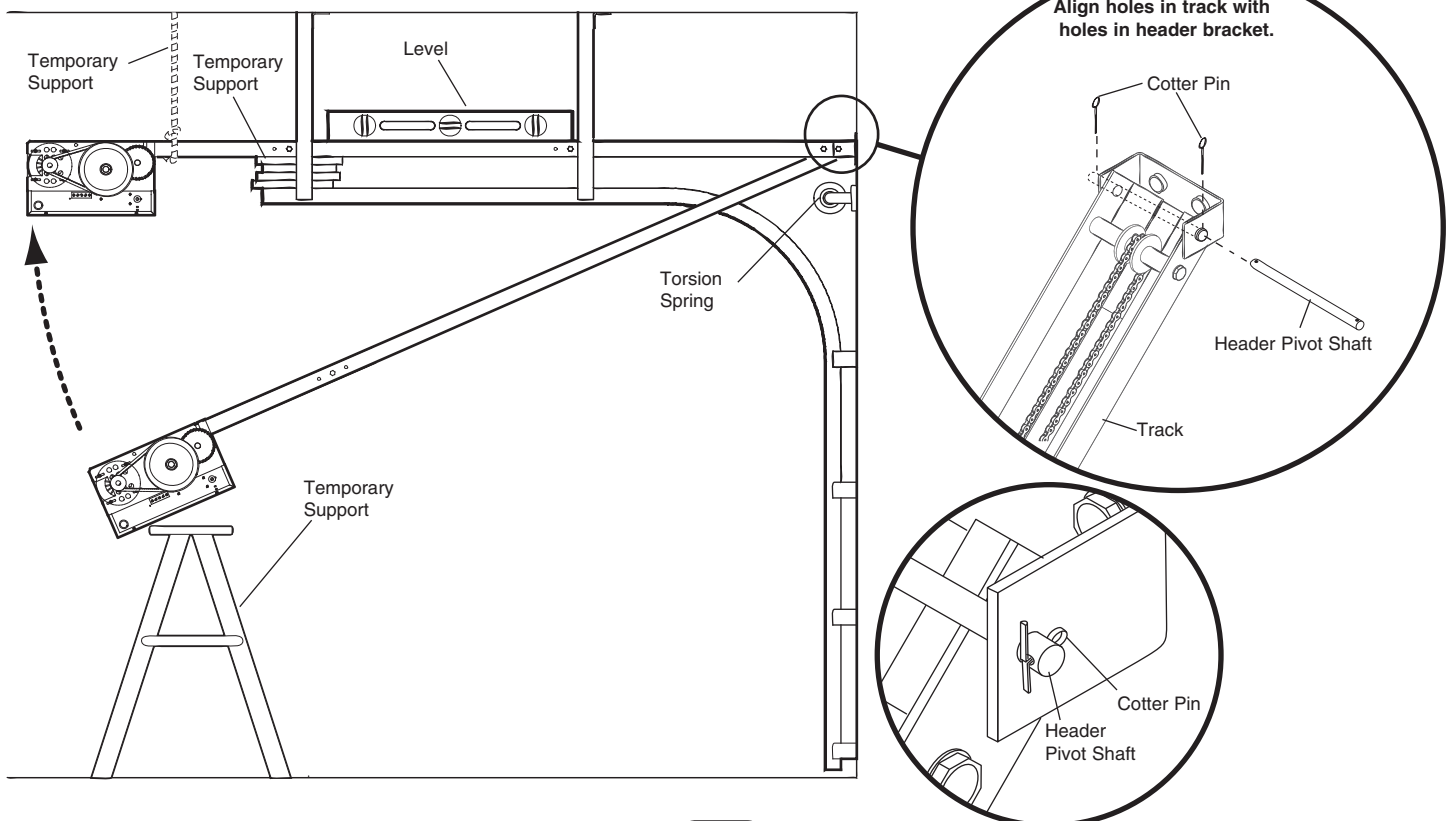
4 Secure header bracket



NOTE: Secure the header bracket to the header using the appropriate method.

5 Attach rail to header bracket and position operator

Swing the operator to a horizontal position and temporarily secure with rope, chain or support from floor. Make sure that the operator is aligned with the header bracket.



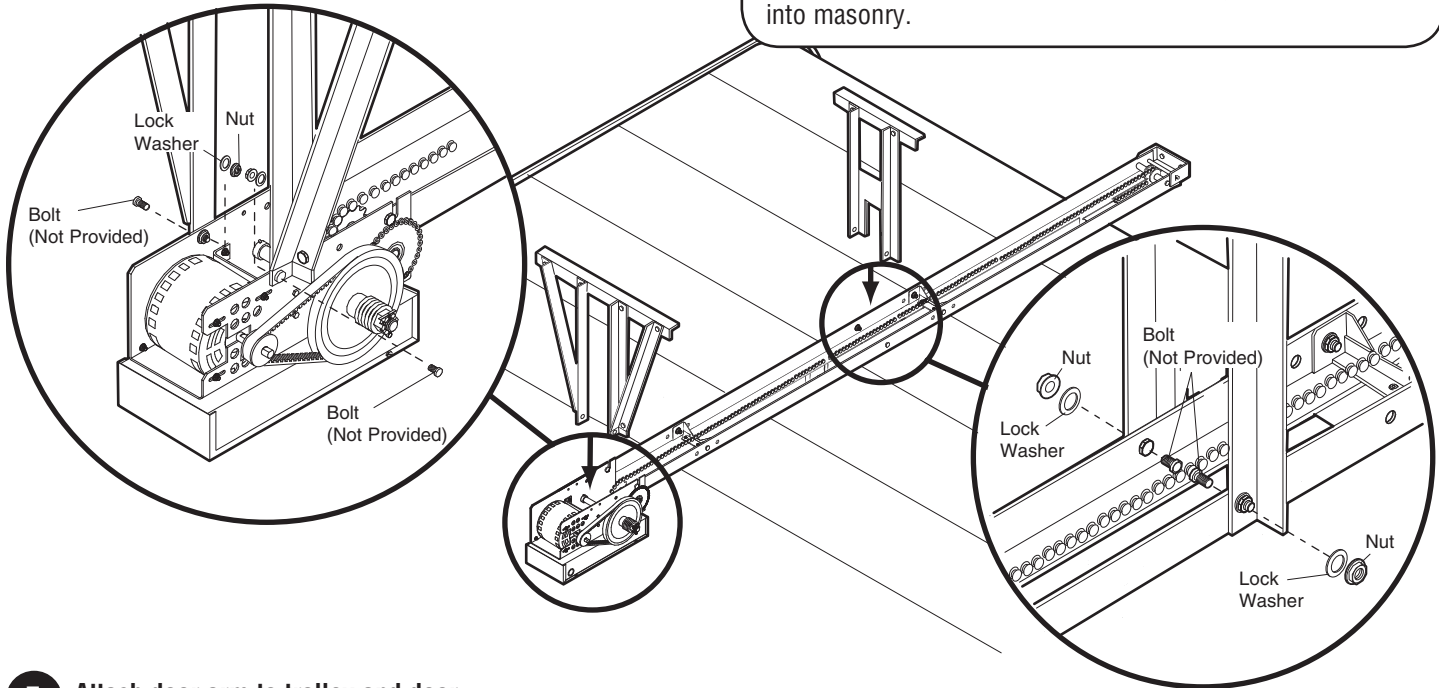
TYPICAL INSTALLATION

6 Hang the operator

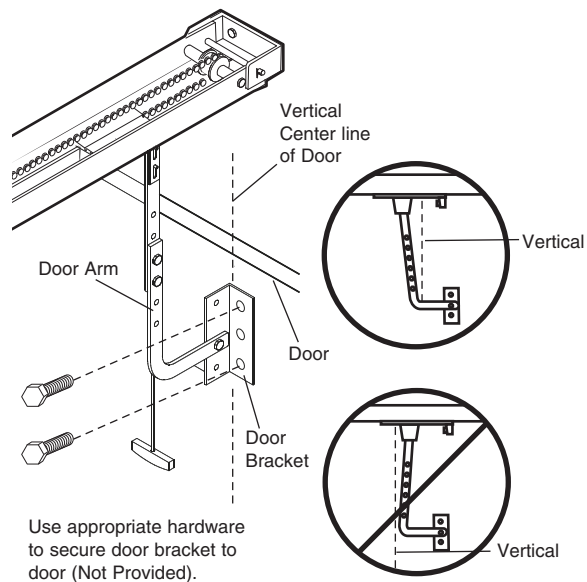
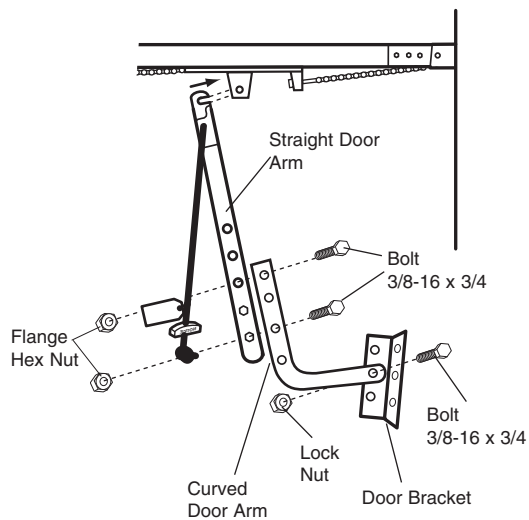
Secure the operator using appropriate fasteners and locking hardware that will support the weight of the operator.

CAUTION

To avoid possible **SERIOUS INJURY** from a falling operator, fasten it **SECURELY** to structural supports of the garage. Concrete anchors **MUST** be used if installing **ANY** brackets into masonry.



7 Attach door arm to trolley and door



NOTE: Refer to door manufacturer's instructions for recommended installation guidelines.

TYPICAL INSTALLATION

⚠️ WARNING

To reduce the risk of SEVERE INJURY or DEATH:

- ANY maintenance to the operator or in the area near the operator MUST NOT be performed until disconnecting the electrical power and locking-out the power via the operator power switch. Upon completion of maintenance the area MUST be cleared and secured, at that time the unit may be returned to service.
- Disconnect power at the fuse box BEFORE proceeding. Operator MUST be properly grounded and connected in accordance with local electrical codes. The operator should be on a separate fused line of adequate capacity.

- ALL electrical connections MUST be made by a qualified individual.
- DO NOT install ANY wiring or attempt to run the operator without consulting the wiring diagram.
- Reversing devices are recommended for ALL installations.
- ALL power wiring should be on a dedicated circuit and well protected. The location of the power disconnect should be visible and clearly labeled.
- ALL power and control wiring MUST be run in separate conduit.

POWER AND GROUND WIRING CONNECTIONS

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

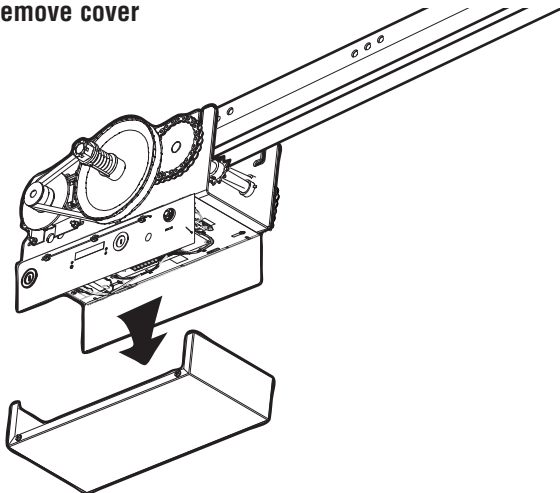
IMPORTANT NOTE: Operator must be properly grounded. Failure to properly ground the operator could result in electric shock and serious injury.

POWER WIRING CHART

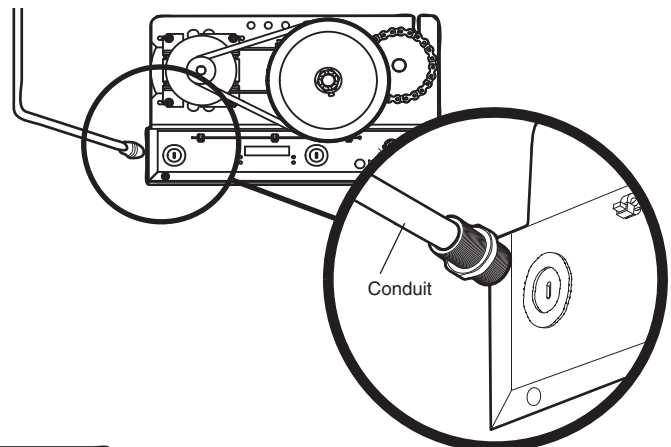
DISTANCE	GAUGE
50'	14 AWG
100'	12 AWG
200'	8 AWG*
350'	6 AWG*
500'	4 AWG*
1000'	2 AWG*

* 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.

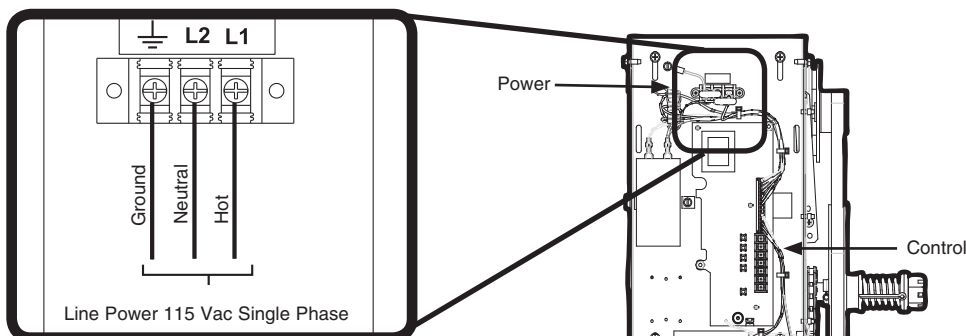
8 Remove cover



9 Run wires to electrical box according to local electrical codes



10 Attach power and ground wires to high voltage terminal strip

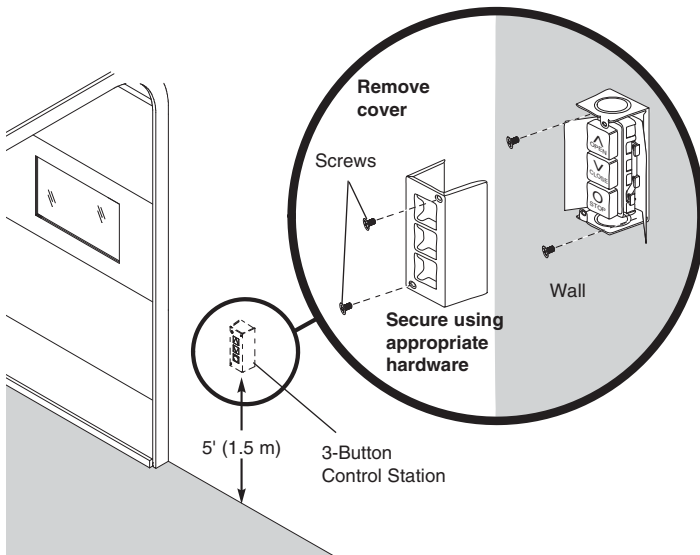


Do NOT turn power on until you have finished making ALL power and control wiring connections.

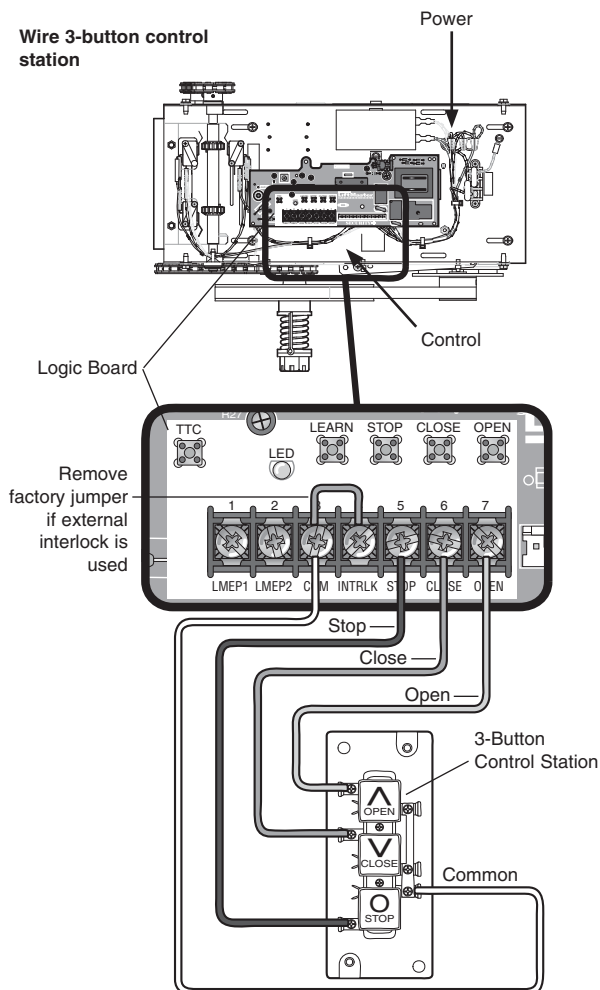
TYPICAL INSTALLATION

11 Install 3-button control station

Select location for 3-button control station



Wire 3-button control station

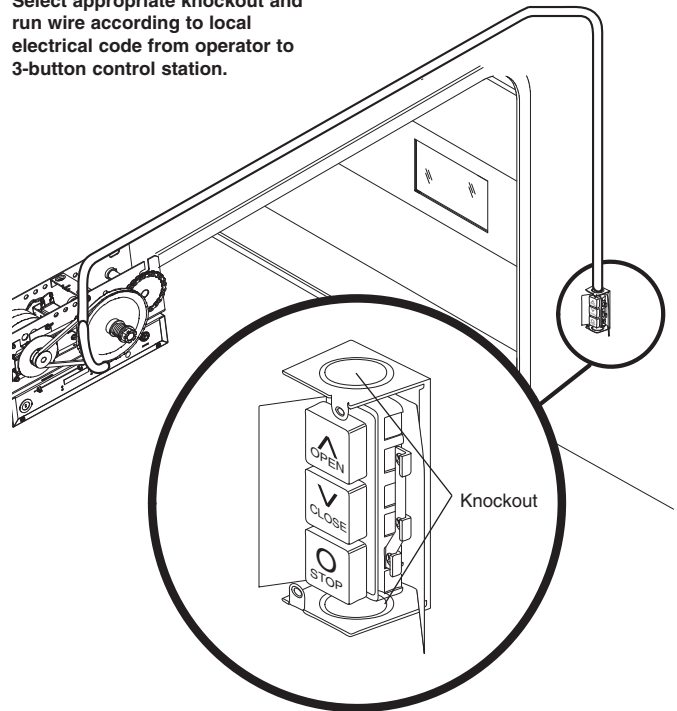


CAUTION

To prevent possible SEVERE INJURY or DEATH, install reversing sensors when:

- The radio is used.
 - The 3-button control station is out of sight of the door.
 - Or ANY other control (automatic or manual) is used.
- Reversing devices are recommended for ALL installations.

Select appropriate knockout and run wire according to local electrical code from operator to 3-button control station.



Secure warning signs

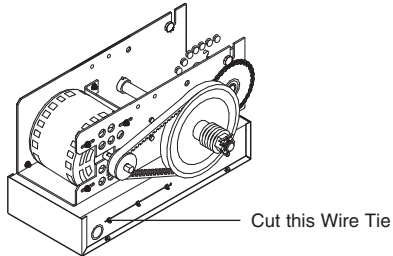


TYPICAL INSTALLATION

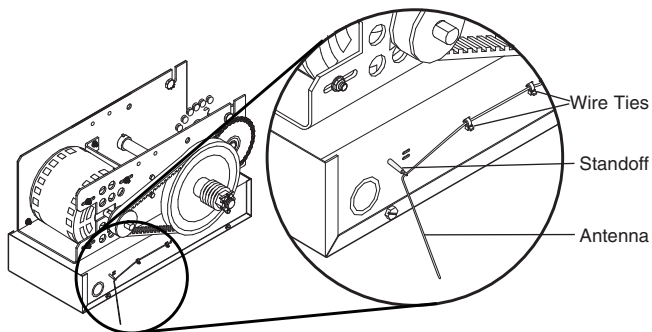
12 Setup radio antenna

Option A

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

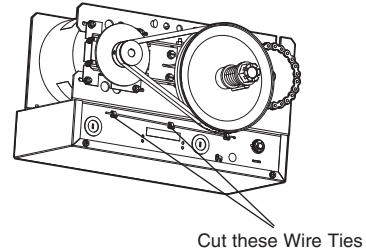


Press the plastic standoff into the hole in the side of the electrical box.

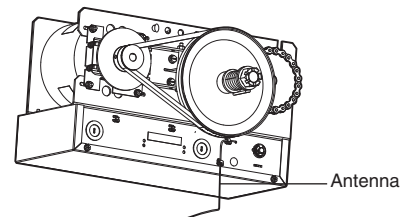


Option B

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



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



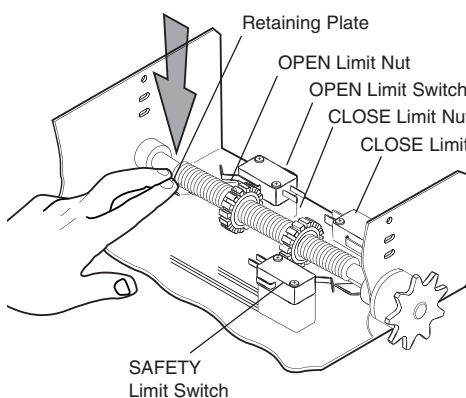
ADJUSTMENT

1 Adjust the limits

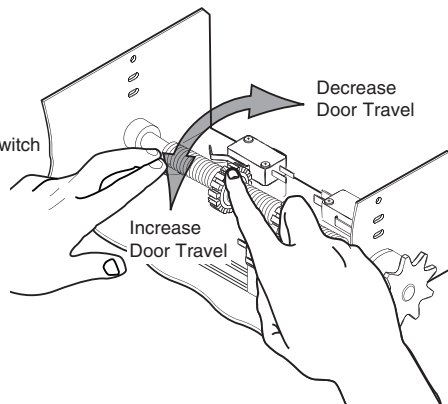
⚠️ WARNING

To avoid **SERIOUS** personal **INJURY** or **DEATH** from electrocution, disconnect electric power **BEFORE** moving limit nuts or adjusting clutch nut.

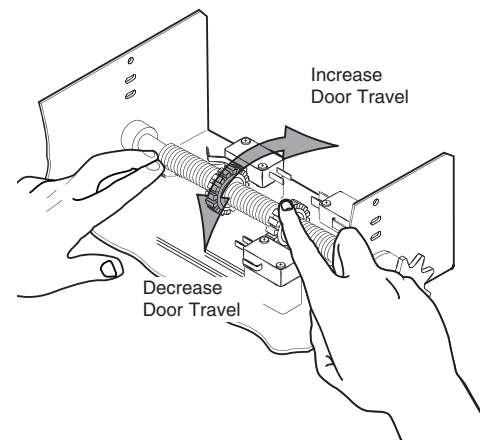
Depress retaining plate



Adjust OPEN limit



Adjust CLOSE limit

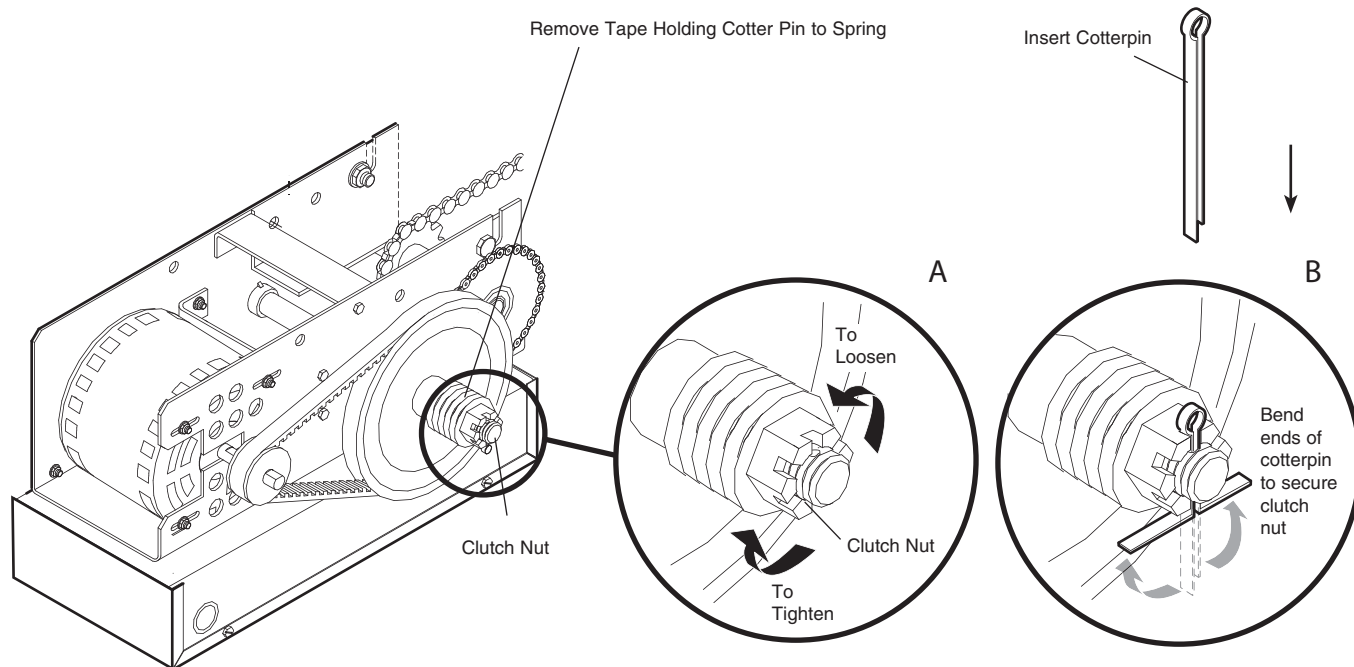


NOTE: When retaining plate is released, verify that the retaining plate is fully seated with the notches of the limit nut.

ADJUSTMENT

2 Adjust the clutch

- Apply power to operator
- Turn clutch nut to release tension.
- Re-tighten nut until there is just enough tension to permit smooth operation.
- Secure clutch nut with cotter pin.



OPTIONAL SAFETY DEVICE CONFIGURATIONS

To protect against accidental entrapment or injury from a moving door it is recommended that a safety device (sensing edge or photo eyes) be installed.

IMPORTANT INFORMATION ABOUT SAFETY DEVICES

PHOTO EYES

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

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

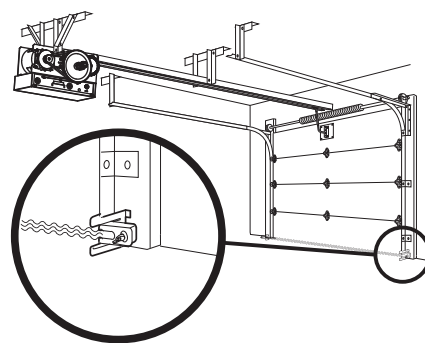
SENSING EDGES

When properly connected, the sensing edge will make contact with an obstruction while the door is closing, the door will stop and typically reverse to the full open position.

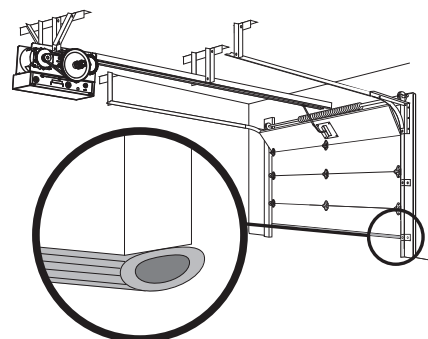
The sensing edge must be installed on the bottom of the door.

See *Optional Safety Device Configurations* for wiring information.

Photo Eyes



Safety Edge

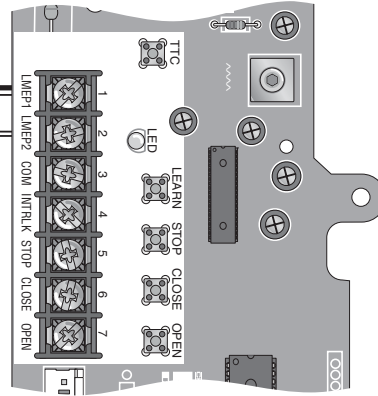


OPTIONAL SAFETY DEVICE CONFIGURATIONS

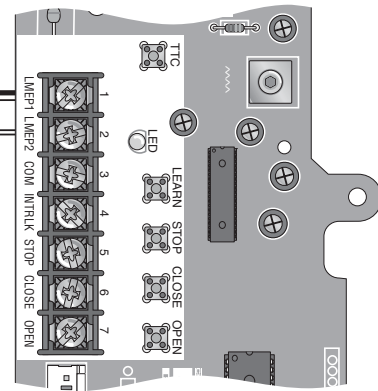
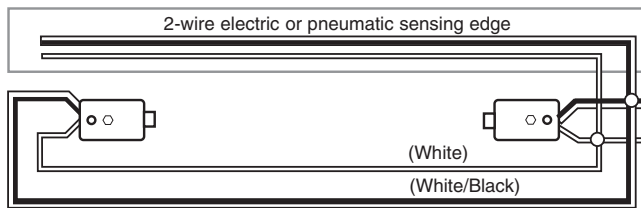
CPS Photo-Eyes



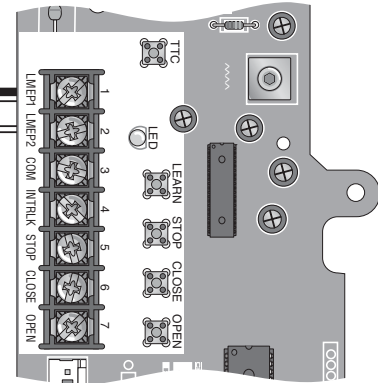
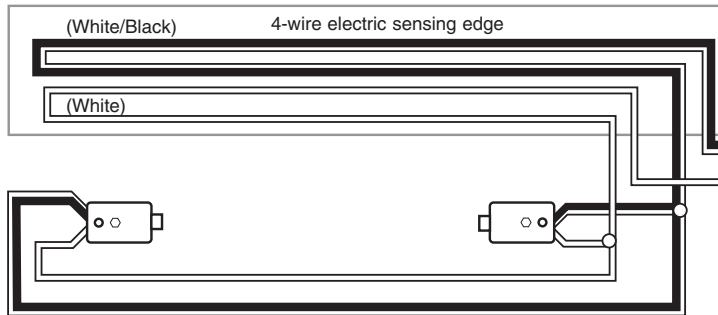
NOTE: When installing model CPS-LN4, connect the brown wire to terminal 1 and the blue wire to terminal 2.



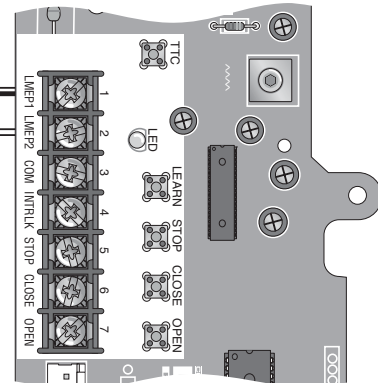
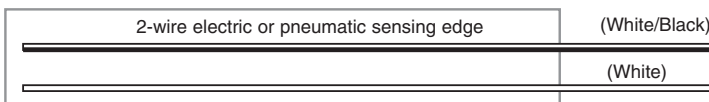
CPS Photo-Eyes with 2-wire sensing edge



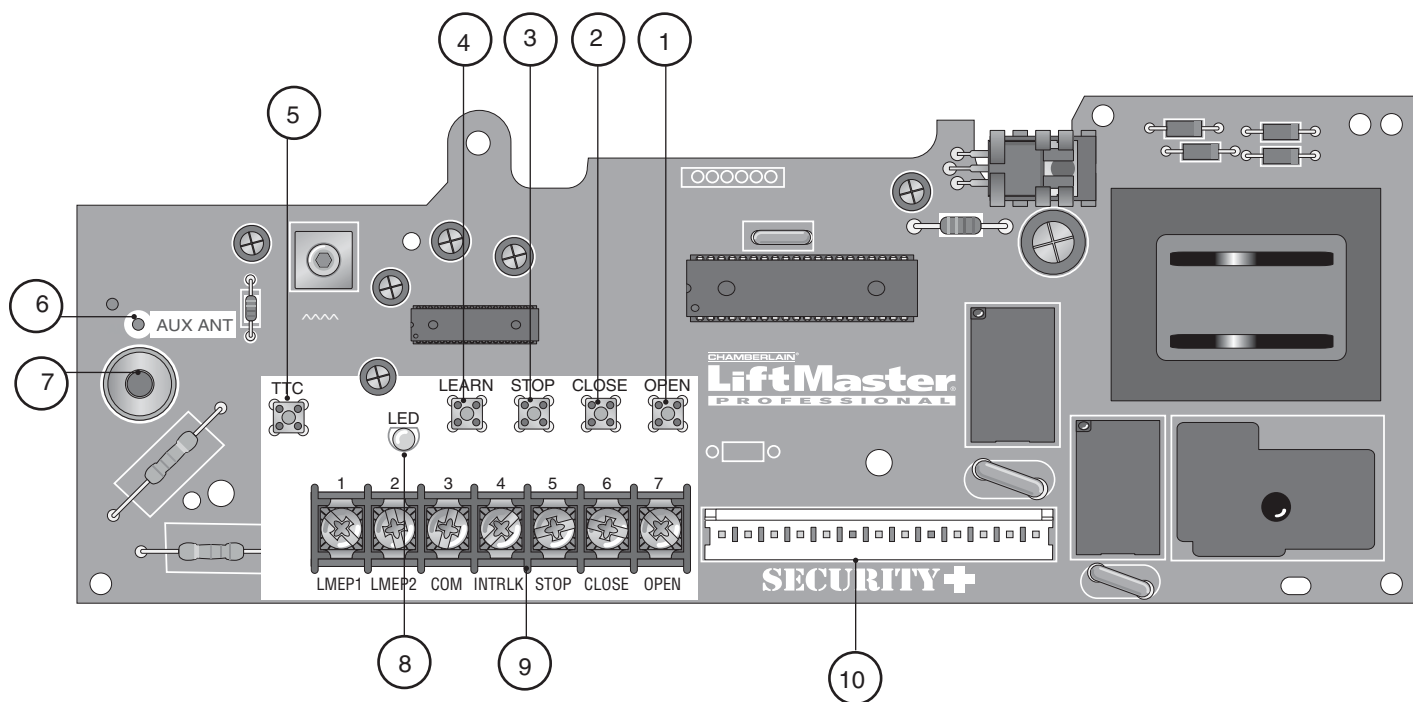
CPS Photo-Eyes with 4-wire sensing edge



2-Wire electric or pneumatic sensing edge



LOGIC BOARD LAYOUT



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

BASIC PROGRAMMING

DETERMINE THE WIRING TYPE

The functionality of this operator is based on the wiring type. The operator is shipped from the factory in standard C2 wiring type (factory default). Some wiring types will require an optional safety device. Refer to the following descriptions of wiring types, requirements and programming.

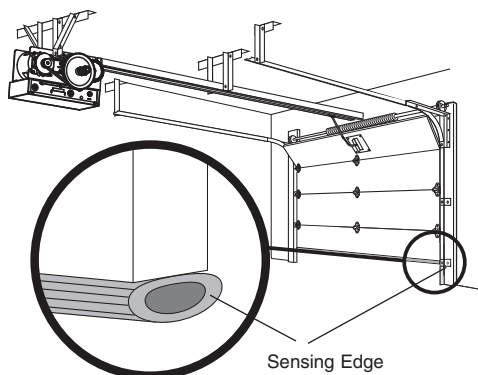
- NOTE:** 1. The LED on the logic board will blink once when in C2 and twice when in B2.
2. The operator will automatically convert to B2 wiring (option D) when Monitored Safety Device is installed. If the Monitored Safety Device is removed, the operator will go into a Restricted Close mode**. Turn power OFF and ON to reset wiring type.

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

A C2 WIRING TYPE WITHOUT MONITORED SAFETY DEVICE (Factory Default)

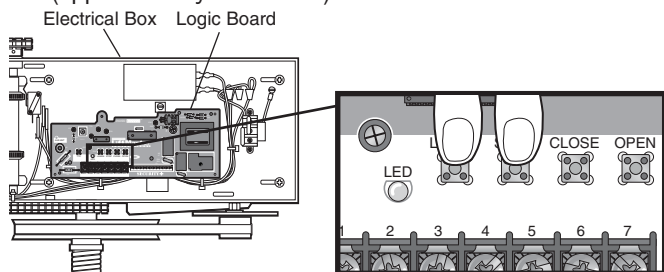
- Momentary contact to open and stop with constant pressure to close.
- Open override that reverses when closing by any opening device.
- Wiring for safety device to reverse. **NOTE:** The operator will automatically convert to B2 wiring (option D) when Monitored Safety Device is installed. (See accessories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

NON-MONITORED SAFETY DEVICE



RESET TO C2 WIRING TYPE (Factory Default)

Remove any monitored safety devices. Disconnect then reconnect power to the operator. Press and hold the LEARN and STOP buttons until the LED goes out (approximately 3 seconds).



CAUTION

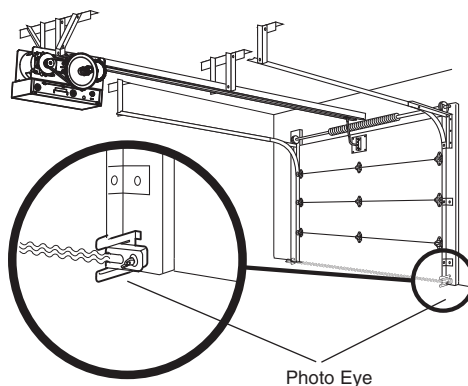
To prevent possible SEVERE INJURY or DEATH, install reversing sensors when:

- The radio is used.
 - The 3-button control station is out of sight of the door.
 - Or ANY other control (automatic or manual) is used.
- Reversing devices are recommended for ALL installations.

B C2 WIRING TYPE WITH MONITORED SAFETY DEVICE

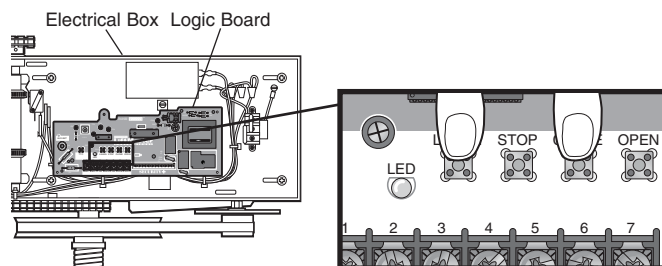
- Momentary contact to open and stop with constant pressure to close.
- Open override that reverses when closing by any opening device.
- Wiring for safety device to reverse. **NOTE:** The operator will automatically convert to B2 wiring (option D) when Monitored Safety Device is installed. (See accessories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

MONITORED SAFETY DEVICE



TO PROGRAM

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



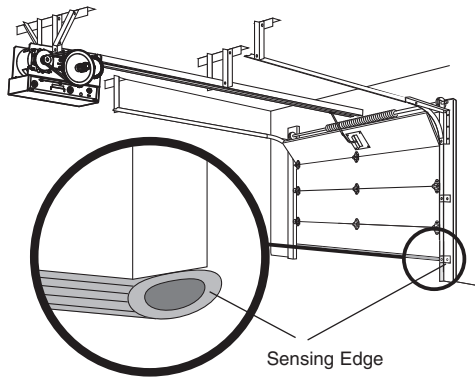
BASIC PROGRAMMING

C B2 WIRING TYPE WITHOUT MONITORED SAFETY DEVICE

Requires a non-monitored safety device.

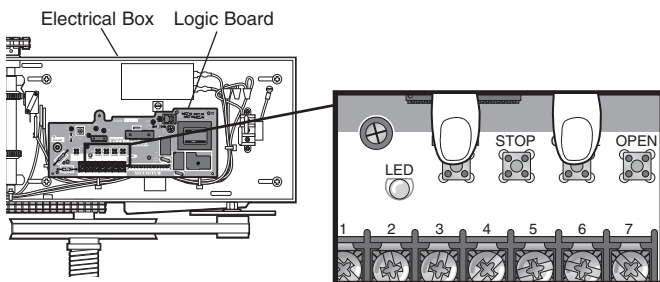
- Momentary contact to open, close and stop.
- Open override that reverses when closing by any opening device.
- Wiring for safety device to reverse. **NOTE:** The operator will automatically convert to B2 wiring (option D) when Monitored Safety Device is installed. (See accessories page for Monitored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

NON-MONITORED SAFETY DEVICE



TO PROGRAM

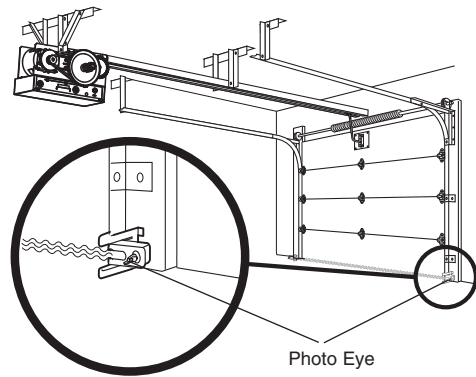
Start with operator in factory default C2 mode.
Press and hold the LEARN and CLOSE buttons until the LED goes out (approximately 3 seconds).



D B2 WIRING TYPE WITH MONITORED SAFETY DEVICE

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

MONITORED SAFETY DEVICE



NO PROGRAMMING REQUIRED

BASIC PROGRAMMING

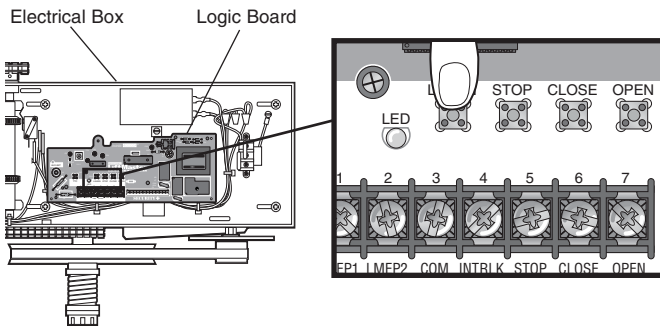
REMOTE CONTROLS

SINGLE BUTTON REMOTE CONTROL

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

TO PROGRAM

1. Press and release the LEARN button (LED will light).
2. Press and hold the button on the remote control until the LED flashes rapidly, then release to complete programming (LED will go out).
3. Repeat steps 1 and 2 for additional remote controls.



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

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

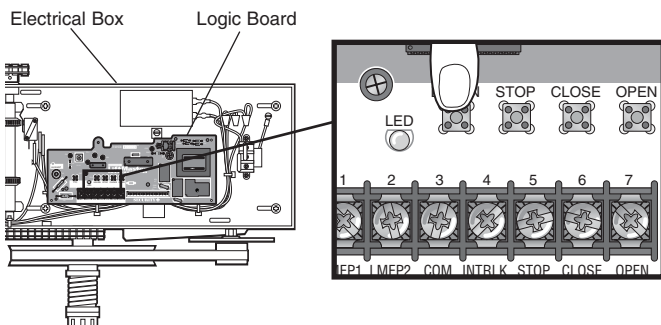
TO PROGRAM

1. Press and hold the LEARN button (LED will light).
2. Press the desired button on the logic board (OPEN, CLOSE or STOP). Release both buttons.
3. Press and hold the desired button of the remote control until LED flashes rapidly, then release.
4. Repeat steps 1 through 3 to program additional buttons.



TO ERASE ALL REMOTE CONTROLS

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



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

Tested to Comply with FCC Standards FOR HOME OR OFFICE USE. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

TIMER TO CLOSE (TTC)

Timer to Close feature enables the operator to close from the open limit after a preset time, adjustable from 5 to 60 seconds.

Requires LiftMaster monitored safety device.

TO PROGRAM

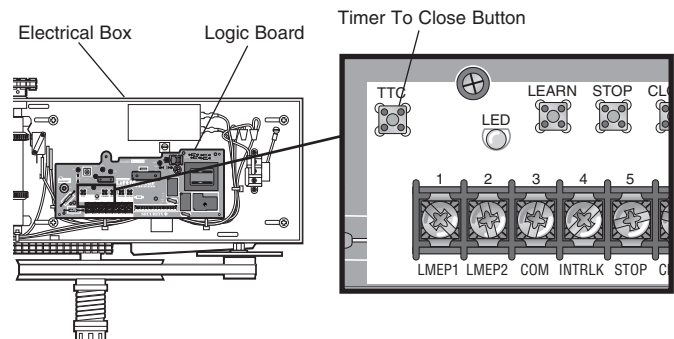
1. Begin with door in fully closed position.
2. Press and release the LEARN button (LED will light).
3. Press and release the TTC button.
4. Every press and release of the STOP button will add 5 seconds to the Timer to Close. Example: 30 second TTC = 6 presses of the STOP button.
5. Press and release the TTC button to exit programming mode.
6. The LED will flash once per 5 seconds of timer setting.

The TTC will become active after completion of the next open cycle.

NOTE: The LED does not indicate that timer is running.

TO VERIFY TIMER TO CLOSE (TTC) SETTING

1. Press and release the LEARN button.
2. Press and release the TTC button.
3. Press and release the TTC button a second time.
4. The LED will flash once per 5 seconds of timer setting.



CLEAR THE TIMER TO CLOSE (TTC)

1. Press and release the LEARN button (LED will light.)
2. Press and hold the TTC button for 6 seconds.
3. Release the TTC button (LED will go out).

The TTC will no longer be active.

TIMER DEFEAT

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

RADIO OPERATION

MODE	OPEN	CLOSE	STOP	REVERSE WHILE CLOSING	TTC RESET
B2	X	X	X	X	
B2 with TTC	X	X (3 button remote)	X	X	X WHEN OPEN
C2	X		X	X	

TESTING

Turn on power, LED will flash 7 times on power up. Test all controls and safety devices to make sure they are working properly. It may be necessary to refer back to the Adjustment section for adjustment of the limits.

IMPORTANT NOTES:

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

TEST 3-BUTTON CONTROL STATION

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

TEST LIMIT ADJUSTMENT

1. Press OPEN button. (The door should open.)
2. Allow the door to fully open.
3. Press CLOSE button. (The door should close.)
4. Allow the door to fully close.
5. If the limits are not set properly, remove power and adjust limits (refer to Adjustment section).



WARNING

To avoid SERIOUS PERSONAL INJURY or DEATH from electrocution, disconnect ALL electric power BEFORE performing ANY maintenance.

TEST THE SAFETY DEVICES (IF INSTALLED)

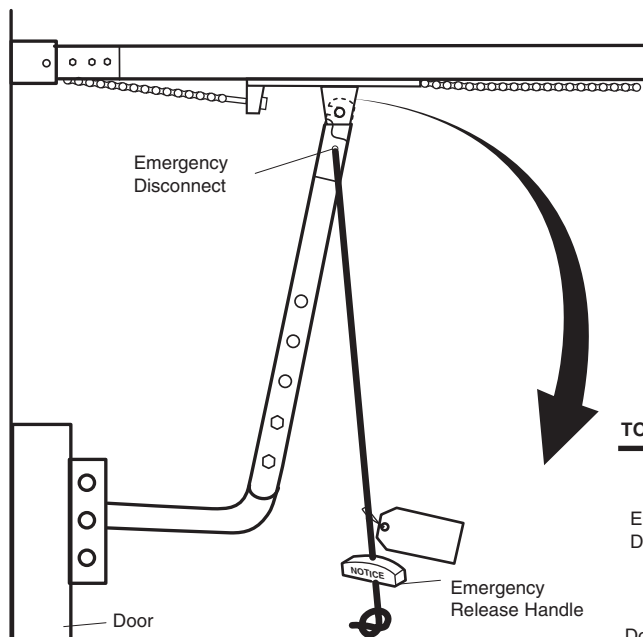
1. Open the door.
2. Place an obstruction in the path of the photo eyes or sensing edge.
3. Press the CLOSE button.
The door should not close if photo eyes are installed. The door should close to obstruction and reverse if sensing edge is installed.
4. Remove the obstruction.
5. Press CLOSE button. Door should close.
If door did not reverse from obstruction, check safety devices.

TEST REMOTE CONTROL

* Requires B2 wiring type and compatible LiftMaster remote control. In C2 wiring the remote control will open the door only.

1. Press remote control button.
2. Door should open. Allow the door to fully open.
3. Press remote control button.
4. Door should close. Allow door to fully close.

MANUAL DISCONNECT

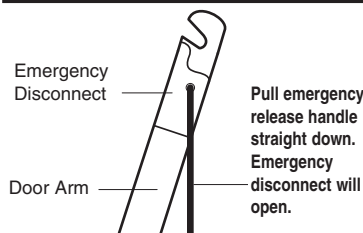


CAUTION

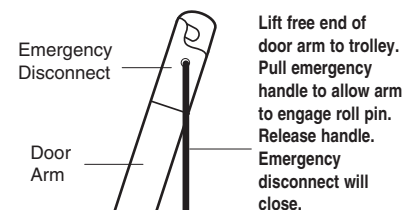
To prevent possible SERIOUS INJURY or DEATH from a falling door or arm:

- DO NOT stand under the door arm when pulling the emergency release.
- If possible, use emergency release handle to disengage trolley 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.

TO DISCONNECT DOOR FROM OPENER



TO RECONNECT DOOR ARM TO TROLLEY



TROUBLESHOOTING

Technical Support 1-800-528-2806

CONDITION	POSSIBLE CAUSE	FIX
OPERATOR WILL NOT RESPOND TO ANY COMMANDS	A) No power	➤ Verify primary line voltage (120Vac,60Hz) is present at terminals L1 & L2. The LED will flash when power is present.
	B) Stop circuit not complete	➤ Verify Stop Button input (terminals 3 & 5) is properly wired and stop button is not stuck.
	C) Stuck button on 3-button control station	➤ Verify that all buttons are actuating freely and releasing properly.
	D) Interlock input activated	➤ Verify jumper is located at terminals 3 & 4 if interlock is not present. ➤ Verify interlock is properly wired and not activated.
	E) Motor overload tripped	➤ Overload is internal within motor. Allow to cool and retry.
	F) Accessory failure	➤ Attempt to close by holding the CLOSE button for more than 5 seconds. If door closes, check accessory for proper wiring, polarity, connections or damage. ➤ Verify safety eyes are aligned or safety edge is not activated.
	G) Possible component failure	➤ Call Technical Support for assistance.
OPERATOR MAKES NOISE BUT DOOR DOES NOT MOVE	A) Clutch slipping	➤ Adjust clutch, see ADJUSTMENT section.
	B) Brake not releasing (if present)	➤ Verify brake assembly operation and wiring.
	C) Door operation problem	➤ Disconnect trolley and check door for proper operation.
OPERATOR MOVES IN THE WRONG DIRECTION	OPEN and CLOSE button wiring connection reversed	➤ Check 3-button control wiring.
DOOR DRIFTS AFTER OPERATOR STOPS	A) Door not balanced properly	➤ Disconnect trolley assembly and check door for proper operation.
	B) Clutch slipping	➤ Adjust clutch, see ADJUSTMENT section.
	C) Brake not functioning properly	➤ Check brake mechanism to ensure brake lever is free and brake pads are engaging the brake disc.
DOOR OPENS/CLOSES TOO FAR	Limits not adjusted properly	➤ Adjust limits. See ADJUSTMENT section.
DOOR REVERSES UNEXPECTEDLY	Intermittent Safety Device activation	➤ Check all connections.
TTC NOT FUNCTIONING	A) Monitored Safety Devices	➤ Check all connections. Verify Photo eyes are not blocked and the sensing edge is not activated.
	B) TTC temporarily disabled	➤ Close and Open the door. TTC will be re-enabled.
	C) TTC not programmed properly	➤ Reprogram TTC. See PROGRAMMING TTC section.
RADIO FUNCTIONALITY	NOTE: Built in radio receiver compatible with all LiftMaster 315Mhz remote control devices.	
NO RESPONSE	A) Remote control is not programmed	➤ See PROGRAMMING REMOTE CONTROLS section.
	B) Remote control not compatible	➤ Obtain qualified LiftMaster remote control device.
	C) Low battery	➤ Replace battery.
REMOTE CANNOT BE LEARNED	A) Low battery	➤ Replace battery.
	B) Remote control not compatible	➤ Obtain qualified LiftMaster remote control device.
POOR RADIO RANGE	A) Low battery in remote	➤ Replace battery.
	B) Antenna not configured	➤ See SETUP RADIO ANTENNA.
	C) Ambient radio interference or building structural issue	➤ Use EXTERNAL ANTENNA kit (see ACCESSORIES page).

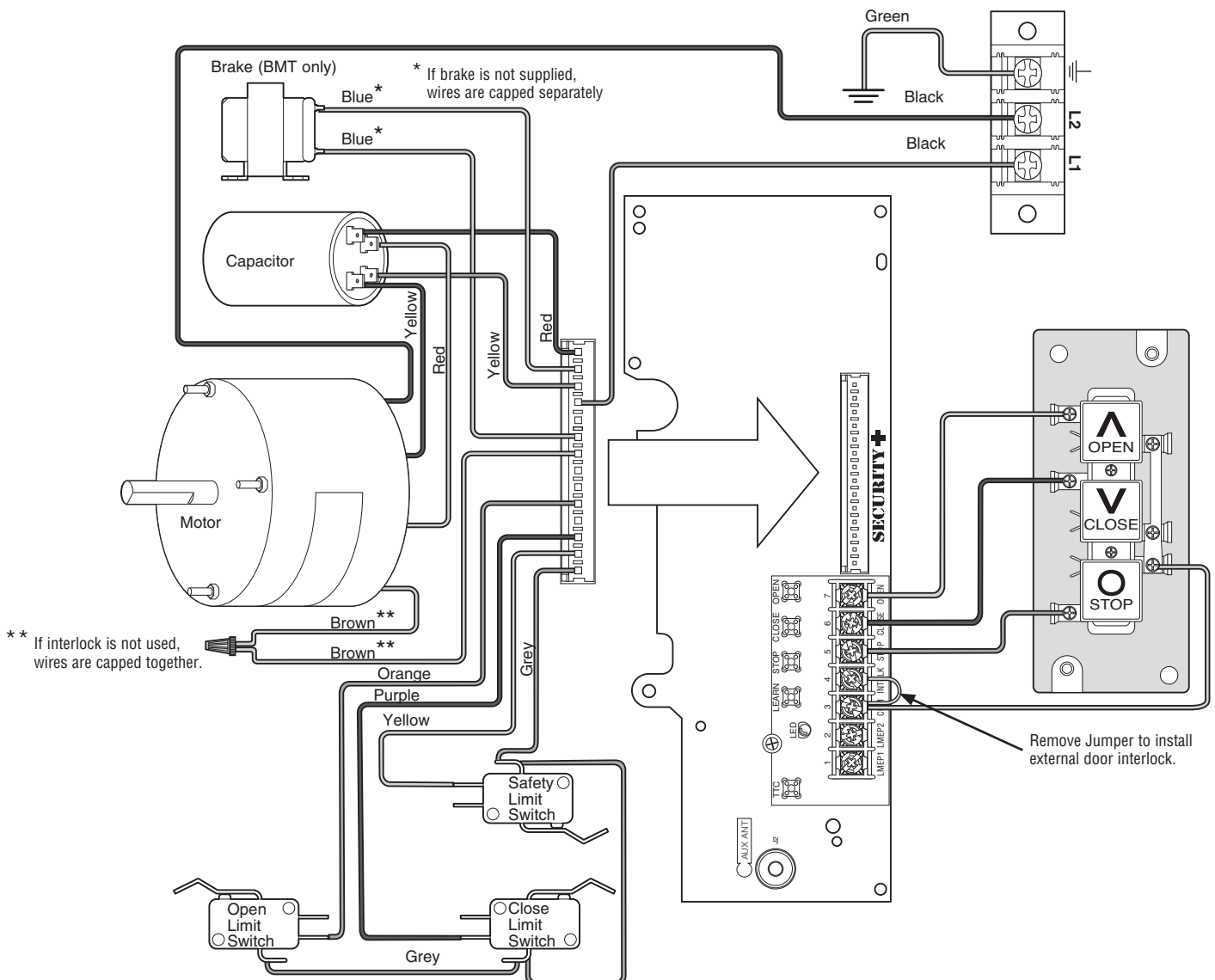
TROUBLESHOOTING

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

DIAGNOSTIC LED TABLE

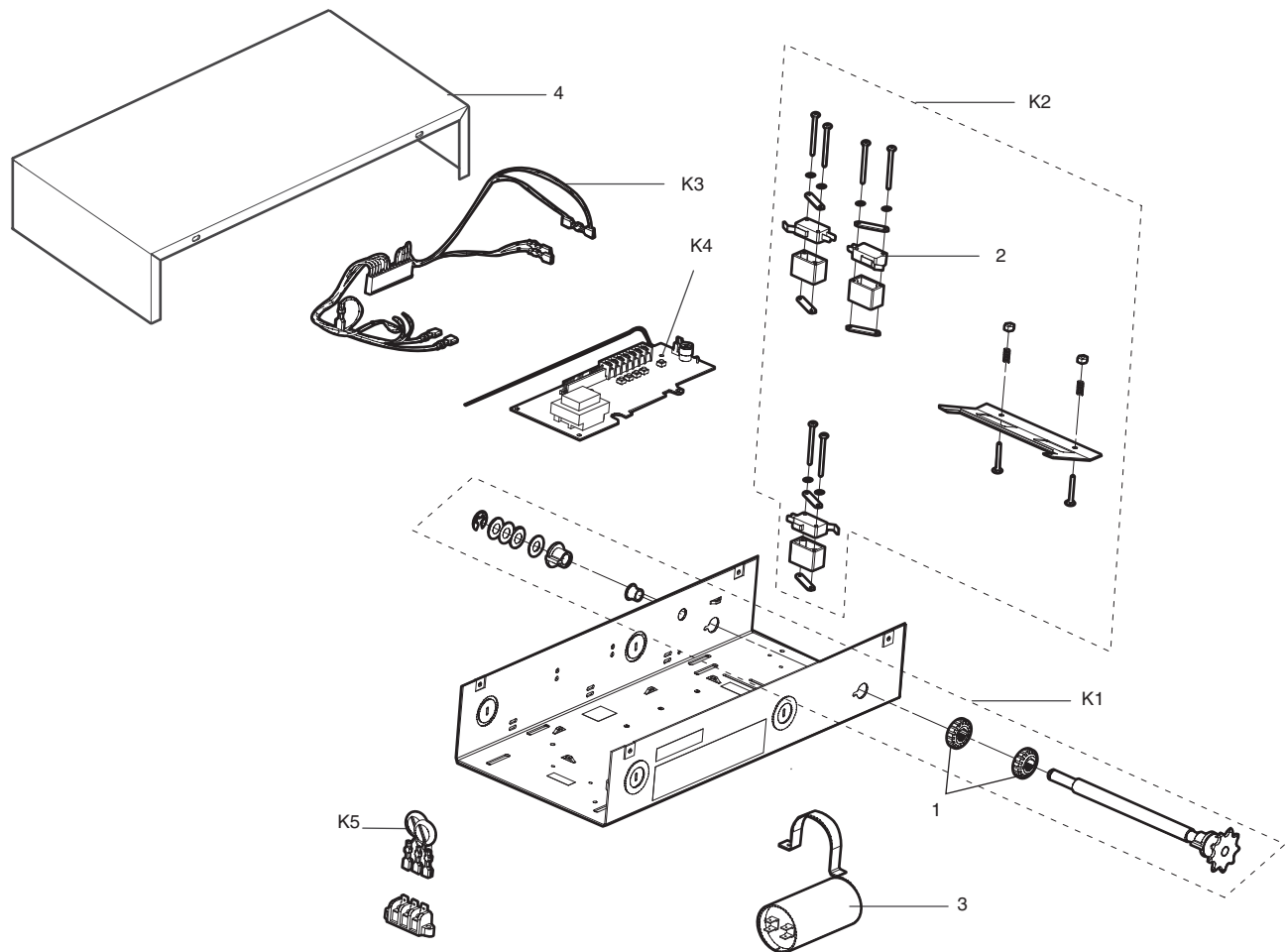
# OF LED FLASHES	STATUS	FIX
1	System OK. Operating in C2 mode	none
2	System OK. Operating in B2 mode	none
3	Stuck CLOSE button	Check for stuck close button or shorted close wire
4	Monitored Safety Device failure	Check for: 1) Misaligned or blocked photo eyes. 2) Issue with Monitored Sensing Edge and/or wiring.
5	Incorrect motor direction	Reverse the yellow and red motor wires on the capacitor.
6	Maximum run timer has timed out (Maximum run time = 90 seconds)	Check clutch adjustment. Door height or speed may exceed the range the operator can travel. Call Technical Support for assistance.
7	Logic Board Failure	Replace Logic Board. NOTE: It is normal for the logic board LED to flash 7 times when power is applied or cycled to the operator. (Not a logic board failure.)

DIAGRAM



REPAIR PARTS

ELECTRICAL BOX



SERVICE KITS

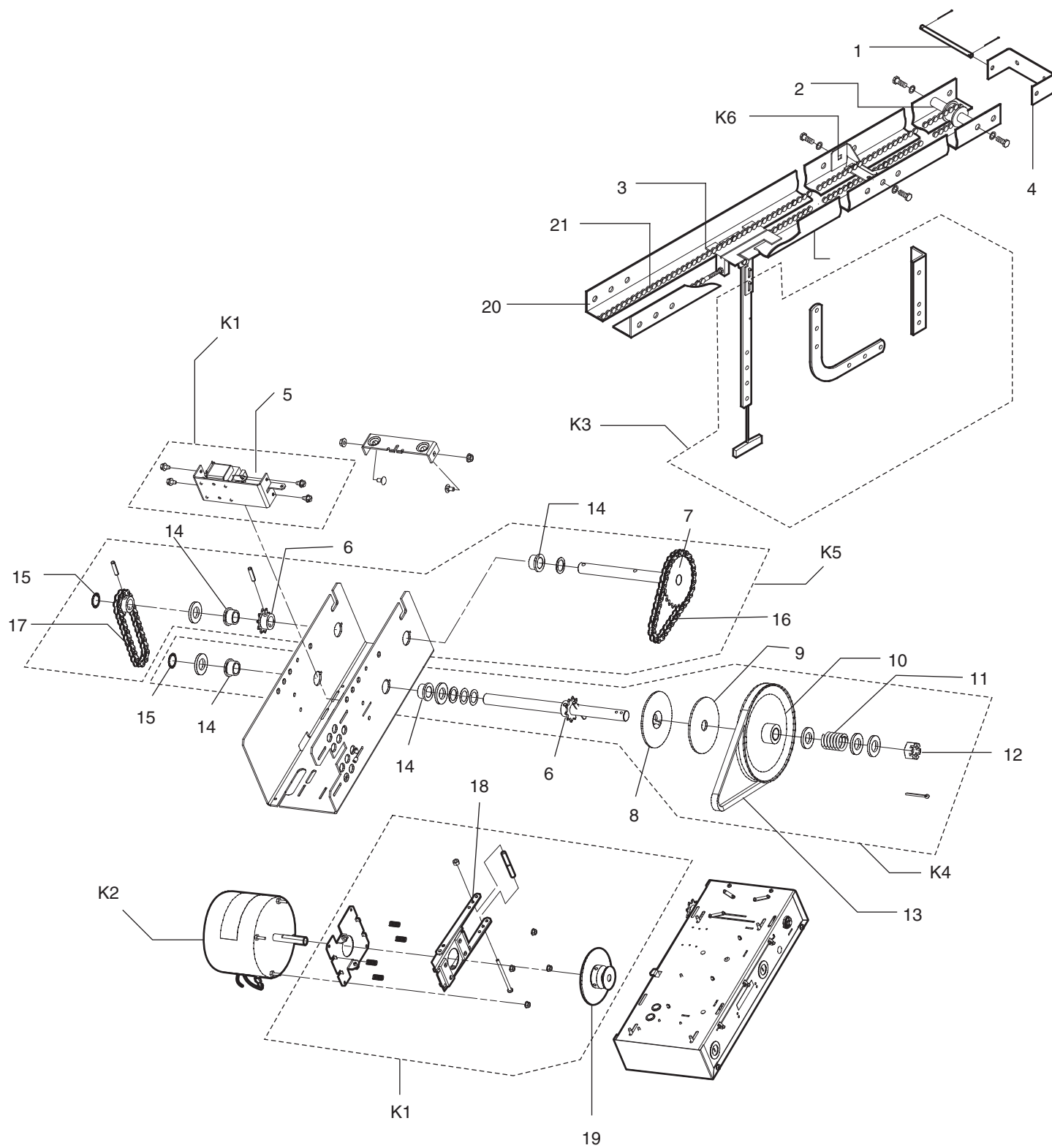
ITEM	PART #	DESCRIPTION
K1	K72-33872-1	Limit Switch Shaft Kit Complete with: Limit shaft, limit nuts, limit bearings, limit sprocket, washers, compression ring, roll pin and e-ring.
K2	K72-12493	Limit Switch Kit Complete with: Limit nut retainer, switch plates, backup plate, depress plate, limit switches (3), standoffs, screws and locknuts.
K3	K94-33961	Wiring Harness Assembly Complete with: harness and wire ties
K4	K1A6424-2	Logic Board Assembly, Medium Duty "E", 315 MHz
K4	K1A6424-3	Logic Board Assembly, Medium Duty "E", 390 MHz
K5	K74-31243	MOV assembly

* To order complete electrical box kit, add a (K-) prefix to the model number for the operator.

SERVICE KITS

ITEM	PART #	DESCRIPTION
1	13-10024	Limit Nut (1)
2	23-10041	Limit Switch (1)
3	29-10338	Capacitor
4	K10-33850	Cover

REPAIR PARTS



REPAIR PARTS

SERVICE KITS

ITEM	PART #	DESCRIPTION
K1	K75-33877	Brake assembly kit, Medium duty Complete with: Brake hub/pulley, brake release lever assembly, brake solenoid and bracket, springs and cotter pin.
K2	K20-5150-LD-1	Motor Kit, Medium Duty 1/2 hp, 115 Volt.
K3	K75-12870	Door arm kit Complete with: Curved arm, straight arm, door bracket and hardware.
K4	K72-33875	Clutch shaft kit Complete with: Clutch shaft, clutch plate, clutch pulley, bearings, belt, washers, spring, castle nut, cotterpin, and push on fastener.
K5	K72-33873	Output shaft kit Complete with: Output shaft, bearings, roller chain with master link, limit chain, washers, roll pins, push ring and sprockets
K6	K75-10259	Track Spacer Kit Complete with: 1 spacer and 2 nuts and 2 bolts

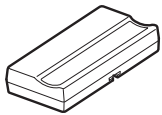
INDIVIDUAL PARTS

ITEM	PART#	DESCRIPTION
1	11-10130	Header Pivot Shaft
2	75-10174	Front Idler Assembly
3	75-10170	Trolley
4	10-10205	Header Bracket
5	22-120	115V Brake Solenoid
6	15-48B10GXX	Sprocket 48B10x3/4" I.D.
7	15-48B24GXX	Sprocket 48B24x3/4" I.D.
8	39-10167	Clutch Disc
9	10-10166	Clutch Plate
10	17-10336	Pulley 4L, 7" Motor Pulley
11	18-10164	Clutch Spring
12	84-SH-76	Castle Nut, 3/4-16
13	16-4L290	Cogged Belt 4L290 (29")
14	12-10029	Bearing, 3/4" I.D.
15	87-P-075	Push on fastener, 3/4", 1 part
16	19-48033MB	Chain, #48x33 Pitch with Master Link
17	19-48027MB	Chain, #48x27 Pitch with Master Link
18	K75-10359	Brake Plate Pad Assembly
20	10-5810-P	Track for doors 8' to 10'
	10-5812-P	Track for doors 10' to 12'
	10-5814-P	Track for 14' doors
21	19-5810	#48 Chain for doors 8' to 10'
	19-5812	#48 Chain for doors 10' to 12'
	19-5814	#48 Chain for 14' doors

ACCESSORIES

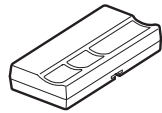
REMOTE CONTROLS 315MHz

371LM



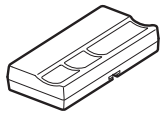
1-Button SECURITY+® Remote Control:
Includes visor clip.

373LM



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

333LM



3-Button Tri-Colored Dip Switch Remote Control:
Includes visor clip.

WPB1LM



Wireless Single Push Button Control SECURITY+®:
Rugged composite housing. (Wireless controls can not be used in place of hardwired controls.)

WPB3LM



Wireless 3 Button Control Station SECURITY+®:
Rugged composite housing. (Wireless controls can not be used in place of hardwired controls.)

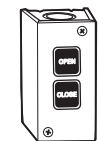
WKP5LM



Wireless Access Control Keypad SECURITY+®:
Rugged composite housing. (Wireless controls can not be used in place of hardwired controls.)

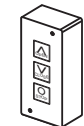
CONTROL STATIONS

02-102



2-Button Control Station:
Steel enclosure.

02-103



3-Button Control Station:
Steel enclosure.

02-109



Key Control Station:
Indoor flush mount, NEMA 1.

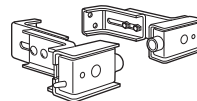
ENTRAPMENT PROTECTION DEVICES

**Monitored
CPS-LN4**



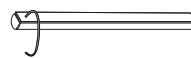
Commercial Protector System®:
Provides protection on doors up to 45' wide. NEMA-4 rated.

CPS-L



Commercial Protector System®:
Provides protection on doors up to 30' wide.

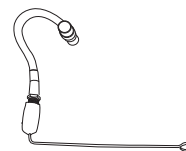
**Non-Monitored
65-8202**



Vehicle Detection System
Pneumatic Sensing Edge Kit

ANTENNA

EXT-ANT



External Antenna:
The external antenna can be used to increase the radio receiver range.

**86LM (15')
86LMT (25')**



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

WIRE

65-7WIREL



7 Conductor 20 AWG Wire (500'):
Recommended for control wiring.

21-2LM



2-Strand 22 AWG Wire (500'):
Color coded, white and white/black.

50-104-1



Coil Cord 18 AWG Wire (20'):
Black coil cord, 2 wire, 18 AWG, 20' extended.

CONTROL CONNECTION DIAGRAM

IMPORTANT NOTES:

1. The 3-Button Control Station provided must be connected for operation.
2. If a STOP button is not used, a jumper must be placed between terminals 3 and 5.
3. If INTERLOCK is not used a jumper must be placed between terminals 3 and 4.
4. When adding accessories, install them one at a time and test each one after it is added to ensure proper installation and operation with the Commercial Door Operator.

