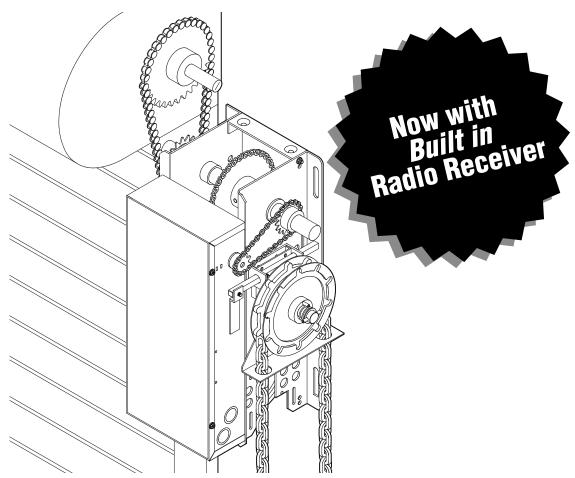
INSTALLATION MANUAL

MODEL

MJ5011E • MH5011E • MHS5011E

MEDIUM DUTY DOOR OPERATOR



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 cover)

Installation Date _____





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SAFETY INFORMATION

A WARNING

Mechanical

WARNING

Electrical

CAUTION

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. 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 installation, repair or service of your commercial door and gate operator unless you are an Authorized Service Technician.

APPLICATIONS

INTRODUCTION

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

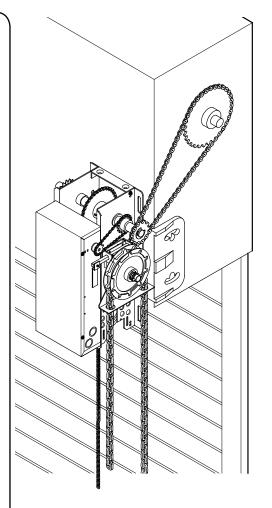
- **Supports both monitored and non-monitored safety devices:** Safety devices detect obstructions in the door's path and automatically reverse a closing door. Safety devices are highly recommended by the manufacturer.
- Radio receiver: A factory installed radio receiver allows remote controls, keyless 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.

Intended for use on vertical or high-lift sectional doors, or rolling door products. The MHS operator is recommended for rolling sheet doors.

Not recommended for use on a standard lift sectional door.

Maximum Door Area (SQ. FT)

Æ	24 ga. Steel	22 ga. Steel	-	20 ga. Steel 18 ga. Steel	16 ga. Steel	
ROLLING DOOR	Aluminum Grilles	Aluminum Doors	1	1		
ROLI		24 ga. Steel	20 ga. Steel	-	20 ga. Steel Insulated	16 ga. Steel Insulated
300R		24 ga. 22 ga. Steel	20 ga. Steel		16 ga. Steel	
NAL	Fiberglass	Aluminum Doors	Wood Doors			
SECTIONAL DOOR		1	24 ga. Steel Insulated	-	20 ga. Steel Insulated	16 ga. Steel Insulated
SQ. FT	320	275	250	200	160	120

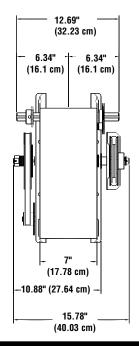


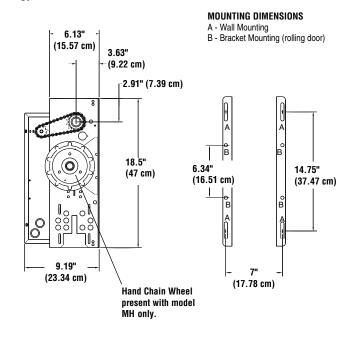
NOTE: On steel insulated doors, a 24 ga. Back panel is assumed.

OPERATOR DIMENSIONS

WEIGHTS AND DIMENSIONS

HANGING WEIGHT:60-70 LBS. (27.22-31.75 kg)





OPERATOR SPECIFICATIONS

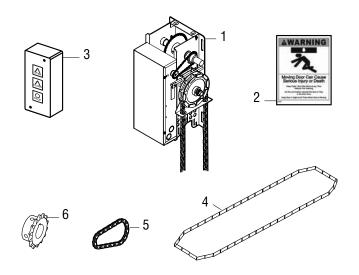
MOTORELECTRICALTYPE:Limited duty
HORSEPOWER:OPERATOR VOLTAGE:115Vac, Single Phase, 60 Hz
WIRING TYPE:C2 (Standard)VOLTAGE:115Vac, Single Phase, 60Hz
FULL LOAD AMPS:B2 Configurable (See Basic Programming Section)FULL LOAD AMPS:6.0 Amps

MECHANICAL SAFETY DISCONNECT: depending on door setup Floor level chain hoist for emergency manual chain hoist operation. **OUTPUT RPM:** Floor level disconnect for emergency manual operation. MHS Both disconnects described above. LIMIT ADJUST: Fully adjustable up to 14' door Max ENTRAPMENT PROTECTION: Supports both monitored and non-monitored safety devices including LiftMaster CPS 50 Cycles per Day Max photo-eyes and industry standard sensing edges. FINISH: Powder coated, Corrosion Resistant Steel

ENVIRONMENTAL

CARTON INVENTORY

Before beginning your installation check that all components were provided.



ITEM	DESCRIPTION	QTY
1	Operator	1
2	Warning labels	2
3	3-Button station	1
4	Hoist hand chain (models MH and MHS only)	1
5	Door/Operator chain	1
6	Door sprocket	1
	NOT SHOWN	
	Installation Manual	1
	Quickstart Guide	1
	User's Guide	1
	Caution Label	1
	Installation Hardware Box	1
	Complete with: Master links (2),	
	wall bracket (1), Fastener Bag (1)	

PREPARATION

PREPARING YOUR DOOR

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

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

A WARNING

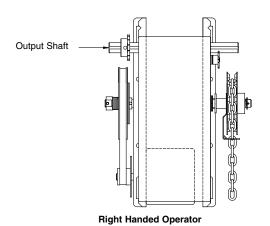
To prevent possible SERIOUS INJURY or DEATH:

- 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.

HANDING IDENTIFICATION

For MH and HMS models with manual hoist hand chain systems, the handing of the operator must be determined at the time of order. The handing is indicated by last letter of the model name (R or L). (Illustration shows right handed operator. Left handed operator will have hoist chain on the left side.)

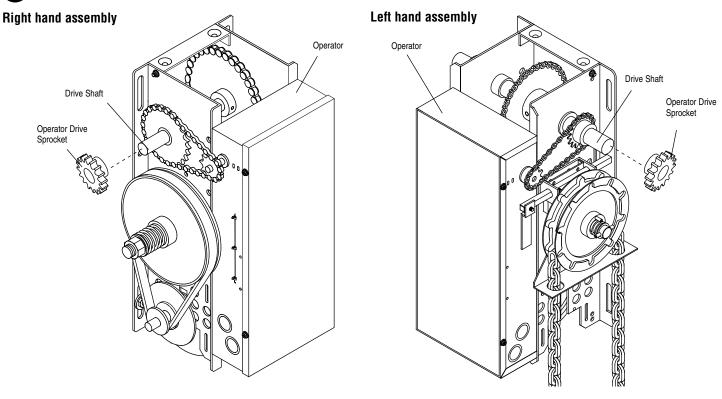
The hand chain wheel can not be switched on site. If your installation causes the hand chain to hang in the door opening, hook the chain off to the side near the top of the door jamb.



ASSEMBLY



INSTALL OPERATOR DRIVE SPROCKET

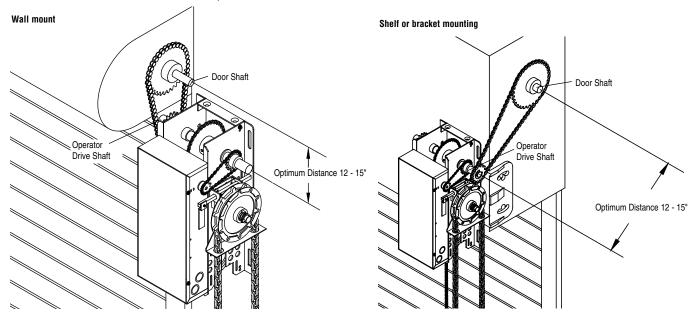


TYPICAL INSTALLATION



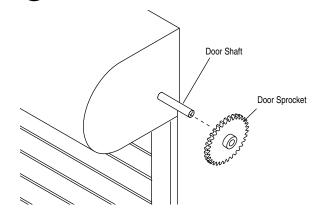
DETERMINE MOUNTING LOCATION FOR OPERATOR

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

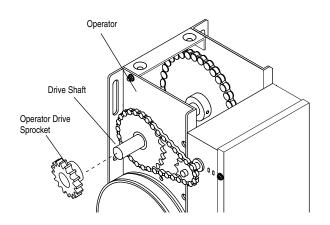


NOTE: All illustrations will depict a typical right hand wall mount installation.

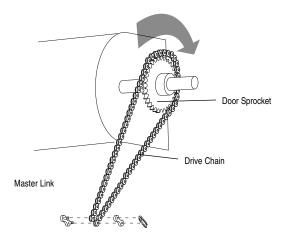
2 PLACE DOOR SPROCKET ON DOOR SHAFT



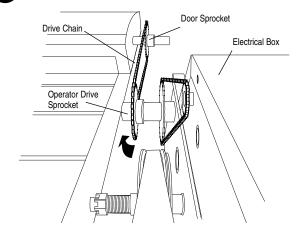
3 PLACE OPERATOR DOOR SPROCKET ON OPERATOR



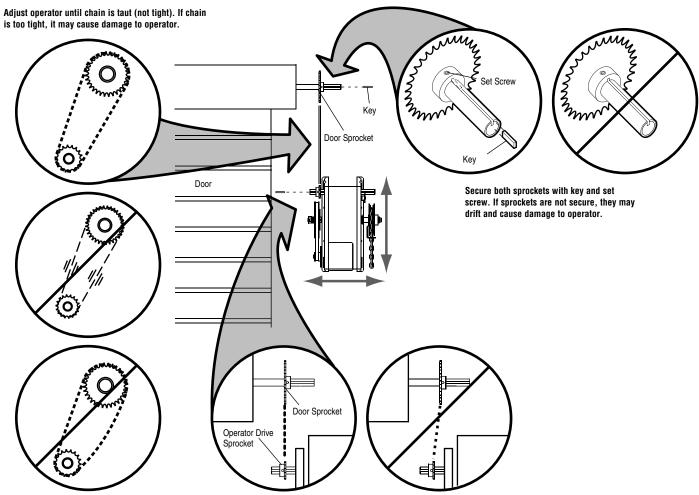
4 WRAP DRIVE CHAIN AROUND DOOR SPROCKET



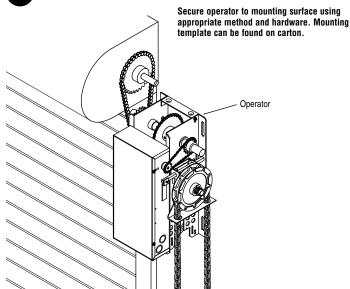
5 WRAP DRIVE CHAIN AROUND OPERATOR SPROCKET

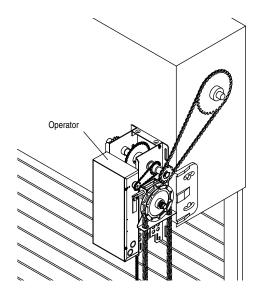


6 POSITION OPERATOR



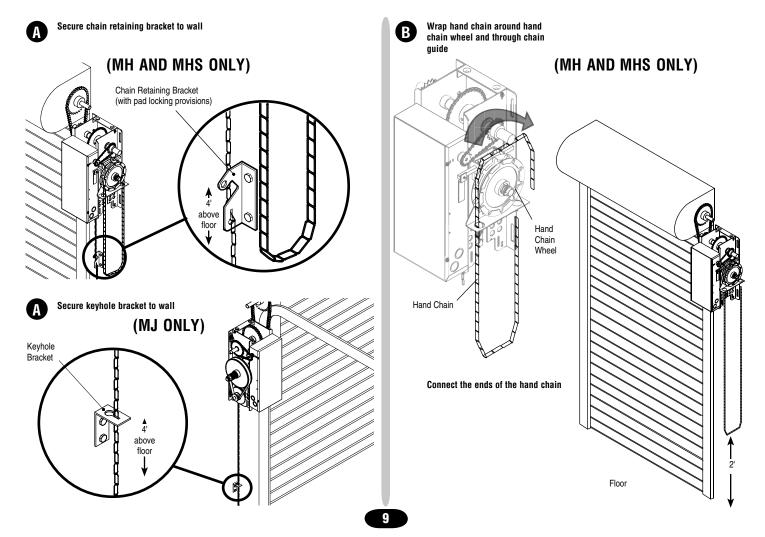
7 SECURE OPERATOR





8 INSTALL MANUAL DISCONNECT SYSTEMS

The MHS operator includes both a floor level disconnect chain to disconnect the door from the door operator and a disconnect chain with manual hoist to electrically disable the operator controls.



A 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.

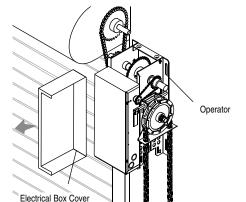
POWER WIRING CHART

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.

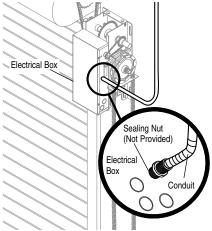
9

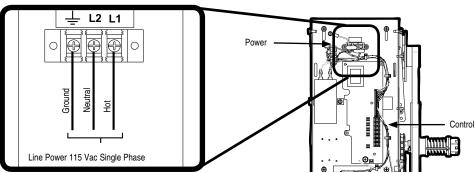
REMOVE COVER



ATTACH POWER AND GROUND WIRES TO TERMINALS

RUN POWER WIRES TO ELECTRICAL BOX ACCORDING TO LOCAL ELECTRICAL CODES



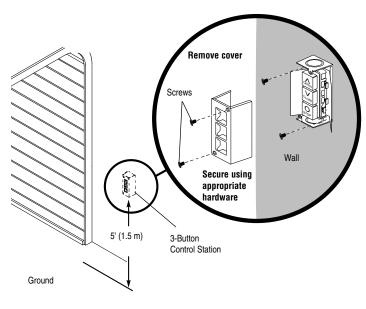


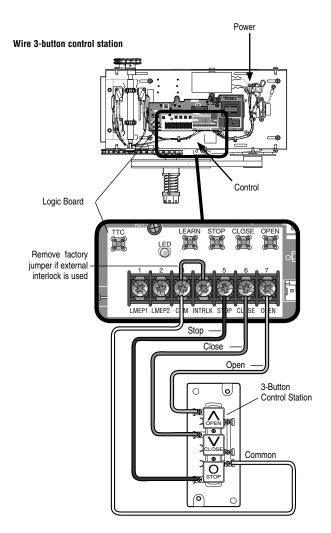
INSTALLATION

12

INSTALL 3-BUTTON CONTROL STATION

Select location for 3-button control station

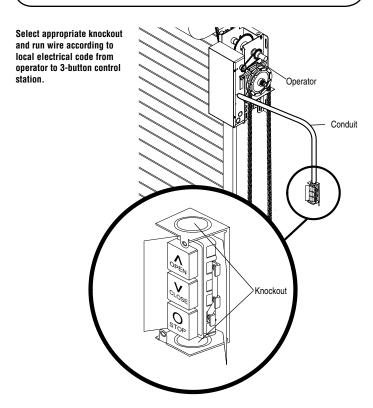




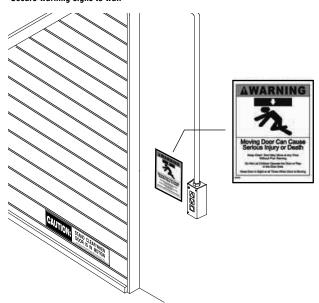
CAUTION

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.



Secure warning signs to wall

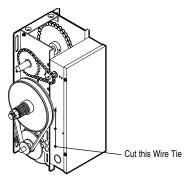


INSTALLATION

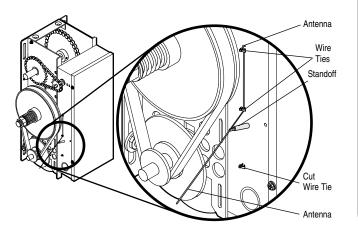
13 SETUP RADIO ANTENNA

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.

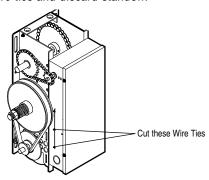


Press the plastic standoff into the hole in the side of the electrical box.

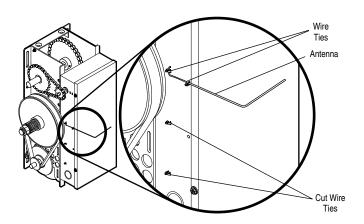


Option B

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.

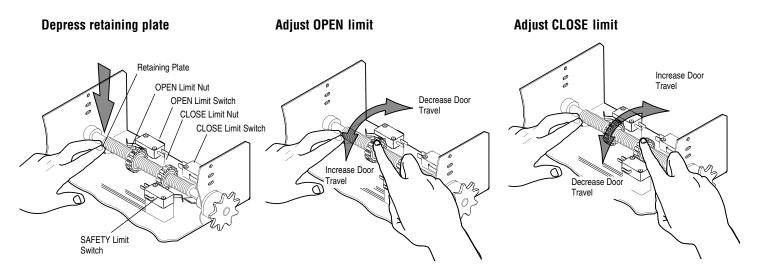


ADJUSTMENT

1 ADJUST THE LIMITS

⚠ MARNING

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

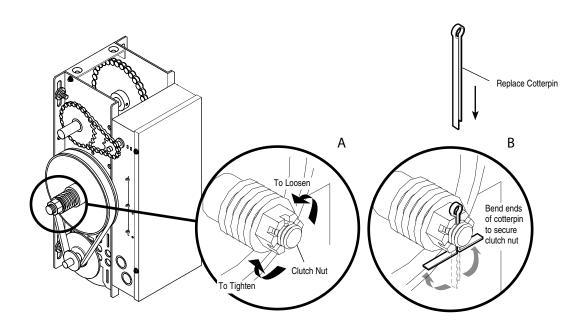


NOTE: When retaining plate is released, verify that the retaining plate is fully seated with the notches of the limit nut.

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.

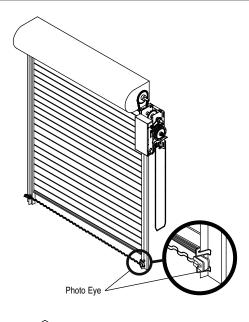
SENSING EDGES

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.

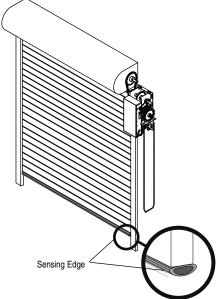
The sensing edge must be installed on the bottom of the door.

See *Optional Safety Device Configurations* for wiring information.

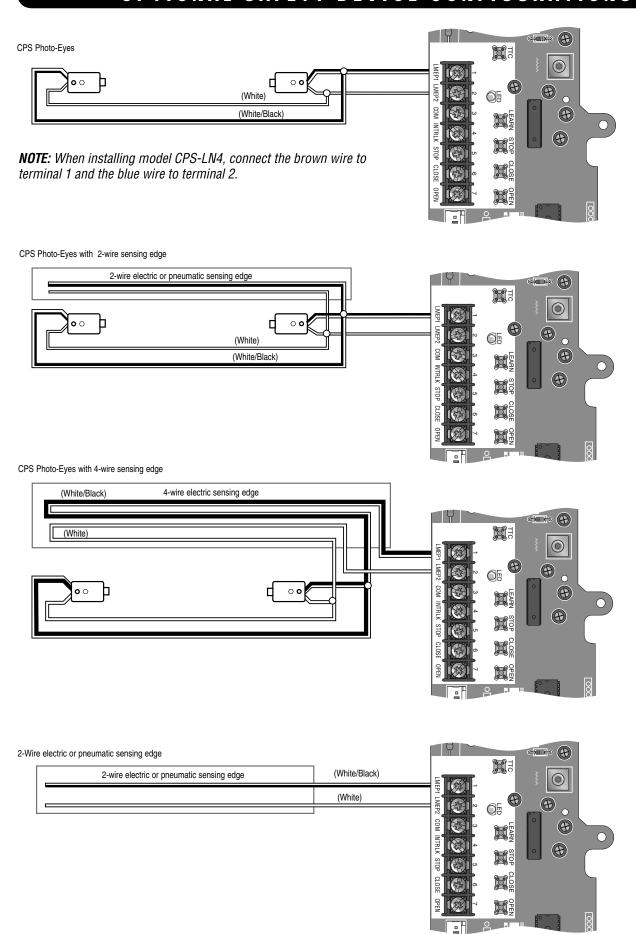
Photo Eyes



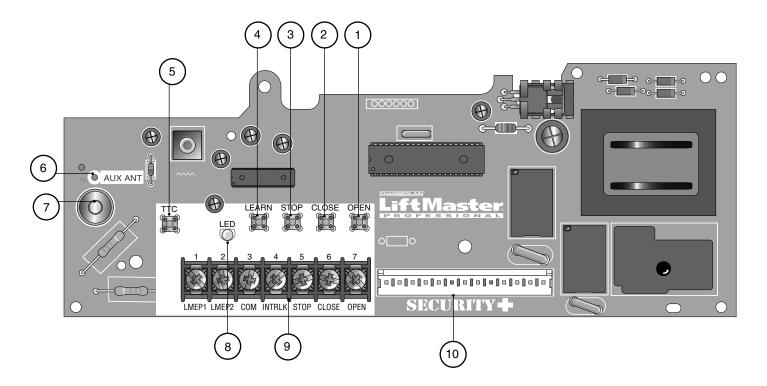
Safety Edge



OPTIONAL SAFETY DEVICE CONFIGURATIONS



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.

CAUTION

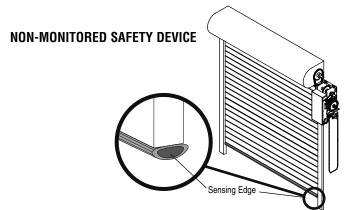
To prevent possible SEVERE INJURY or DEATH, install reversing sensors when:

- . 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.

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.

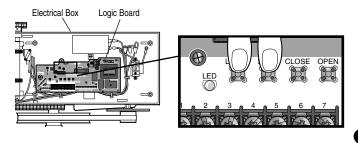


RESET TO C2 WIRING TYPE (Factory Default)

Remove any monitored safety devices.

Disconnect then reconnect power to the operator.

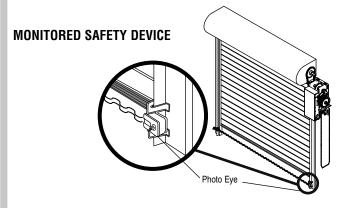
Press and hold the LEARN and STOP buttons until the LED goes out (approximately 3 seconds).



B

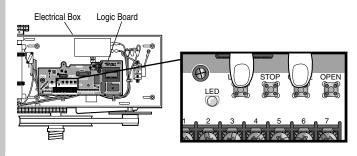
C2 WIRING TYPE WITH MONITORED SAFETY DEVICE

- 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.



TO PROGRAM

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



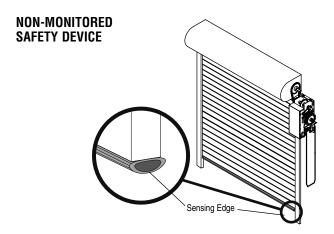
BASIC PROGRAMMING



B2 WIRING TYPE WITHOUT MONITORED SAFETY DEVICE

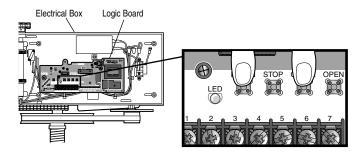
Requires a non-monitored safety device.

- · 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.



TO PROGRAM

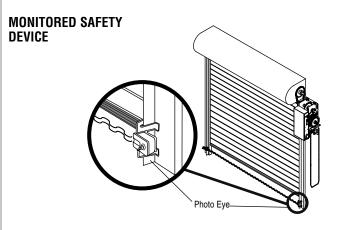
Start with operator in factory default C2 mode. Press and hold the LEARN and CLOSE buttons until the LED goes out (approximately 3 seconds).



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.



NO PROGRAMMING REQUIRED

BASIC PROGRAMMING

-Open

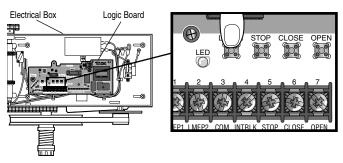
REMOTE CONTROLS

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).
- 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

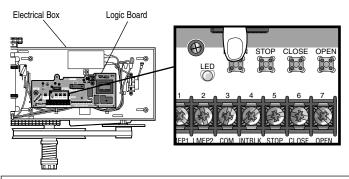
NOTE: The feature will use 3 of the 20 memory channels in the operator.

TO PROGRAM

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

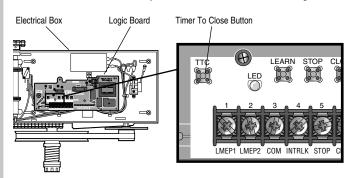
TO PROGRAM

- 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.
- 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.

		RADI	O OPER	ATION	
MODE	OPEN	CLOSE	STOP	REVERSE WHILE CLOSING	TTC RESET
B2	Х	Х	Х	Х	
B2 with TTC	х	X (3 button remote)	Х	х	X WHEN OPEN
C2	Х		Х	Х	

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).

MARNING

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.
- 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

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

MODEL MH

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

- Pull the disconnect chain (sash chain) to engage the hoist mechanism. The disconnect chain may be locked in position by slipping the end through the keyhole of the chain keeper mounted on the wall.
- 2. Operate the door in the desired direction by pulling on one side or the other of the continuous loop hoist chain.
- 3. The disconnect chain must be released from the chain keeper before the door will operate again electrically.

MODEL MJ

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

- To disengage, pull the chain and secure in the disengaged position by slipping the end through the keyhole bracket mounted on the wall. Or if emergency egress device is used, pull handle to disengage operator from door.
- 2. The door may now be pushed up or pulled down manually.
- 3. Release the disconnect chain or reset the emergeny egress device to operate the door again electrically.

MODEL MHS

This operator includes both a floor level disconnect chain to disconnect the door from the door operator and a disconnect chain with manual hoist to electrically disable the operator controls.

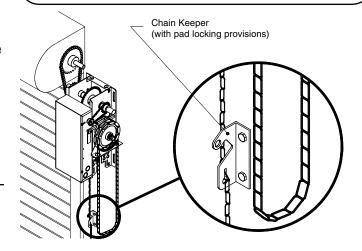
- 1. Refer to Model MH instructions for hoist operation.
- 2. Refer to Model MJ instructions for manual operation.

When operator is disconnected by the manual operation chain, hoist and electrical operation will not function.

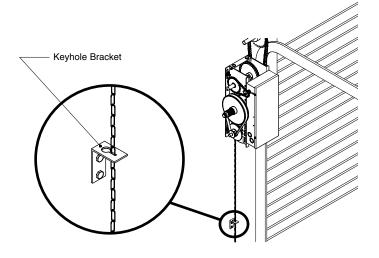
CAUTION

To prevent possible SERIOUS INJURY from a moving chain:

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



Electrical Interlock with Hoist for Models MH and MHS



Manual Disconnect for Models MJ

TROUBLESHOOTING

Technical Support 1-800-528-2806

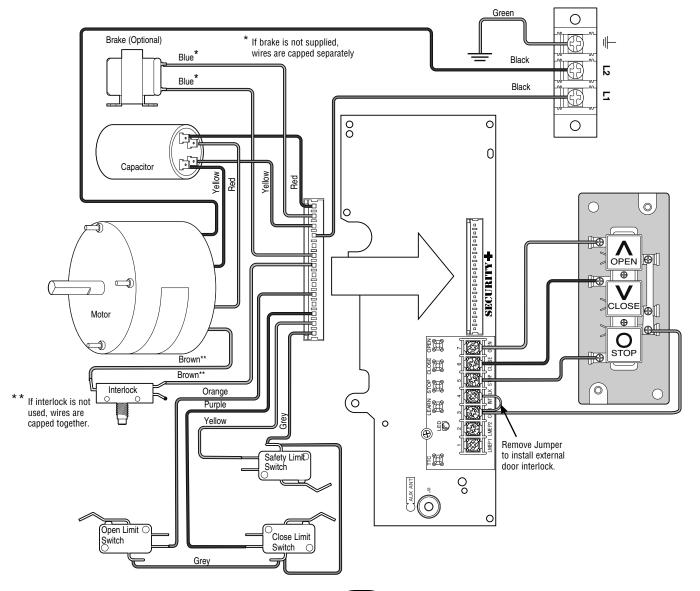
CONDITION	POSSIBLE CAUSE	FIX
OPERATOR WILL NOT RESPOND TO ANY COMMANDS	A) No power	➤ Verify primary line voltage (120Vac,60Hz) is present at terminals L1 & L2. The LED will flash when power is present.
	B) Stop circuit not complete	➤ Verify Stop Button input (terminals 3 & 5) is properly wired and stop 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 compa	ntible 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.
. Joh millio manut	B) Antenna not configured	➤ See SETUP RADIO ANTENNA.
	C) Ambient radio interference or	➤ Use EXTERNAL ANTENNA kit (see ACCESSORIES page).
	building structural issue	(337.33-237.12-37.33-237.12-37.33-37.37.37-37.37-37.37-37.37-37.37-37.37-37.37-37.37-37.37-37.37-37.37-

TROUBLESHOOTING CONT.

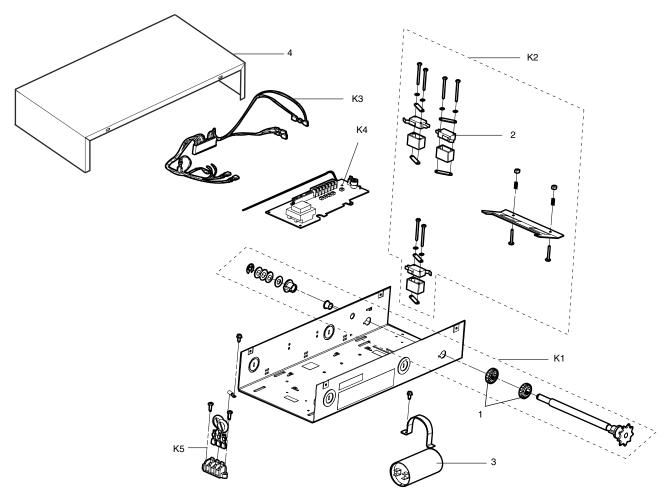
The status of the operator can be determined by counting the number of flashes of the LED on the logic board.

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



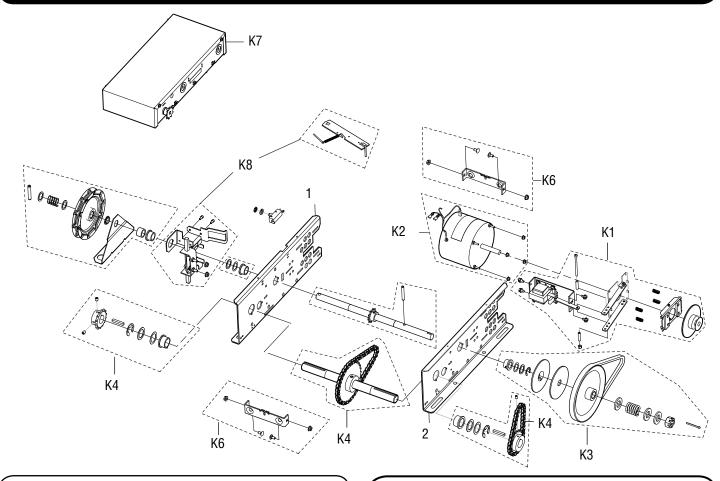
REPAIR PARTS - ELECTRICAL BOX



		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	K76-34283	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 Complete with harness and wire ties
K4	K001A6424-2	Logic Board, Medium Duty "E", 315 MHz
K4	K001A6424-3	Logic Board, Medium Duty "E", 390 MHz
K5	K74-31243	MOV and terminal block
	order complete ele lel number for the	ectrical box kit, add a (K-) prefix to the eoperator.

PART #	DESCRIPTION
3-10024	Limit Nut
23-10041	Limit Switch
9-10338	Capacitor, Medium Duty
(10-33850	Cover
	3-10024 3-10041 9-10338

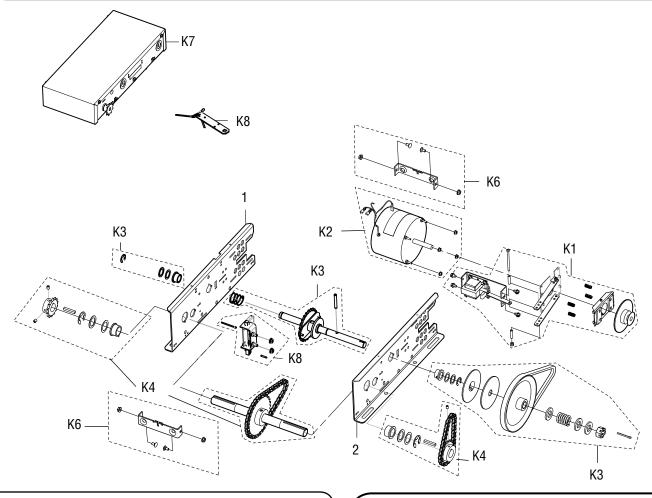
REPAIR PARTS KITS - MH



			SERVICE KITS
	ITEM K1	PART # K75-33877	DESCRIPTION Brake assembly kit Complete with: Plate, release arm, solenoid link, mounting plate, solenoid bracket, pulley and disc, compression spring, pad, rivets, screws, washer, nuts, lock nuts, lock washers, and cotterpins
	K2	K20-5150-LD-1	Motor, 1/2 hp, 115 Volt.
	K3	K72-33841	Clutch shaft kit Complete with: Disc, chain guide, release holder, 4L V-Belt, 4L motor pulley, 7" O.D., shaft, wheel, washers, bushings, bearings, nuts, pins, cotterpin
	K4	K72-33962	Output shaft kit Complete with: Ouptut shaft, bearings, roller chain with master link, limit chain, washers, roll pins, push ring and sprockets
	K6	K75-10030	Frame spacer kit Complete with: 1 spacer and 2 nuts and 2 bolts
	K7	1/75 000 40	Electrical box
	K8	K75-33948	Disconnect assembly
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INDIVIDUAL PARTS			D'
ITEM	PART#	DESCRIPTION	
1	10-10713	Frame (Right Hand)	
2	10-10714	Frame (Left Hand)	

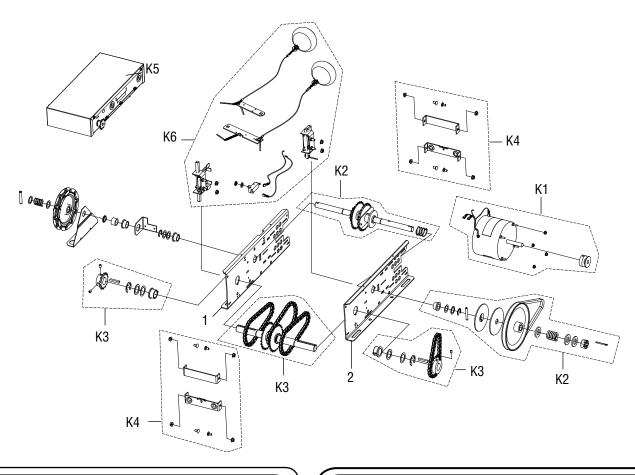
REPAIR PARTS KITS - MJ



SERVICE KITS					
ITEM K1	PART # K75-33877	DESCRIPTION Brake assembly kit Complete with: Brake hub/pulley, brake release lever assembly, brake solenoid and bracket, springs and			
K2 K3	K20-5150-LD-1 K72-33889	cotter pin Motor, 1/2 hp, 115 Volt. Clutch shaft kit Complete with: Clutch shaft, clutch plate, clutch pulley, bearings, belt,			
K4	K72-33962	washers, spring, castle nut, cotterpin, and push on fastener. Output shaft kit Complete with: Shaft, sprockets (41B14x1", 48B18x1, and 41B32x1"), spacers, washers, keys, e-rings,			
K6 K7	K75-10030	chains (#48x29 and #48x43), roll pins Frame spacer kit Complete with: Spacer, nuts and bolts Electrical box			
K7 K8	K75-33972	Disconnect assembly Complete with: Support bracket, yoke, level, shaft, spring, sash, chain, screws, nuts, cotterpins and roll pin			

	INDIVIDUAL PARTS		
ITEM	PART#	DESCRIPTION	
1	10-10713	Frame (Right Hand)	
2	10-10714	Frame (Left Hand)	

REPAIR PARTS KITS - MHS



SERVICE KITS					
ITEM K1 K2	PART # K20-5150-LD-1 K72-33841	DESCRIPTION Motor, 1/2 hp, 115 Volt. Clutch shaft kit Complete with: Disc, chain guide, release holder, 4L V-Belt, 4L motor pulley, 7" O.D., shaft, wheel, washers, bushings, bearings, nuts, pins, cotterpin			
K3	K72-33962	Output shaft kit Complete with: Ouptut shaft, bearings, roller chain with master link, limit chain, washers, roll pins, push ring and sprockets			
K4	K75-10030	Frame spacer kit Complete with: 1 spacer and 2 nuts and 2 bolts			
K5		Electrical box			
K6	K75-33948	Disconnect assembly			

INDIVIDUAL PARTS				
ITEM	PART#	DESCRIPTION		
1	10-10713	Frame (Right Hand)		
2	10-10714	Frame (Left Hand)		
			/	

OPERATOR NOTES

OPERATOR NOTES

OPERATOR NOTES

ACCESSORIES

REMOTE CONTROLS 315MHz (1)

REMOTE CONTROLS 315MHz (371LM 3-Button SEC)

3-Button SECURITY+® Remote Control:

Includes visor clip.

373LM

3-Button SECURITY+® Remote Control:

Includes visor clip.

333LM

3-Button Tri-Colored 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.

CHAIN TENSIONERS

71-6023

Chain Tensioner:

For 1" shafts

71-6125

Chain Tensioner:



For 1-1/2" shafts

ENTRAPMENT PROTECTION DEVICES

CPS-LN4

Commercial Protector System:

P N

Provides protection on doors up to 45' wide. NEMA-4 rated.

CPS-L

Commercial Protector System:

Provides protection on doors up to 30' wide.

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Vehicle Detection System

Pneumatic Edge Kit

WIRE

65-7WIREL

65-8202

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.

MOUNTING BRACKETS

10-12360

Mounting Brackets:

Angle mounting bracket, Painted steel, for MJ, MH, and MHS.

10-9095

Medium Duty Angle Mounting Bracket:

Heavy-gauge steel bracket. May be welded. For use with MJ, MGJ, and MH operators.

ANTENNA

EXT-ANT &



Antenna:

External kit for medium duty.

86LM (15') 86LMT (25') **Antenna Extension Kit:**

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



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.

