



Operational & Maintenance Manual

Products:

Installation Site

Contractor

Architect

Distributor



Dear Customer:

Thank you for choosing [^ Á [{] æ ^ Á as your custom door installation specialist.

The Operation and Maintenance Manual, which is enclosed, has been supplied by Overhead Door Corporation to meet your needs as our customer. Appropriate information for the products installed has been compiled in this manual for your use. We recommend compliance with all of the safety information provided within the manual.

We strongly recommend implementing a preventative maintenance program. Benefits of properly maintaining your door system include:

- Increased operational efficiency and reliability.
- Extended useful life of your equipment.
- Increased probability of dependable equipment performance.
- Elimination of non-budgeted maintenance cost for door service.

As an Overhead Door distributor, we offer you complete product support for your service and maintenance needs. Do not hesitate to call us for assistance.

We hope that you will also continue to consider [^ Á [{] æ ^ Á for your future product and installation needs. We are firmly committed to providing the finest in Overhead Door products, accessories, and a level of customer support unmatched in the industry.

Sincerely,



Operation & Maintenance Manual

Commercial Operators

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Section 1	General Information
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GENERAL INFORMATION



OVERHEAD DOOR CORPORATION

Overhead Door Corporation, based in Dallas, Texas, is a leading single-source manufacturer of integrated door and operator systems for commercial and residential applications.

Overhead Door is the door solutions provider that delivers expert service and the highest level of performance and reliability. Our comprehensive product line encompasses a wide variety of commercial door solutions including: commercial operators, commercial sectional and rolling service doors, advanced performance rolling doors, and security grilles.

With our nationwide network of more than 400 authorized distributors, we are a leading provider of overhead and garage door systems, and we continue to lead the way with reliable solutions and unmatched professional installation, service and support that keeps customers coming back. The brand trusted for over 90 years, Overhead Door gives home and business owners confidence and peace of mind.



To locate a distributor:

From the United States, call 1-800-929-3667 (DOOR)

International: 1-717-248-0131

<http://www.overheaddoor.com/Pages/distributor-locator.aspx>

Contact Information:

Overhead Door Corporation
2501 S. State Hwy. 121, Suite 200
Lewisville, TX 75067

Telephone: 1-800-275-3290

www.overheaddoor.com



PREVENTATIVE MAINTENANCE



BENEFITS OF PREVENTATIVE MAINTENANCE PROGRAM

- **Increase operational efficiency, safety and reliability**
- **Extend useful life of your equipment**
- **Reduce probability of equipment malfunctioning**
- **Decrease costly downtime**
- **Decrease long-term repair expense**
- **Priority scheduling for service**
- **Establish relationship with experienced, service-oriented professionals**



SCOPE OF WORK FOR ELECTRIC OPERATORS

For the period _____, 20__, through _____, 20__, the following services and inspections will be provided as part of the Preventative Maintenance Program for operator(s):

ELECTRIC OPERATORS:

- 1) Inspect and adjust limit switches.
- 2) Inspect and adjust belts.
- 3) Inspect and adjust brake.
- 4) Inspect gear reducer.
- 5) Inspect operator mounting.
- 6) Inspect and test disconnect.
- 7) Inspect and lubricate roller chain.
- 8) Inspect and tighten all sprockets.
- 9) Inspect safety labels, placement and condition.



INSTALLATION INSTRUCTIONS

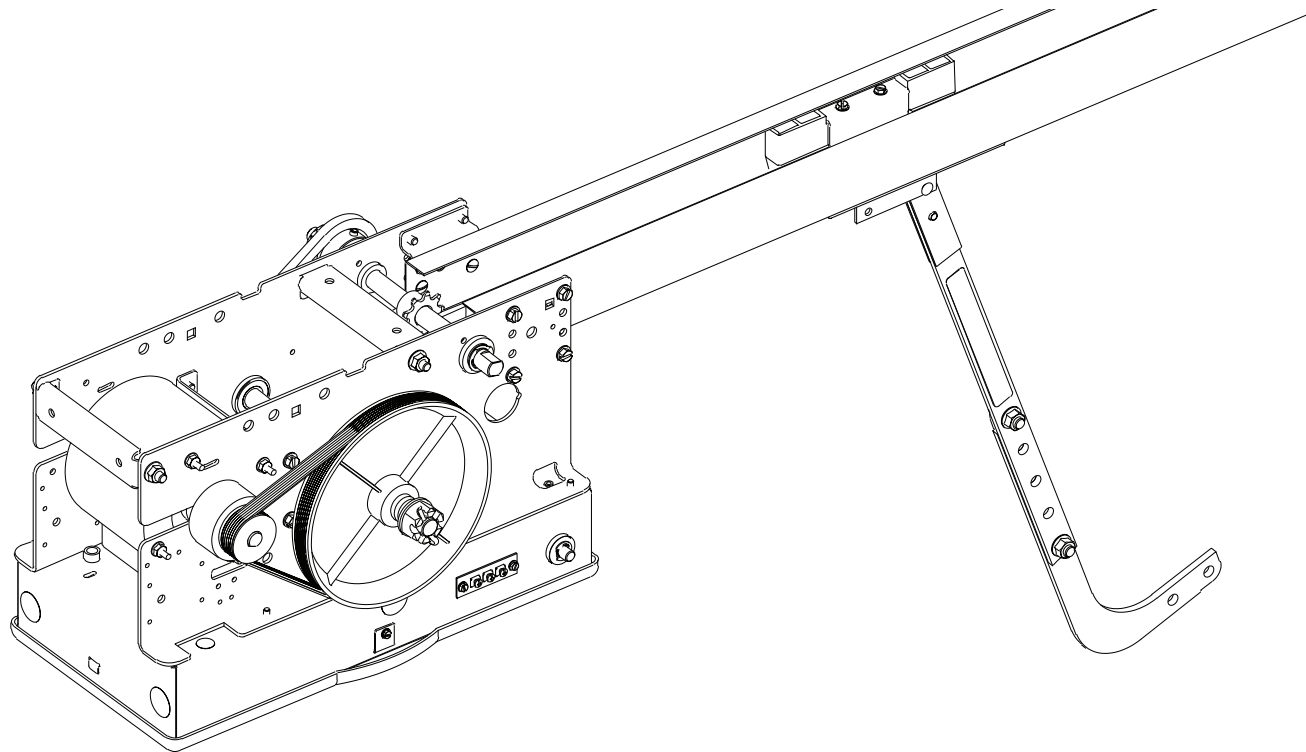
RMX™

MEDIUM DUTY COMMERCIAL OPERATOR

The Genuine. The Original.

The logo for Overhead Door, featuring the words "OVERHEAD DOOR" in a stylized, arched font with a registered trademark symbol.

D R A W B A R



NOT FOR RESIDENTIAL USE

This Installation Manual provides the information required to install, troubleshoot and maintain an RMX™ Commercial/Industrial Door Operator.

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Section 1: How to use this manual

The 11 sections of this Installation Manual provide the information required to install, troubleshoot and maintain an RMX™ commercial/industrial door operator.

Section 2

Provides important defining information related to safety terminology used throughout this manual, as well as safety related instructions which must be followed at all times while doing any steps/tasks/instructions detailed in this manual.

Section 3

Details pre-installation concerns/issues/decisions that are recommended to be considered and/or resolved prior to beginning any commercial door operator installation.



WARNING

Failure to correctly perform all steps in sections 4-6 can result in serious injury or death.

Sections 4-6

Provide step by step installation and set-up instructions for the RMX™ commercial door operator. Each section is written such that it must be followed in a step by step order to complete a successful installation.

Sections 7-8

Detail important features and troubleshooting information for typical installation and normal operations that may occur.

Sections 9-11




Provide related information on service and maintenance items, operator drawings for use in troubleshooting and service activities, along with important warranty and returned goods policy information.

Section 2: Safety Information & Instructions

WARNING

Overhead Doors are large, heavy objects that move with the help of springs under high tension and electric motors. Since moving objects, springs under tension, and electric motors can cause injuries, your safety and the safety of others depend on you reading the information in this manual. If you have any questions or do not understand the information presented, call your nearest service representative. For the number of your local Overhead Door Dealer, call 800-929-3667, and for Overhead Door Factory Technical Advice, call 800-275-6187.

In this Section and those that follow, the words Danger, Warning, and Caution are used to stress important safety information. The word:







-  **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
-  **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
-  **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in injury or property damage.

The word **NOTE** is used to indicate important steps to be followed or important considerations.

IMPORTANT

READ PRIOR TO ANY DOOR OPERATION

1. **Read manual and warnings carefully.**
2. **Keep the door in good working condition. Periodically lubricate all moving parts of door.**
3. **If door has a sensing edge, check operations monthly. Make any necessary repairs to keep it functional.**
4. **AT LEAST twice a year, manually operate door by disconnecting it from the operator. The Door should open and close freely. If it does not, the door must be taken out of service and a trained service representative must correct the condition causing the malfunction.**
5. **The Operator Motor is protected against overheating by an internal thermal protector. If the operator ceases to function because motor protector has tripped, a trained service technician may need to correct the condition which caused the overheating. When motor has cooled, thermal protector will automatically reset and normal operation can be resumed.**
6. **In case of power failure, the door can be operated manually by pulling the release cable to disconnect the operator drive system.**
7. **Keep instructions in a prominent location near the pushbutton.**

POTENTIAL HAZARD	EFFECT	PREVENTION
 MOVING DOOR	 WARNING Could result in Serious Injury or Death	<p>Do Not operate unless the doorway is in sight and free of obstructions. Keep people clear of opening while door is moving.</p> <p>Do Not allow children to play with the door operator.</p> <p>Do Not change operator control to momentary contact unless an external reversing means is installed.</p> <p>Do Not operate a door that jams or one that has a broken spring</p>
 ELECTRICAL SHOCK	 WARNING Could result in Serious Injury or Death	<p>Turn off electrical power before removing operator cover.</p> <p>When replacing the cover, make sure wires are not pinched or near moving parts.</p> <p>Operator must be electrically grounded.</p>
 HIGH SPRING TENSION	 WARNING Could result in Serious Injury or Death	<p>Do Not try to remove, repair or adjust springs or anything to which door spring parts are fastened, such as, wood block, steel bracket, cable or any other structure or like item.</p> <p>Repairs and adjustments must be made by a trained service representative using proper tools and instructions.</p>

Section 3: General Information

Job Site Issues to Consider/Concerns

The following list of items should be considered prior to selecting an operator for a given job site.

- Available power supply.
- Type of door.
- Potential operator mounting obstructions. Items to consider include, but are not limited to: side room, room above door shaft, room below door shaft, available mounting surface integrity, power supply location, and convenient chain hoist and release cable positioning.
- Size of door for appropriate operator torque and door travel speed selection.
- Operator mounting environment. Items to consider include operator location, dampness of location, dustiness of the location and corrosiveness of the location.
- Door activation needs/requirements. Examples include 3 button control stations, 1 button control stations, radio controls, pull cords, loop detectors, photoelectric controls, key switches, etc. See “Entrapment Protection” section below.
- Interlock switches are required under certain conditions for doors with pass doors and door locks. See Section 5.5 below.
- Accessory equipment. Examples include reversing edges and/or photocell beams, which are required for doors set to operate as momentary contact, auxiliary control relays, warning lights, etc.
See “Entrapment Protection” section below.

Entrapment Protection Recommendations

Overhead Door Corporation recommends the installation of a fail safe external reversing device (such as a reversing edge or photocell system, etc.) on all electronically operated commercial doors. If such a reversing device is not chosen, then the operator must be installed with only a constant contact control switch for operation.

NOTE: A monitored 2-wire reversing edge or sensing edge can be installed using the optionally available Timer Close Module (TCM) P/N OPABTCX.S.

WARNING:

DO NOT apply line voltage until instructed to do so.

CAUTION:

Check working condition of door before installing the operator. Door must be free from sticking and binding. If equipped, deactivate any door locking device(s). Door repairs and adjustments, including cables and spring assemblies **MUST** be made by a trained service representative using proper tools and instructions.

Section 4: Installation

Drawbar Assembly

The Model RMX™ Drawbar Operator consists of the Power Unit (A), Drawbar Track (B), Chain Guides (C), Drawbar Arm (E), Front Spreader (G), Front Idler Pulley (H), Drive Chain (J), Drive Sprocket (K) and Drawbar Track Spacer (L). The Drawbar track length, chain length and quantity of chain guides will vary by door heights. **Fig. 1.**

- 1) The Drawbar Track Spacers are attached to the Power Unit at the factory. **Fig. 1.**
 - Attach Track to Power Unit at the Spacers using eight (8) 1/4"-20 x 1-1/2" track bolts and 1/4"-20 keps nuts (provided). **Fig. 2.** The curved part of the Track MUST be toward the electrical panel.

NOTE: Drawbar tracks must be thirty (30) inches longer than the door's height. Tracks have been pre-punched at the door plant for the chain guide assemblies.

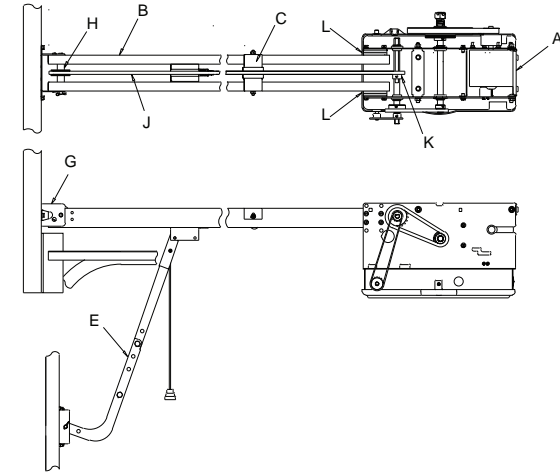


Figure 1

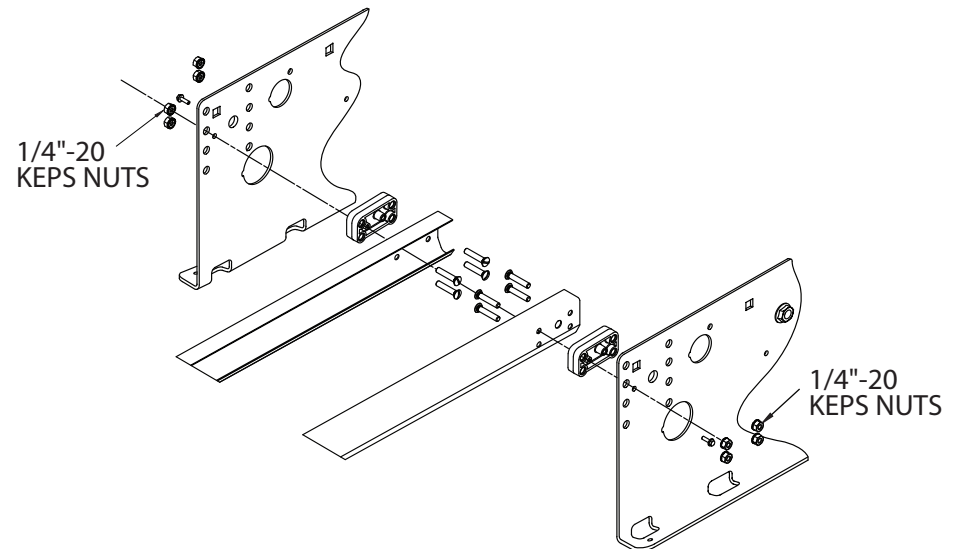


Figure 2

Drawbar Assembly (cont')

- 2) Attach the assembled drawbar track to the power unit using the eight (8) 1/4"-20 x 1/2" self-tapping screws provided. The curved part of the track MUST be toward the electrical panel.
- 3) Insert the carriage into the tracks as shown in **Fig. 3**.

NOTE: One end of the carriage has a notch (**Detail A**) which will be used to locate the chain pin (**Detail B**). This end of the carriage faces the front spreader bracket and away from the power unit.

- 4) Attach the front spreader bracket to the front of the operator tracks with two (2) track bolts and two (2) locknuts (check hole alignment before installing).
- 5) Position the idler pulley inside the track and insert the 3/8" x 4-1/2" clevis pin. Secure the clevis pin using the hitch pin. **Fig. 4**.

NOTE: Track bolts MUST be installed from inside the track.

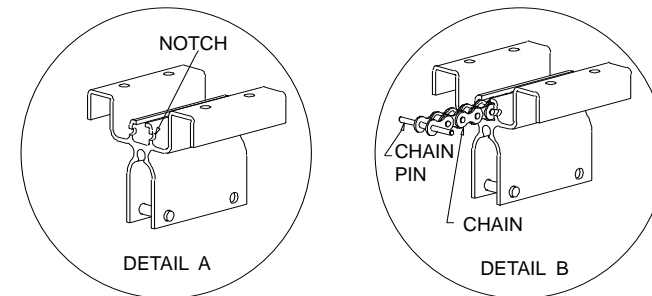
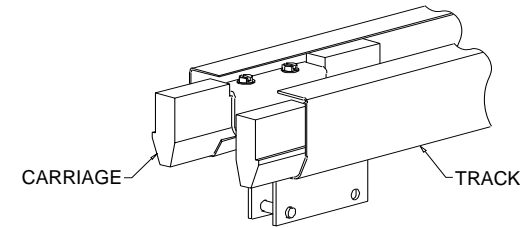


Figure 3

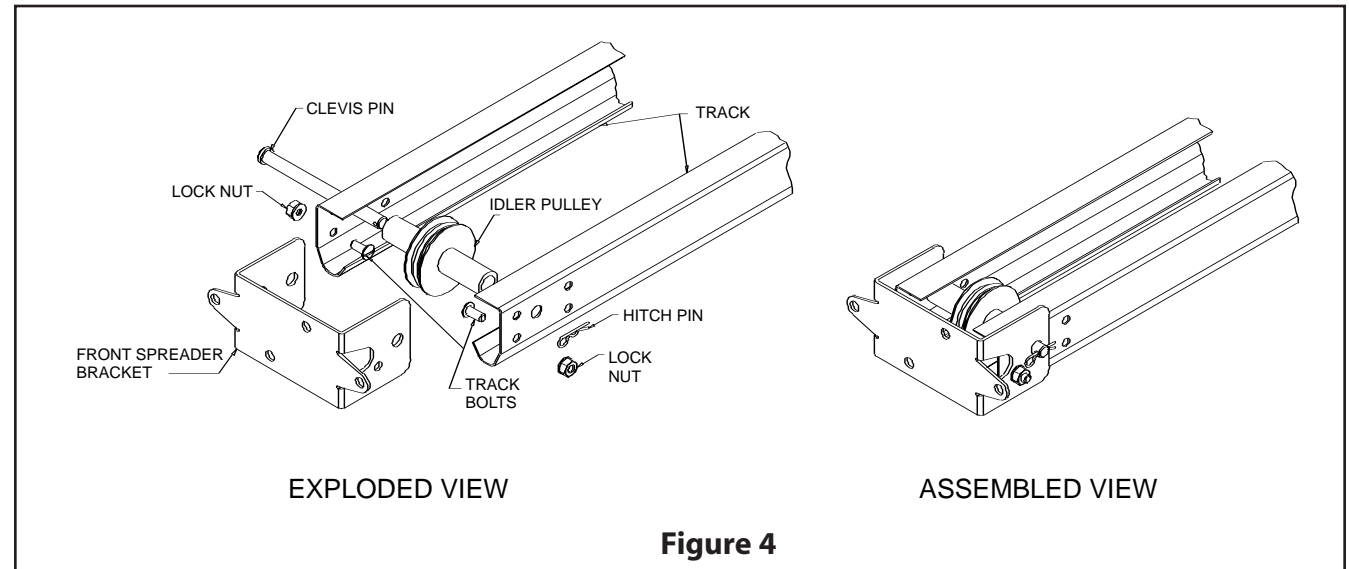


Figure 4

Drawbar Assembly (cont')

- 6) Attach the chain guide assemblies to the drawbar tracks using track bolts and locknuts. **Fig. 5.**

NOTE: Space chain guides evenly between operator and header. Doors 12 foot tall and under will use 2 chain guides. Doors over 12 feet will require 3 chain guides.

NOTE: Verify that track bolts are properly seated in track. Failure to seat bolts can cause carriage to bind in door track.

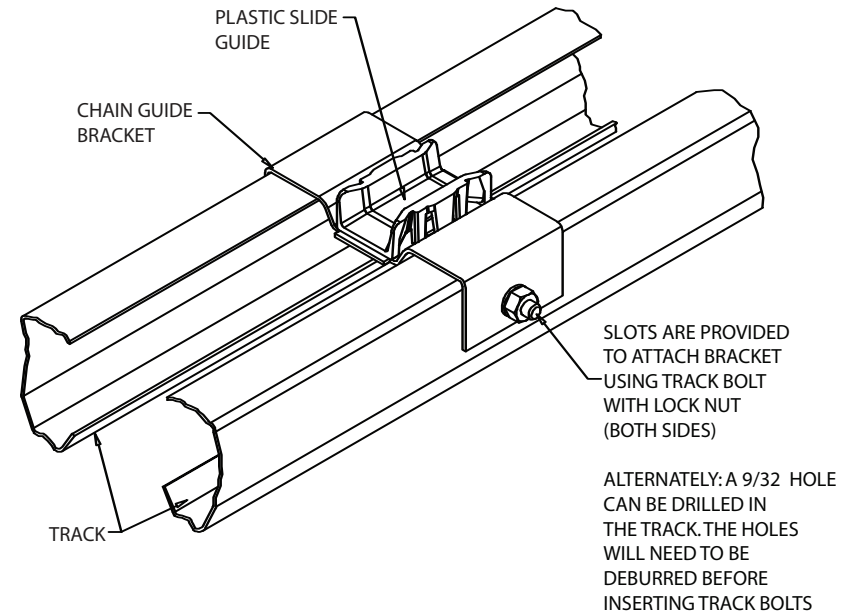


Figure 5

Drawbar Assembly (cont')

- 7) Uncoil the drawbar chain and install by routing the chain over the chain guides and around the drive sprocket on the output shaft as shown in **Fig. 6**.
- 8) Pass the chain through the rectangular slot in the carriage and insert the chain pin through the end link of the chain.
- 9) Pass the other end of the chain between the front spreader bracket and the idler pulley. Make certain the chain is not twisted.
- 10) Move chain toward the carriage.
- 11) Attach the eye bolt to the chain using the #41 master chain link.
- 12) Attach the chain to the carriage.
- 13) Insert the eye bolt through the hole in the carriage.
- 14) Place the spring and flat washer over the eyebolt.
- 15) Thread a single nut onto the eyebolt as shown in **Detail A, Fig 6**.
- 16) Tighten Chain with no more than 2" of sag and add second locknut. **Detail A, Fig 6**.

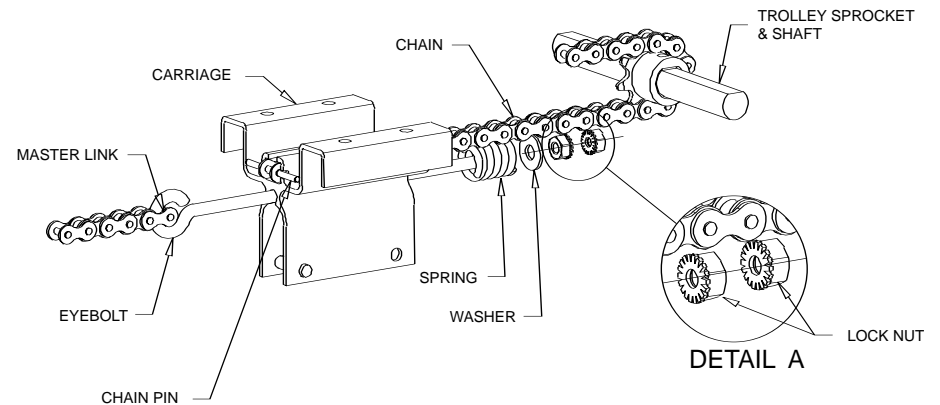


Figure 6

Check to ensure the following:

- The chain is properly engaging the output sprocket.
- The chain pin is properly seated in the indentations on the front of the carriage.
- The chain is properly seated on the rib of the idler pulley.
- The chain is not twisted.

! WARNING

- DO NOT apply line voltage until instructed to do so.
- Repairs and adjustments, including particularly to cables and spring assemblies under high tension, must be made by a trained service representative using proper tools and instructions.

Drawbar Installation

CAUTION

Check the working condition of the door before installing the operator. Door must be free from sticking and binding. If the door is equipped with a latching device, secure the locking bar in the open (unlocked) position. This style operator will act as a latching device when the door is down and therefore the door's lock is no longer needed. If the door lock is to remain functional, an interlock switch **MUST** be installed which will prevent operation of the door whenever the door lock is engaged. Refer to the Wiring Instructions, section 5.5, of this manual for proper connection of the interlock switch.

- 1) Measure the width of the door to determine the center. Make a vertical line as shown in **Fig. 7**. (If the vertical line is not in line with a door stile, a means of attaching the spring box to the door must be provided. This can be accomplished by spanning the center of the door's top section (between the top and bottom rail) with a suitable material such as wood or steel.

NOTE: On torsion spring doors with an uneven number of panels, the operator may be attached to the stile nearest to the center.

- 2) Prepare for attaching drawbar to header. If suitable woodwork is not already in place, securely affix a 2" x 6" block of wood as shown in **Fig. 7**.
- 3) Center the block on the header.
- 4) Mark the center vertical line on this block.
- 5) Use a level, as shown in **Fig. 8 (pg 4.6)** to find the highest point of travel for the door.
- 6) Mark a horizontal line across the vertical line you made on the header at 2-1/2" above the highest point of door travel.

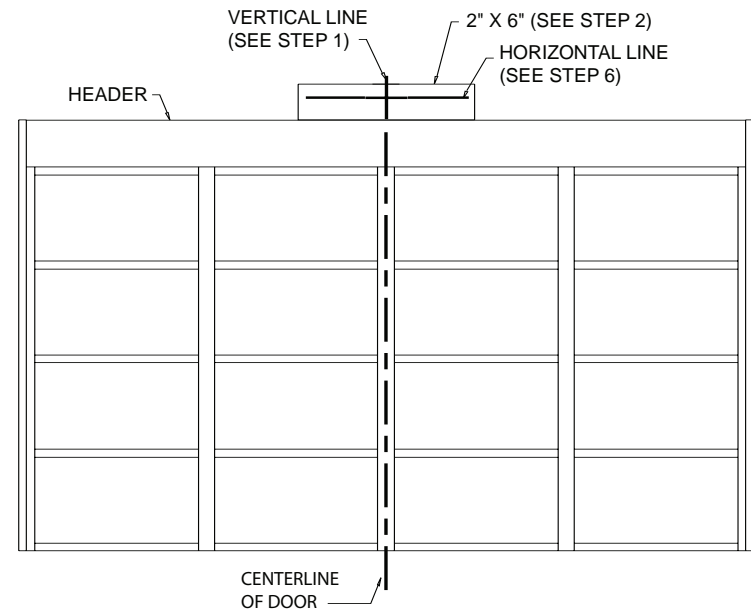


Figure 7

Drawbar Installation (cont')

- 1) Raise the operator into a position approximately 4" above the horizontal door tracks.
- 2) Temporarily suspend the operator from the ceiling superstructure with rope or by some other safe and suitable means.
- 3) Position the bottom edge of the front spreader bracket on your horizontal mark on the header. **Fig. 8.**

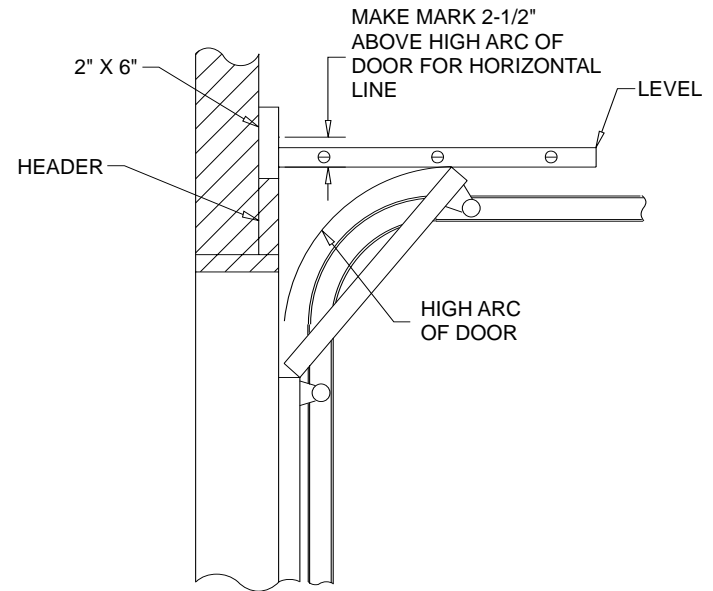


Figure 8

Attach Operator.

- 4) Center spreader bracket on the vertical line. Use two (2) 1/4" x 1-3/4" lag bolts to attach the bracket to the header. **Fig. 9.**
- 5) Raise the door and position the operator so that the drawbar tracks are level and the operator chain is in line with the center of the door (or the stile where the door bracket will be attached). **Fig. 9.**
- 6) Secure the operator in this position by installing steel angles (not furnished) between the ceiling superstructure and the operator power unit. **Fig. 10.**

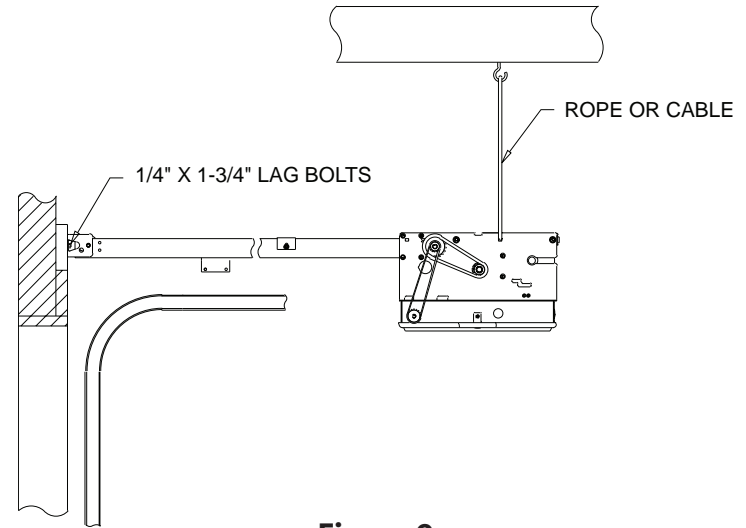


Figure 9

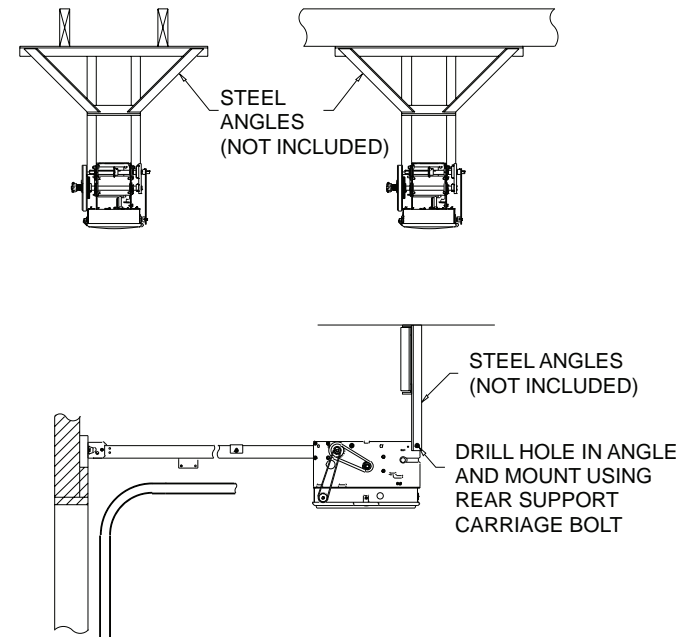


Figure 10

Connection to the Door

- 1) Pull down on the drawbar arm locking sleeve and attach to carriage.
- 2) Position the door bracket on the door as shown in **Fig. 11**, with mounting holes on the door centerline. (Even with or above top door roller).
- 3) Fasten the door bracket to the door using two 1/4" -20 X 2-1/4" carriage bolts and nuts for wood doors. Use 1/4"- 20 self tapping sheet metal screws for metal doors. Or as recommended by the door manufacturer.
- 4) Use two (2) 3/8" -16 X 7/8" bolts and nuts to attach the door curved door arm to the straight drawbar arm.

NOTE: Use the set of holes that align the drawbar in a near vertical position for operators without a brake. Set arms at a 20-30 degree rearward angle for **operators with a brake**.

For **units without a brake**, set arms as close to 0 degrees as possible.
Fig. 12.

NOTE: If the door strut interferes with the mounting of the door bracket, position the door bracket below the strut. **DO NOT**, in any way, cut or modify the strut.

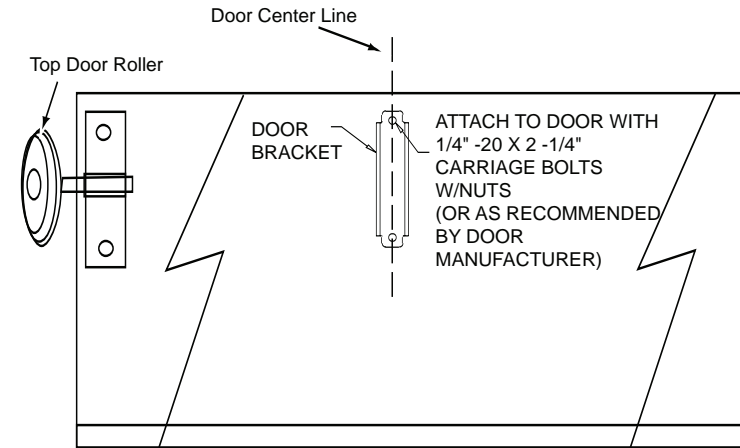


Figure 11

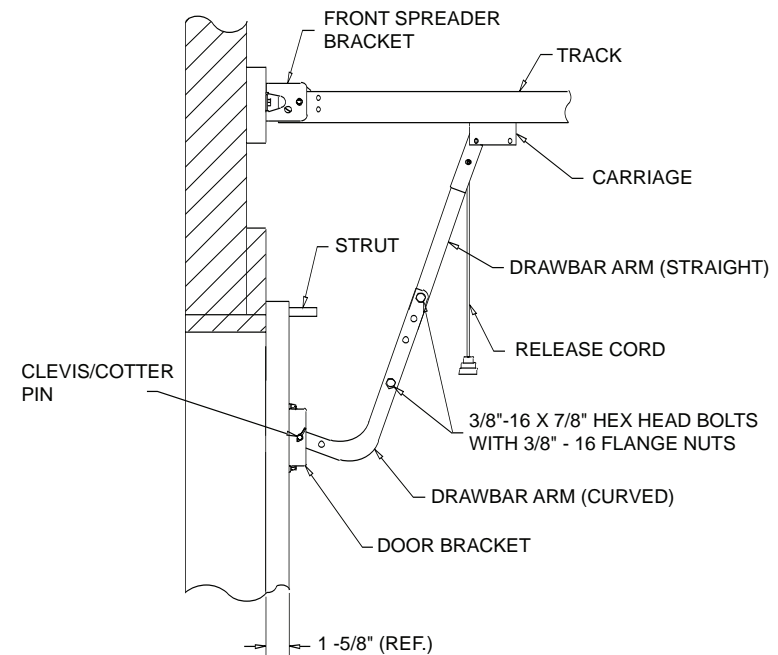


Figure 12

Clutch Adjustment

The RMX™ Operators have a friction style clutch that can be adjusted.

NOTE: The clutch is intended to provide protection for the door, the operator and associated equipment. It is not intended for entrapment protection. RMX™ Operators have a motor reversing feature that is integrated with the clutch assembly. If an obstruction is placed in the pathway of the door during operation the RMX™ motor will stop and reverse when the clutch begins to slip. Therefore, the adjustment of the clutch should be such that the door and operator function in this manner. The steps for clutch adjustment follow:

To Adjust the Clutch

- 1) Decrease the tension on the clutch until the operator will not lift the door.
 - Turn the adjusting castle nut counter-clockwise to decrease clutch tension and clockwise to increase clutch tension.
- 2) After completing step 1, begin to increase tension on the clutch until the operator is capable of lifting the door through the complete cycle without clutch slippage.
- 3) Test the reversing feature of the operator by placing an obstruction under the door during a close cycle. The door should reverse on the obstruction and return to the open position. If the door does not close but comes down part way and reverses without any obstructions in its path, then increase the clutch tension until the door will close fully.
- 4) Finally, insert the cotter pin through the castle nut and shaft and bend the outer leg of the cotter pin.

NOTE: Periodically check the system for proper clutch action. If clutch starts to slip after working properly for some time, check manual operation of door BEFORE adjusting clutch. The door may not be operating freely or the counterbalance spring may need adjusting. Repairs and adjustments must be performed by a trained service representative using proper tools and instructions.

To Adjust the Brake

- 1) Loosen the Adjustment Bracket Lock Nut/Bolt.
- 2) Slide the Adjustment Bracket as needed to reach the desired spring tension.
 - When properly adjusted, the pivot arm should move with very little effort.
- 3) Re-tighten the Adjustment Bracket Lock Nut/Bolt.

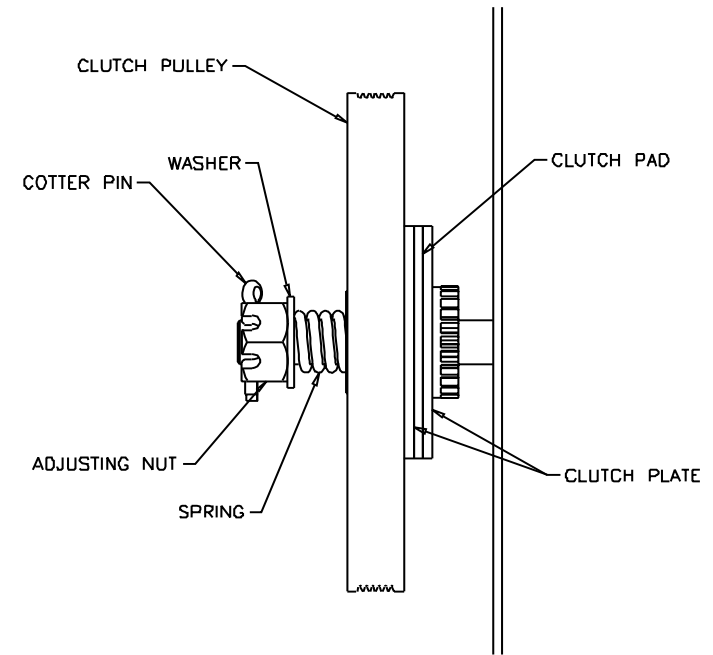


Figure 13

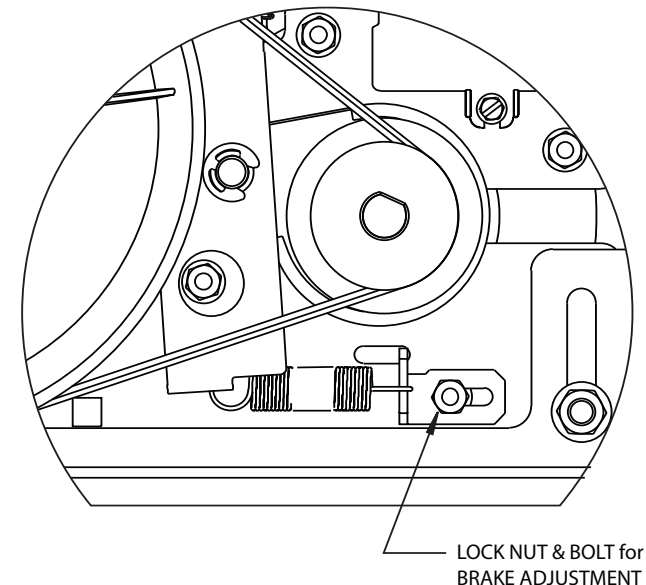


Figure 14

Section 5: Wiring

Line Voltage Wiring Fig. 1

⚠ WARNING

- DO NOT apply power to operator until instructed to do so.
- Overhead Door Corporation recommends that line voltage wiring be performed by a qualified electrician.
- Be sure that electrical power has been disconnected from the input power wires being connected to the operator prior to handling these wires. An appropriate lock-out / tag-out procedure is recommended.
- Line voltage wiring must meet all local building codes.
- Make sure operator voltage, phase and frequency nameplate ratings are identical to the job site line voltage ratings.
- Input power wiring must be properly sized for the operators amperage rating located on the nameplate.
- To reduce the risk of electric shock, make sure the chassis of this unit is properly grounded.

- 1) Remove LINE VOLTAGE INPUT PLUG and install proper fittings and 1/2" conduit.
- 2) Route proper LINE VOLTAGE wires into operator.
- 3) Locate LINE INPUT terminals on circuit board. Using correct connectors, attach wires to LINE INPUTS, and GROUND terminal. **Fig. 2.**
 - Keep low voltage and line voltage wires separate.
 - Route all line voltage wires as shown.
 - Plug all unused conduit holes.

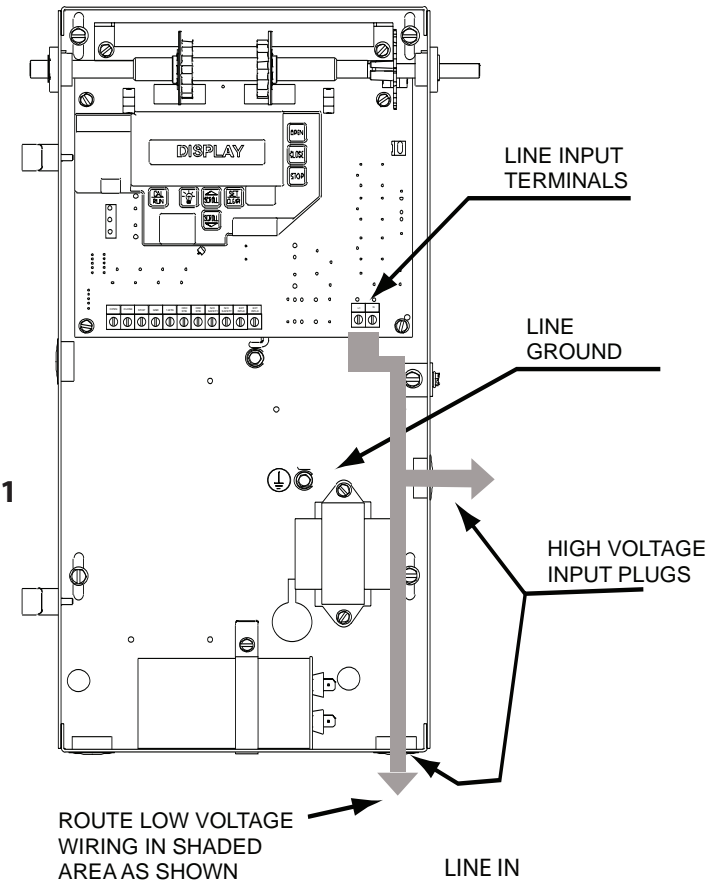


Figure 1

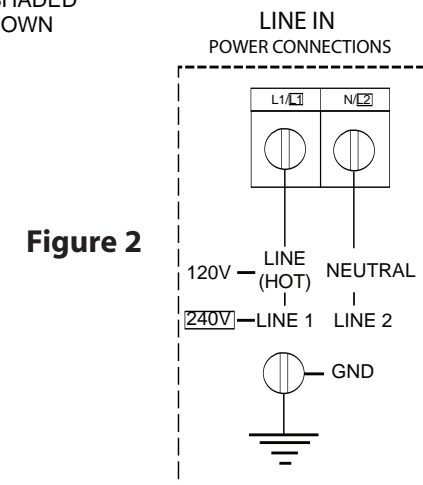
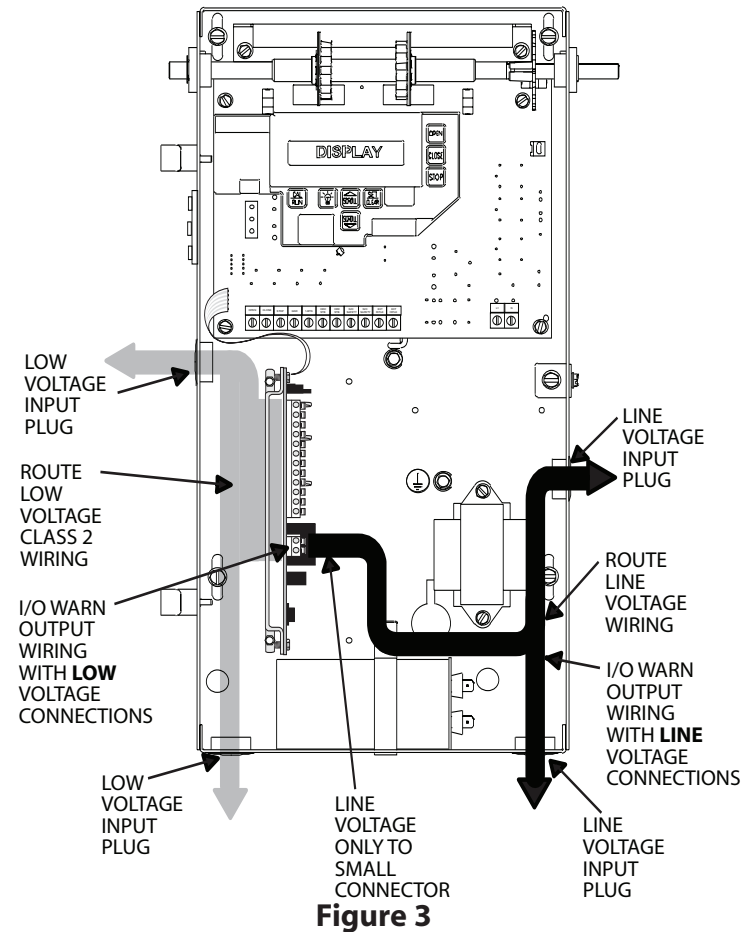


Figure 2

Low Voltage Control Wiring (general) Fig. 3

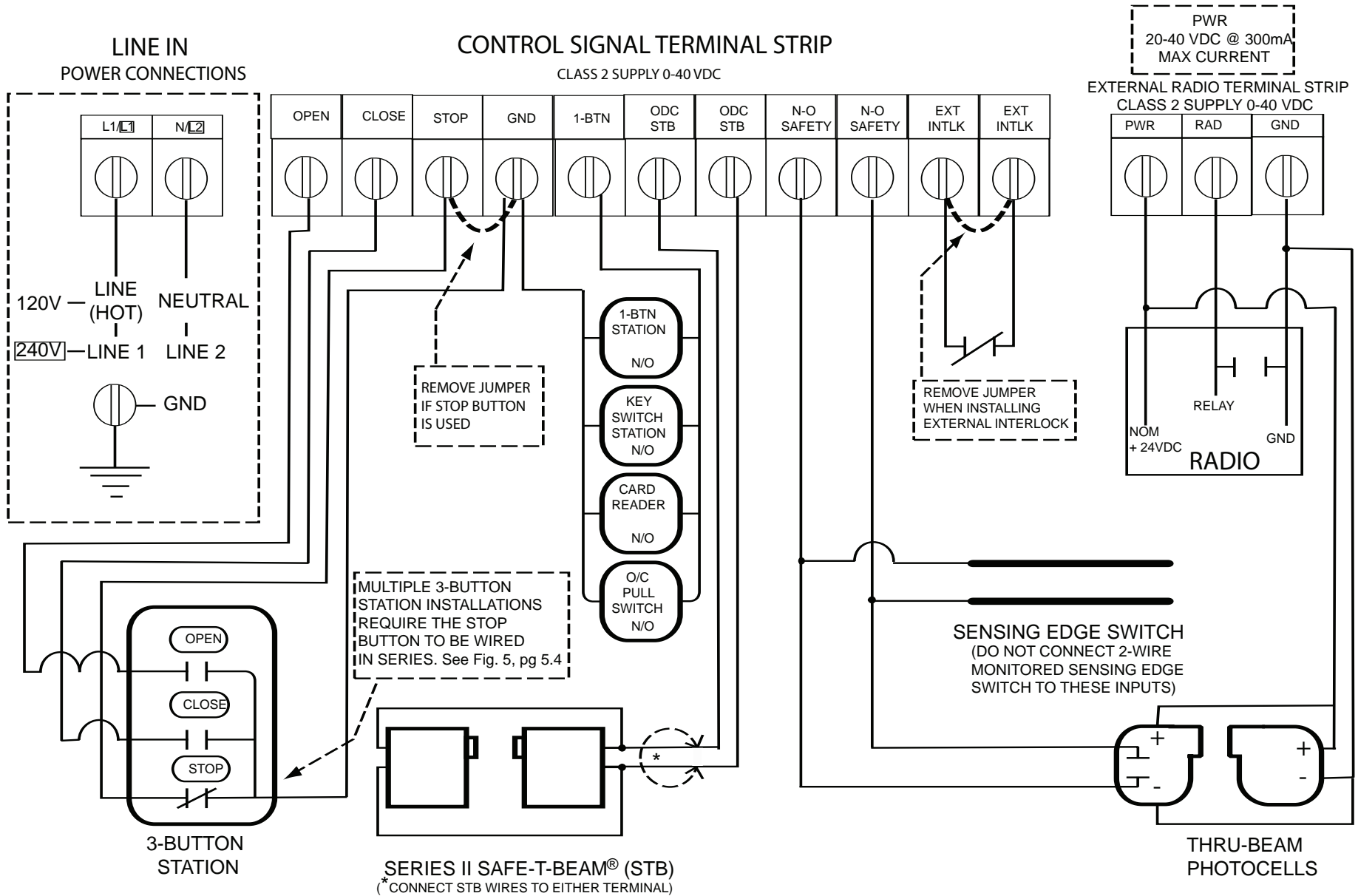
- 1) Connect all LOW VOLTAGE control circuit wires to this side of unit using 1/2" conduit or flexible convoluted tubing.
 - Keep low voltage and line voltage wires separate.
 - Route all low voltage control wiring as shown. This includes all control circuit wires such as wall controls, timers and single button input devices as well as radio control and safety circuit wiring. See Figs 2 through 10 in this section.
 - Plug all unused conduit holes.

NOTE: For a detailed description of control wire terminals see Appendix B.



External Wire Diagram

See Appendix B for detailed description of terminals.



Wall Control

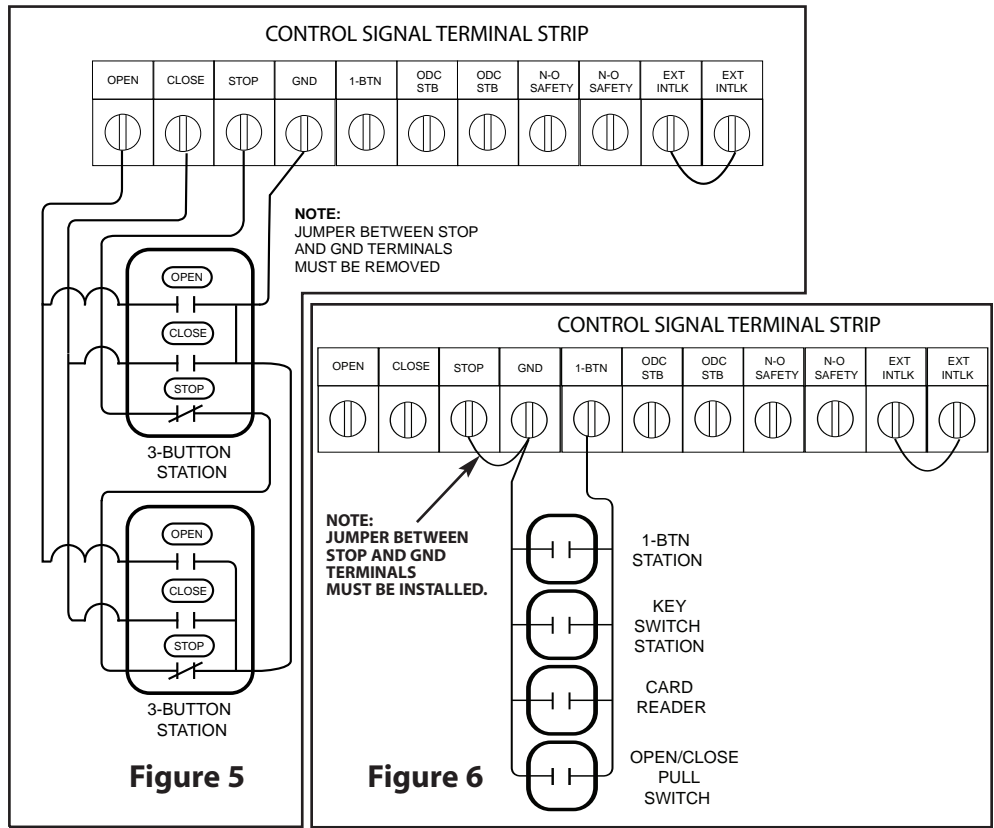
- 1) For a single 3 - button installation, make connections as shown in **Fig. 4.**
- 2) For a multiple 3 - button installations, make connections as shown in **Fig. 5.**
- 3) For single button accessory controls, make connections as shown in **Fig. 6.**

NOTE: If an External STOP button is NOT being installed, a jumper wire must be installed between the "STOP" AND "GND" terminals as shown.

NOTE: Long Distance Relay Kit wiring is not required for long distance control runs and should not be used.

WARNING:

- Wall Control(s) must be located so that the door is within sight of the user.
- Attach the Warning placard adjacent to the Wall Control. **Fig. 4A.**
- Attach the Caution label adjacent to the Wall Control. **Fig. 4B.**



WARNING:

If momentary contact control is to be used, an external reversing device such as a photocell system or sensing edge switch must be used. See pages 5.6-5.7 for installation of entrapment protection devices.

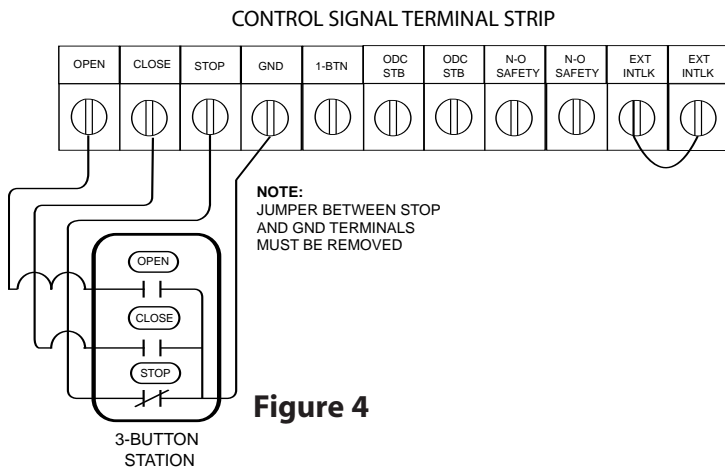


Figure 4

Entrapment
Warning
Placard

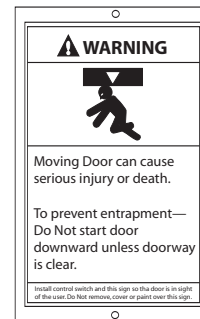


Figure 4A

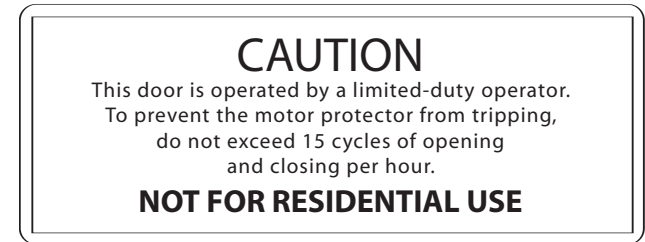


Figure 4B

Interlock Switches

1) Optional external interlock switches are required with some Sectional or Rolling Steel Doors to prevent the door from operating under certain conditions including the following:

- If the door is equipped with a functioning door lock, an interlock switch must be installed to prevent electric operation when the lock is engaged.
- If the door is equipped with a pedestrian pass-through door, an interlock switch must be installed at the pass-through door in order to prevent electrical operation when the pass-through door is open.

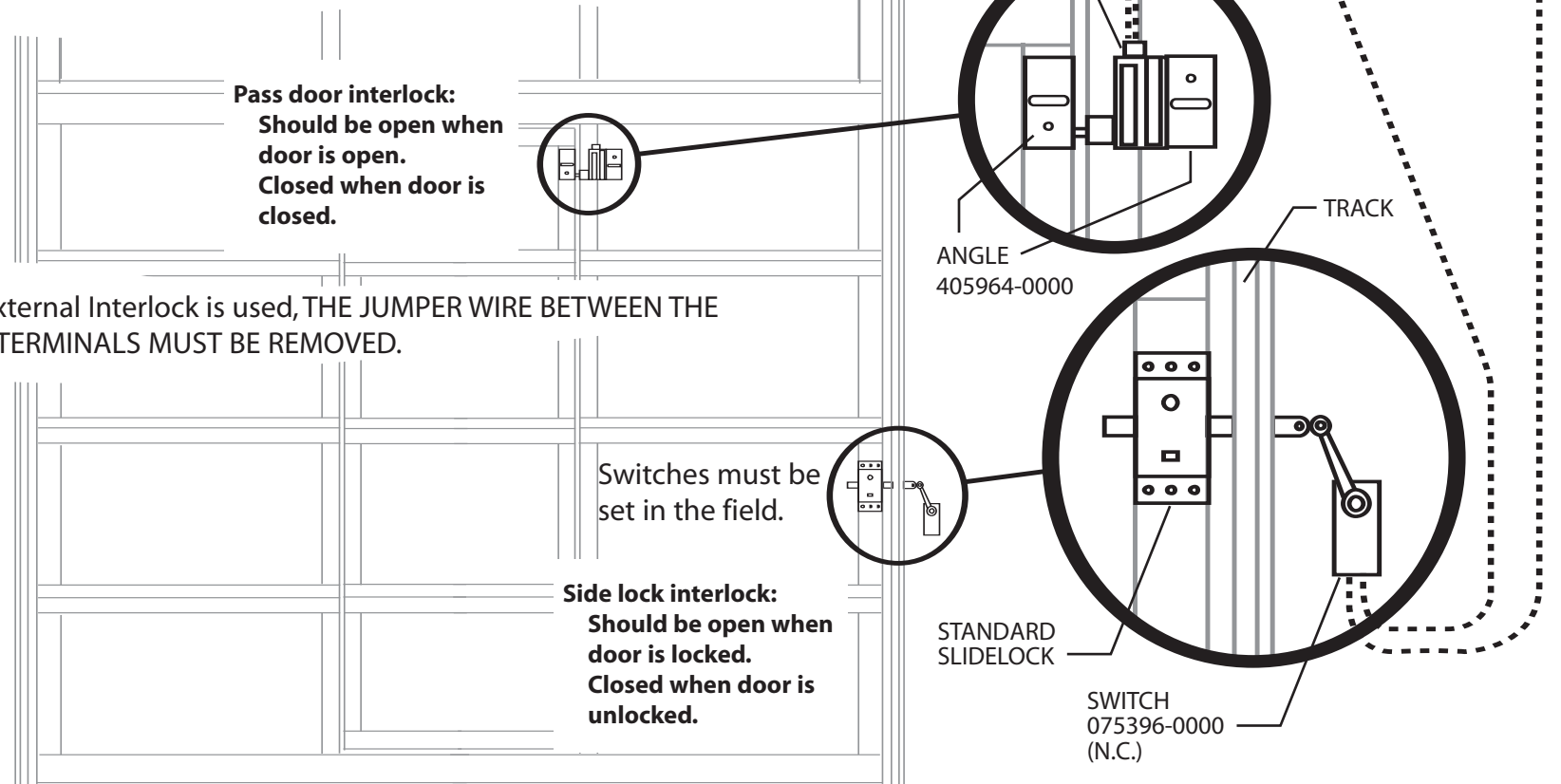


Figure 7

Radio Control and Photocell Wiring

Radio Control Installation

1) For a 3-wire radio control installation, make connections as shown in **Fig. 8**.

NOTE: PWR terminal supplies 20 – 40VDC. Radios used must be compatible with this voltage range.

NOTE: If no voltage is present at PWR terminal, check fuse F1 on control board.

Series II Safe-T-Beam® Monitored Photocells

1) Monitored SERIES II (STB) photocells (P/N 35048R.S) can be installed as shown in **Fig. 9**. Wiring to these photocells can be connected to either terminal (they are not polarity sensitive). (**Troubleshooting Section is Appendix D**).

NOTE: Installer must enable ODC STB in calibration mode. See page 6.5.

WARNING: Actuating operator using constant contact on the CLOSE button will override external reversing devices, including photocells.

- 2) **To Mount Photocells:** (Kit includes detailed Instructions).
- Determine location for mounting. They do not need to be directly adjacent to the door but must be somewhere along the wall where there will be an unobstructed line between them. **Fig 11.**
 - Screws provided for mounting on soft material (wood, drywall, etc.)
 - They must extend out away from the wall sufficiently that no door hardware breaks the plane of the photo-beam.

WARNING: Photocell systems provide entrapment protection when mounted near the doorway in such a way that the lower portion of an individual's leg will break the photocell beam during normal walking conditions. If an alternative location is chosen it must be approved by the facility owner.

Commercial Non-Monitored Photocells

1) Nominal 24 Volt DC Commercial photocells with normally open contacts can be connected as shown in **Fig. 10**.

NOTE: PWR terminal supplies 20 – 40VDC. Photocells used must be compatible with this voltage range.

NOTE: If no voltage is present at PWR Terminal, check fuse F-1 on Control board.

WARNING: Actuating the operator using constant contact on the CLOSE button will override external reversing devices, including photocells.

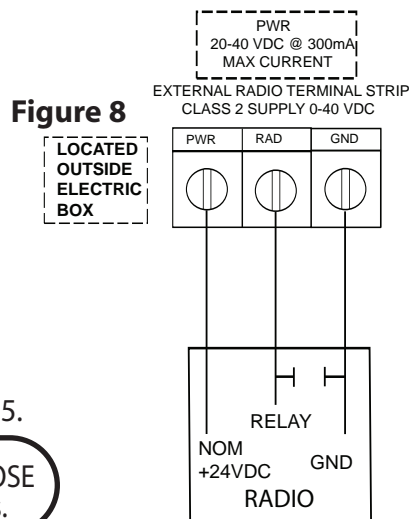


Figure 8

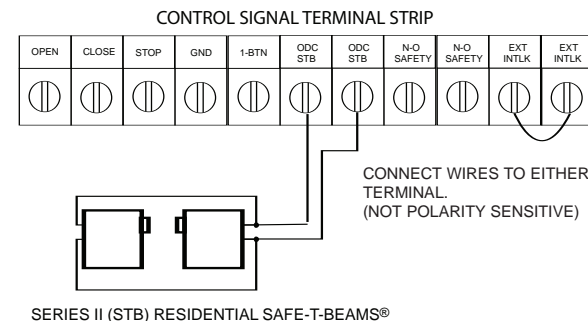


Figure 9

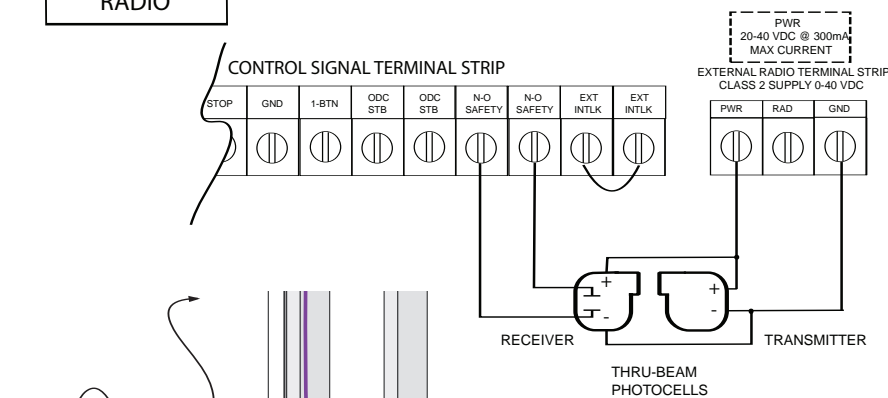


Figure 10

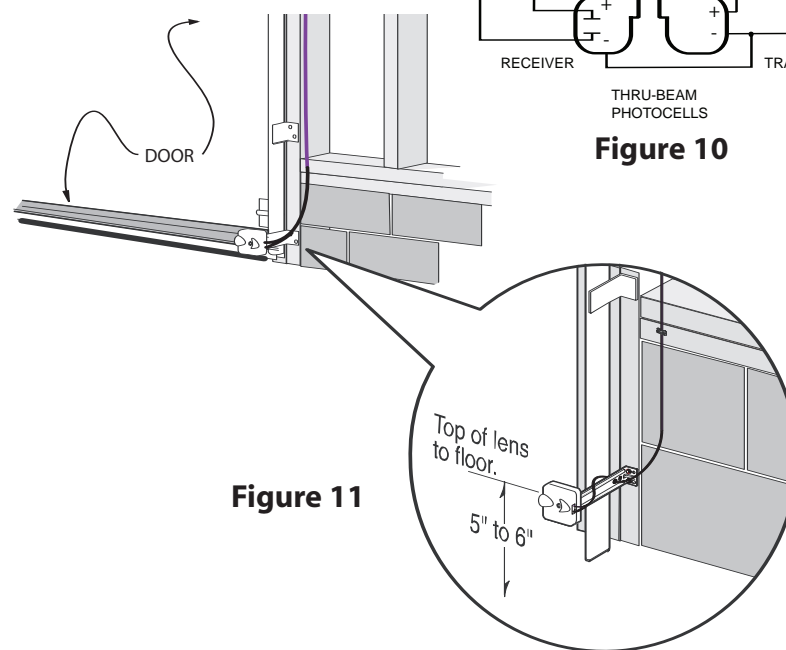


Figure 11

Sensing Edge Switch Installation

NOTE: Do not connect a 2-wire monitored sensing edge switch to these terminals.

Figure 12 shows an example of a typical sensing edge installation. Left hand side is shown but right hand is a mirror image of this.

- 1A) If wiring from sensing edge switch to operator is coiled cord or 2 wire jacketed cord:
 - Install junction box 12" above the center of the door opening on same side as sensing switch.
 - Secure one end of cord to junction box using a cable clamp.
- 1B) If connection is to be made through a take up reel cord:
 - Install on same side as sensing edge switch and above door opening and slightly to the side.
 - Install junction box adjacent to take up reel and route the stationary cord from the reel to the box and secure with a cable clamp.
- 2) Secure other end of cord (straight, coiled or reel) to sensing edge switch enclosure using a cable clamp.
- 3) Connect wires of cord to sensing edge switch using wire nuts or other suitable wire connectors.
- 4) Run a straight 2 wire cord from the junction box (Step 1) to the operator electrical box.
 - Secure using cable clamp on each end.
- 5) Join wires in cord from operator to wires in cord from switch using wire nuts or other suitable wire connectors.
- 6) Connect to terminal strip using N-O Safety inputs. See **Fig. 13**.
- 7) Operate the door to make certain cord is free to travel and does not become snared during door opening or closing.
 - Check sensing edge switch for proper operation.

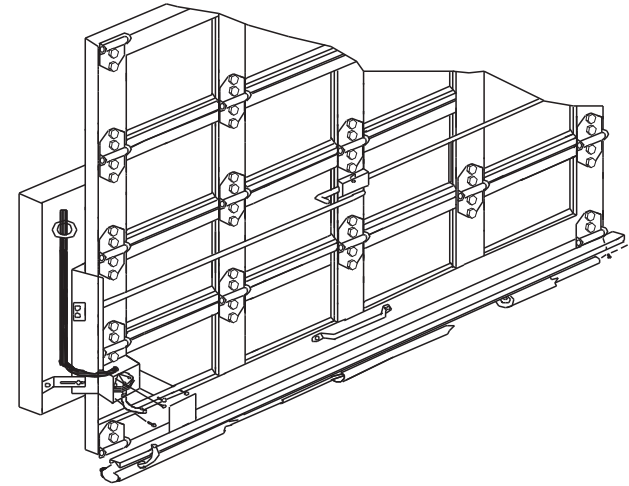


Figure 12

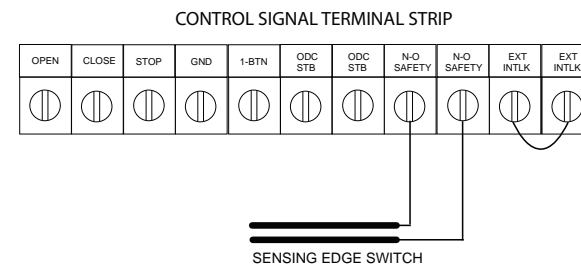


Figure 13

⚠ WARNING: Actuating the operator using constant contact on the CLOSE button will override external reversing devices, including sensing edges or reversing edges

Section 6: Operator Setup Procedure

Control Panel

RMX™ Operators include a full function control panel including a liquid crystal display (LCD), calibration keys and Open, Close and Stop keys for on board operator control. See **Fig. 1**. The open, close and stop keys function as a 3-button wall control. The Display will show current operator conditions and calibration information. Due to limited character space, some displays will be abbreviated.

See Appendix C (pgs. 10.11-10.13) for full display descriptions.

RMX™ Operators include a non-volatile memory. The unit will remember all calibration settings plus error code and run code logs, if power is removed from unit.

NOTE: During Setup, refer to Caution Label for limited use (pictured on page 5.4).

! DANGER

After power is supplied to the operator, **Do Not** make contact with components inside the control panel except for the Keypad Keys. **Fig. 1**.

Control Operating Modes

RMX™ Operator control boards operate in two modes: Run Mode and Calibration Mode. The control board should normally operate in the Run Mode. The operator is calibrated in Calibration Mode.

With the operator standing idle:

PRESS CAL/RUN TO TOGGLE BETWEEN OPERATING MODES.

- The first display in calibration mode is "open mode > ***"
(*** = current operating mode).
- The display in run mode will be one of the condition codes listed in Appendix C.

NOTE: The CAL/RUN key will not toggle between operator modes while the operator is running.

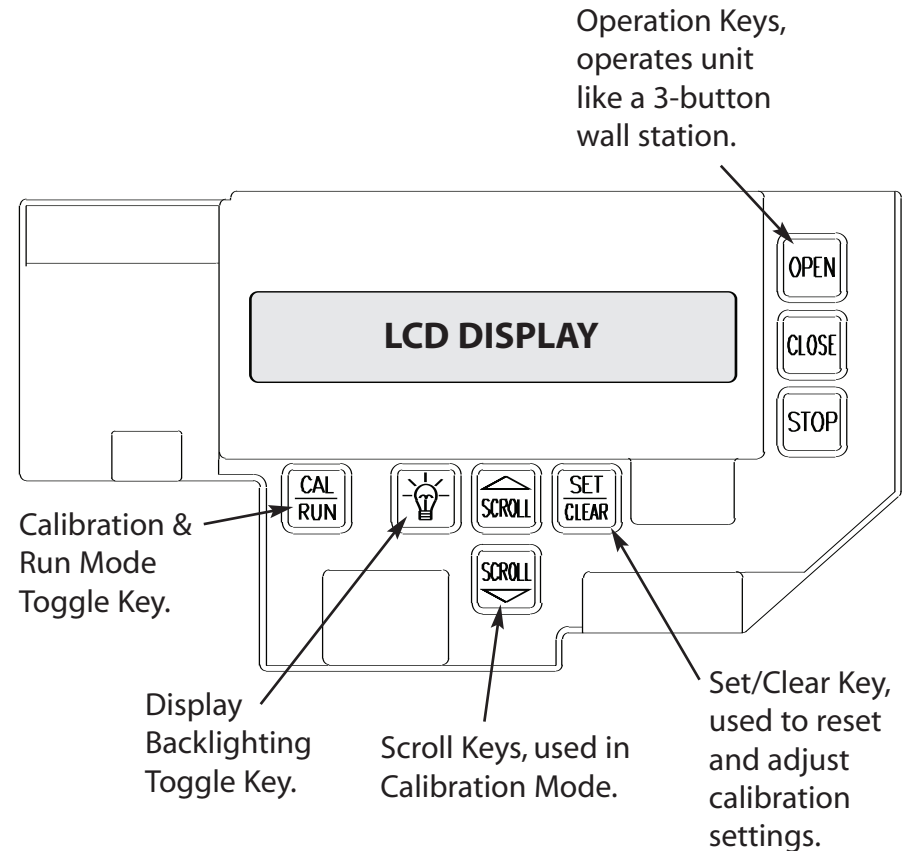


Figure 1

Setting Constant Contact

RMX™ Operators are shipped from the factory with both open and close operating modes set to constant contact – stop (C – STP) If your unit is set to Momentary Contact (MOM) Open and/or CLOSE, reset the operating modes by taking the following steps:

- 1) Press CAL/RUN to enter calibration mode. **Fig. 2.**
- 2) Press SET/CLEAR until display reads “OPEN MODE > C-STP.” **Fig. 3.**
- 3) Press SCROLL (DN) until display reads “CLOSE MODE.” **Fig. 4.**
- 4) Press SET/CLEAR until display reads “CLOSE MODE > C-STP.” **Fig. 5.**

! WARNING:

If an external reversing device is not used, then the operator must be used with only a Constant Contact Control. Verify close mode is set to “C-STP” and NOT “C-REV” or “MOM” before continuing.

- 5) Press CAL/RUN to return to run mode.

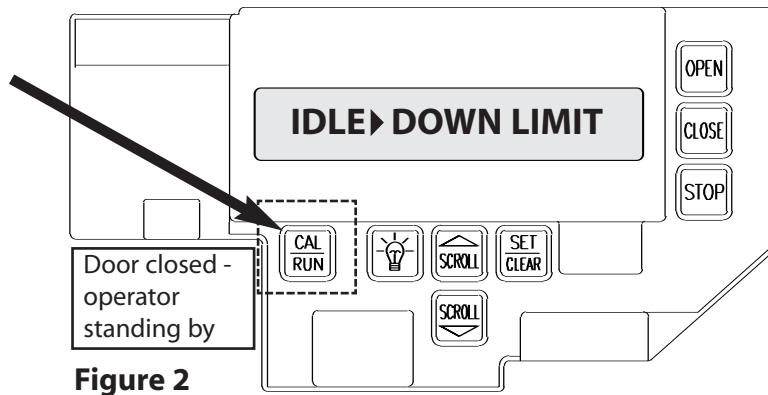


Figure 2

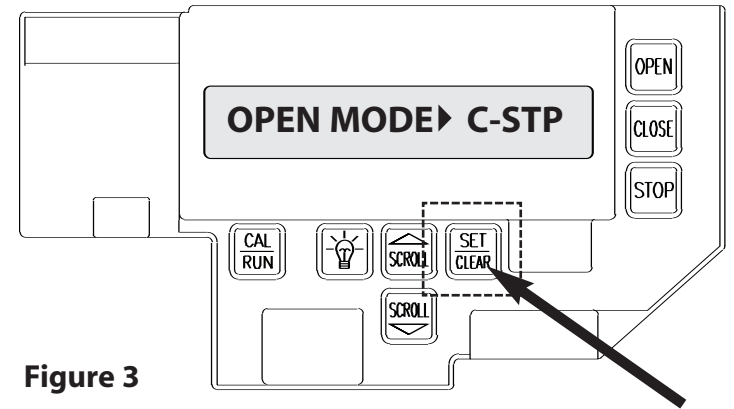


Figure 3

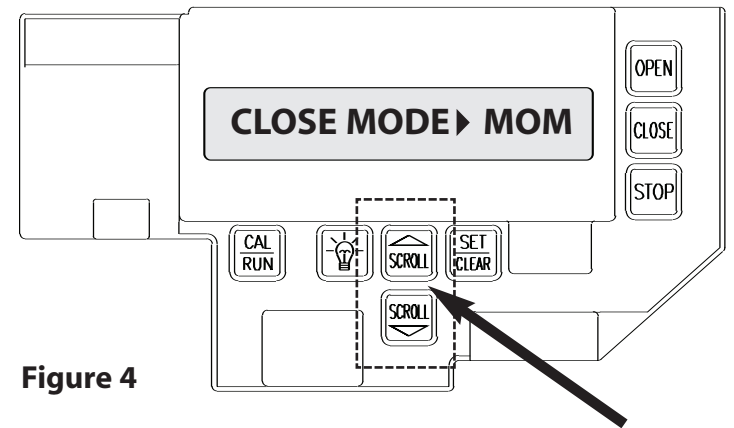


Figure 4

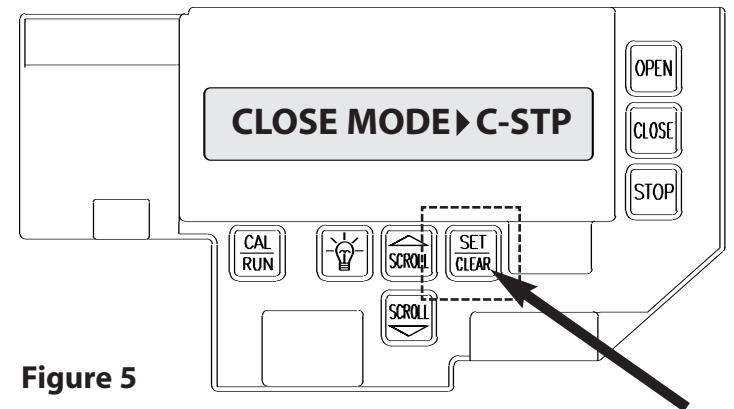


Figure 5

Setting Limit Travel

- 1) Engage door to Operator.

NOTE: Verify open and close operating modes are set to constant contact – Stop (C-STP). See page 6.2 for details.

- 2) Press CAL/RUN until operator is in run mode.
- 3) Press and hold OPEN Key on Control Panel. Run door to desired open position, release OPEN Key.
- 4) Push LIMIT LOCKING BAR away from Limit Sensors and turn Open Limit Travel Nut until travel nut arrow and open limit sensor arrow are aligned and the display reads "IDLE>UP LIMIT."
- 5) Release the LIMIT LOCKING BAR and make sure bar seats completely into both Travel Nuts. **Fig. 6.**
- 6) Press and hold CLOSE key on Control Panel. Run door to within 2" above floor, release Close button.

NOTE: If the operator stops while trying to set limits and the display reads "GDO shutdown>MRT / Hit key to reset," see page 6.6 "Resetting Max Run Timers".

- 7) Push LIMIT LOCKING BAR away from Limit Sensors and turn Close Limit Travel Nut until travel nut arrow and close limit sensor arrow are aligned and the display reads "IDLE > DOWN LIMIT." **Fig. 7.**
- 8) Run door fully Open and Closed with Open & Close Keys on control panel and make final adjustments as necessary to make sure that door opens fully and closes no more than 2" above the floor.

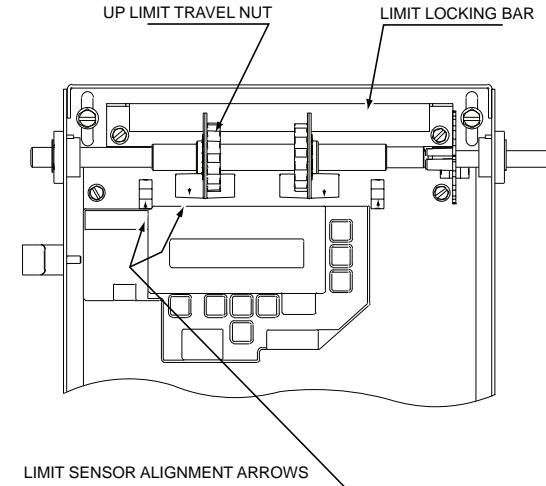


Figure 6

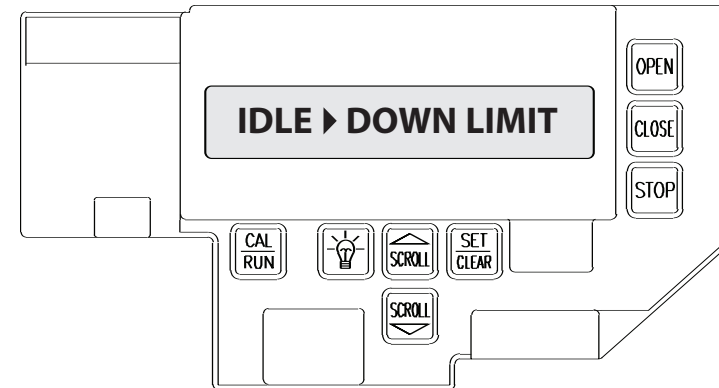


Figure 7

Setting Limit Overrun

⚠ WARNING: The Limit Overrun function will override external reversing devices, including photocells and sensing edges. Therefore, any externally connected devices will be disabled during that portion of the door travel controlled by the Limit Overrun function. The Down Limit Overrun function should be used to close the door no more than the final 2".

- A)** The Limit Overrun setting is a matter of trial and error. The goal is to adjust the Limit Overrun until an appropriate seal is obtained between the bottom edge of the door and the floor.
- B)** The Limit Overrun setting can be varied between 0 and 9.
0- disables the Limit Overrun so that the door stops at the down limit switch setting.
9- causes the greatest amount of door travel beyond the limit switch setting. Door should close gently with light tension on door cables, or minimal stacking on rolling steel slats.

- 1) Press CAL-RUN to enter calibration mode
- 2) Press scroll (DN) until the display reads "LIMIT OVERRUN>(0-9)."

Fig. 8.

- 3) Press SET/RUN until the display reads the desired value.
- 4) Press the OPEN key to open the door a few feet, then release
- 5) Press the CLOSE key to close the door and hold until the operator stops.
- 6) Check the door seal and repeat steps 3-5 until the appropriate seal is obtained between the door and the floor.

⚠ CAUTION: If proper seal cannot be obtained at a setting of 9, Reset the Limit Overrun back to 0 and reset the Down Limit position as described on pg. 6.3. Then adjust the Limit Overrun as instructed above.

- 7) Press CAL-RUN to return to Run mode.

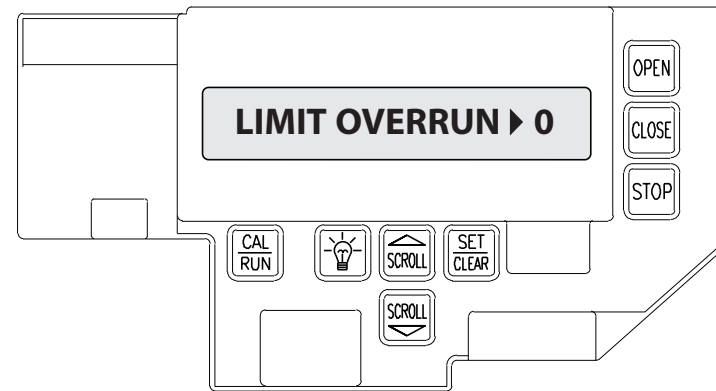


Figure 8

Using Series II Safe-T-Beam® (STB) Monitored Photocells

NOTE: The RMX™ Operator can use monitored SERIES II Photocells (STB). If your application requires these photocells, they must be activated in calibration mode.

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press scroll (DN) until display reads "ODC STB> "
- 3) Press SET/CLEAR until display reads "ODC STB > ON"
 - The "STB ENAB" LED on the control board should light.
- 4) Press CAL/RUN to return to run mode.

NOTES

- A)** To turn series II photocells off, repeat process until display reads "ODC STB > OFF." **Fig. 9.**
- B)** Installation of Series II monitored photocells (STB) does NOT make the RMX™ unit legal for residential installation. Overhead Door does NOT recommend the installation of the RMX™ unit in residentially zoned construction.

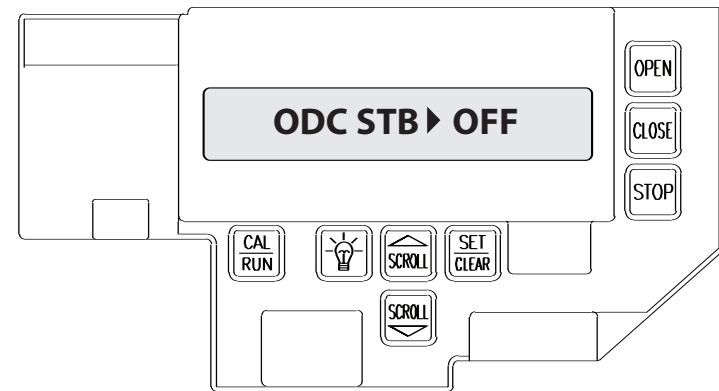


Figure 9

⚠ WARNING:

Photocell systems provide entrapment protection when mounted near the doorway in such a way that the lower portion of an individual's leg will break the photocell beam during normal walking conditions. If an alternative location is chosen it must be approved by the facility owner.

Max Run Timer

The RMX™ Operator will automatically set its maximum run timers (MRT) when the unit is run from limit to limit in the run mode. The Max Run Timer is a feature that prevents the unit from running continuously in the event of a slipping clutch, etc.

NOTE: The MRT's are set to the time required to run from one limit to the other, plus 5 seconds (nominal). When the MRT is exceeded, the operator stops and may reverse (only on a close attempt with trolley unit). The operator will not respond to any command until it is reset by pressing one of the calibration keys or by cycling power to the unit.

Resetting the Max Run Timers

The Maximum Run timers can be reset to their default values using this procedure:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press Scroll (DN) until display reads "MAX RUN TMR > SET."
- 3) Press SET/CLEAR until display reads "MAX RUN TMR > CLEAR."

FIG. 10.

- 4) Press CAL/RUN to return to run mode.

NOTE: The Max Run Timers must be reset each and every time the travel limits are adjusted.

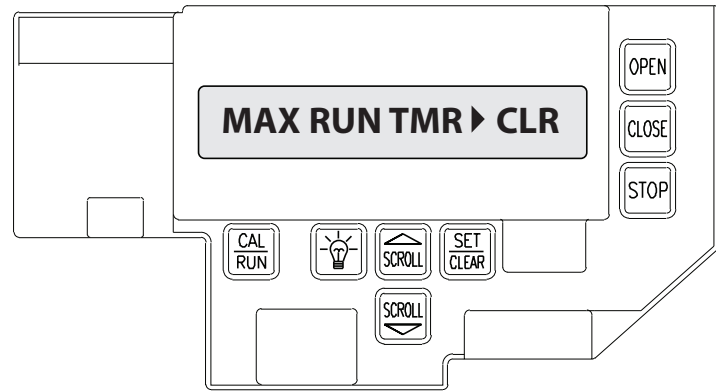


Figure 10

CAUTION:

The Mid-Stop feature must be turned off to properly set the maximum run timers.

Setting the Mid-Stop

The RMX™ Operator includes a programmable Mid-Stop. This feature allows the operator to stop at a user selectable point when opening. It is used when operating very tall doors that only open to their full height occasionally. The Mid-Stop does not effect the operator when closing.

- 1) To operate door to full open position from mid-stop, press open button again.

NOTE: Setting of the MID-STOP should only be performed AFTER Travel Limit and Max Run Timer settings have been made.

To set the Mid-Stop:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press the CLOSE key to close the door to the down limit.
- 3) Press SCROLL (DN) until the display reads "MID-STOP > CLEAR."

Fig. 11.

NOTE: If the display reads MID-STOP > SET at this point, first clear the MID-STOP as described below then repeat steps 1-3 and continue.

- 4) Press the OPEN key to open the door and release the key when the door is at the desired Mid-Stop height.
- 5) Press the SET/CLEAR until the display reads "MID-STOP > SET."
- 6) Press CAL/RUN to return to run mode.

To clear the Mid-Stop:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (DN) until the display reads MID-STOP > SET.
- 3) Press SET/CLEAR until the display reads MID-STOP > CLR
- 4) Press CAL/RUN to return to run mode.

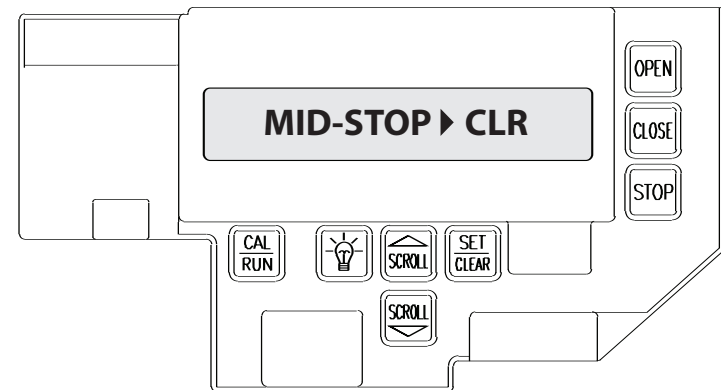


Figure 11

Changing Open and Close Modes

NOTE: Once the travel limit and safety modes have been set, the OPEN and CLOSE modes may be set for Momentary Contact if desired.

WARNING

If momentary contact control is to be used, an external reversing device such as a photocell system or sensing edge switch must be used.

NOTE: The radio control input will not operate when the open or close mode is set in the Constant Contact mode. Operating modes affect all control inputs and keys.

To set the OPEN mode: Fig. 12.

- 1) Press CAL/RUN to enter the calibration mode.
- 2) Press SCROLL (DN) or (UP) until display reads "OPEN MODE > ."
 - This displays current setting.
- 3) Press SET/CLEAR until the display reads the desired operating mode:
 - C-STP = Constant contact is required to open door. Door will stop if button or key is released before operator reaches its limit.
 - MOM = Momentary contact will cause door to open to limit.
- 4) Press CAL/RUN to return to run mode.

To set the CLOSE mode: Fig. 13.

- 1) Press CAL/RUN to enter the calibration mode.
- 2) Press SCROLL (DN) or (UP) until display reads "CLOSE MODE > ."
 - This displays current setting.
- 3) Press SET/CLEAR until the display reads the desired operating mode:
 - C-STP = Constant contact is required to close door. Door will stop if button or key is released before operator reaches its limit.
 - C-REV = Constant contact is required to close the door. Door will reverse automatically if stop button or key is released before door reaches down limit.
 - MOM = Momentary contact will cause door to close to limit.
- 4) Press CAL/RUN to return to run mode.

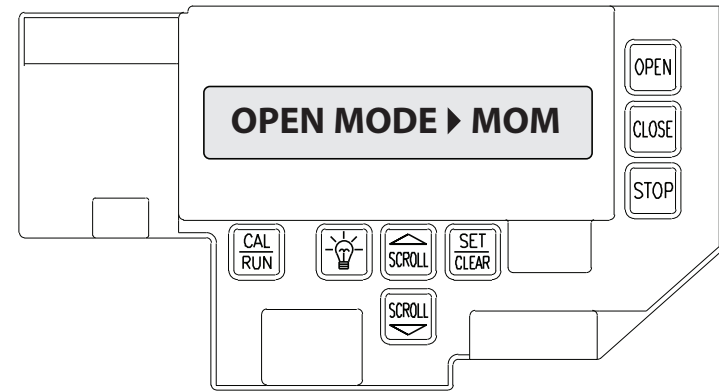


Figure 12

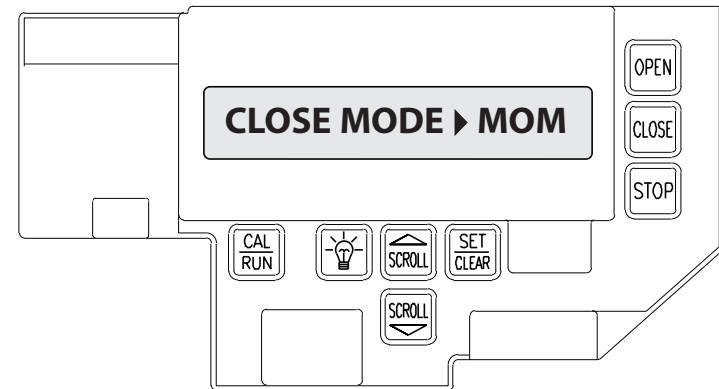


Figure 13

Section 7: Special Operator Features

Operator Cycle Count Fig. 1

RMX™ operators include a built-in cycle counter that store the count with or without power to the operator.

To view the Cycle Count:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (DN) or (UP) until display reads "CYCLES > ." This will display current cycle count.
- 3) Press CAL/RUN to return to run mode.

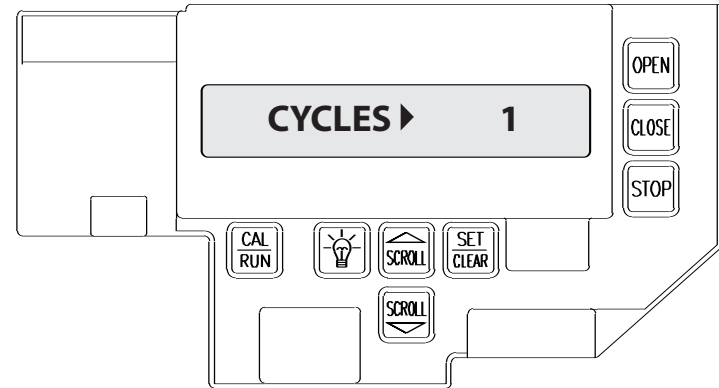


Figure 1

Circuit Board Firmware Version Fig. 2

RMX™ operators can display the version number of the firmware used in the on-board micro-controller.

To view this version number:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (DN) or (UP) until the display reads "FIRMWARE > ." This will display the current firmware version number.
- 3) Press CAL/RUN to return to run mode.

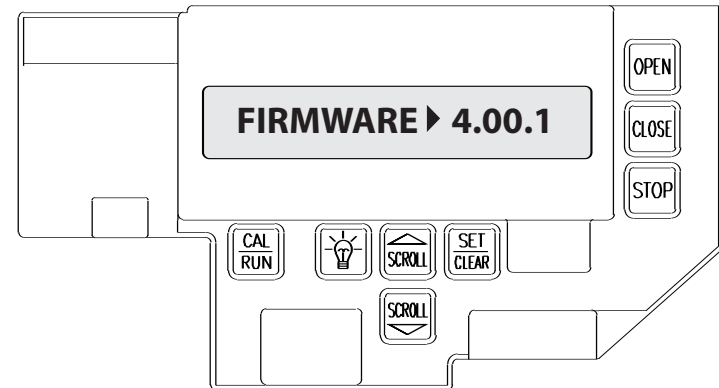


Figure 2

Operator Type Fig. 3

RMX™ operators are available for use in jackshaft or trolley configurations. The same control board is used for either configuration, however the control board must be set for the appropriate GDO configuration. A board set for trolley mode will not work in a jackshaft operator and vice-versa.

NOTE: The GDO type is factory set. The installer should not have to set this feature. However, if the GDO type is inadvertently changed, or if a board needs to be replaced in the field, follow these instructions to set GDO type.

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (DN) or (UP) until display reads "GDO TYPE > ."
This will display the current GDO type.
- 3) Press SET/CLEAR until display indicates correct GDO type
(J-SHAFT or TROLLEY)
- 4) Press CAL/RUN to return to run mode.

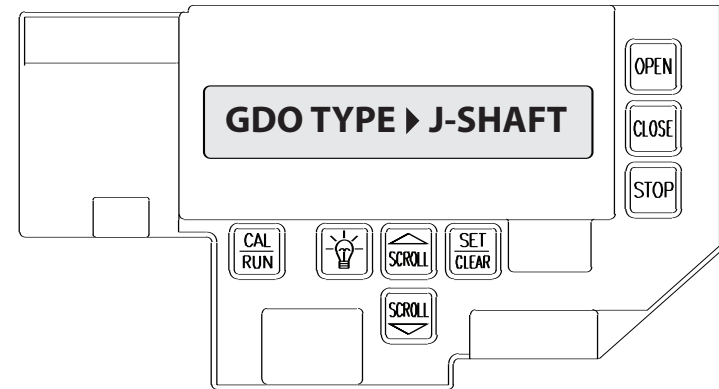


Figure 3

Section 8: Troubleshooting

Display Operation in Run Mode

RMX™ operators display their status on the integral display. Each time the operator runs, stops, reverses or refuses to run, the display will indicate why the action did, or did not, take place.

Once an error code has been generated, the RMX™ operator will continue to display the error code while the operator is not running. This error code can be cleared by pressing the STOP button or STOP key on the keypad. The error code will automatically clear when the operator stops at the down limit. Error codes will continue to be stored in the RMX™ operator's Error Code Memory after they have been cleared from the display in the Run Mode.

Error Codes

To aid in troubleshooting problems, RMX™ operators include an error code memory that stores the last 10 error events. These codes are stored with or without power. The last error code detected is also displayed on the LCD until the stop button or key is pressed or the operator stops at the down limit.

The error code memory stores the last 10 error codes in sequence. Once 10 codes are stored, the oldest code is erased to make room for the newest code. These codes are displayed in calibration mode. The display will flash the number of the error code and the 2-digit error code followed by a description of the error code. **Fig. 1 & 2.**

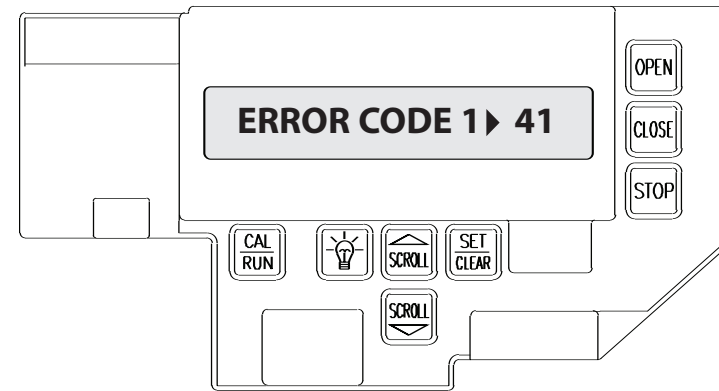


Figure 1

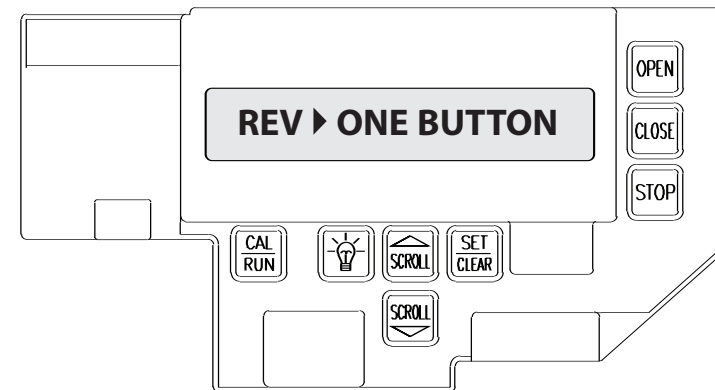


Figure 2

Error Codes (cont')

To view the error code memory:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (UP) or (DN) until display reads "ERROR CODE 1 > ."
 - The display will begin flashing the error code number and 2-digit error code followed by its description.
 - Reminder: Error code number 1 is the latest code generated.
- 3) Press SET/CLEAR. The display will now read "ERROR CODE 2 > ."
(This is the error code which was generated before error code 1.)
- 4) Repeat step 3 until all 10 error codes have been displayed or move on to step 5 when ready.
- 5) Press CAL/RUN to return to run mode.

NOTE: For all error codes see Appendix C, Sections 10.12 - 10.13.

Run Codes

RMX™ operators also include a run code memory that stores the last 10 run events. These codes are stored with or without power. Each time the operator runs or stops, it generates a code that it stores in this memory (Why the operator ran or stopped). Used together with the error code memory, it becomes a powerful troubleshooting aid.

The run code memory stores the last 10 error codes in sequence. Once 10 codes are stored, the oldest code is erased to make room for the newest code. These codes are displayed in calibration mode. The display will flash the number of the run code and the 2-digit run code followed by a description of the run code. **Fig. 3 & 4.**

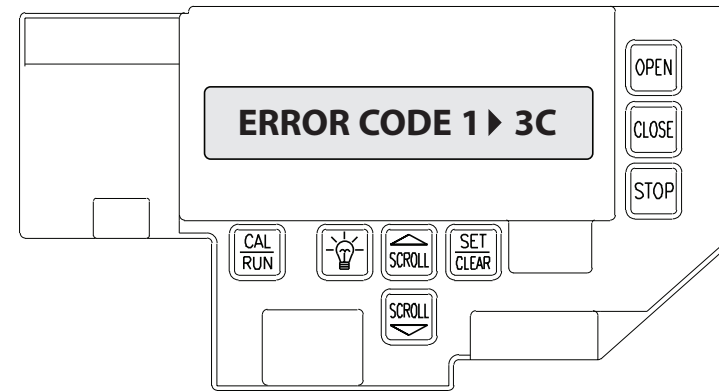


Figure 3

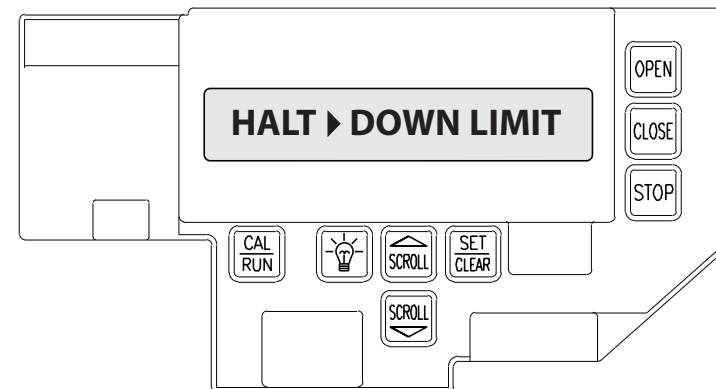


Figure 4

Run Codes (cont')

To view the run code memory:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (UP) or (DN) until display reads "RUN CODE 1 > ."
 - The display will begin flashing the run code number and code followed by its description.
 - Remember: run code number 1 is the latest code generated.
- 3) Press SET/CLEAR. The display will now read "RUN CODE 2 > ." (This is the run code which was generated before run code 1.)
- 4) Repeat step 3 until all 10 run codes have been displayed or move on to step 5 when ready.
- 5) Press CAL/RUN to return to run mode.

NOTE: For all run codes see Appendix C, Section 10.11.

TROUBLESHOOTING EXAMPLE USING RUN AND ERROR CODE MEMORIES. Fig. 6

1. In Calibration Mode, display and write down each Run Code and Error Code stored in memory.
2. List as shown below.
3. Refer to Appendix C to interpret the codes.

In this example, the operator was opened using the OPEN key on the keypad and stopped at the up limit. The OPEN wall button was then activated, causing the "6D" code to be generated since the operator could not open when it is already at the up limit. The CLOSE wall button was then activated, causing the operator to close. While closing, the Normally-Open (N-O) Safety Input was activated, causing the operator to stop and then reverse, stopping at the up limit.

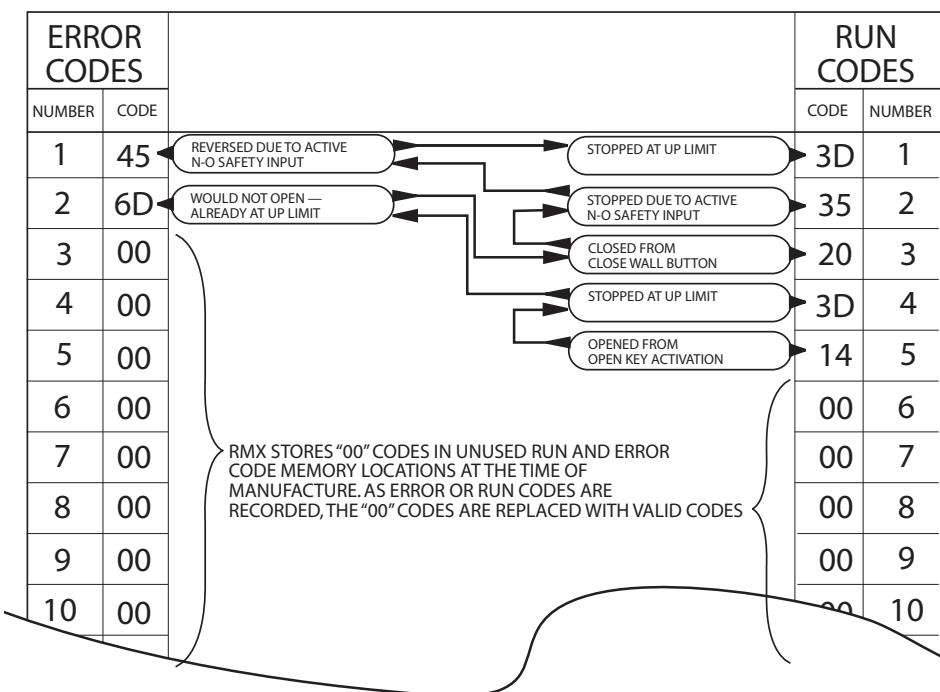


Figure 6

LED Indicators Fig. 7

RMX™ operators include a self-diagnostic circuit board using troubleshooting LED indicators to signal the technician of a problem.

↑
FUSE F2

Figure 7

TROUBLESHOOTING LED's				
HOIST INTERLOCK	EXTERNAL INTERLOCK	+ 24 VOLTS DC	STB ENABLE	INDICATION
			OFF	STB DISABLED
			ON	STB ENABLED
ON	ON	ON		NORMAL OPERATING CONDITION
OFF	ON	ON		HOIST INTERLOCK SWITCH OPEN: 1) HOIST RELEASE NEEDS RESET. 2) HOIST INTERLOCK CONNECTOR NOT PLUGGED IN. 3) HOIST INTERLOCK DEFECTIVE.
OFF	OFF	ON		EXTERNAL INTERLOCK OPEN
OFF	OFF	OFF		POWER SUPPLY PROBLEM: 1) CHECK AC POWER SUPPLY. 2) CHECK MAIN POWER FUSE. 3) CHECK SECONDARY FUSE (2A).

Section 9: Service and Maintenance

Maintenance Schedule

The following table provides a schedule of recommended Service and Maintenance items to be completed by a trained service representative.

⚠ CAUTION

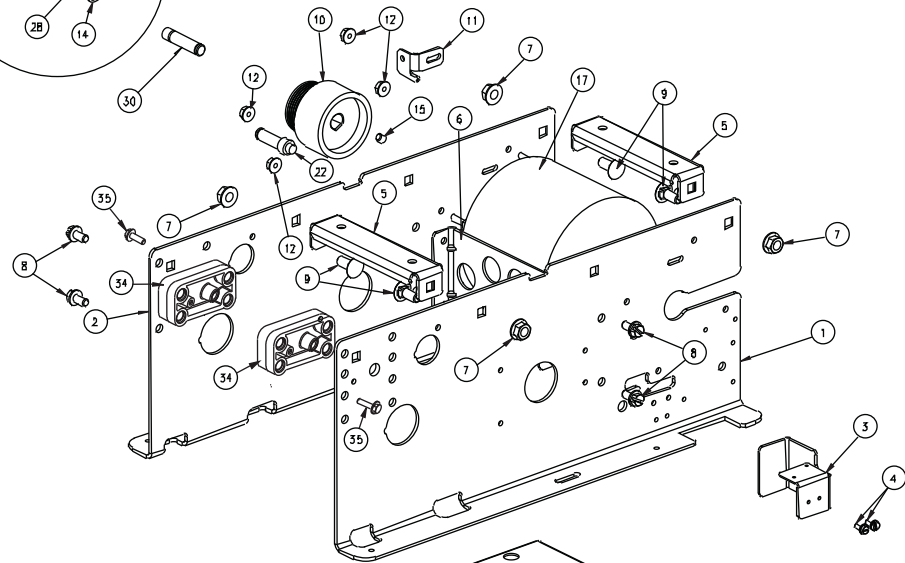
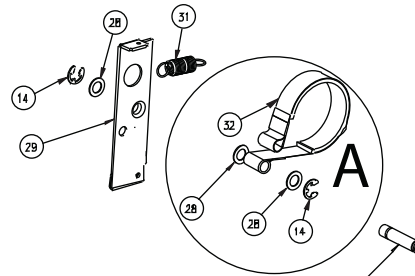
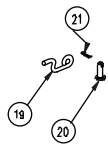
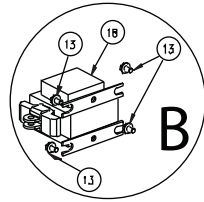
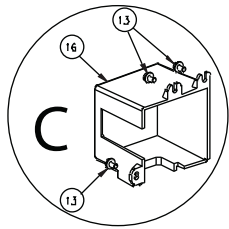
Failure to perform the recommended Service & Maintenance may result in premature failure of the operator.

SERVICE ITEM	SERVICE INTERVAL (FREQUENCY)		
	EVERY 6 MO. OR 5,000 CYCLES	EVERY 12 MO. OR 10,000 CYCLES	EVERY 36 MO. OR 30,000 CYCLES
MANUAL OPERATION OF DOOR	●		
DRIVE CHAIN TENSION	●		
* PHOTOCCELL/ SENSING EDGE OPERATION	●		
CLUTCH ADJUSTMENT		●	
BRAKE ADJUSTMENT		●	
CHECK FOR LOSE OR MISSING HARDWARE		●	
CHECK LIMIT POSITION			●
GEAR TRAIN WEAR			●

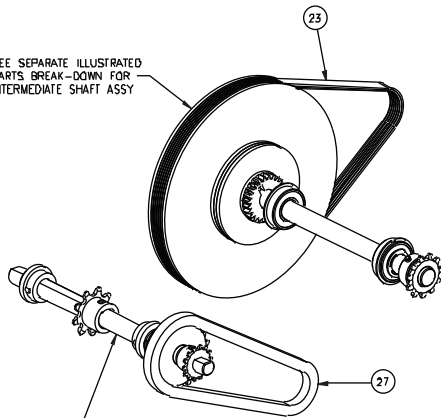
* ALL EXTERNAL REVERSING DEVICES SHOULD BE CHECKED MONTHLY .

Section 10: Appendix A

Operator Exploded View

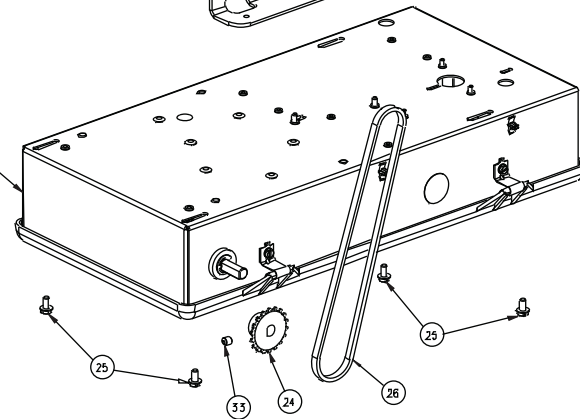


SEE SEPARATE ILLUSTRATED PARTS BREAK-DOWN FOR INTERMEDIATE SHAFT ASSY



SEE SEPARATE ILLUSTRATED PARTS BREAK-DOWN FOR OUTPUT SHAFT ASSY

SEE SEPARATE ILLUSTRATED PARTS BREAK-DOWN FOR ELECTRIC BOX & LIMIT SHAFT



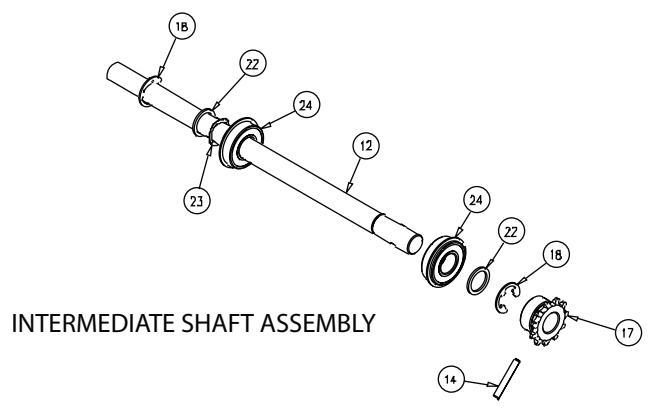
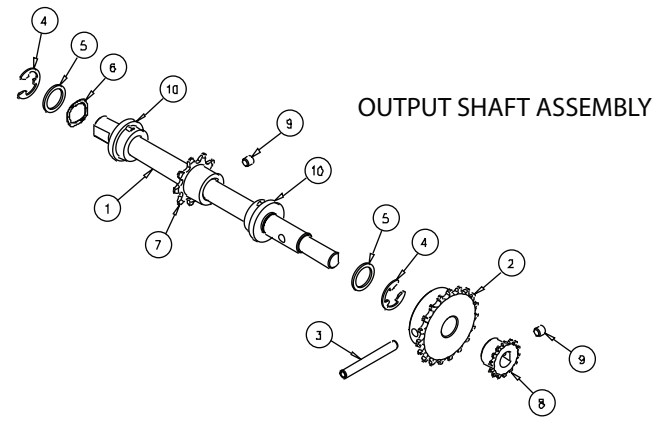
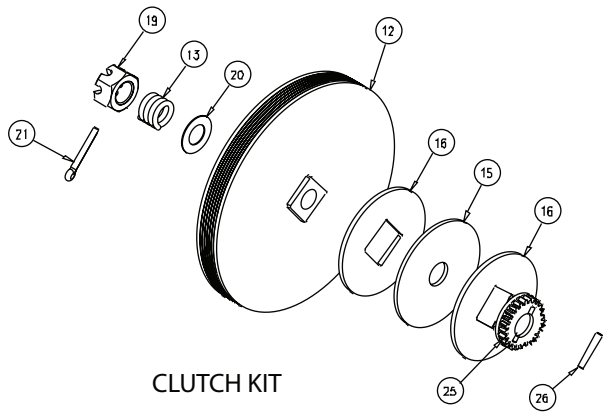
Appendix A (cont')

Operator Parts List

Item	Part Number	Kit Includes	Description	Qty	Item	Part Number	Kit Includes	Description	Qty	
A	110956-0001		Kit, Brake Band		14	080415.0016		Ring, RTNG, EXT, "E", STL, 5/16"	2	
		110450.0001	Brake Band. MX	1	15	080300.1608		SCR, SET, 1/4"-20 X 1/2"	1	
		080415.0016	Ring, RTNG, EXT, "E", STL, 5/16"S	1	16	110549.0001		Cover, Solenoid	1	
		106124.0007	WSHR, NYL .375" ID X .625" OD	2	17	110380.0001		Motor, 1/2HP, 120VAC	1	
		110960.0001	Instructions (not shown)	1		110380.0002		Motor, 1/2HP, 240VAC	1	
B	110953.0001		Solenoid Kit 120V		18	110847.0001		Solenoid, 120VAC	1	
		110847.0001	Solenoid 120V	1		110847.0002		Solenoid, 240VAC	1	
		086575.0604	Screw	4	19	111001.0001		Hook, Z-bend	1	
		110954.0001		Solenoid Kit 240V		20	111007.0001		Pin, Clevis, 3/16 X 1/2"	1
			110847.0002	Solenoid 240V	1	21	111004.0001		Cottor, Hairpin	1
	086575.0604	Screw	4	22	110521.0001		Post, Brake Fixed End	1		
C	110952.0001		Solenoid Cover Kit		23	111010.0001		Belt, Poly-V	1	
		110549.0001	Cover	1	24	601332.0004		Sprkt, 18T, 1/4P, 3/8" Bore	1	
		086575.0604	Screw	3	25	086575.0806		Screw, THDF, 10-32 X 3/8"	4	
					26	086565.1007		Chain, RLR, #25 X 80P, Loop	1	
					27	110877.0044		Chain, #35 X 44P, loop	1	
1	110421.0002		Enclosure, Right Side	1	28	106124.0007	Wsher, Nyn .375 ID X .625 OD	3		
2	110421.0001		Enclosure, Left Side	1	29	110449.0001	Lever, Brake	1		
3	110805.0001		Bracket, Wire Guard	1	30	110522.0001	Post, Brake, Floating End	1		
4	24173F04		Scr, #6-32 X 3/8" SLFTPG	2	31	110824.0001	Spring, Brake Release	1		
5	110803.0001		Brace, Support	2	32	110450.0001	Brake Band	1		
6	110804.0001		Bracket, Support	1	33	080300.1604	Screw, Set, SCH, KNRLD, 1/4"-20 x 1/4"	1		
7	24121C05		Nut, 5/16-18 HX SERR FLG	4	34	110920.0001	Spacer, Track Mtg	2		
8	086575.1008		SCR, HH, SLTD, TF, 1/4-20 X 1/2"	4	35	29302A04	Screw, #6 x 1/2"	2		
9	086420.0506		Bolt, CRG, SQNK, RDH, 5/16-18 X 3/4"	4						
10	110443.0001		Pulley, Band Brake	1						
11	110808.0001		Plate, Brake Adjust	1						
12	24121E05		Nut, 10-32 HX, SERR FLG	4						
13	086575.0604		Screw, THDF, 8-32 X 1/4"	7						

Appendix A (cont')

Shaft Assemblies



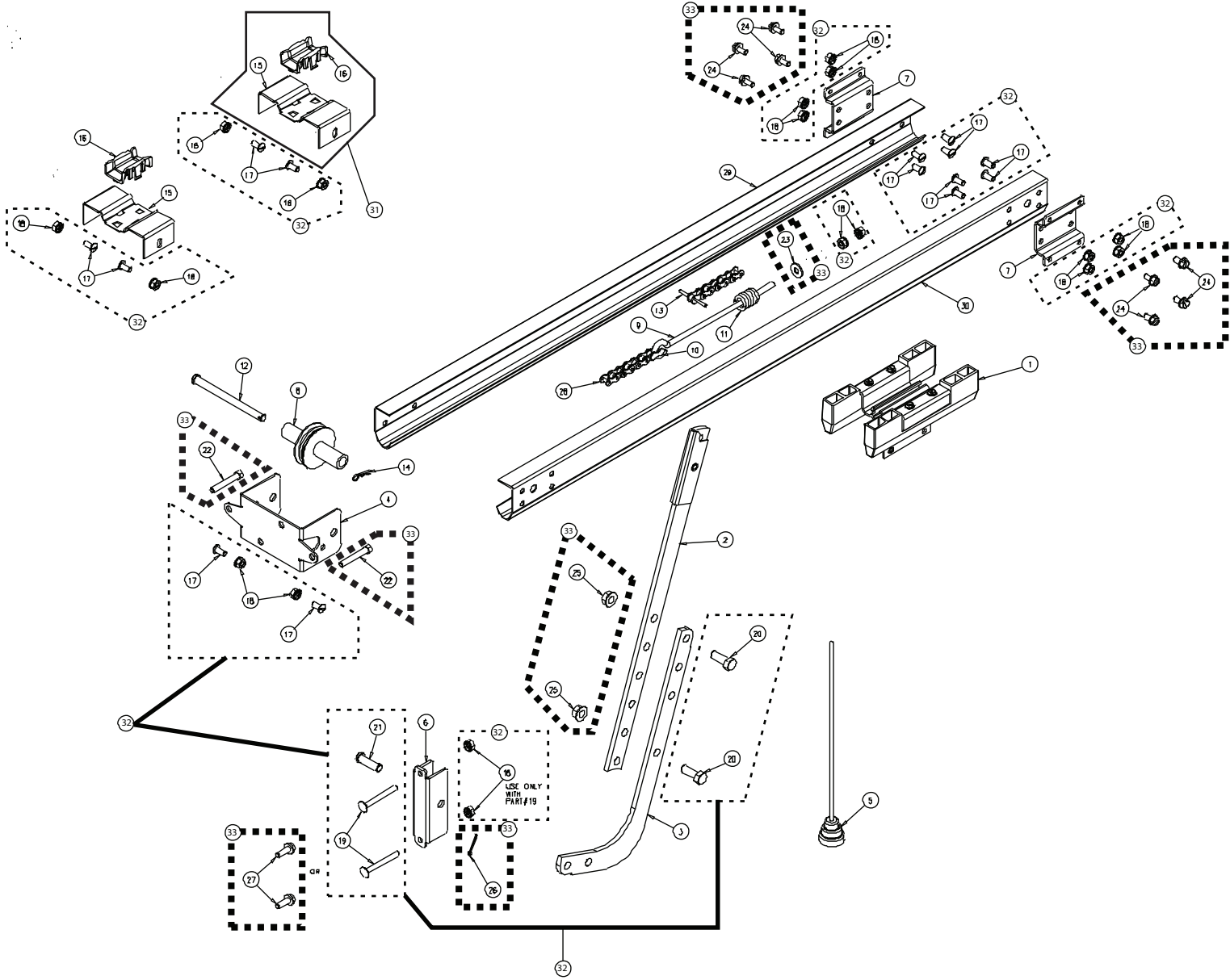
Appendix A (cont')

Shaft Parts List

Item	Part Number	Kit Includes	Description	Qty
	110970-0001		Clutch Kit	
12		110469.0001	Pulley, Clutch	1
13		075197.0000	Spring, Clutch	1
15		075193.0000	Lining, Clutch	1
16		108015.0001	Disc, Clutch Movable	2
19		110472.0001	Nut 5/8-11	1
20		086649.0029	Washer, Thrust	1
21		080401.0624	Pin, Cotter	1
25		110874.0001	Insert, Clutch Disc	1
26		110881.0001	Pin, Dowel	1
		110971.0001	Instructions (not shown)	1
	110982-0001		Output Shaft Kit - DB	
1		110520.0001	Shaft	1
2		110526.0001	Sprocket 19T #35	1
3		110313.0002	Pin, Spring	1
4		080415.0021	"E" Ring 5/8"	2
5		110819.0001	Washer	2
6		110818.0001	Washer	1
7		107894.0001	Sprocket 9T	1
8		086563.0001	Sprocket 14T #25	1
9		080300.1604	Set Screw 1/4-20	2
10		106062.0003	Bushing 5/8" Moly	2
11		110996.0001	Grease (not shown)	1
		110983.0001	Instructions (not shown)	1
	110964.0001		Intermediate Shaft Kit - DB	
12		110464.0001	Shaft	1
14		110313.0008	Pin, Spring	1
17		110465.0001	Sprocket 11T #35	1
18		080415.0021	"E" Ring 5/8"	2
22		110819.0001	Washer	2
23		110818.0001	Washer	1
24		110813.0001	Bearing 5/8"	2
		110965.0001	Instructions (not shown)	1

Appendix A (cont')

Rail/Trolley



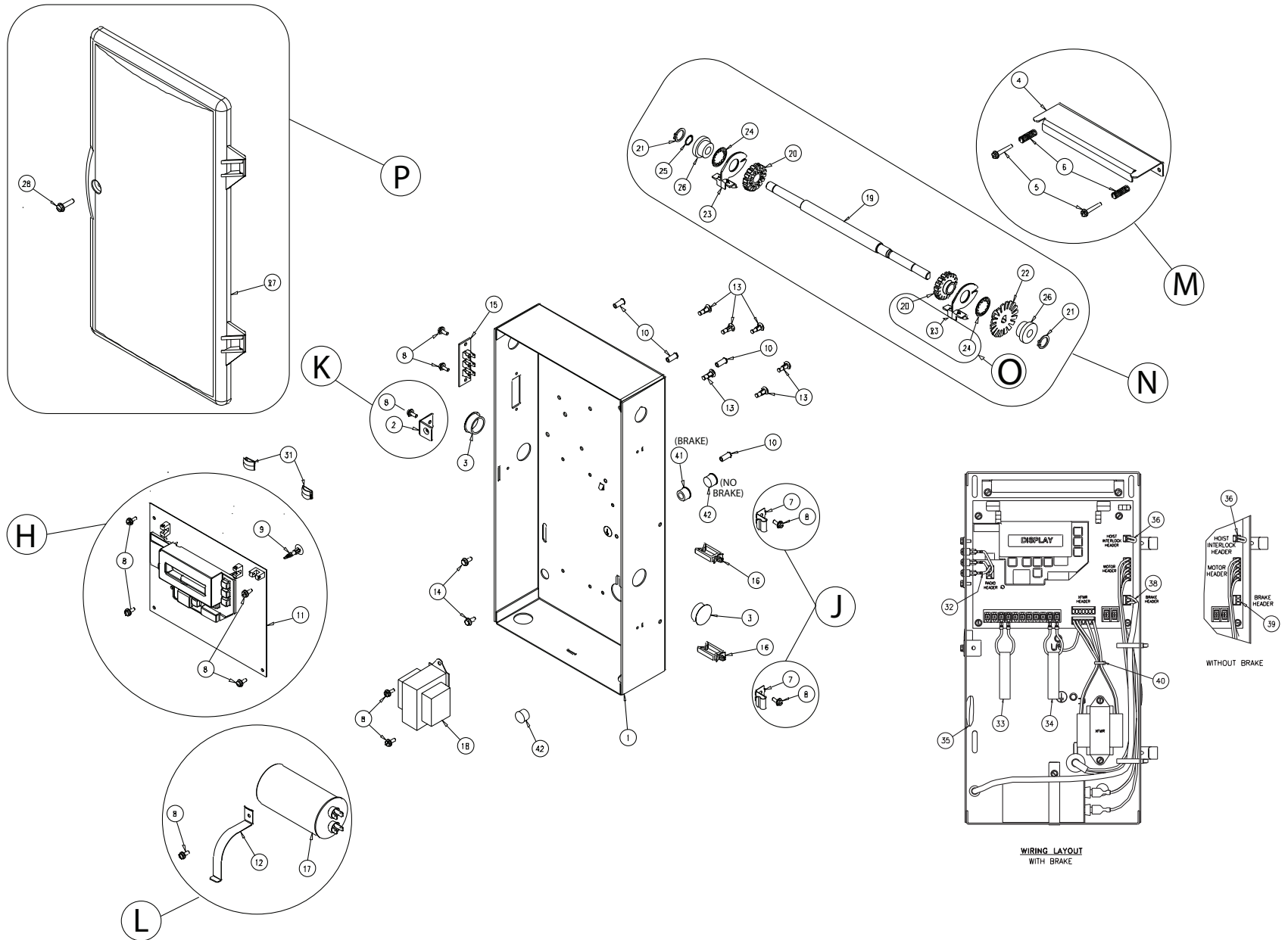
Appendix A (cont')

Rail/Trolley Parts List

Item	Part Number	Description	Qty	Item	Part Number	Description	Qty
1	110977.0001	Pan Assy, plastic Runner	1	28	080839.5091	Chain, Roller, #65 X 509P	1
2	110844.0001	Arm Assy, Trolley	1		080839.6051	Chain, Roller, #65 X 605P	
3	26013D	Door Arm, Curved	1		080839.7011	Chain, Roller, #65 X 701P	
4	076169.0000	Brkt, Front Spreader	1		080839.7971	Chain, Roller, #65 X 797P	
5	35227A	Knob, Release	1	29	410465.1126	TRK, 2" X .068 X 126", LH	1
6	110842.0001	Brkt, Door	1		410465.1150	TRK, 2" X .068 X 150", LH	
7	110811.0001	Brkt, Support, Track	2		410465.1174	TRK, 2" X .068 X 174", LH	
8	108380.0001	Idler, Chain	1		410465.1198	TRK, 2" X .068 X 198", LH	
9	080122.0026	Bolt, Eye, Closed, 1/4-20	1	30	410465.2126	TRK, 2" X .068 X 126", RH	1
10	080884.0003	Link, Conn, #41 CH	1		410465.2150	TRK, 2" X .068 X 150", RH	
11	075064.0000	Spr, Crg, .796 OD X 1-1/4	1		410465.2174	TRK, 2" X .068 X 174", RH	
12	086621.0672	Pin, Clevis, 3/8 X 4-1/2	1		410465.2198	TRK, 2" X .068 X 198", RH	
13	608793.0828	Pin, Cham, Str, SST, 1/8 X 1-3/4	1				
14	107718.0003	Hairpin, Cotter, 1/4 X 1-1/8	1	110972.0001	Kit Includes	Hardware Kit - Drawbar	
15	110933.0001	Brkt, Chain Guide	2				
16	110911.0001	Guide, Chain, Plastic	2	5	35227A	Release Knob	1
17	080019.0001	Bolt, Trk, Pld, 1/4-20 X 9/16	14	6	110842.0001	Bracket, Door	1
18	086480.1620	Nut, Hex, W/LK Wshr, 1/4-20	18	7	110811.0001	Bracket, Track Support	2
19	086420.0418	Bolt, Crg, Sqnk, Rdh, 1/4 X 2-1/4	2	9	080122.0026	Eye Bolt	1
20	5973Q04	Screw, 3/8 X 7/8 HX HD	2	10	080884.0003	Master Link #41	1
21	086621.0620	Pin, Clevis, 3/8 X 1-1/4	1	11	075064.0000	Spring, Carriage	1
22	080220.1628	Scr, HH, TPG, PLD, 1/4 X 1-3/4	2	12	086621.0672	Clevis Pin 3/8 X 4-1/2	1
23	080302.2024	Wshr, Flat, Pld, 1/4 X 47/64 OD	1	13	608793.0828	Pin, Cham	1
24	086575.1008	Scr, HH, SLTD, TF, 1/4-20 X 1/2	8	26	107718.0003	Pin, Cotter	1
25	24121D05	Nut, 3/8-16 HX, SERR, FLG	2	31	110999.0001	Chain Guide Assy	2
26	606E04	Pin, Cotter	1	32	110479.0001	Parts Pack	1
27	605879.0001	Scr, SLF, Drill, HH, 1/4-20 X 3/4	2	33	110829.0001	Parts Pack	1

Appendix A (cont')

Electric Box Exploded View



Appendix A (cont')

Electric Box Parts List

Item	Part Number	Kit Includes	Description	Qty	Item	Part Number	Kit Includes	Description
G	110939.0001		Electric Box Assy, Drawbar 120V		L	110963.0001		Capacitor Kit 19.5µF
G	110940.0001		Electric Box Assy, Drawbar 240V			110830.0002		Capacitor 19.5µF
H	110955-0001		Replacement Board Kit			110868.0001		Clamp
		35451R	Board	1		24173F04		Screw
		110825.0001	Standoff, Locking	1	M	110958-0001		Limit Retainer Kit
	Not Shown	110922.0001	Jumper Stop	1		110542.0001		Plate, Limit Retainer
	Not Shown	110922.0002	Jumper Ext Interlock	1		110562.0001		Spring, Limit
	Not Shown	110859.0001	Hoist Interlock Jumper	1		110827.0001		Screw
		24173F04	Screw	4		Not Shown	110961.0001	Instructions
	Not Shown	110959.0001	Instructions	1	N	110966-0001		Limit Shaft Kit - Drawbar
I	110957.0001		Fuse Kit (Not Shown)			111048.0001		Limit Shaft
		34004C0002	Fuse 2A	10		110459.0001		Travel Nut
		34004DR315	Fuse .3A	10		109876.0003		Retaining Ring
J	110950.0001		Hinge Kit			110550.0001		Limit Trigger
		110423.0001	Hinge	2		110810.0001		Opto Wheel
		24173F04	Screw	2		110823.0001		Retaining Ring, Push On
K	110951.0001		Latch Kit			110818.0003		Washer
		110870-0001	Latch	1		077538.0000		Bushing 3/8"
		24173F04	Screw	1		Not Shown	601332.0004	Sprocket 18T
L	110962.0001		Capacitor Kit 79µF			Not Shown	110967.0001	Instructions
		110830.0001	Capacitor 79µF	1	O	110945.0001		Limit Nut Assy
		110868.0001	Clamp	1		110459.0001		Travel Nut
		24173F04	Screw	1		110550.0001		Limit Trigger
						110823.0001		Retaining Ring, Push On


Appendix A (cont')

Electric Box Parts List (cont')

Item	Part Number	Kit Includes	Description	Qty	Item	Part Number	Kit Includes	Description	Qty
P	110869.0002		Cover Assy		23	110550.0001		Limit Trigger	2
		110505.0002	Cover	1	24	110823.0001		Retaining Ring, Push on	2
	Not Shown	100270.0005	Decal	1	25	110818.0003		Washer, Wave Spring, .397 ID	1
	Not Shown	110851.0001	Decal	1	26	077538.0000		Bushing, 3/8" ID	2
	Not Shown	35571A	Label	1	27	110505.0002		Cover, Electric Box	1
		086575.0712	Screw	1	28	086575.0712		Screw, HH, SLTD, TF, #10-24 X 3/4"	1
					31	35709A		Limit Ramp	2
					32	110892.0001		HSG & Lead Assy., Radio	1
					33	110922.0001		Lead & Label Assy, Stop Button	1
1	110429.0001		Box, Electric	1	34	110922.0002		Lead & Label Assy, Interlock	1
2	110870.0001		Latch, Electric Box	1	35	110898.0001		Bag Assy, Fuse	1
3	603038.0012		Plug, hole, 7/8	2	36	110859.0001		HSG & Lead Assy., Jumper	1
4	110542.0001		Plate, Limit Retainer	1	38	110857.0001		HSG & Lead Assy., 3 Pos, Brake	1
5	110827.0001		Screw, THDF, #8-32 X 1, Hex Head	2	39	34084A03		Housing, SL-156, 3 Pos	1
6	110562.0001		Spring, Limit	2	40	22327B		Tie, Cable	1
7	110423.0001		Hinge, Electric Box	2	41	107606.0002		Bushing, Snap, .500	1
8	24173F04		Scr, #6-32 X 3/8, SLFTPG, SEMS	12	42	603038.0006		Plug, 1/2" Hole	2
9	110825.0001		Standoff, Circuit Board, Locking	1		110848.0001	Not Shown	Instructions Manual	1
10	110826.0001		Standoff, PEM, #6-32	4					
11	35451R		Circuit Board	1					
12	110868.0001		Clamp, Capacitor	1					
13	110828.0001		Standoff, Circuit Board, Support	6					
14	8706E29		Screw, HHD, SLTD, TAP, #8-32 X 3/8 GN	2					
15	110900.0001		Terminal Strip, 3 Position	1					
16	605476.0003		Clip, Wire	2					
17	110830.0001		Capacitor, 79µF	1					
	110830.0002		Capacitor, 19.5µF						
18	110846.0001		Transformer, 120VAC	1					
	110846.0002		Transformer, 240VAC						
19	110454.0001		Shaft, Limit	1					
20	110459.0001		Nut, Travel	2					
21	109876.0003		Retaining Ring	2					
22	110810.0001		Opto Wheel	1					

Section 10: Appendix B

Screw Terminal Assignments

INPUT		FUNCTION	CONNECTION TYPE
11-POSITION TERMINAL BLOCK INSIDE ELECTRIC BOX	OPEN	Causes door to open if not at Up Limit. Causes a closing door to reverse.	Normally-Open Dry Contact to GND.
	CLOSE	Causes door to close if not at Down Limit.	Normally-Open Dry Contact to GND.
	STOP	Causes a moving door to stop. Prevents the operator from running.	Normally-Closed Dry Contact to GND.
	GND	Common ground connection for Open, Close, Stop & 1-Btn Inputs.	
	1-BTN	Causes door to open if not at Up Limit or Mid-Stop Limit. Causes door to close if at Up Limit or Mid-Stop Limit. Causes door to stop if opening. Causes a closing door to reverse.	Normally-Open Dry Contact to GND.
	ODC STB	Reverses a closing door if photocell beam is blocked. NOTE: STB's must be enabled in Calibration Mode.	Connect only ODC Series II Safe-T-Beams® to these inputs. Connect to either terminal (not polarity sensitive).
	ODC STB	Reverses a closing door if photocell beam is blocked. NOTE: STB's must be enabled in Calibration Mode.	Connect only ODC Series II Safe-T-Beams® to these inputs. Connect to either terminal (not polarity sensitive).
	N-O SAFETY	Causes a closing door to reverse. NOTE: Will not open a stopped door.	Normally-Open 2-Wire Non-Monitored Edge Sensor Connect to either terminal (not polarity sensitive)
	N-O SAFETY	Causes a closing door to reverse. NOTE: Will not open a stopped door.	Normally-Open 2-Wire Non-Monitored Edge Sensor Connect to either terminal (not polarity sensitive)
	EXT INTLK	Causes a moving door to stop. Prevents the operator from running when contact is open. Operates even if microcontroller is non-functional.	Normally-Closed dry contacts. (board will energize these contacts at nominal +24VDC).
	EXT INTLK	Causes a moving door to stop. Prevents the operator from running when contact is open. Operates even if microcontroller is non-functional.	Normally-Closed dry contacts. (board will energize these contacts at nominal +24VDC).
	2-POSITION TERMINAL BLOCK INSIDE ELECTRIC BOX	L1 / L1	Power to RMX™ operator.
N / L2		Power to RMX™ operator.	120VAC: Connect to Neutral / 240VAC: Connect to Line 2.
3-POSITION TERMINAL STRIP ON OUTSIDE OF ELECTRIC BOX	PWR	Provides power for radio & other accessories. +20 to +40VDC, fused at 315mA (F1).	Connect to radio or other accessory's power input.
	RAD (Radio Input Control)	Causes door to open if not at Up Limit or Mid-Stop Limit. Causes door to close if at Up Limit or Mid-Stop Limit. Causes a closing door to reverse.	
	GND	Common ground connection for PWR and RAD terminals.	Connect to radio or other accessory's ground input.
PLUG CONNECTIONS INSIDE ELECTRIC BOX	EXPANSION PORT	Connects accessory modules to RMX™ operator.	Accessory Module Ribbon Cable.
	TRANSFORMER	Connects main transformer to control board.	Transformer Plug.
	TRANSFORMER	Connects optional second transformer to control board.	Transformer Plug.
	BRAKE	Connects brake solenoid to control board.	Brake Solenoid Plug.
	MOTOR	Connects motor & capacitor to control board.	Motor Plug.
	HOIST INTLK	Causes a moving door to stop. Prevents the operator from running. Operates even if microcontroller is non-functional.	Hoist Interlock Plug or Jumper.

Section 10: Appendix C

Display Run Codes

Condition Code	DISPLAY	Condition Code Description
0C	IDLE > DOWN LIMIT	STANDING BY AT DOWN LIMIT (NOTE: THIS MESSAGE IS DISPLAYED IF BOTH LIMITS ARE ACTIVE)
0D	IDLE > UP LIMIT	STANDING BY AT UP LIMIT
0E	IDLE > MID STOP	STANDING BY AT MID-STOP LIMIT
0F	IDLE > NO LIMIT	STANDING BY BETWEEN LIMITS
10	OPENING > OPEN BTN	OPENING FROM OPEN BUTTON
11	OPENING > ONE BTN	OPENING FROM 1 BUTTON
12	OPENING > RADIO	OPENING FROM RADIO
13	OPENING > AUX OPEN	OPENING FROM AUXILIARY OPEN INPUT
14	OPENING > OPEN KEY	OPENING FROM KEYPAD OPEN KEY
20	CLOSING > CLOSE PB	CLOSING FROM CLOSE BUTTON
21	CLOSING > ONE BTN	CLOSING FROM 1 BUTTON
22	CLOSING > RADIO	CLOSING FROM RADIO
24	CLOSING > CLOSE KP	CLOSING FROM KEYPAD CLOSE KEY
2A	CLOSING > TCM CLS	CLOSING FROM TIMER CLOSE MODULE
30	HALT > WALL BUTTON	GDO STOPPED BECAUSE STOP OR OPEN BUTTON WAS ACTIVATED, POSSIBLY STARTING A REVERSAL
31	HALT > ONE BUTTON	GDO STOPPED BECAUSE 1 BUTTON WAS ACTIVATED, POSSIBLY STARTING A REVERSAL
32	HALT > RADIO	GDO STOPPED BECAUSE RADIO INPUT WAS ACTIVATED, STARTING A REVERSAL
33	HALT > AUX. OPEN	GDO STOPPED BECAUSE AUXILIARY OPEN INPUT WAS ACTIVATED, STARTING A REVERSAL
34	HALT > KEYPAD KEY	GDO STOPPED BECAUSE KEYPAD STOP OR OPEN KEY WAS ACTIVATED, POSSIBLY STARTING A REVERSAL
35	HALT > N-O SAFETY	GDO STOPPED BECAUSE N-O REVERSING INPUT WAS ACTIVATED, STARTING A REVERSAL
36	HALT > ODC STB	GDO STOPPED BECAUSE ODC STB WAS BLOCKED, STARTING A REVERSAL
37	HALT > N-C SAFETY	GDO STOPPED BECAUSE N-C REVERSING INPUT WAS ACTIVATED, STARTING A REVERSAL
38	HALT > MON. EDGE	GDO STOPPED BECAUSE MONITORED EDGE SENSOR INPUT WAS ACTIVATED, STARTING A REVERSAL
39	HALT > DOOR FORCE	GDO STOPPED BECAUSE THE FORCE REQUIRED TO OPERATE THE DOOR WAS TOO HIGH, POSSIBLY STARTING A REVERSAL
3A	HALT > LOSS OF C/C	GDO STOPPED BECAUSE CONSTANT CONTACT ON THE CONTROL WAS REMOVED BEFORE REACHING A LIMIT, POSSIBLY STARTING A REVERSAL
3B	HALT > SHUTDOWN	GDO STOPPED BECAUSE THE GDO DETECTED A FAULT SUCH AS AN OPEN INTERLOCK, OVERHEATED MOTOR, ETC.
3C	HALT > DOWN LIMIT	GDO STOPPED BECAUSE IT REACHED THE DOWN LIMIT
3D	HALT > UP LIMIT	GDO STOPPED BECAUSE IT REACHED THE UP LIMIT
3E	HALT > MID STOP	GDO STOPPED BECAUSE IT REACHED THE MID-STOP LIMIT
3F	HALT > MODULE FAIL	GDO STOPPED BECAUSE AN EXPANSION MODULE WAS NOT WORKING PROPERLY

Display Error Codes

Section 10: Appendix C

Condition Code	DISPLAY	Condition Code Description
40	REV > OPEN BUTTON	GDO REVERSED BECAUSE THE OPEN BUTTON WAS ACTIVATED
41	REV > ONE BUTTON	GDO REVERSED BECAUSE THE 1 BUTTON WAS ACTIVATED
42	REV > RADIO	GDO REVERSED BECAUSE THE RADIO INPUT WAS ACTIVATED
43	REV > AUX OPEN	GDO REVERSED BECAUSE THE AUXILIARY OPEN INPUT WAS ACTIVATED
44	REV > OPEN KEY	GDO REVERSED BECAUSE THE KEYPAD OPEN KEY WAS ACTIVATED
45	REV > N-O SAFETY	GDO REVERSED BECAUSE THE N-O REVERSING INPUT WAS ACTIVATED
46	REV > ODC STB	GDO REVERSED BECAUSE THE ODC STB WAS BLOCKED
47	REV > N-C SAFETY	GDO REVERSED BECAUSE THE N-C REVERSING INPUT WAS ACTIVATED
48	REV > MON. EDGE	GDO REVERSED BECAUSE THE MONITORED EDGE SENSOR WAS ACTIVATED
49	REV > DOOR FORCE	GDO REVERSED BECAUSE THE FORCE REQUIRED TO CLOSE THE DOOR WAS TOO HIGH
4A	REV > LOSS OF C/C	GDO REVERSED BECAUSE CONSTANT CONTACT ON THE CONTROL WAS REMOVED BEFORE REACHING THE DOWN LIMIT
4B	REV > MAX RUN TMR	GDO REVERSED BECAUSE THE CLUTCH SLIPPED OR SOME OTHER FAULT OCCURRED THAT ALLOWED THE GDO TO RUN TOO LONG
4F	REV > EXP MOD FAIL	GDO REVERSED BECAUSE AN EXPANSION MODULE WAS NOT WORKING PROPERLY
50	STOP > HOT MOTOR	GDO STOPPED BECAUSE THE MOTOR WAS OVERHEATED
51	STOP > OPEN MRT	GDO STOPPED BECAUSE THE CLUTCH SLIPPED OR SOME OTHER FAULT OCCURRED THAT ALLOWED THE GDO TO RUN OPEN TOO LONG
52	STOP > CLOSE MRT	GDO STOPPED BECAUSE THE CLUTCH SLIPPED OR SOME OTHER FAULT OCCURRED THAT ALLOWED THE GDO TO RUN DOWN TOO LONG
57	STOP > OPEN INTLK	GDO STOPPED BECAUSE THE HOIST INTERLOCK OR EXTERNAL INTERLOCK IS OPEN
58	STOP > WRONG GDO	GDO STOPPED BECAUSE THE BOARD IS SET FOR JACKSHAFT MODE, BUT INSTALLED IN A TROLLEY OPERATOR
59	STOP > DOOR FORCE	GDO STOPPED BECAUSE THE FORCE REQUIRED TO OPEN THE DOOR WAS TOO HIGH
5A	STOP > WRONG LIMIT	GDO STOPPED BECAUSE THE UP LIMIT ACTIVATED WHEN CLOSING OR THE DOWN LIMIT ACTIVATED WHEN OPENING
5C	STALL > DOWN LIMIT	GDO STOPPED BECAUSE IT COULDN'T LEAVE THE DOWN LIMIT DUE TO A SLIPPING CLUTCH OR OTHER PROBLEM
5D	STALL > UP LIMIT	GDO STOPPED BECAUSE IT COULDN'T LEAVE THE UP LIMIT DUE TO A SLIPPING CLUTCH OR OTHER PROBLEM
60	CHECK STOP BTN	GDO WON'T RUN BECAUSE THE STOP BUTTON IS ACTIVE
61	TCM DISABLED	TIMER CLOSE WON'T WORK BECAUSE NO SAFETIES ARE ENABLED
62	NO RADIO >> C/C	RADIO INPUT WON'T WORK WITH OPEN OR CLOSE FUNCTION IN CONSTANT CONTACT MODE
63	CHECK AUX OPEN	GDO WON'T CLOSE BECAUSE AUXILIARY OPEN INPUT IS ACTIVE
64	CHECK STOP KEY	GDO WON'T RUN BECAUSE THE KEYPAD STOP KEY IS ACTIVE
65	CHECK N-O SAFETY	GDO WON'T CLOSE BECAUSE THE N-O REVERSING IS ACTIVE
66	CHECK ODC STB	GDO WON'T CLOSE BECAUSE THE ODC STB IS BLOCKED
67	CHECK N-C SAFETY	GDO WON'T CLOSE BECAUSE THE N-C REVERSING INPUT IS ACTIVE
68	CHECK MON. EDGE	GDO WON'T CLOSE BECAUSE THE MONITORED EDGE SENSOR IS ACTIVE
69	OVERHEATED MOTOR	GDO WON'T RUN BECAUSE THE MOTOR IS OVERHEATED
6C	NO RUN > DOWN LIM	GDO WON'T CLOSE BECAUSE ITS ALREADY AT THE DOWN LIMIT
6D	NO RUN > UP LIMIT	GDO WON'T OPEN BECAUSE ITS ALREADY AT THE UP LIMIT
6E	NO RUN > MID STOP	GDO WON'T RUN BECAUSE ITS AT OR ABOVE THE MID-STOP LIMIT & CAN'T RUN UP & A REVERSING INPUT IS PREVENTING IT FROM CLOSING
6F	EXP MODULE FAIL	GDO WON'T RUN BECAUSE AN EXPANSION MODULE FAILURE IS PREVENTING IT

Section 10: Appendix C


Display Error Codes (cont')

Condition Code	DISPLAY	Condition Code Description
70	BOARD FAILURE 70	CONTROL BOARD FAILURE 70, CONTACT FACTORY TECHNICAL SERVICE DEPT.
71	BOARD FAILURE 71	CONTROL BOARD FAILURE 71, CONTACT FACTORY TECHNICAL SERVICE DEPT.
74	BOARD FAILURE 74	CONTROL BOARD FAILURE 74, CONTACT FACTORY TECHNICAL SERVICE DEPT.
75	BOARD FAILURE 75	CONTROL BOARD FAILURE 75, CONTACT FACTORY TECHNICAL SERVICE DEPT.
76	BOARD FAILURE 76	CONTROL BOARD FAILURE 76, CONTACT FACTORY TECHNICAL SERVICE DEPT.
77	BOARD FAILURE 77	CONTROL BOARD FAILURE 77, CONTACT FACTORY TECHNICAL SERVICE DEPT.
80	BOARD FAILURE 80	CONTROL BOARD FAILURE 80, CONTACT FACTORY TECHNICAL SERVICE DEPT.
81	BOARD FAILURE 81	CONTROL BOARD FAILURE 81, CONTACT FACTORY TECHNICAL SERVICE DEPT.
82	BOARD FAILURE 82	CONTROL BOARD FAILURE 82, CONTACT FACTORY TECHNICAL SERVICE DEPT.
83	BOARD FAILURE 83	CONTROL BOARD FAILURE 83, CONTACT FACTORY TECHNICAL SERVICE DEPT.
84	BOARD FAILURE 84	CONTROL BOARD FAILURE 84, CONTACT FACTORY TECHNICAL SERVICE DEPT.
85	EXP PORT PROBLEM	EXPANSION PORT IS SHORT CIRCUITED, TRY DISCONNECTING EXPANSION MODULES OR CONTACT FACTORY TECHNICAL SERVICE DEPT.
86	BOARD FAILURE 86	CONTROL BOARD FAILURE 86, DISCONNECT EXPANSION MODULES. IF NO CHANGE, CONTACT FACTORY TECHNICAL SERVICE DEPT.
88	TCM FAILURE	TIMER CLOSE MODULE (TCM) HAS FAILED
8A	AOM FAILURE	AUXILIARY OUTPUT MODULE (AOM) HAS FAILED
8E	REV INTERRUPTED	GDO LOST POWER OR ENCOUNTERED ANOTHER PROBLEM DURING THE REVERSAL PROCESS, REVERSAL IS COMPLETING NOW
8F	LIMIT MOD. FAIL	GDO WON'T RUN, LIMIT MODULE HAS FAILED
90	DIAGNOSTIC MODE	GDO IS IN DIAGNOSTIC MODE, NORMAL FUNCTIONS ARE NOT ALLOWED
A0	OPEN BTN BAD > PU	OPEN & CLOSE BUTTONS WON'T WORK, THE OPEN BUTTON WAS ACTIVE WHEN THE GDO WAS POWERED-UP
A1	CLOSE BTN BAD > PU	OPEN & CLOSE BUTTONS WON'T WORK, THE CLOSE BUTTON WAS ACTIVE WHEN THE GDO WAS POWERED-UP
A2	ONE BTN BAD > PU	1 BUTTON WON'T WORK, THE 1 BUTTON WAS ACTIVE WHEN THE GDO WAS POWERED-UP
A3	RADIO BAD > PWR UP	RADIO INPUT WON'T WORK, THE RADIO INPUT WAS ACTIVE WHEN THE GDO WAS POWERED-UP
A4	AUX OPEN BAD > PU	AUXILIARY OPEN INPUT WON'T WORK, THE AUXILIARY OPEN INPUT WAS ACTIVE WHEN THE GDO WAS POWERED-UP
A5	OPEN KEY BAD > PU	KEYPAD OPEN & CLOSE KEYS WON'T WORK, THE OPEN KEY WAS ACTIVE WHEN THE GDO WAS POWERED-UP
A6	CLOSE KEY BAD > PU	KEYPAD OPEN & CLOSE KEYS WON'T WORK, THE CLOSE KEY WAS ACTIVE WHEN THE GDO WAS POWERED-UP
A7	MULT KEYS BAD > PU	1 OR MORE KEYPAD CALIBRATION KEYS WON'T WORK, 1 OR MORE WERE ACTIVE WHEN THE GDO WAS POWERED-UP
AA	TCM BAD > POWER UP	TIMER CLOSE MODULE WON'T CLOSE DOOR, IT WAS ACTIVE WHEN THE GDO WAS POWERED-UP

Section 10: Appendix D

Safe-T-Beam® Monitored Photocell Self-diagnostic Troubleshooting Chart

SOURCE (RED LED)	SENSOR (GREEN LED)	INDICATED CONDITION	REQUIRED ACTION
● ON	● ON	NORMAL OPERATION	NONE REQUIRED
○ OFF	○ OFF	1. POWER HEAD NOT POWERED 2. WIRING FROM POWER HEAD BAD	1. CHECK BREAKERS, FUSES, PLUGS 2. CHECK WIRING FOR OBVIOUS SHORTS
○ OFF	● ON	1. WIRING TO SOURCE MISSING OR BAD 2. POWER HAS BEEN INTERRUPTED	1. CHECK WIRING 2. REMOVE POWER AND REAPPLY
2 BLINKS, PAUSE (REPEAT)	● ON	1. BEAM NOT ALIGNED 2. BEAM OBSTRUCTED 3. SENSOR DEFECTIVE	1. CHECK ALIGNMENT 2. CHECK FOR OBSTRUCTION 3. CALL CUSTOMER SERVICE
2 BLINKS, PAUSE (REPEAT)	○ OFF	1. WIRE TO SENSOR MISSING OR BAD 2. SENSOR DEFECTIVE	1. CHECK WIRING 2. CALL CUSTOMER SERVICE
3 BLINKS, PAUSE (REPEAT)	● ON	1. SENSOR RECEIVING INTERFERENCE	1. ATTEMPT TO DETERMINE SOURCE OF INTERFERENCE 2. CALL CUSTOMER SERVICE
4 BLINKS, PAUSE (REPEAT)	● ON	1. SOURCE NOT SENDING PULSES 2. SOURCE DEFECTIVE	1. CALL CUSTOMER SERVICE 2. CALL CUSTOMER SERVICE

 WARNING:

ACTUATING THE OPERATOR BY USING CONSTANT CONTACT ON THE CLOSE BUTTON WILL OVERRIDE EXTERNAL REVERSING DEVICES, INCLUDING PHOTOCELLS.

The Genuine. The Original.



Access Systems Division
a Division of Overhead Door Corporation
22790 Lake Park Blvd.
Alliance, Ohio 44601



WARRANTY

The Genuine. The Original.



RMX®

Commercial Operator Limited Warranty

The authorized distributor of Overhead Door Corporation products, whose name appears below ("Seller") warrants to the original purchaser of model RMX® commercial operators ("Product"), subject to all of the terms and conditions hereof, that the Product and all components thereof will be free from defects in materials and workmanship under normal use for the following period(s), measured from the date of installation:

- Two (2) years or 20,000 cycles*, whichever occurs first.

Seller's obligation under this warranty is specifically limited to repairing or replacing, at its option, any part which is determined by Seller to be defective during the applicable warranty period. Any labor charges are excluded and will be the responsibility of the purchaser.

This warranty is made to the original purchaser of the Product only, and is not transferable or assignable. This warranty applies only to an operator which is installed in commercial or industrial building applications. This warranty does not apply to any unauthorized alteration or repair of the Product, or to any Product or component which has been damaged or deteriorated due to misuse, neglect, accident, failure to provide necessary maintenance, normal wear and tear, or acts of God or any other cause beyond the reasonable control of Seller.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL SELLER BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, even if Seller has been advised of the possibility of such damages. Such excluded damages include, but are not limited to, loss of goodwill, loss of profits, loss of use, cost of any substitute product, interruption of business, or other similar indirect financial loss.

Claims under this warranty must be made promptly after discovery, within the applicable warranty period, and in writing to the Seller or to the authorized distributor or installer whose name and address appear below. The purchaser must allow Seller a reasonable opportunity to inspect any Product claimed to be defective prior to removal or any alteration of its condition. Proof of the purchase and/or installation date, and identification as the original purchaser, may be required.

*The number of cycles referred to herein shall be measured by an integrated cycle counter contained in or attached to the Product. If the cycle counter is rendered inoperable Seller shall use other reasonable means to determine cycle count.

ORIGINAL PURCHASER _____

INSTALLATION ADDRESS _____

SELLER: _____

SELLER'S ADDRESS: _____

FACTORY ORDER #: _____

DATE OF INSTALLATION: _____

SIGNATURE OF SELLER: _____



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