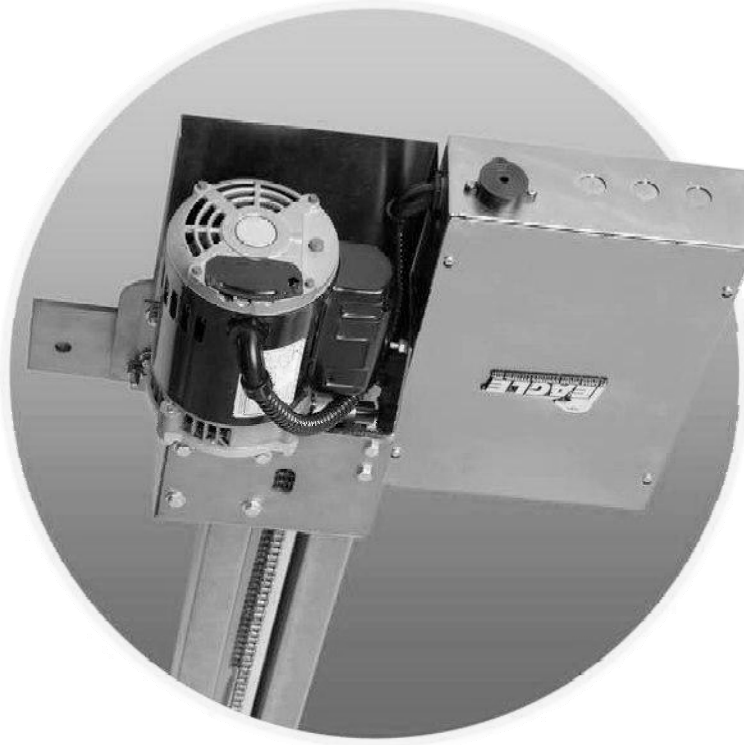




EAGLE-OH

OVERHEAD GATE OPERATOR



Eagle-OH Overhead Gate Operator
For Single Tilt-up Gates to 500 lbs

Eagle-OH=1HP Overhead Gate Operator
For Single Tilt-up Gates to 700 lbs

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UL LISTINGS

IMPORTANT SAFETY INFORMATION

⚠ WARNING

To reduce the risk of INJURY or DEATH read and follow the instructions

1. Never let children operate or play with gate controls. Keep the remote control away from children.
2. Always keep people and objects away from the gate. **NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.**
3. Test the gate operator monthly. The gate **MUST** reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, re-test the gate operator. Failure to adjust and re-test the gate operator properly can increase the risk of injury or death.
4. Use the emergency release only when the gate is not moving.
5. **KEEP GATES PROPERLY MAINTAINED.** Read the owner's manual. Have a qualified service person make repairs to gate hardware.
6. The entrance is for vehicles only. Pedestrians must use separate entrance.
7. **SAVE THESE INSTRUCTIONS.**

REQUIREMENTS FOR UL COMPLIANT INSTALLATION

1. Install the gate operator only when:
 - a) The operator is appropriate for the construction of the gate and the usage class of the gate.
 - b) All openings of a horizontal slide gate are guarded or screened from the bottom of the gate to a minimum of 4 feet (1.22 m) above the ground to prevent a 2-1/4 inch (57.2 mm) diameter sphere from passing through the openings anywhere in the gate, and in that portion of the adjacent fence that the gate covers in the open position.
 - c) All exposed pinch points are eliminated or guarded, and
 - d) Guarding is supplied for exposed rollers.
2. The operator is intended for installation only on gates used for vehicles. Pedestrians must be supplied with a separate access opening. The pedestrian access opening shall be designed to promote pedestrian usage. Locate the pedestrian gate such that persons will not come in contact with the vehicular gate during the entire path of travel of the vehicular gate.
3. The gate must be installed in a location so that enough clearance is supplied between the gate and adjacent structures when opening and closing to reduce the risk of entrapment. Swinging gates shall not open into public access areas.
4. The gate must be properly installed and work freely in both directions prior to the installation of the gate operator. Do not over-tighten the operator clutch or pressure relief valve to compensate for a damaged gate.

UL LISTINGS

REQUIREMENTS FOR UL COMPLIANT INSTALLATION (continued)

5. For gate operators utilizing Type D protection:
 - a) The gate operator controls must be placed so that the user has full view of the gate area when the gate is not moving.
 - b) The placard provided marked in letters at least 1/4 in. [6.4-mm] high with the word "WARNING" and the following statement or the equivalent: "Moving Gate Has the Potential of Inflicting Injury or Death – Do Not Start Gate Unless Path is Clear" shall be placed adjacent to the controls.
 - c) An automatic closing device (such as a timer, loop sensor, or similar device) shall not be employed, and
 - d) No other activation device shall be connected.
6. Controls intended for user activation must be located at least six feet [6'] away from any moving part of the gate and where the user is prevented from reaching over, under, around or through the gate to operate the controls. Outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.
7. The Stop and /or Reset button must be located in the line-of-sight of the gate. Activation of the reset control shall not cause the operator to start.
8. A minimum of two (2) WARNING SIGNS shall be installed, one on each side of the gate where easily visible.
9. For gate operators utilizing a non-contact sensor in accordance with Usage Class:
 - a) See instructions on the placement of non-contact sensors for each type of application.
 - b) Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle trips the sensor while the gate is still moving, and
 - c) One or more non-contact sensors shall be located where the risk of entrapment or obstruction exists, such as the perimeter reachable by a moving gate or barrier.
10. For gate operators utilizing a contact sensor in accordance with Usage Class:
 - a) One or more contact sensors shall be located where the risk of entrapment or obstruction exists, such as at the leading edge, trailing edge, and post-mounted both inside and outside of a vehicular horizontal slide gate.
 - b) One or more contact sensors shall be located at the bottom edge of a vehicular vertical lift gate.
 - c) One or more contact sensors shall be located at the pinch point of a vehicular vertical pivot gate.
 - d) A hardwired contact sensor shall be located and its wiring arranged so that the communication between the sensor and the gate operator is not subjected to mechanical damage.
 - e) A wireless contact sensor such as one that transmits radio frequency (RF) signals to the gate operator for entrapment protection functions shall be located where the transmission of the signals are not obstructed or impeded by building structures, natural landscaping or similar obstruction. A wireless contact sensor shall function under the intended end-use conditions.
 - f) One or more contact sensors shall be located on the inside and outside leading edge of a swing gate. Additionally, if the bottom edge of a swing gate is greater than 6 inches [152 mm] above the ground at any point in its arc of travel, one or more contact sensors shall be located on the bottom edge.
 - g) One or more contact sensors shall be located at the bottom edge of a vertical barrier (arm).

UL LISTINGS

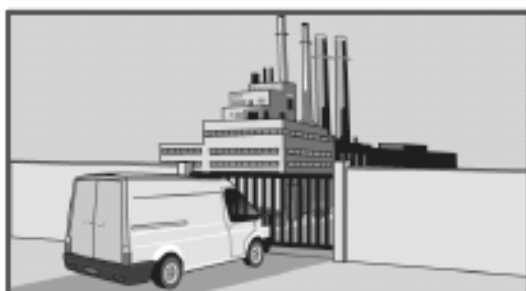
UL 325 MODEL CLASSIFICATIONS



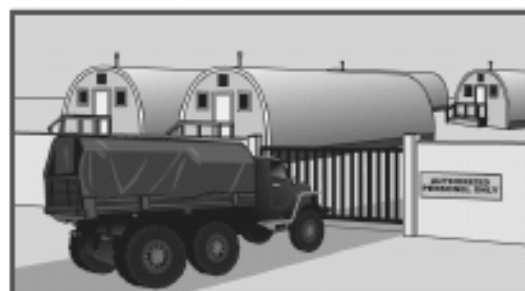
Class I (Residential Vehicular Gate Operator) - A vehicular gate operator (opener or system) intended for use in a home of one to four single family dwellings, or a garage or parking area associated therewith.



Class II (Commercial/General Access Vehicular Gate Operator) - A vehicular gate operator (opener or system) intended for use in a commercial location or building such as a multi-family housing unit (five or more single family units), hotel, garages, retail store, or other buildings servicing the general public.



Class III (Industrial/Limited Access Vehicular Gate Operator) - A vehicular gate operator (opener or system) intended for use in an industrial location, loading dock area, or other location not intended to service the general public.



Class IV (Restricted Access Vehicular Gate Operator) - A vehicular gate operator (opener or system) intended for use in a guarded industrial location or buildings such as airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.

UL 325 REQUIRED ENTRAPMENT PROTECTION

Entrapment Protection Requirements For Each UL 325 Classification

Proper installation must satisfy the entrapment protection chart as shown. The installation must have one PRIMARY means and one SECONDARY means of entrapment protection in both the OPEN and CLOSE direction of gate travel.

A - Inherent (built into the gate operator) Entrapment Protection System, and at least one of the following as indicated on chart
B1 - Non-contact Sensor such as photo-eye or equivalent
B2 - Contact Sensor such as edge sensor or equivalent

C - Inherent Adjustable Clutch or Pressure Relief Device
D - Actuating Device requiring continuous pressure to maintain gate motion
E - Inherent Audio Alarm

GATE TYPE	PROTECTION	CLASS I & II	CLASS III	CLASS IV
HORIZONTAL SLIDE, VERTICAL LIFT, VERTICAL PIVOT GATE	Primary Type	A	A, B1, B2	A, B1, B2, D
	Secondary Type	B1, B2, D	A, B1, B2, D, E	A, B1, B2, D, E
SWING GATE OR VERTICAL BARRIER (ARM)	Primary Type	A, C	A, B1, B2, C	A, B1, B2, C, D
	Secondary Type	A, B1, B2, C, D	A, B1, B2, D, E	A, B1, B2, C, D, E

INSTALLATION

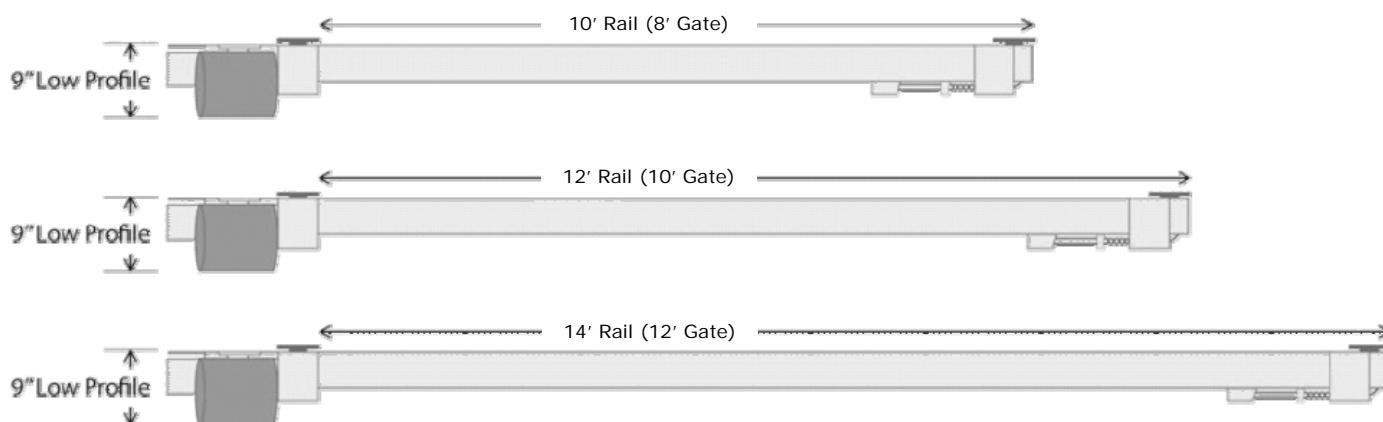
OPERATOR & GATE OVERVIEW

Gate Size & Weight Requirements (Gate must operate freely)

Operator Model	Rail Length (Gate Height)	Gate Weight
Eagle-OH	10' Rail (8' Gate)	500 lbs
	12' Rail (10' Gate)	500 lbs
	14' Rail (12' Gate)	500 lbs

Operator Model	Rail Length (Gate Height)	Gate Weight
Eagle-OH-1HP	10' Rail (8' Gate)	700 lbs
	12' Rail (10' Gate)	700 lbs
	14' Rail (12' Gate)	700 lbs

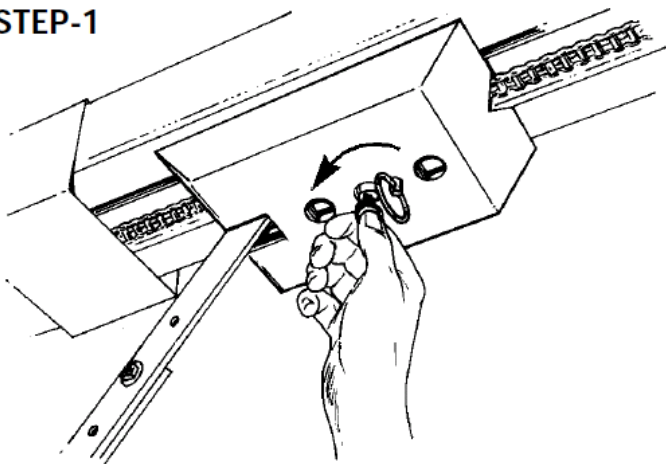
Eagle-OH & Eagle-OH-1HP



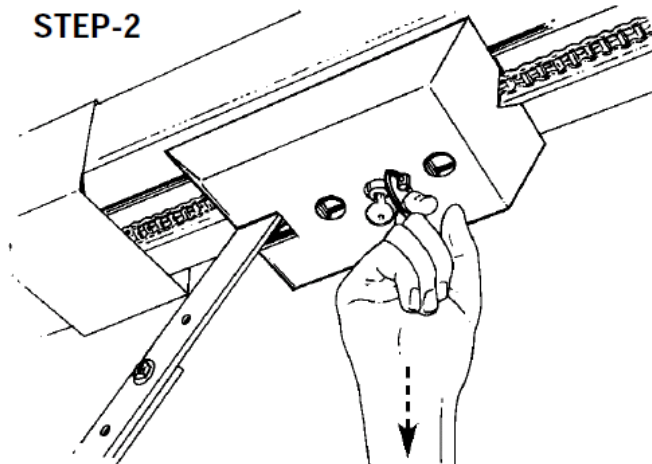
PRELIMINARY INFORMATION

Before installation, be sure that

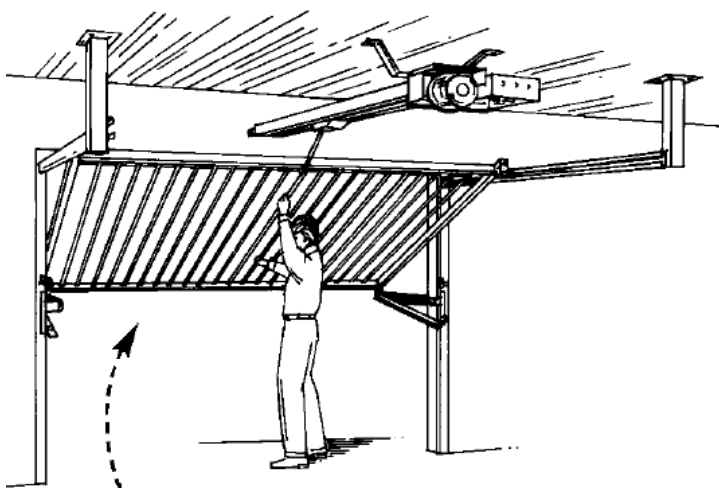
- Gate springs are balance and that the gate of good construction
- Gates opens freely and there is no friction or obstruction between moving parts
- The Header and Ceiling are sufficient to support the gate and the gate operator

EMERGENCY RELEASE**STEP-1**

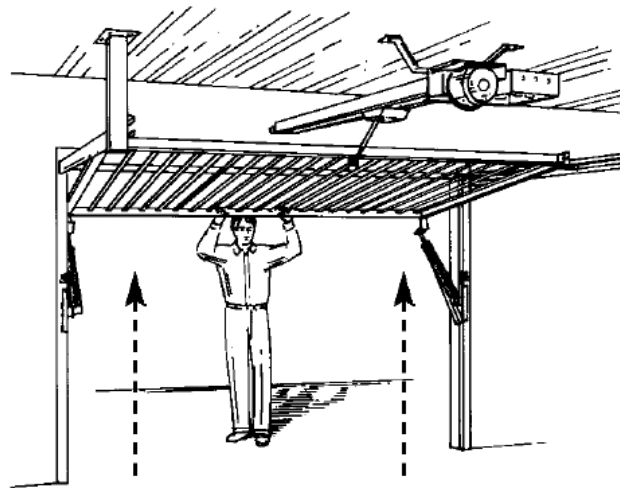
Insert the key and turn to unlock position.

STEP-2

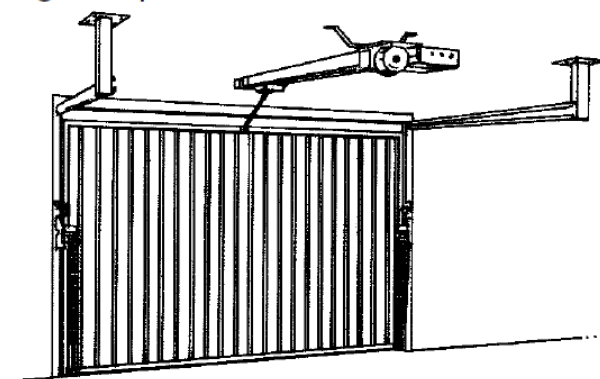
Pull down the release ring.

STEP-3

Lift the gate up.

STEP-4

Lift the gate up.



Once the power is back on, the gate will automatically be operational.

CAUTION!

When in open release position, make sure the gate is supported properly to ensure it can not close by itself and cause damage or injury.

EAGLE OPERATOR INSTALLATION

ELECTRICAL REQUIREMENT

⚠ WARNING

- Electrical power **MUST** be disconnected and locked-out before **ANY WORK** to install, service, maintain or repair the operator. **DISCONNECT THE POWER AT THE CIRCUIT BREAKER.**
- Operator **MUST** be properly grounded and connected and all connections **MUST** be made by a qualified individual according to local code.
- All wiring should be made to a **DEDICATED** circuit and the location of the power disconnect should be visible and clearly labeled.
- **FOLLOW** all specifications herein. Failure to do so may cause severe injury to persons and/or damage to operator.

WIRING CHART

GATE OPERATOR	14 AWG	12 AWG	10 AWG	8 AWG	4 AWG	DEDICATED FUSE
Eagle-OH	200 ft.	400 ft.	860 ft.	1000 ft.	2000 ft.	16A
Eagle-OH-1HP	100 ft.	200 ft.	325 ft.	600 ft.	1000 ft.	20A

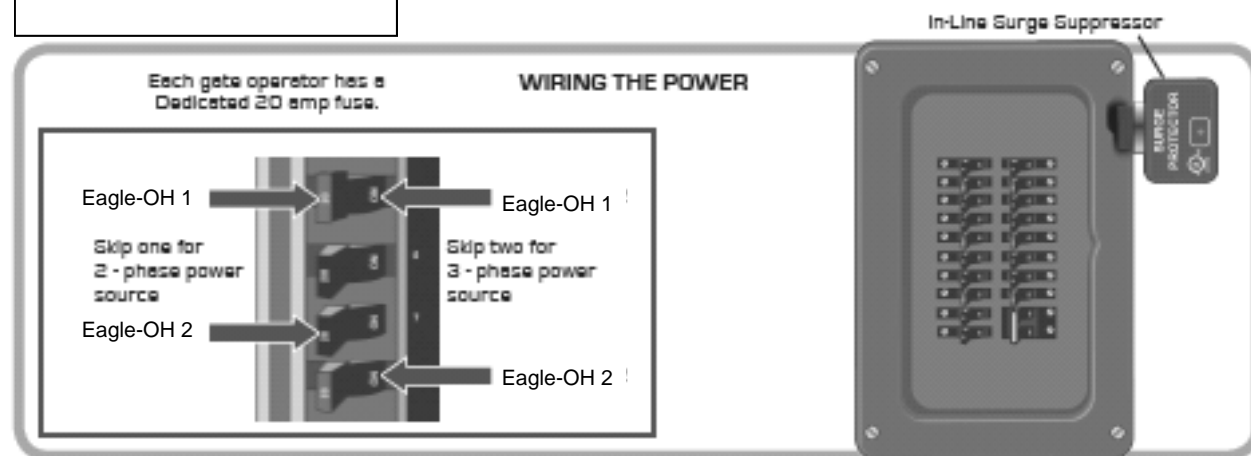
EARTH GROUND & IN-LINE SURGE SUPPRESSION



ALWAYS CONTACT local utility companies **BEFORE** digging.

- Proper earth grounding provides a path to discharge intense electrical static charge or near direct lightning strike safely into the earth.
- In-line surge suppression can stabilize fluctuation of in-coming power supply.

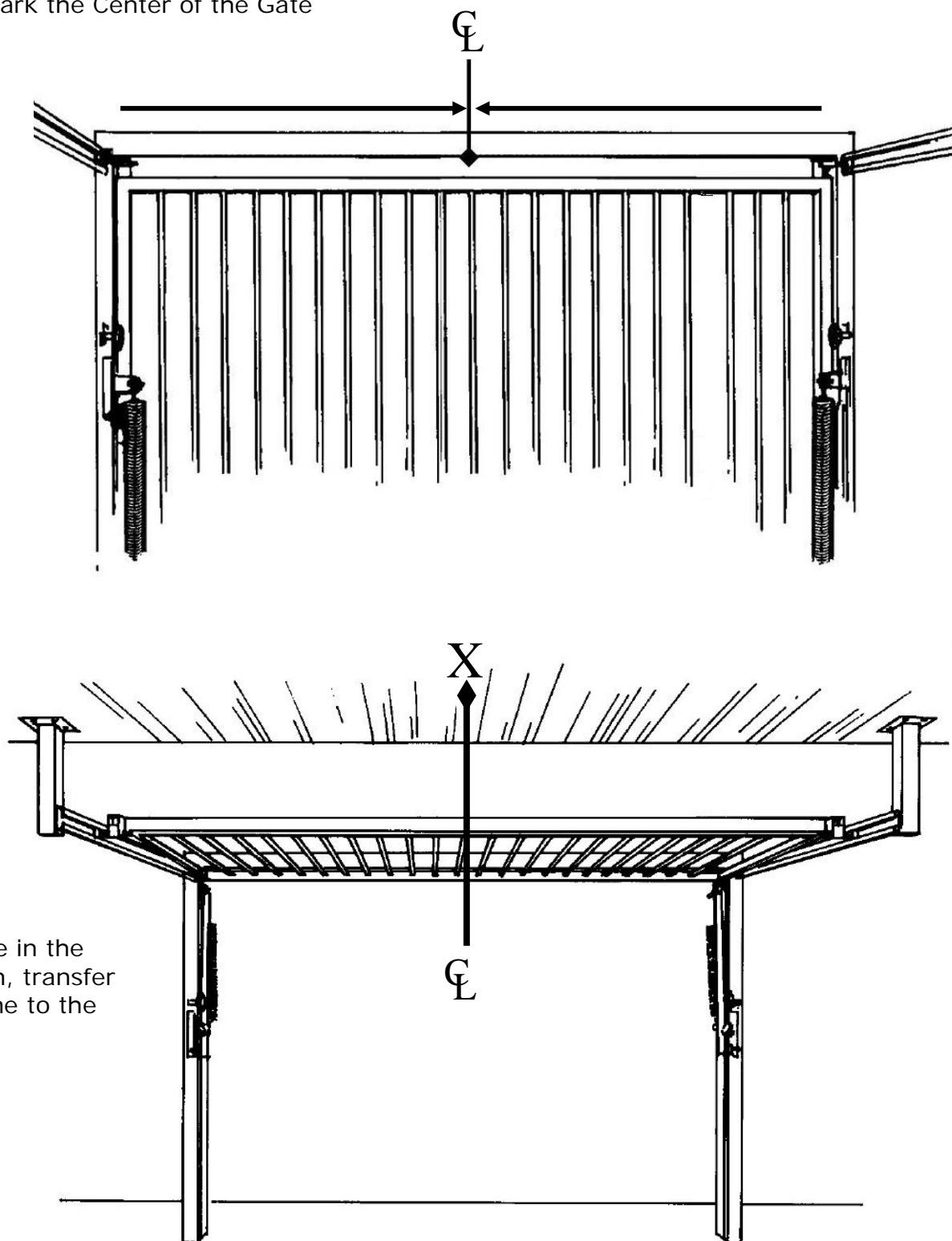
Nothing can absorb the power of a direct lightning strike, or extreme voltage spike from original power source, but proper earth grounding & surge suppression can protect the gate operator in most cases.



INSTALLATION

MOUNTING THE OPERATOR

Measure & Mark the Center of the Gate

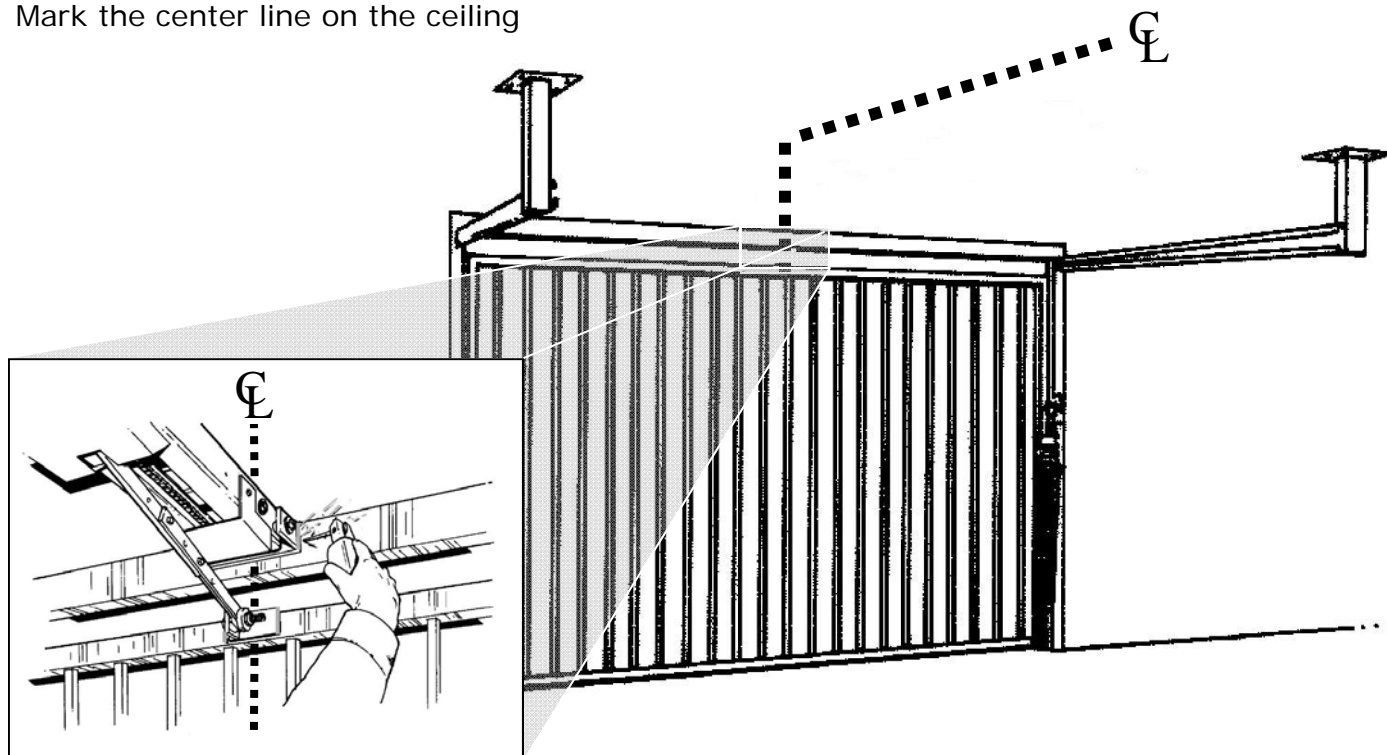


With the gate in the open position, transfer the center line to the ceiling.

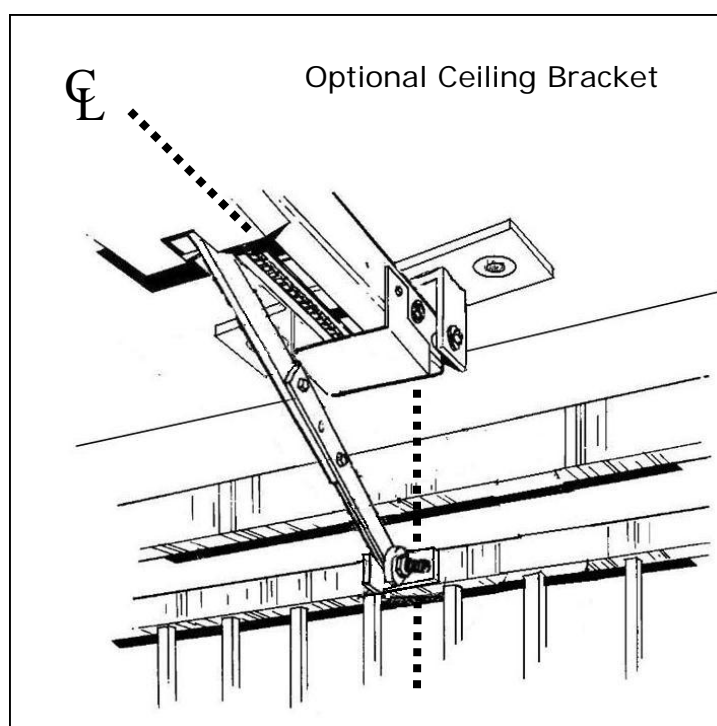
INSTALLATION

MOUNTING THE OPERATOR (CONTINUED)

Mark the center line on the ceiling

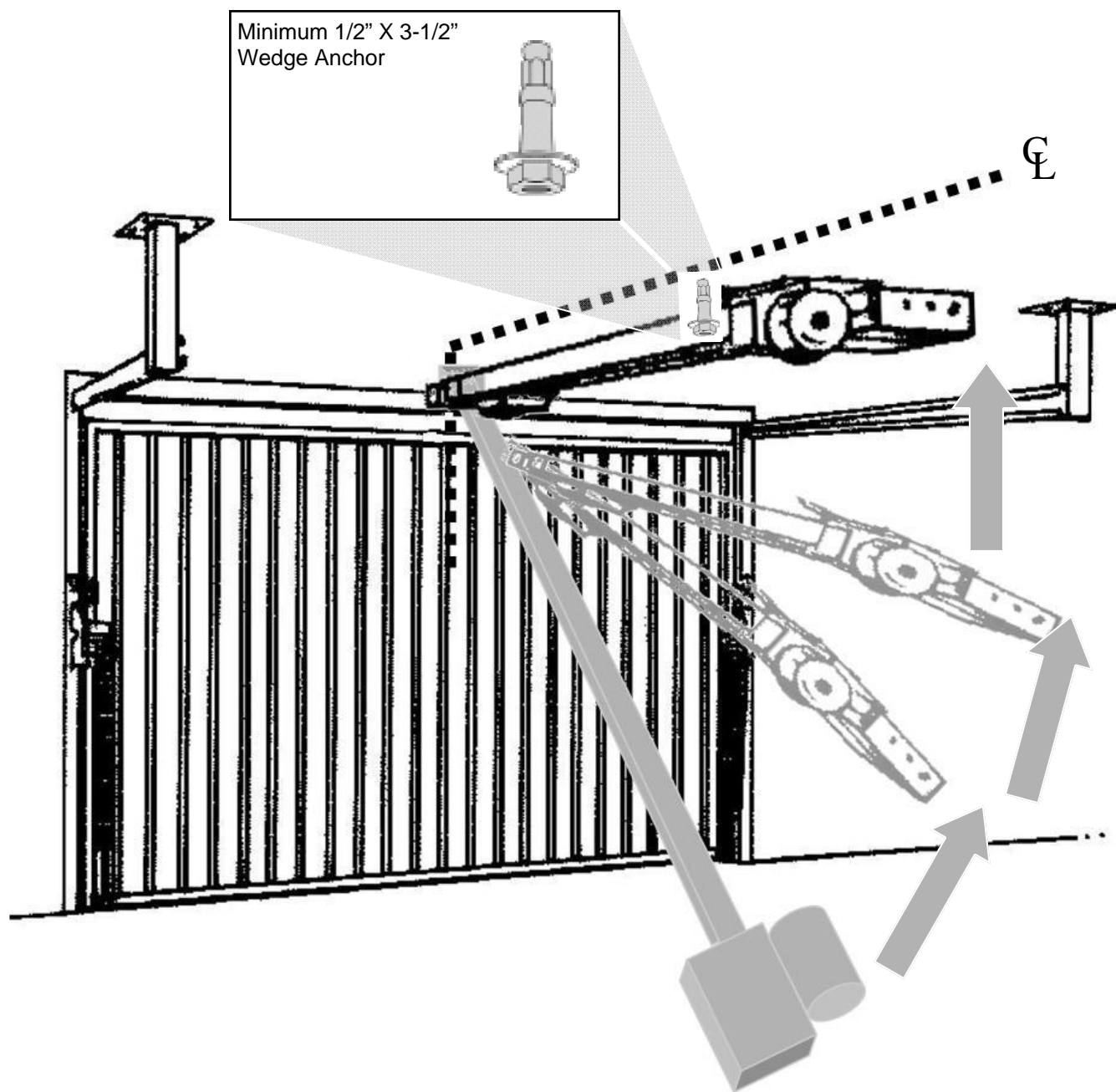


Weld or bolt Header
Bracket at the center line.



INSTALLATION

MOUNTING THE OPERATOR (CONTINUED)



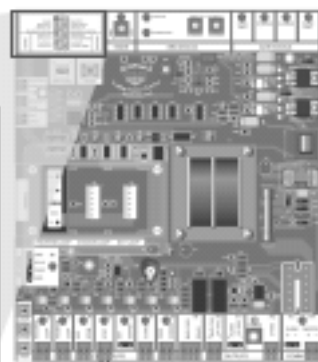
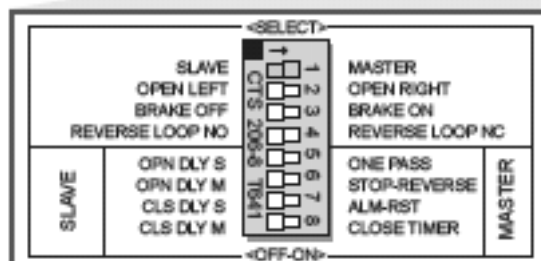
With the Header Bracket attached, lift motor head into position.

EAGLE OPERATOR SET - UP & OPERATION

INITIAL SET-UP

Feature Selector

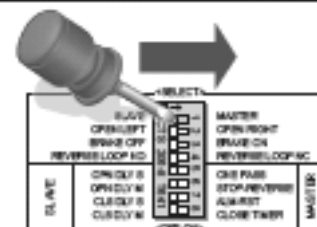
Locate the Feature Sector on the Eagle Diamond Control Board.



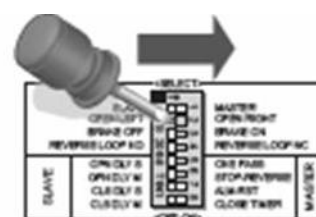
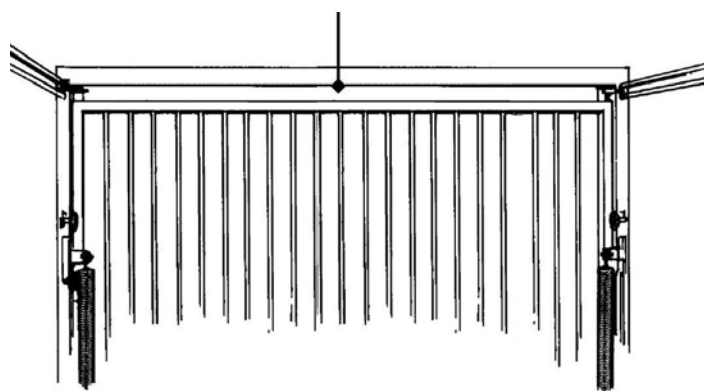
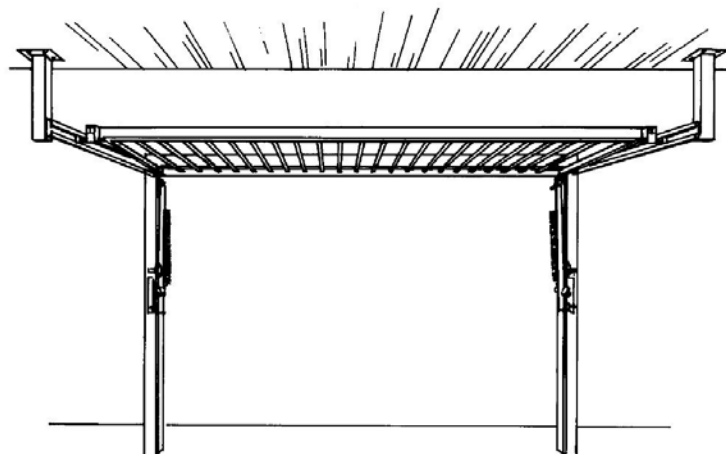
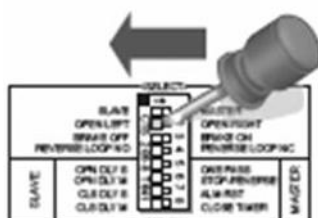
Note: The Power should be turned off when changing switch positions on Feature Selector. Press the Reset Button to clear the memory and allow microprocessor to accept new function.

Switch 1: Single or Dual Gate Systems

Set to ON position [Master] for single gate operation or if Primary Operator [Master] in M/S System.



Switch 2: Direction of Travel



EAGLE OPERATOR SET - UP & OPERATION

INITIAL SET-UP (Continued)

Limit of Travel

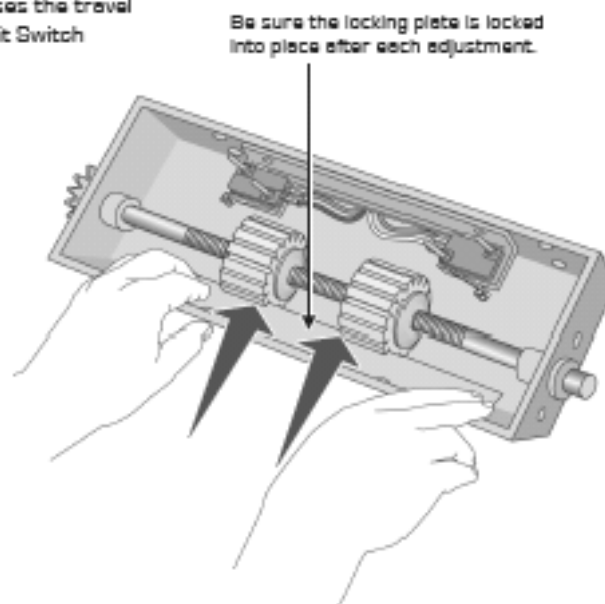
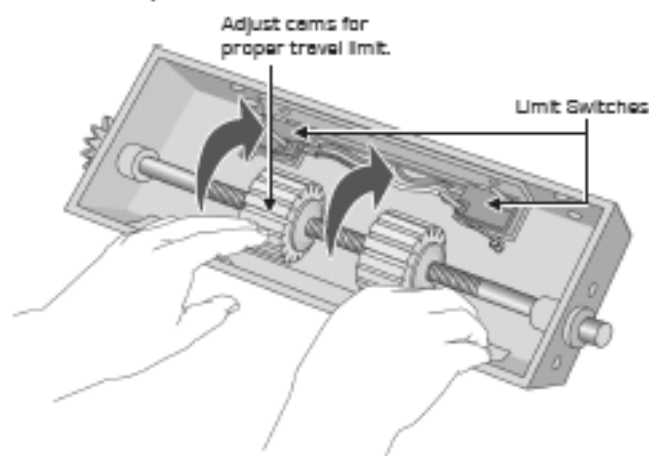
Only a Qualified Service Technician should make adjustments.

OPEN and CLOSE limits should be set to stop gate travel 2" - 3" before reaching any positive stop, gate post or obstruction.

To adjust travel limits, release Locking Plate from Limit Adjustment Cams and rotate Limit Adjustment Cam toward or away from limit switches.

Moving Limit Adjustment Cam closer to the limit switch decreases the travel distance. Moving the Limit Adjustment Cam away from the Limit Switch increases the travel distance.

Be sure the locking plate is returned to the locked position in each Limit Adjustment Cam.



Emergency Reversing Device

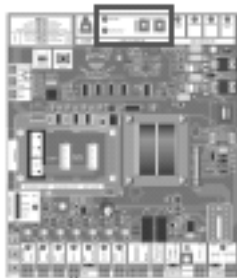
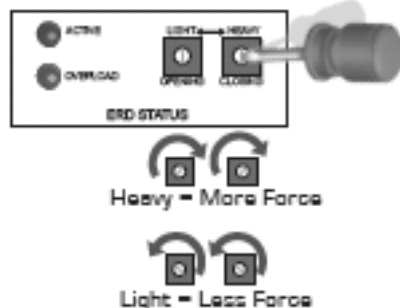
Only a Qualified Service Technician should make adjustments.

Proper Function of ERD - When properly set, ERD will function as follows. When meeting an obstruction in the closing direction, the gate will stop, reverse direction and return to the full open position. When meeting an obstruction in the opening direction, the gate will stop and reverse its direction and stop after approximately 4 - 8 inches. The gate operator will stay in an overload state for 5 minutes or until manually reset.

If the gate operator enters overload status two times in a row, the alarm siren will sound until manual reset.

Adjustment must be made so that the gate stops and reverses when meeting an obstruction equal to approximately 20 lbs of stopping force. Adjustment must be made in both the Opening and Closing direction of travel.

A qualified service technician must make all adjustments to the sensor.



When adjusting sensors remember ...

1. Too Sensitive = if the gate stops or reverses by itself.
2. Not Sensitive Enough = if the gate strikes an object and does not stop or reverse.

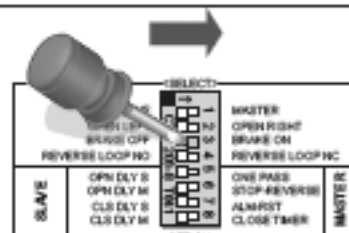


EAGLE OPERATOR SET - UP & OPERATION

SUPPLEMENTAL FEATURE SELECTION

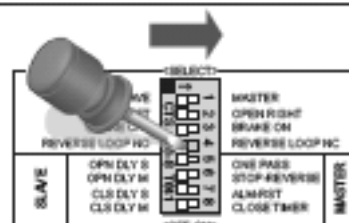
SWITCH 3: Motor Brake for Heavy Gates

Motor Brake - If the "ON" position is selected, the motor will instantly reverse, applying a braking action when gate reaches the open or closed limit. This is useful on uphill / downhill applications and on all Fail-Safe operators.



SWITCH 4: Selectable Reverse Loop (NO or NC)

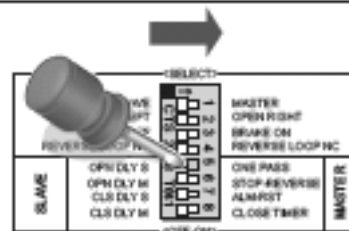
Reverse Loop - Depending on the device connected to the Reverse Loop input, you may need to change to ON position. If the ON position is selected the Reverse Loop input will be set to a Normally Closed (NC) circuit. Determine the requirement of your accessory before turning ON Switch 4.



SWITCH 5: One-Pass for Anti-tailgating

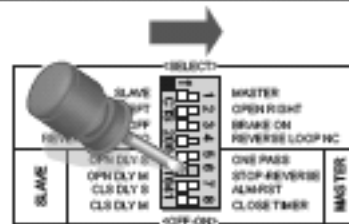
One Pass - If the ON position is selected, the Eagle anti-tailgating feature is in operation. After vehicle clears the inside loop area, the gate begins to close immediately without traveling to the open limit.

Note: Using the One Pass feature requires in-ground loop and loop detector.



SWITCH 6: Stop-Reverse for Convenience

Stop-Reverse - If the ON position is selected, this feature allows the transmitter to work as a 3 - button station for partial opening. The first command opens your gate, the second command stops your gate before opening all the way. The third command closes the gate.



SWITCH 7: Alarm Reset

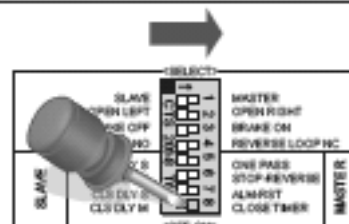
Alarm Reset

If the "ON" position is selected, the gate operator will reset after a five minute "SHUT DOWN" time period, after which any input will be accepted.



SWITCH 8: Automatic Close Timer

Close Timer - If the ON position is selected, the close timer is made operational and your gate will close automatically. Adjust the time-to-close from 1 - 60 seconds.



ACCESSORIES

RECEIVER (Radio Controls)

Eagle Gate Operators work with all brands of receivers. Each Eagle Gate Operator has a pre-wired terminal strip, ready to receive a 3-wire or 4-wire receiver.

Consult the wiring diagram of your receiver for proper connection to the Eagle Receiver Terminal Strip. Shown is a typical 3-wire and 4-wire receiver installation.

If non-rolling code receiver is installed, be sure to personalize your code/frequency. See Receiver Manufacturer information.

Note: Dual Leaf Gate (M/S) Installation
 Receiver must be installed on Primary (Master) Gate Operator.

Terminal Strip is ONLY for Receiver connection

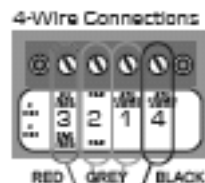
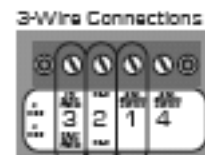
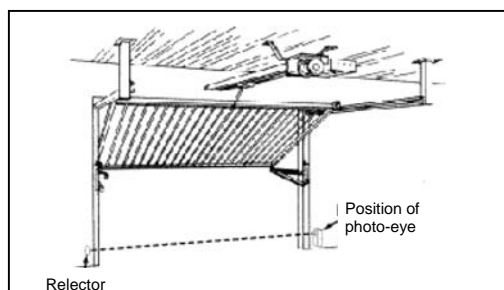


PHOTO - EYE DETECTOR/NON - CONTACT SENSOR (Entrapment Protection)

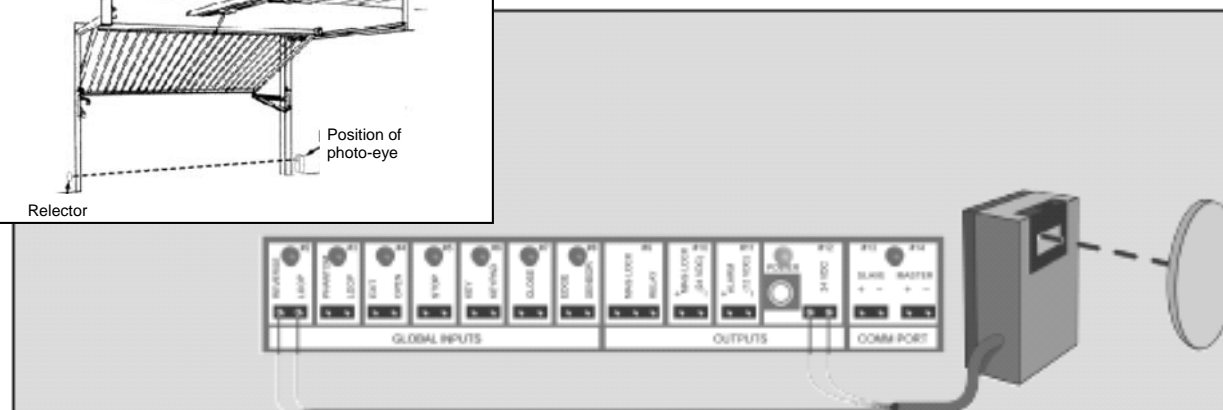
The Eagle Diamond Control Board supports all brands of photo-eye detectors.

Connect photo-eye detector to the Reverse Loop input.

Consult wiring diagram for your photo-eye detector for proper connection to the Eagle Diamond Control Board. **Note:** Reverse Loop Input is selectable as NO or NC.



GLOBAL INPUT
 connects to Primary
 or Secondary



ACCESSORIES

IN-GROUND LOOPS & LOOP DETECTORS

Inductive loop systems are made up of an in-ground wire loop and an Eagle Plug-in Loop Detector (Eagle Part# EG189). The Loop Detector powers the loop and causes a magnetic field to form, creating a resonant frequency which is monitored by the Eagle Loop Detector.

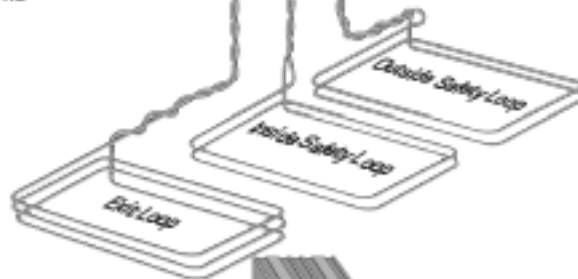
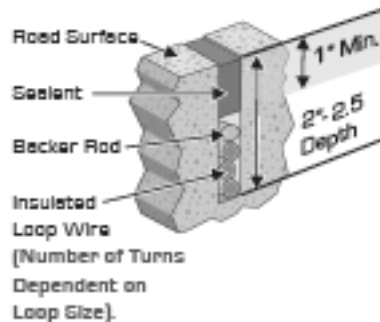
When a vehicle enters or crosses the loop area, it causes the loop inductance to decrease, changing the resonant frequency. If the frequency change exceeds the threshold set by the sensitivity of the loop detector a detect signal will be sent to the Eagle Diamond Control Board.

NOTE: Use only Eagle brand Plug-in Loop Detectors.

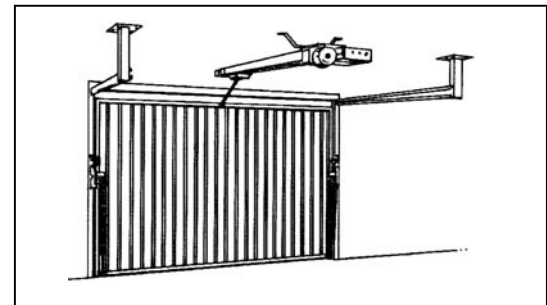
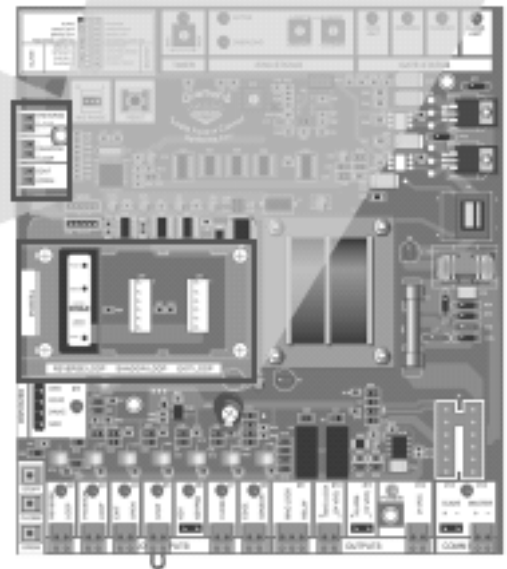
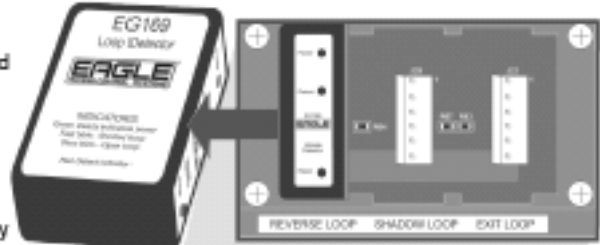
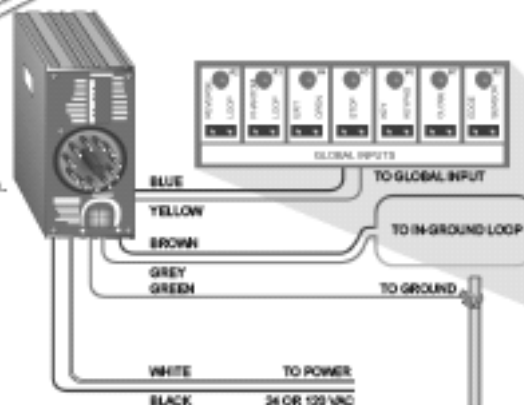


GLOBAL INPUT
connects to Primary
or Secondary

1/8" to 1/4" Width Saw Cut



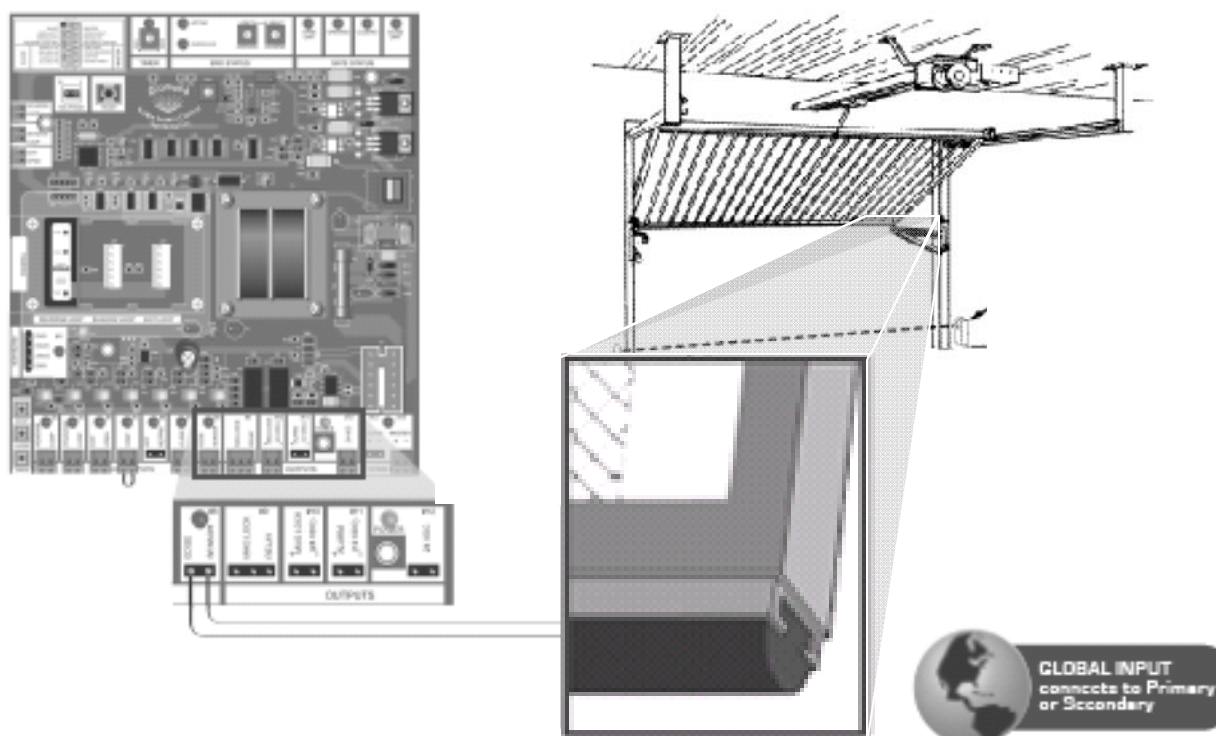
NOTE: External Loop Detectors can be used. See loop detector instructions for your wiring diagram.



ACCESSORIES

EDGE SENSOR ENTRAPMENT PROTECTION

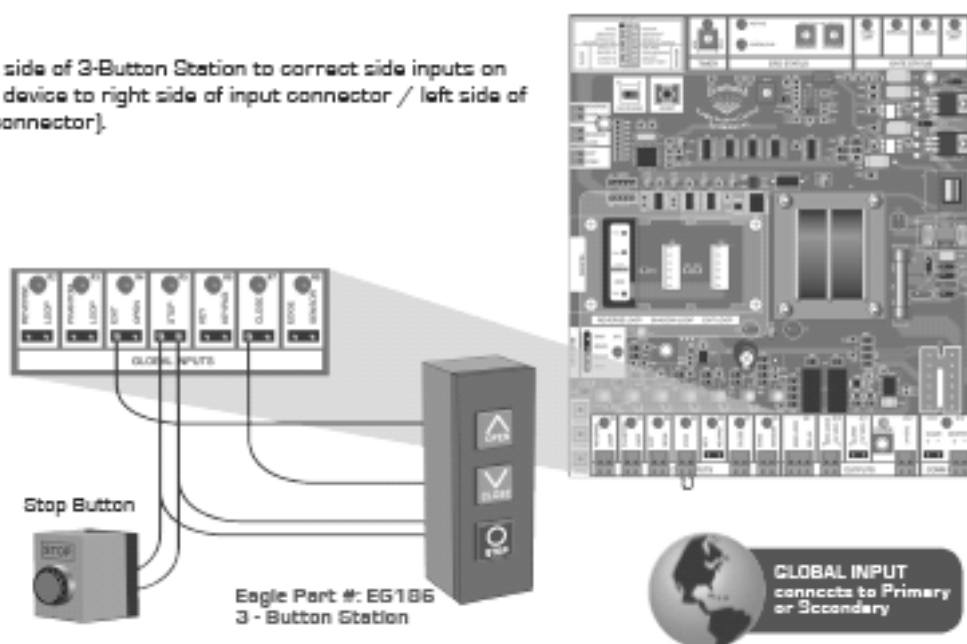
Connect Edge Sensors to Edge Sensor Input. When touched, the edge sensor sends a signal to stop the gate. Edge Sensors are placed in areas of entrapment in front and/or behind the gate.



3-BUTTON STATION

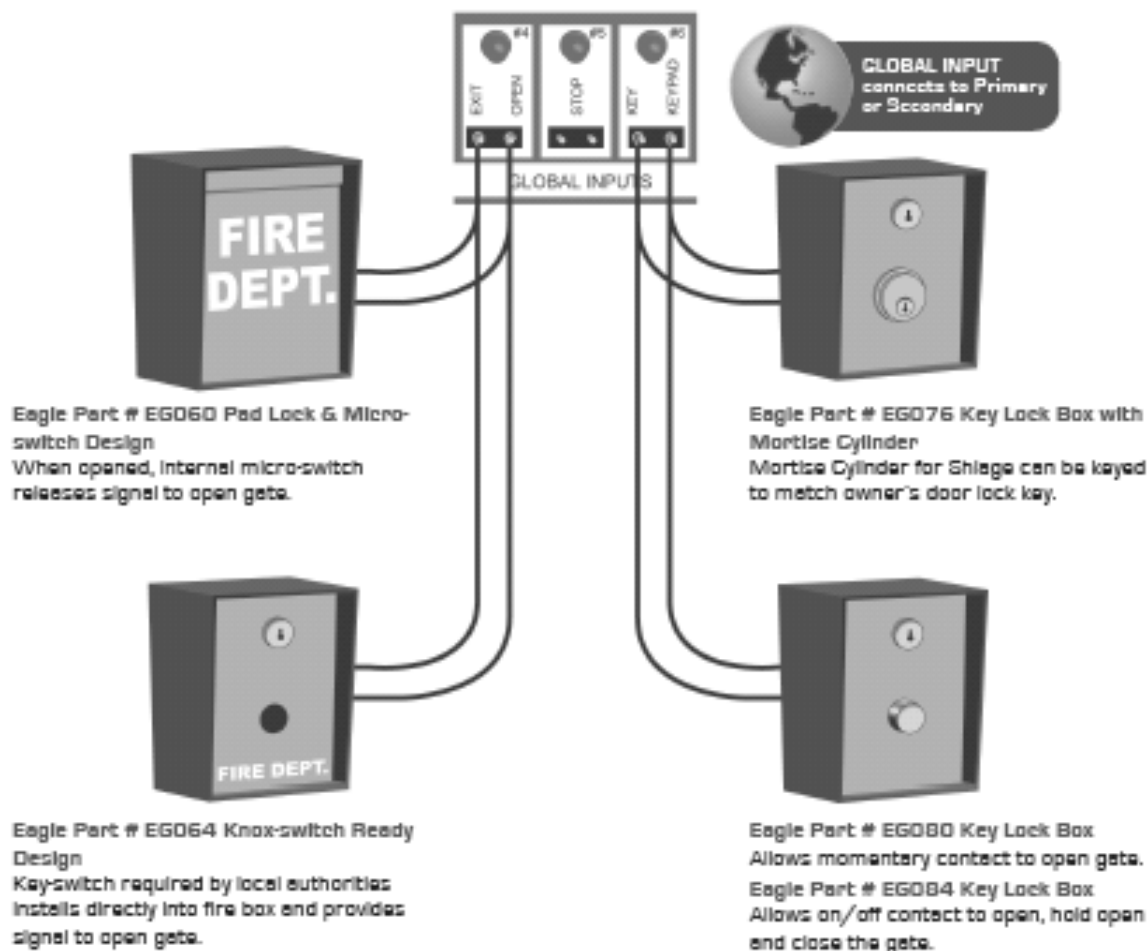
Stop Button replaces factory supplied jumper on Stop input. The Stop input is a NC circuit.

Connect wire from correct side of 3-Button Station to correct side inputs on control board (right side of device to right side of input connector / left side of device to left side of input connector).



ACCESSORIES

FIRE & KEY LOCK BOXES



ACCESSORIES

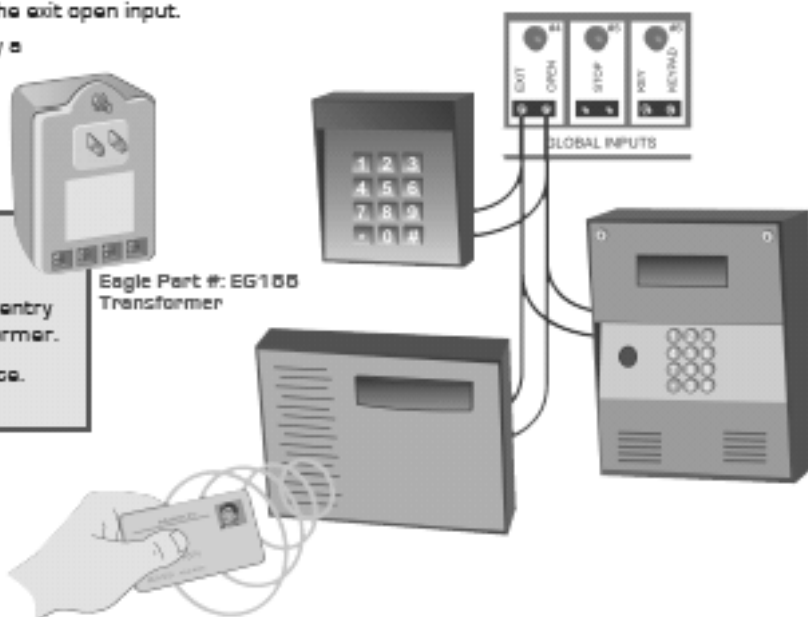
KEY PADS, PROXIMITY READERS & TELEPHONE ENTRY

Most access control devices, such as key pads, proximity card readers, and telephone entry systems connect to the exit open input.

Note: exit open input (NO) recognizes only a command to open the gate and ignores a command to close the gate.

Key Keypad Input (NO) recognizes a command to open and close the gate.

Important: It is recommended that electronic devices such as keypads, proximity card readers and telephone entry systems have their own power transformer. See power requirements for your device.



GLOBAL INPUT
connects to Primary
or Secondary

MAGNETIC LOCK

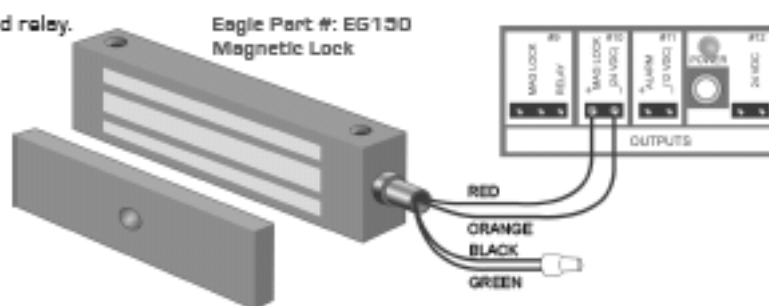
Connect the magnetic lock to the output labeled Mag Lock relay (NOTE: No solenoid or external relay required).

Mag lock output provides 24 VAC power and relay.

Check power requirements for your device.



GLOBAL INPUT
connects to Primary
or Secondary



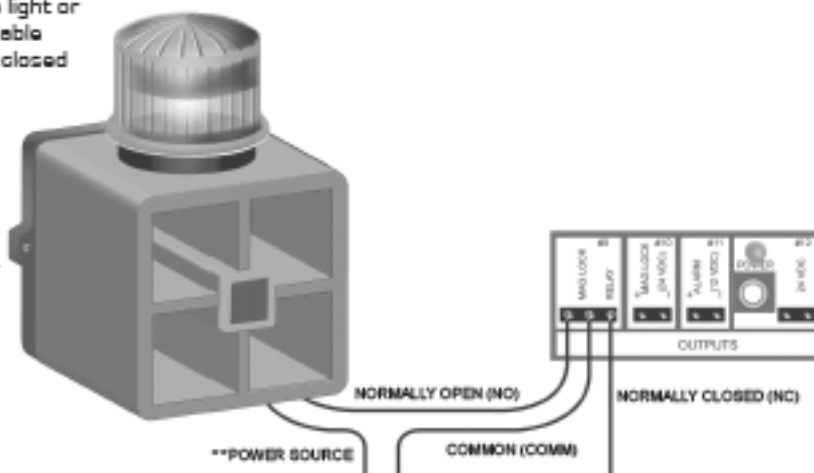
For additional accessories such as strobe light or audible alarm, a Dry Contact Relay is available for both normally open (NO) and normally closed (NC) circuits.

Note: This output triggers a device while the gate is in motion in both the opening and closing direction.

**Note: Power source can be 12-120 V AC/DC.



GLOBAL INPUT
connects to Primary
or Secondary





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