



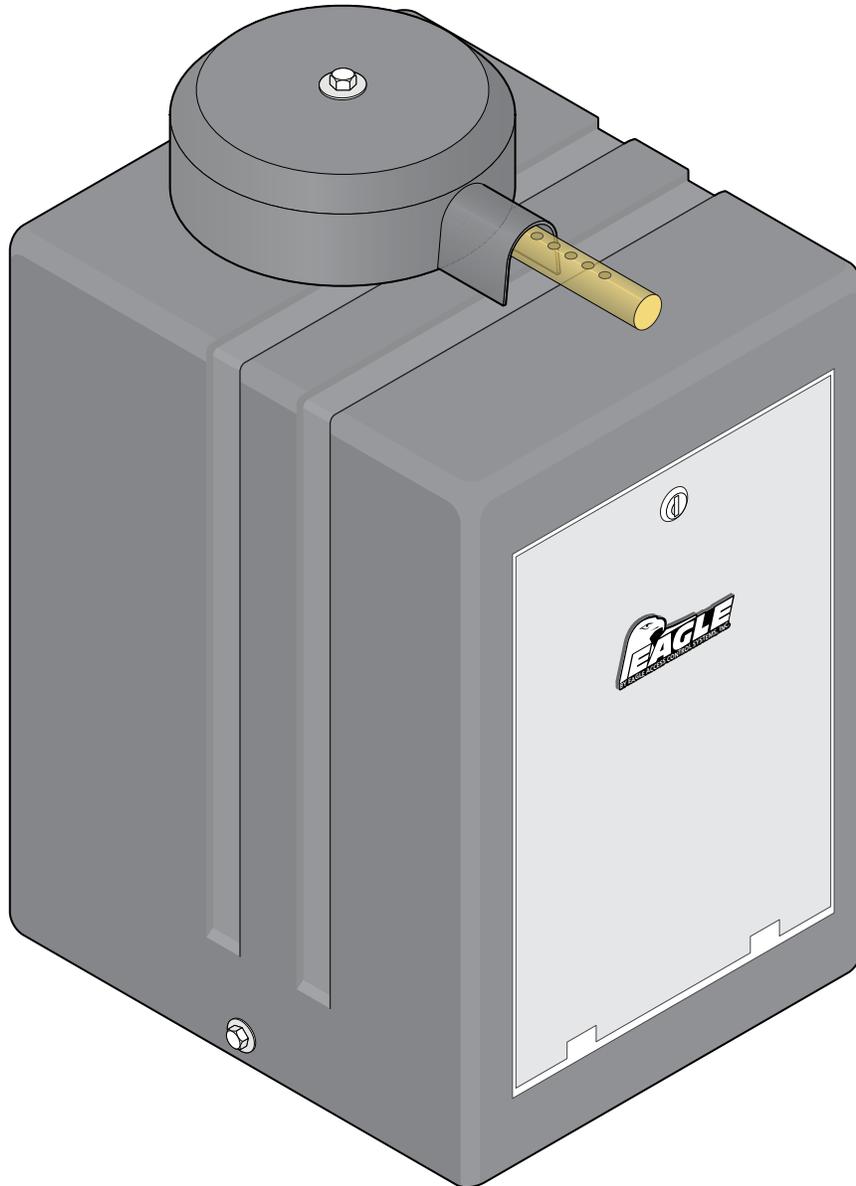
# Eagle-100 Series Eagle-200 Series

Swing Gate Operators

ACCESS CONTROL SYSTEMS, INC.

Made in the USA

**Diamond Control Board** or **Diamond DC Control Board**



## Installation & Owners Manual



UL 325 Compliant / UL 991 Compliant



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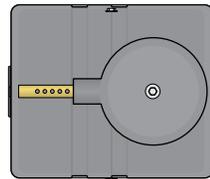
# SWING GATE OPERATOR SPECIFICATIONS

UL 325 Class I, II, III and IV

## Residential Swing Gate Operators

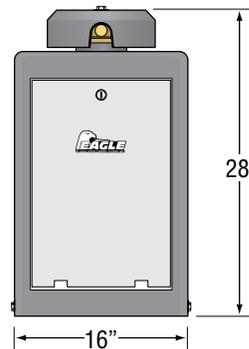
Model	Motor Power	Max Length	Max Weight	Control Board	Operation	Battery Back-Up & Cycles
Eagle-100	1/2 HP - 120 VAC - 5.7 amp	18 ft	600 lbs	Diamond	Continuous	Power I (Optional) - 100
Eagle-100-DC	Input Power: 120/240 VAC (1 Phase) Operator Power: 1/2 HP - 24 VDC	18 ft	600 lbs	Diamond DC	Continuous	Built-in - 100

**NOTE:** Eagle-100 can handle lite-commercial duty as well as residential.



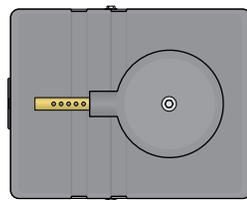
### Eagle-100 Series

**NOTE:** The number of gate cycles when using **ONLY** battery back-up power are approximate and **WILL** vary depending on length and weight of the gate.



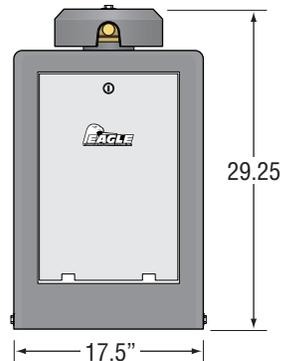
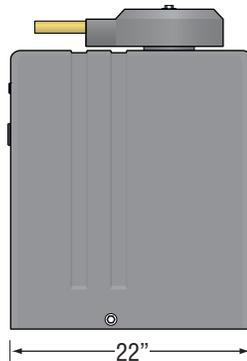
## Commercial Swing Gate Operators

Model	Motor(s) Power	Max Length	Max Weight	Control Board	Operation	Battery Back-Up & Cycles
Eagle-200	1/2 HP - 120 VAC - 5.7 amp	20 ft	750 lbs	Diamond	Continuous	Power I (Optional) - 40-80
Eagle-200-1HP	1 HP - 120 VAC - 10.5 amp	20 ft	1000 lbs	Diamond	Continuous	Power II (Optional) - 40-80
Eagle-200-DM	(2) 1/2 HP - 120 VAC - 5.7 amp	20 ft	750 lbs	Diamond	Continuous	Power I (Optional) - 40-80
Eagle-200-DC	Input Power: 120/240 VAC (1 Phase) Operator Power: 1/2 HP - 24 VDC	20 ft	800 lbs	Diamond DC	Continuous	Built-in - 100
Eagle-200-DC-HD	Input Power: 120/240 VAC (1 Phase) Operator Power: 3/4 HP - 24 VDC	20 ft	1000 lbs	Diamond DC	Continuous	Built-in - 100



### Eagle-200 Series

**NOTE:** The number of gate cycles when using **ONLY** battery back-up power are approximate and **WILL** vary depending on length and weight of the gate.



# SAFETY

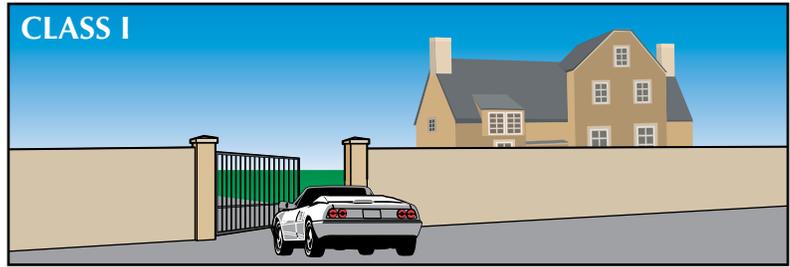
## Requirements for UL 325 Compliant Installation

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.
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 325 Model Classifications

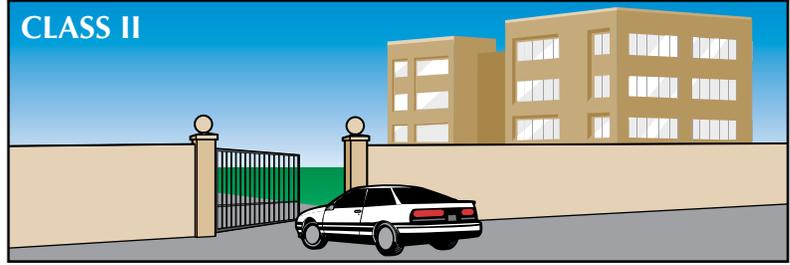
## CLASS I

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.



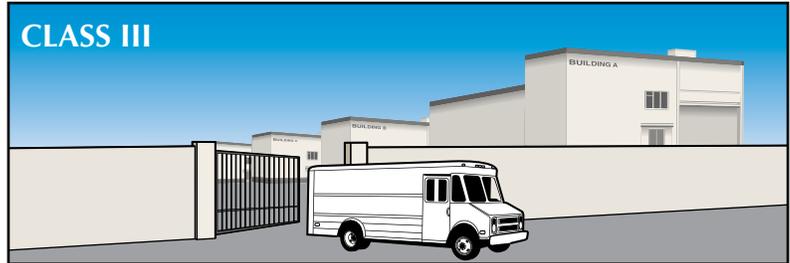
## CLASS II

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 building servicing the general public.



## CLASS III

Industrial/Limited Access Vehicular Gate Operator - A vehicular gate operator (opener or system) intended for use in a 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 a SECONDARY means of entrapment protection in both the OPEN and CLOSE direction of gate travel.

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

**A** - Inherent (built into the gate operator) entrapment protection.

**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.

# 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 gate. **NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.**
3. Test the 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, retest the gate operator. Failure to adjust and retest the gate operator properly can increase the risk of injury or death.
4. Use the emergency release **ONLY** when the gate is not moving and verify that operator power has been turned OFF.
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.**

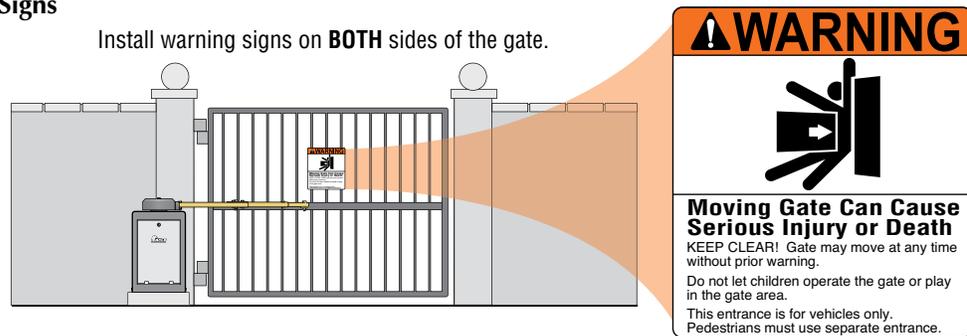
# General Safety Information

## **CAUTION**

Be sure to read and follow all the Eagle Access Control Systems, Inc. and UL instructions before installing and operating any Eagle Access Control System, Inc. products. Eagle Access Control Systems, Inc. is not responsible for any improper installation procedures caused by failure to comply with local building codes.

### Install Warning Signs

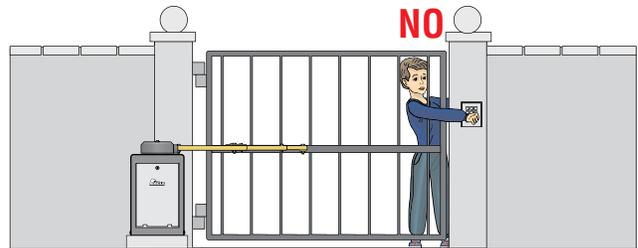
Install warning signs on **BOTH** sides of the gate.



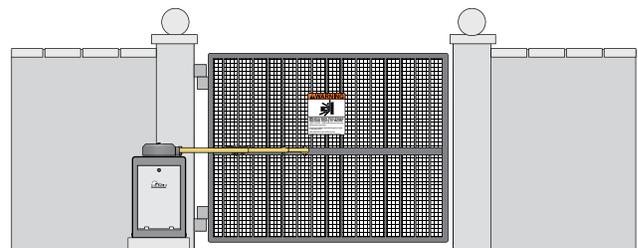
### Precautions

Eagle swing gate operators are for vehicular use only. They are **NOT** for pedestrian use.

Be sure to mount ALL gate operating devices at least ten feet (10') away from any moving part of the gate. They must **NOT** be able to be operated reaching through the gate.



**Regarding Ornamental Grill Styled Gates:** Injuries may be avoided if a mesh screen is installed on the gate. Injuries resulting from hands and feet becoming stuck in the gate or children riding on the gate while gate is moving can be greatly reduced if this "screen" or "mesh" is applied to the gate as a safety precaution.



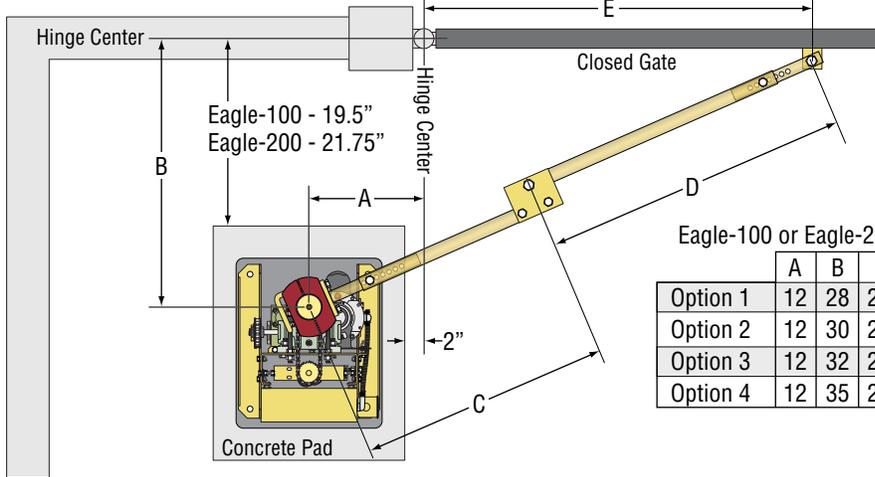
# METHODS OF INSTALLATION

An experienced installer should perform the installation. Improper installation may result in property damage, severe injury or death.

**Read the entire manual before proceeding with the installation.**

Eagle Access Control Systems, Inc. is not responsible for researching and complying with local building codes. Be sure to check all local building codes **before** installation.

## Standard Installation

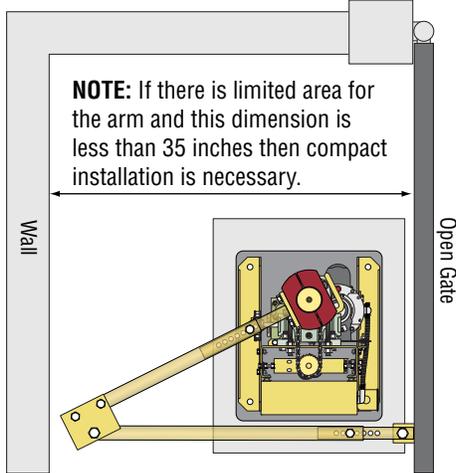


Recommended Concrete Pad Dimensions:  
Eagle-100 - 20" x 24"  
Eagle-200 - 24" x 24"

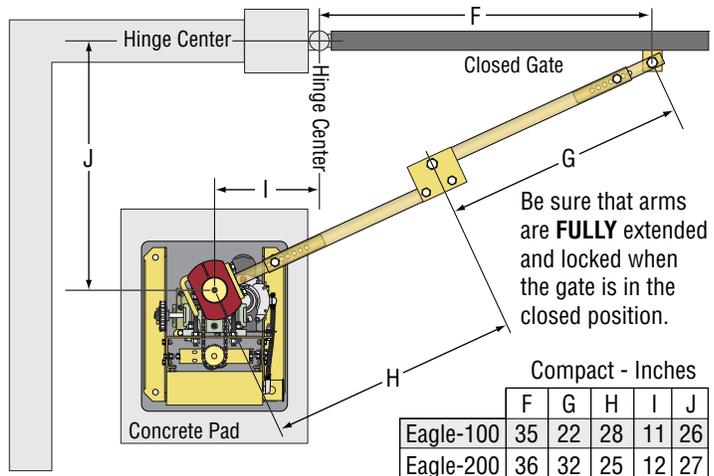
Eagle-100 or Eagle-200 - Inches

	A	B	C	D	E
Option 1	12	28	27.5	34.5	42
Option 2	12	30	29.5	36	43
Option 3	12	32	25.5	39	44
Option 4	12	35	29	36	45

**NOTE:** If there is limited area for the arm and this dimension is less than 35 inches then compact installation is necessary.



## Compact Installation

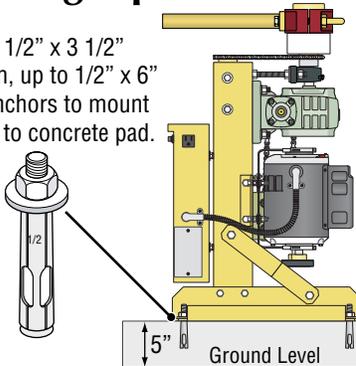


Compact - Inches

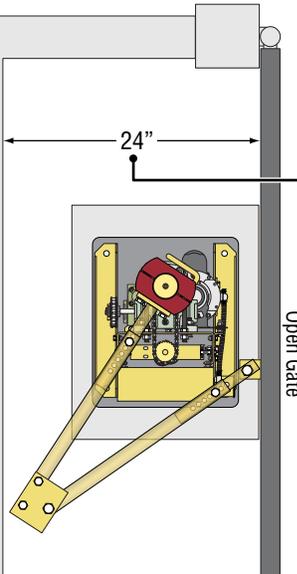
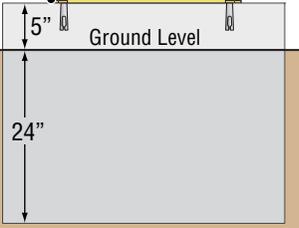
	F	G	H	I	J
Eagle-100	35	22	28	11	26
Eagle-200	36	32	25	12	27

## Securing Operator to Pad

Use four 1/2" x 3 1/2" minimum, up to 1/2" x 6" sleeve anchors to mount operator to concrete pad.

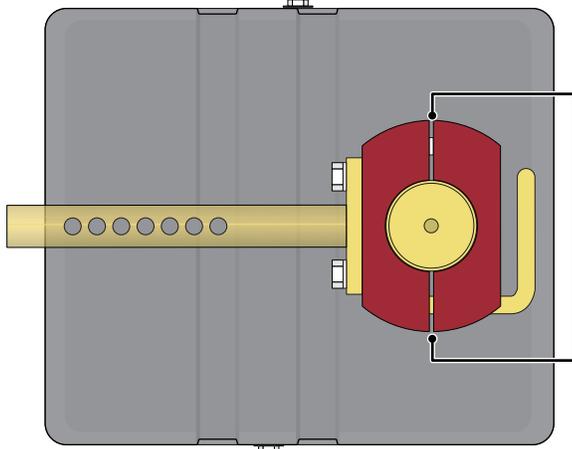


Suggested concrete depth dimension. Check local building codes in your area for depth of concrete before installation.

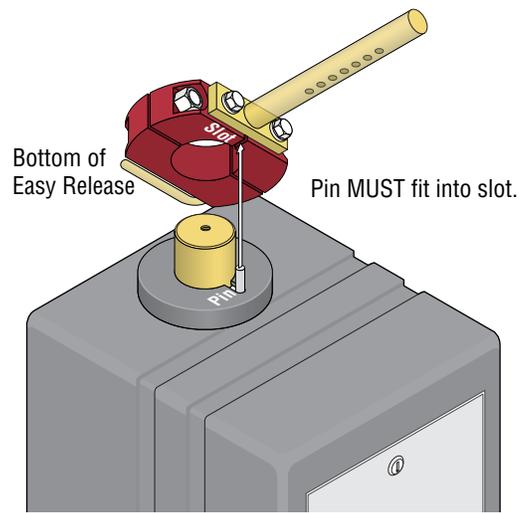


**NOTE:** If this dimension is less than 16 inches, secondary entrapment protection is **REQUIRED** in this area. See page 8 for more information.

## Easy Release Alignment



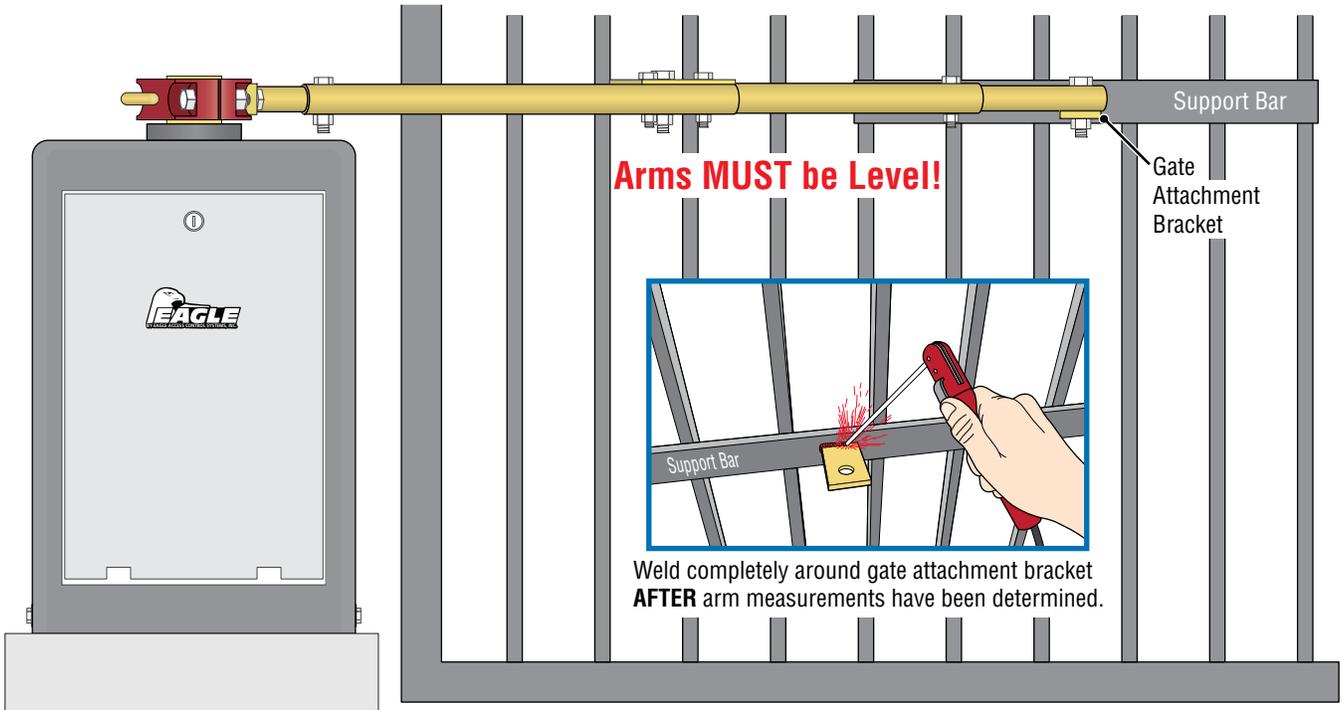
These two gaps should remain even for proper fit.



Bottom of Easy Release

Pin MUST fit into slot.

## Gate Arm Installation



**Arms MUST be Level!**

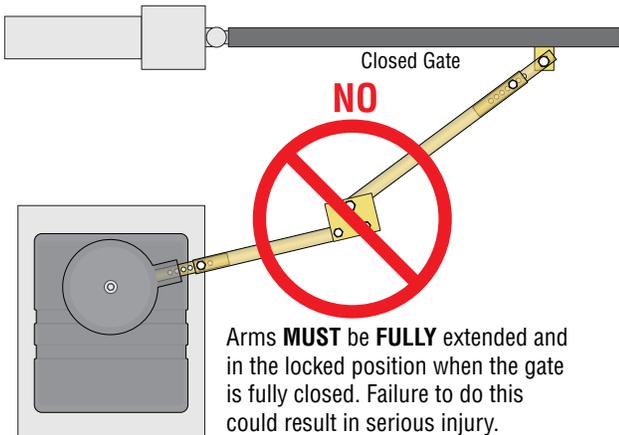
Support Bar

Gate Attachment Bracket

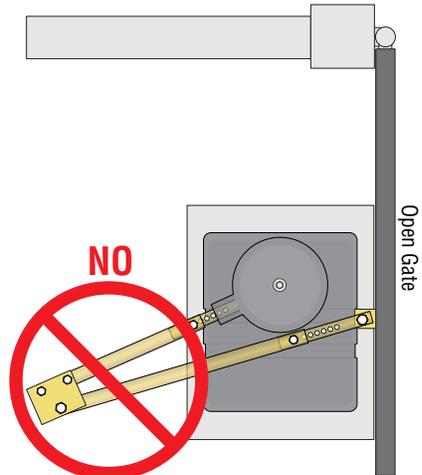
Weld completely around gate attachment bracket **AFTER** arm measurements have been determined.

Installation

## COMMON MISTAKES TO BE AWARE OF:



Arms **MUST** be **FULLY** extended and in the locked position when the gate is fully closed. Failure to do this could result in serious injury.

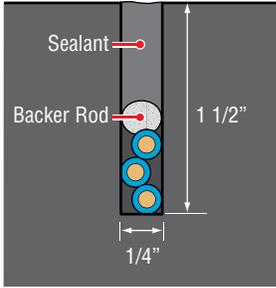


**DO NOT** allow arms to scissor when the gate is fully open. This will put too much stress on the arms and operator when the gate is cycling.

# Loops

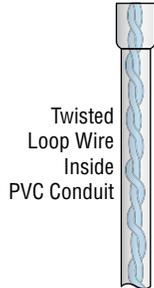
## Reverse, Phantom (Shadow) and Exit In-Ground Loop Installation

Reversing and phantom loops are used to prevent the gate from closing on a vehicle while it is in the gates swinging path (**CAUTION:** phantom loop is **ONLY** active when gate is **FULLY** open). An exit loop is used to automatically open the gate when a vehicle approaches to exit. **An experienced installer should perform this installation.**



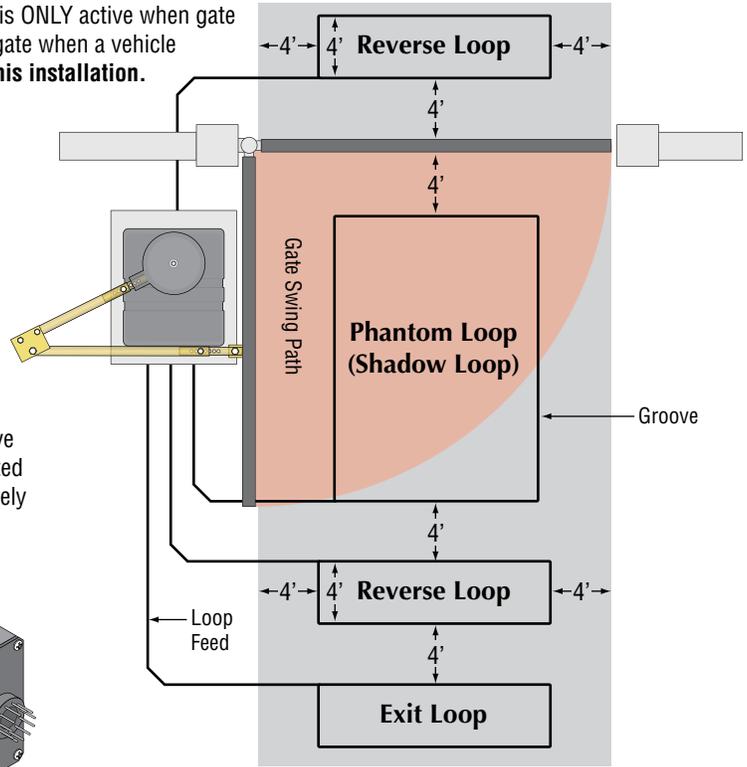
### Cutaway of Groove

Loop wire must be wrapped inside the groove three times. Fill the grooves with a proper sealant.



### Loop Feed

Loop feed must have the loop wires twisted in them approximately 6 twists per foot.

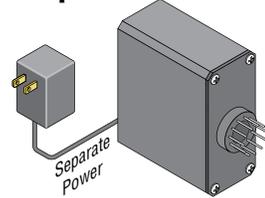


Drawing NOT to scale

### Loop Detector Options



**Eagle Plug-In Loop Detector**  
Connect loop wires to **Loop Wire Input** on control board.



**External Loop Detector**  
Connect loop wires directly to external loop detector.

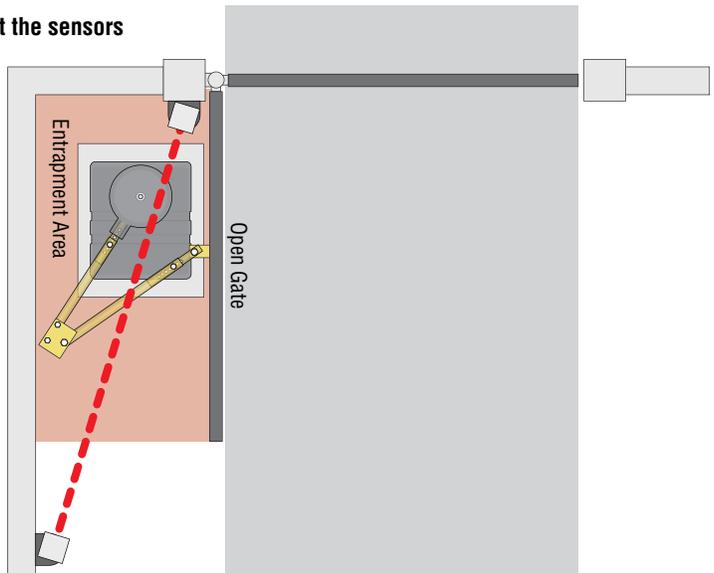
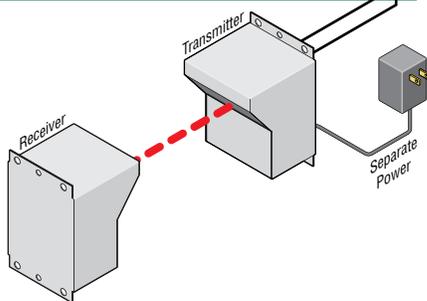
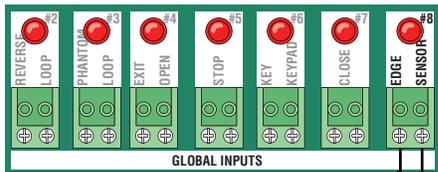
**SOLAR-ONLY LOOP DETECTOR POWER NOTE:** It is recommended using Eagle plug-in loop detectors when using solar-only power. External loop detectors require a separate power source which is usually not available when a solar-only configuration is used. **The operator should not be used to power external loop detectors.** Please contact Eagle Access if you would like more information about a solar-only setup.

# Secondary Entrapment

## Secondary Entrapment Protection

Installation of a reflective photocell sensor is recommended. **Mount the sensors just above the height of the gate operator in position shown.**

Use EMX - IRB - 325 Photocell Sensors. **All secondary entrapment sensors are connected to #8 Edge Sensor Global Input.**





# Diamond Board ONLY

## Diamond Board 120 VAC Input Power Connection

### ⚠ CAUTION

Be sure that the circuit breaker for the input power is turned **OFF** before connecting the input power to the operator.

All operators **MUST** be properly grounded. Installing surge protection is recommended.

**WARNING:** Eagle Access Control Systems, Inc. is not responsible for researching and complying with local building codes. Be sure to check all local building codes before installation.

Input Power Connection

### 120 VAC

#### Wire Color Description

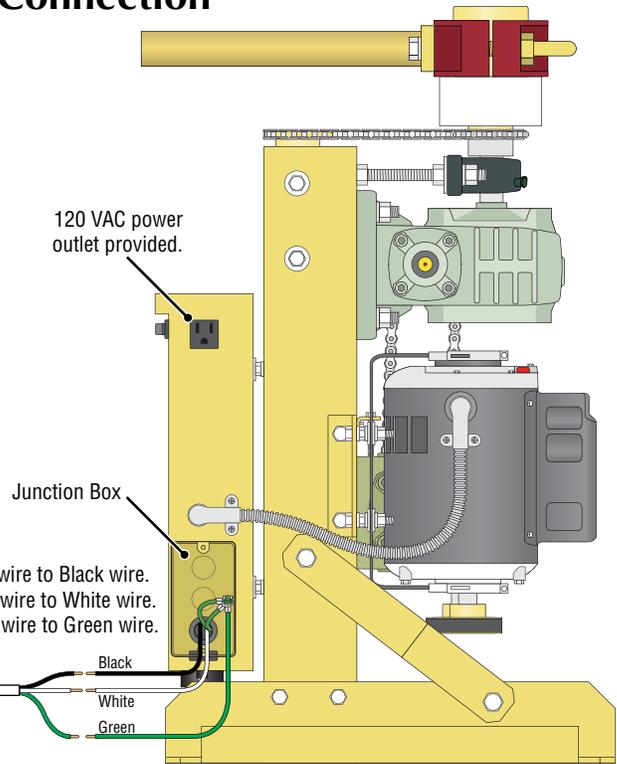
- Black** - 120 VAC input power
- White** - Neutral input
- Green** - Ground input (from an approved grounding method)

**IMPORTANT: DO NOT** cycle the operator **before** setting the limit switches. Damage or injury could occur if limit switches are **NOT** set. (See below)

120 VAC Input Power Wire

**Single Operator 120 VAC Input Wire Guidelines**

14 AWG	12 AWG	10 AWG	8 AWG	4 AWG
250 ft	400 ft	650 ft	1000 ft	2000 ft

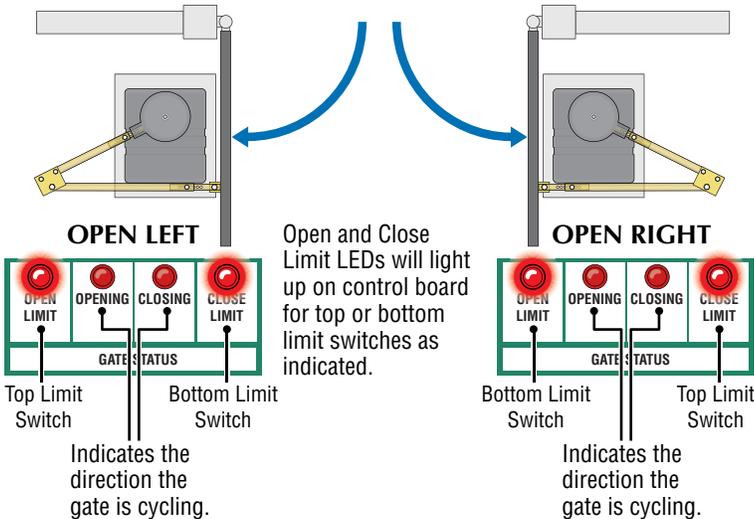
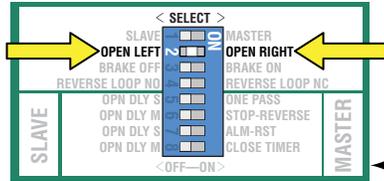


**MASTER/SLAVE INPUT POWER NOTE:** Industrial setting using 3-phase must be on the same phase.

## Setting the Limit Switches

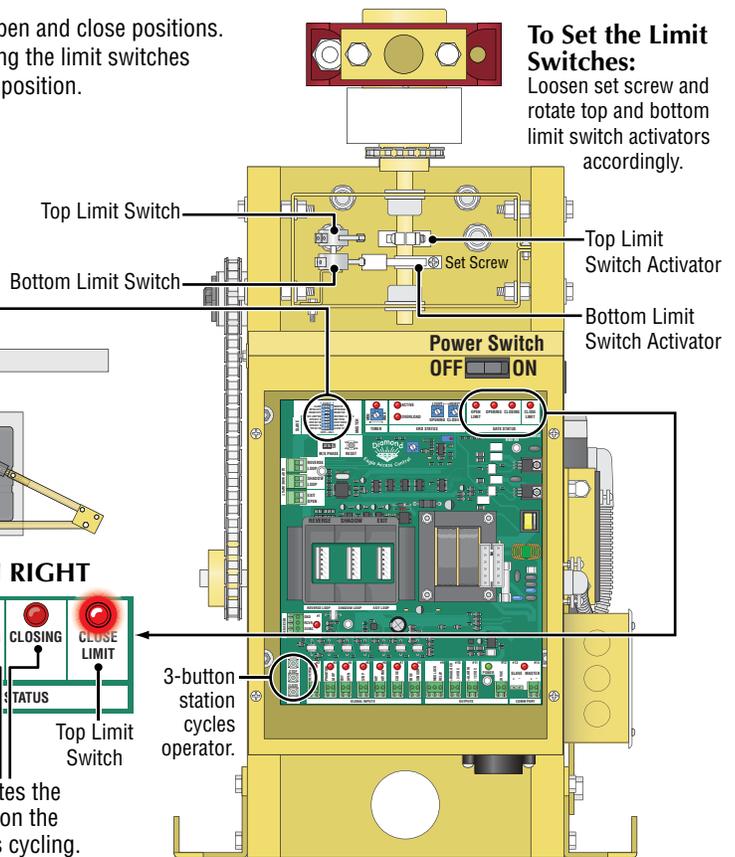
The limit switches **MUST** be set so the gate stops at the correct open and close positions. The control board **MUST** have power for the limit LEDs when setting the limit switches. Adjust the close limit switch **FIRST** when the gate is in the closed position.

### Feature Selector #2



### To Set the Limit Switches:

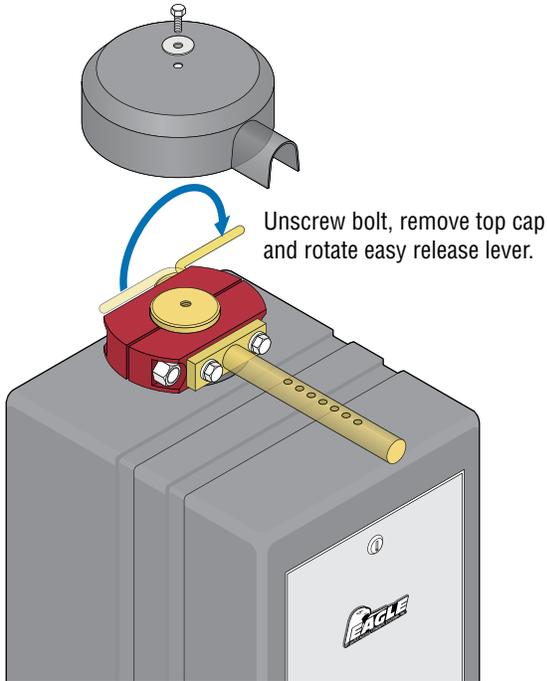
Loosen set screw and rotate top and bottom limit switch activators accordingly.



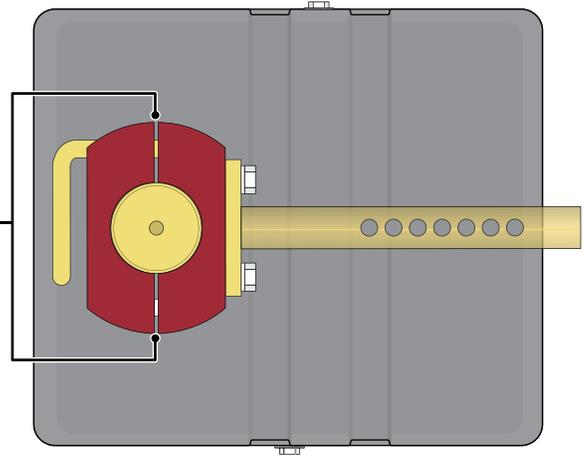
Limit Switches

# Diamond Board ONLY

## Emergency Release



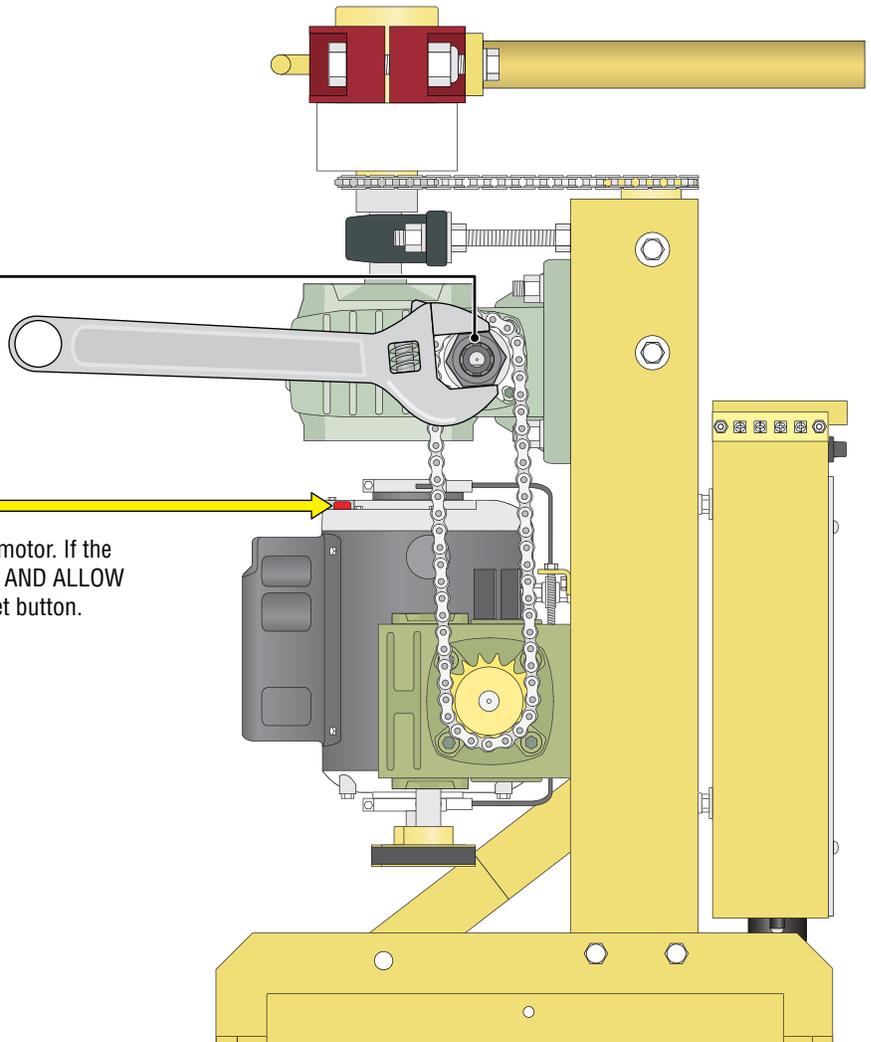
These two gaps should remain even for proper fit.



Emergency Release

## Adjusting the Clutch

Depending on the weight of the gate, clutch slippage may occur. Typical clutch slippage is about 1/4 turn. If it does not slip, re-adjust the clutch accordingly.



Clutch

## Reset the Motor

There is a red reset button on top of the 115 VAC motor. If the motor ceases to function, **TURN THE POWER OFF AND ALLOW THE MOTOR TO COOL DOWN**, then press the reset button.

Reset Motor

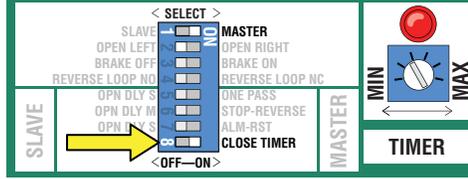
# Diamond Board ONLY

Timer

## Close Timer for a Single or Master Operator

Turn the close timer **ON** (#8) and adjust the **TIMER** from 1 to 60 seconds.

Feature Selector #8 (Switch #1 must be ON)



**NOTE:** See page 15 for master/slave close timer setup.

Clockwise increases close time.

ERD Reverse Sensor

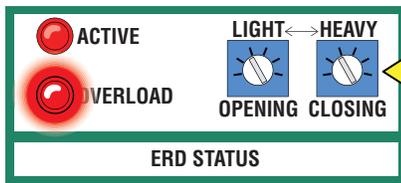
## Two-Way Adjustable Reverse Sensor / ERD Emergency Reversing Device

Proper function of reverse sensor (ERD):

When meeting an obstruction in the **CLOSING** direction, the gate will STOP, reverse direction and return to the FULL OPEN position.

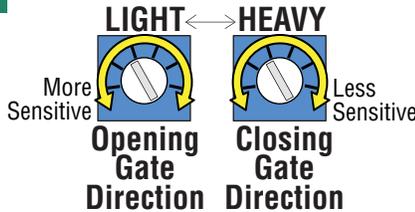
When meeting an obstruction in the **OPENING** direction, the gate will STOP and reverse its direction and stop again after 4-6 inches. The gate operator will stay in an "OVERLOAD" state for 5 minutes or until manually reset.

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



**IMPORTANT:** The level of sensitivity has to do with the weight of the gate and the condition of the installation. A heavier gate will require **LESS** sensitivity and a lighter gate will require **MORE** sensitivity.

**OVERLOAD LED:** The OVERLOAD LED warning light will light up when the gate is heavier than normal for the operator. During this warning, the operator will **NOT** function properly.



### CAUTION

Only a qualified service technician must make all adjustments to these sensors.

The Diamond Control Board has a sensitivity adjustment for the **OPENING** direction and **CLOSING** direction of the gate. **Both MUST be adjusted.**

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

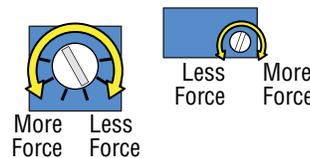
### When adjusting the sensors sensitivity:

**TOO sensitive** - If the gate stops or reverses by itself.

**NOT sensitive enough** - If the gate strikes an object and does **NOT** stop or reverse.

### Factory Set ERD Sensor "Fine Tune" Adjustment:

**Please call Eagle Access before adjusting this sensor!**



Fine tune adjustment is **ONLY necessary** when stopping force **cannot be achieved** within normal reverse sensor ERD range.

Three (3) full turns sets ERD in the "Normal Range":

- Turn **Clockwise** for **MORE force** beyond normal range.

- Turn **Counter-Clockwise** for **LESS force** than normal range.

Outputs

## Output Connection Descriptions

**#9 MAGLOCK RELAY:** (NO-COM-NC Relay) - Can be used to control higher powered maglocks that can't be powered by the diamond board's #10 output connection.

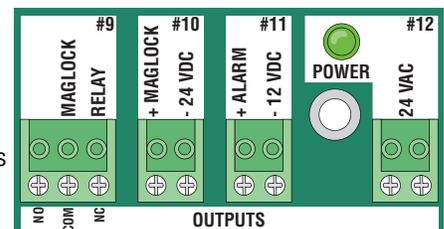
**#10 MAGLOCK (24 VDC):** Provides a 24 VDC and relay output for maglock or solenoid locks.

**#11 ALARM (12 VDC):** Safety Alarm - If the gate hits an obstruction twice while closing or opening, the system will shut down for 5 minutes. On the diamond board, you have two options of reset mode (Feature Selector switch #7):

**OFF setting** - The system will require a "Manual Reset" of the board after the gate hits an obstruction twice while closing or opening.

**ON setting** - The system will automatically reset itself.

**#12 POWER (24 VAC):** Provides 24 VAC power which can be used for external loop detectors and receivers.



# Diamond Board ONLY

## Global Input Descriptions

**#2 REVERSE LOOP:** Momentary or continuous signal - This input is active only when the gate is closing or when its fully open, if this input is active. The close timer is disabled. Vehicle loop detectors and photo sensors should be connected here. Multiple devices may be connected in parallel.

**#3 PHANTOM LOOP (SHADOW):** Momentary or continuous signal - This input is active only when the gate is at rest in the fully open position. The input has no effect on the gate when fully closed or while closing or opening. Continuous activation will prevent the gate from moving in the close direction. When the input is removed, normal operation is resumed. The input is intended for a vehicle loop detector to sense a vehicle in the gate path. Multiple devices may be connected in parallel.

**#4 EXIT LOOP:** Momentary or continuous signal - Once activated, the gate will fully open. Activation while the gate is closing will cause the gate to re-open. Continuous activation while the gate is open will disable the close timer from automatically closing the gate.

**#5 STOP:** Momentary or continuous signal - This function overrides all other signals. Once activated, the gate will immediately stop and wait for a new command to be given. If the stop input is continuously activated, the gate will not move. A jumper wire has been factory installed in this input for the operator to function normally. It must be removed **ONLY** when using the 3-Button Station, see next page.

### #6 KEY / KEYPAD:

**Close Timer ON** - Momentary or continuous signal - Once activated, the gate will fully open. Activation while the gate is closing will cause the gate to re-open. Continuous activation while the gate is open will disable the close timer from automatically closing the gate.

**Close Timer OFF** - Momentary input - This function must be released and reentered to be recognized. This input is to be used for COMMAND OPEN / COMMAND CLOSE applications. The first signal will cause the gate to begin opening. The second signal will close the gate only when the gate is in the fully open position.

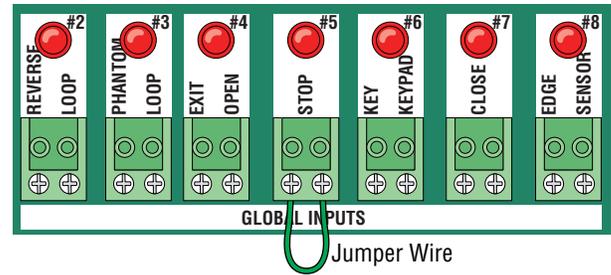
**#7 CLOSE:** Momentary or continuous signal - Once activated, the gate will fully close. Activation while the gate is opening will cause the gate to stop. Activating the gate again will close the gate.

**#8 EDGE SENSOR:** Momentary or continuous signal - This signal is active when the gate is opening and/or closing.

**If activated when the gate is OPENING:** The gate will stop, pause and reverse in the closing direction for 1 1/2 seconds and stop.

Continuous activation will prevent the gate from moving in the opening direction. If the second activation occurs before the limit switch is activated, the gate will stop and reverse direction for 1 1/2 seconds and stop. Thus activating the ALARM MODE. At this point, the operator must be manually reset (OFF/ON) before normal operation can resume.

**If activated when the gate is CLOSING:** The gate will stop, pause and fully re-open. During this mode, the timer to close, reverse loop, exit loop and phantom loop are disabled. The key/keypad and receiver will cause the gate to close if a second activation occurs before the limit switch is activated. The gate will stop and reverse direction for 1 1/2 seconds and stop again, thus activating the ALARM MODE. At this point, the operator must be manually reset (OFF/ON) before normal operation can resume.

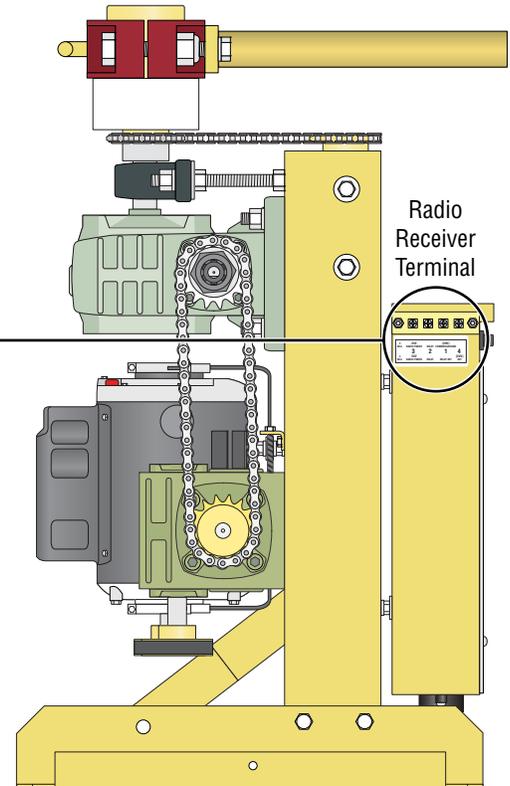
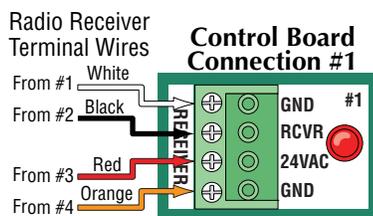
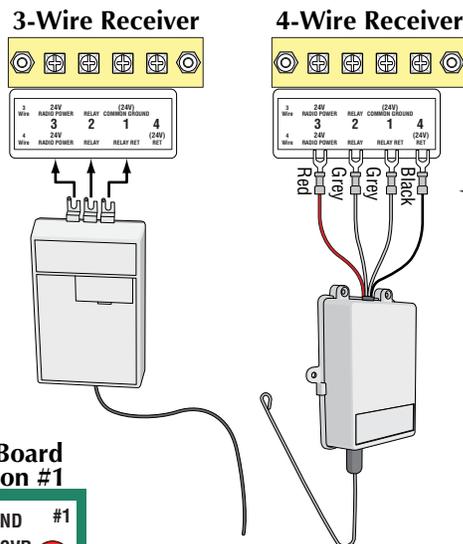


Global Inputs

## Radio Receiver Connection

Radio receiver terminal is mounted on the outside of the control box for easy installation and is pre-wired for a 3-wire or a 4-wire receiver. The Radio receiver terminal is wired to the control board #1 as shown below.

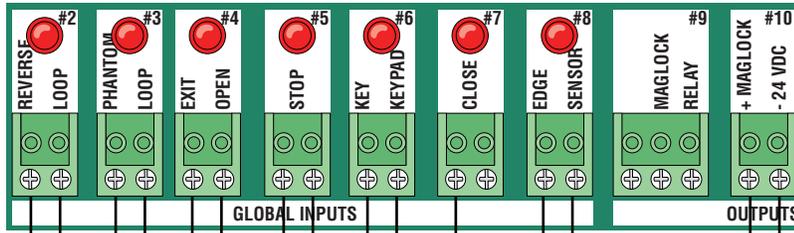
**NOTE:** Radio Receiver can be connected to the master or slave operator for master/slave setup.



Radio Receiver

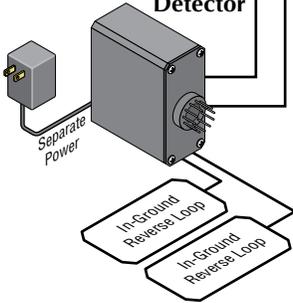
# Diamond Board ONLY

## Connecting Accessories

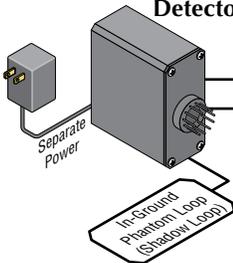


### Safety Equipment

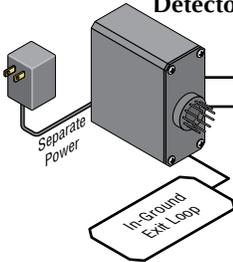
#### External Reverse Loop Detector



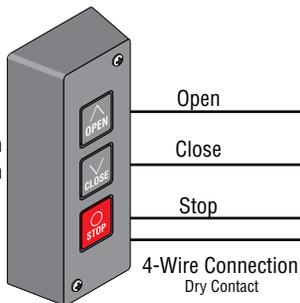
#### External Phantom Loop (Shadow Loop) Detector



#### External Exit Loop Detector



#### 3-Button Station



### Safety Equipment

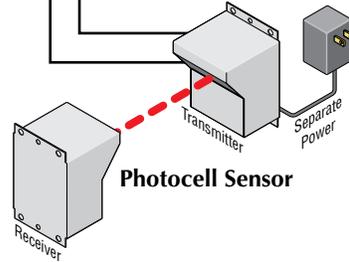
Maglock  
24 VDC  
Max



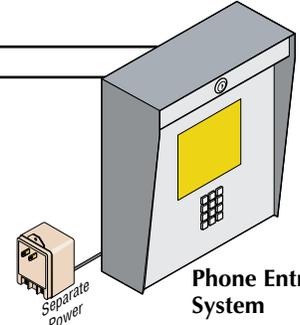
Edge  
Sensor



Photocell  
Sensor



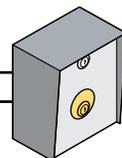
Phone Entry  
System



Fire Dept.  
Lock Box  
Dry Contact



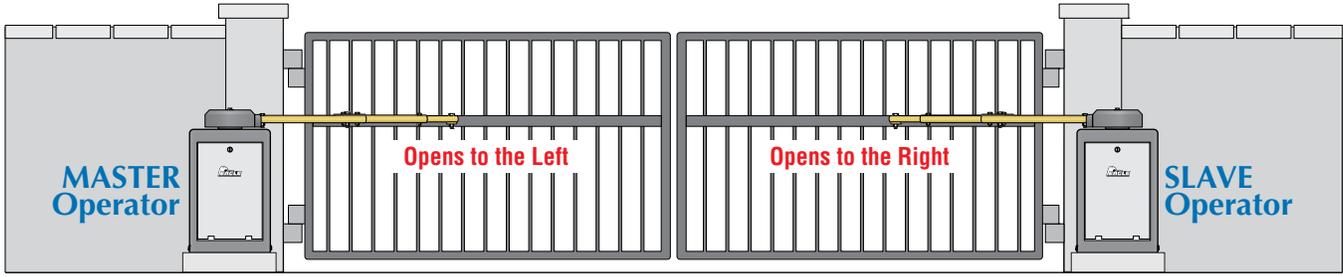
Key  
Switch  
Lock Box  
Dry Contact



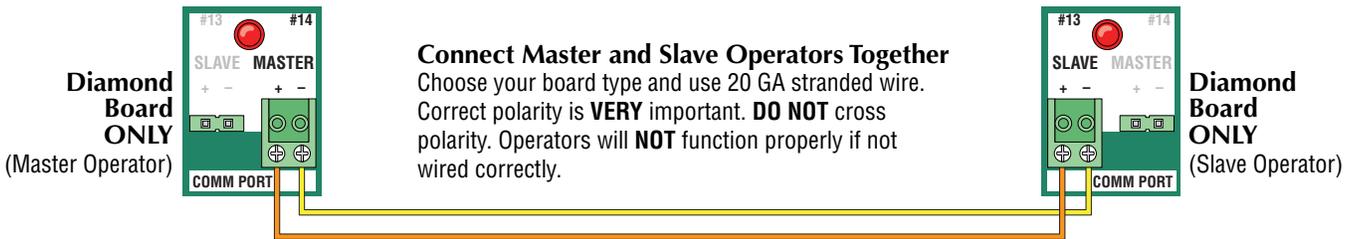
Connecting Accessories

# Diamond Board ONLY

## Diamond Board Master / Slave Setup



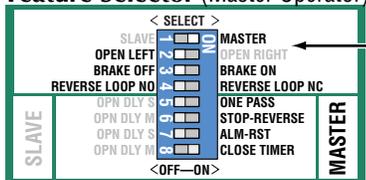
**IMPORTANT:** The 115 VAC power for the master and slave operators MUST be on the same circuit breaker. It is recommended that each gate operator's initial set-up is completed (Direction of gate travel, limit switches, ERD reverse sensor and feature selector switches #1 - #4) before connecting the operators together. After each operator functions individually, proceed to Master/Slave connection and operation.



### Connect Master and Slave Operators Together

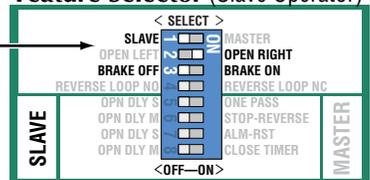
Choose your board type and use 20 GA stranded wire. Correct polarity is **VERY** important. **DO NOT** cross polarity. Operators will **NOT** function properly if not wired correctly.

### Feature Selector (Master Operator)



Use the feature selector to choose #2 - #8 options for the master operator. **Switch #1 MUST be ON.** Refer to page 9 for more information about each of the features.

### Feature Selector (Slave Operator)

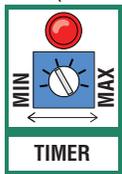


Use the feature selector to choose #2 - #3 options for the slave operator. **Switch #1 MUST be OFF.** Switch #4 is not used. Refer to page 9 for more information about each of the features.

**NOTE:** #1 & #2 switch settings are based on the illustration above.

**ACCESSORIES NOTE:** The Diamond Board allow you to connect accessories to the master or slave boards). See page 14 for accessory wiring connections.

### Close Timer (Master Operator)



Use the Close Timer (#8 ON) on the master board only to set the gates closing time 1 - 60 seconds.

## Gate Delay Functions

For overlapping bi-parting gates

**If NO gate delay is needed:**  
Switches #5 - #8 MUST be OFF.

### Setting the OPEN Delay Feature:

**#5 OPEN DELAY S:** Turning #5 - ON delays opening the **SLAVE** gate by 1.5 seconds. #6 must be turned OFF. This is useful for magnetic lock applications.

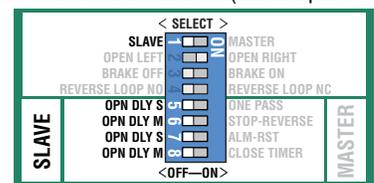
**#6 OPEN DELAY M:** Turning #6 - ON delays opening the **MASTER** gate by 1.5 seconds. #5 must be turned OFF. This is useful for magnetic lock applications.

### Setting the CLOSE Delay Feature:

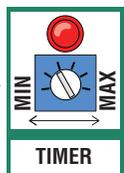
**#7 CLOSE DELAY S:** Turning #7 - ON delays closing the **SLAVE** gate by 1 - 6 seconds, adjustable by the close timer on the slave board. #8 must be turned OFF.

**#8 CLOSE DELAY M:** Turning #8 - ON delays closing the **MASTER** gate by 1 - 6 seconds, adjustable by the close timer on the slave board. #7 must be turned OFF.

### Feature Selector (Slave #5 - #8) Switch #1 MUST be OFF (Slave Operator)



Close Timer on the slave operator  
1 - 6 seconds



# Diamond Board ONLY

## Diamond Board Troubleshooting

SYMPTOMS	PROBABLE CAUSE	REMEDY
Gate stops and reverses direction in mid cycle and the OVERLOAD LED remains ON.	(A) Gate operator is not plumb and level.	(A) Remount operator.
	(B) ERD current sensor may be set too sensitive.	(B) Turn the ERD current sensor slightly in the clockwise direction.
	(C) Gate encountered an obstruction while cycling.	(C) Check and remove all obstructions
Gate will not close.	(A) The radio receiver's LED remains on.	(A) The radio receiver or remote control has malfunctioned in the "ON" position.
	(B) One or more of the global input LEDs remain active.	(B) Check global inputs for a short circuit.
	(C) Gate has re-opened because in encountered an obstruction while closing.	(C) Only Key/Keypad will resume normal operation.
	(D) The loop detector LED is on.	(D) Reset loop detector. Verify correct loop wiring. Set loop detector to a different frequency and/or change the sensitivity of the loop detector.
	(E) Switch #8 CLOSE TIMER is not functioning.	(E) Be sure Switch #8 is in the "ON" position.
Gate will not open.	(A) Motor Overload LED is on.	(A) Reset motor (see page 11).
	(B) Radio receiver is not "ON" when the remote control button is activated.	(B) Radio receiver has malfunctioned in the "OFF" position.
	(C) The green "Power" LED is off.	(C) Turn on operator power switch and/or reset the main circuit breaker.
	(D) The Fuse is blown.	(D) Check and/or replace the fuse with same amp fuse.

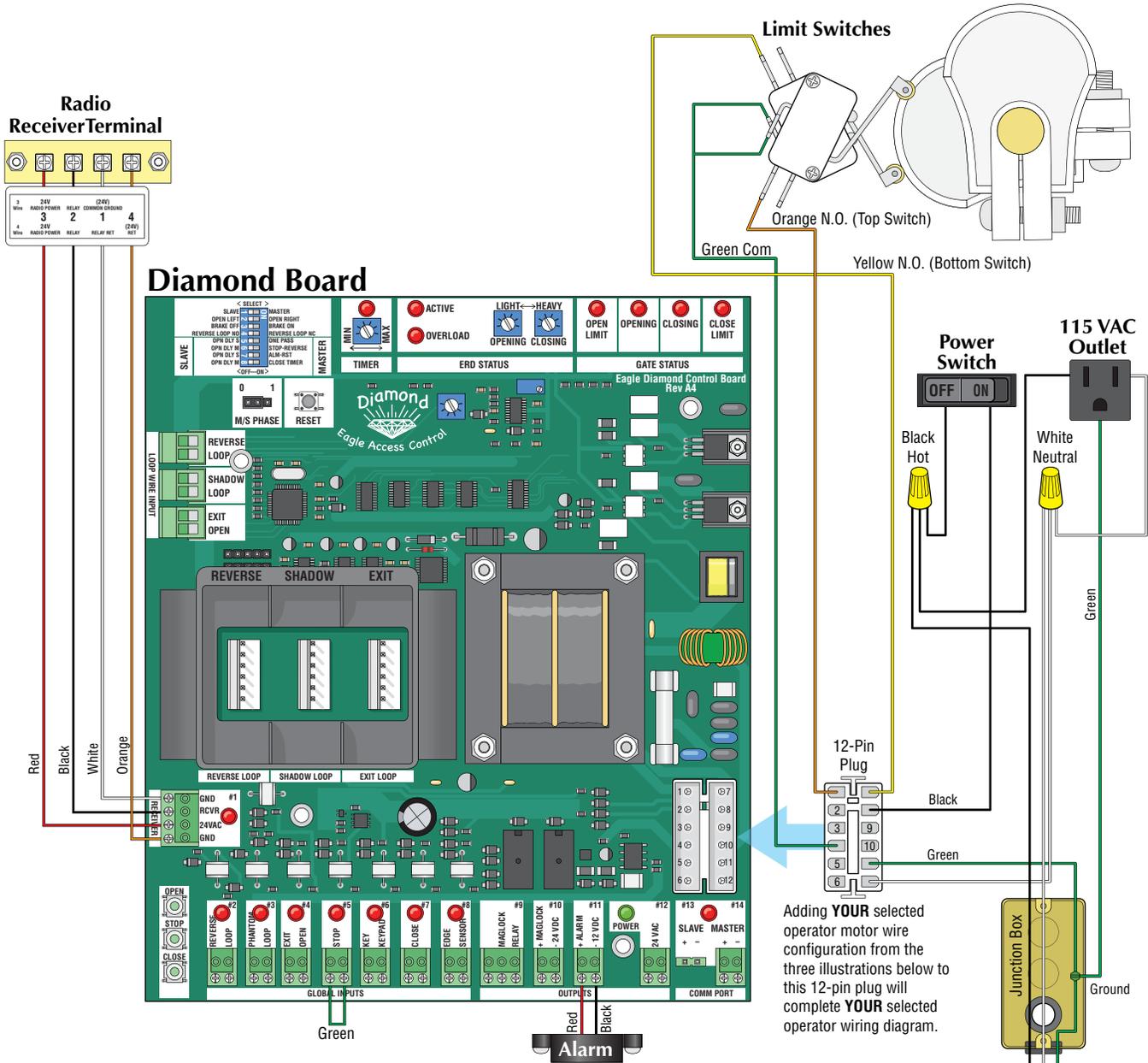
### COMMON OVERSIGHTS TO BE AWARE OF:

- Feature selector Switch #1 MUST be set to the "MASTER ON" position unless the operator is being used as a slave operator.
- Safety external loop detector must be connected to the "REVERSE LOOP" input (see pages 13 & 14).
- If the CLOSE TIMER feature is desired, switch #8 MUST be in the "ON" position.
- It is OK to call the Eagle Access Customer Service Department with any questions... we are here to serve YOU!

**1-800-708-8848**

# Diamond Board ONLY

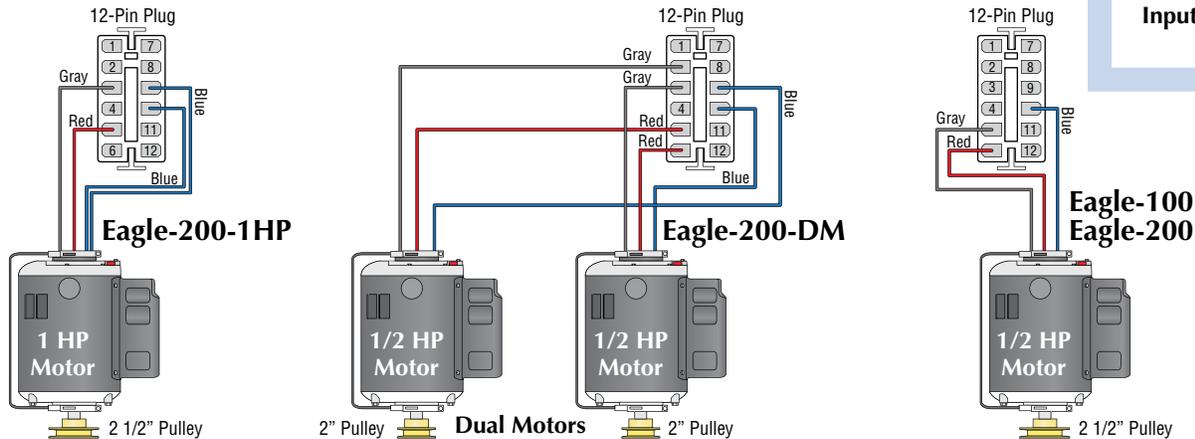
## Eagle-100 / Eagle-200 Models Wiring Diagram



Adding YOUR selected operator motor wire configuration from the three illustrations below to this 12-pin plug will complete YOUR selected operator wiring diagram.

Diamond Board Wiring Diagram

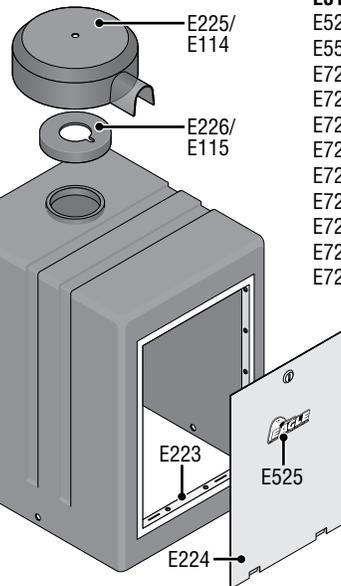
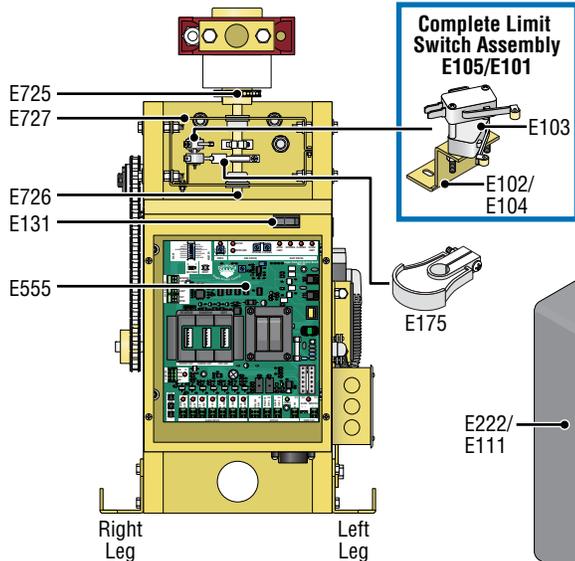
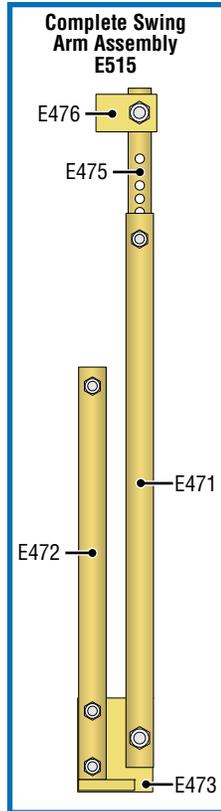
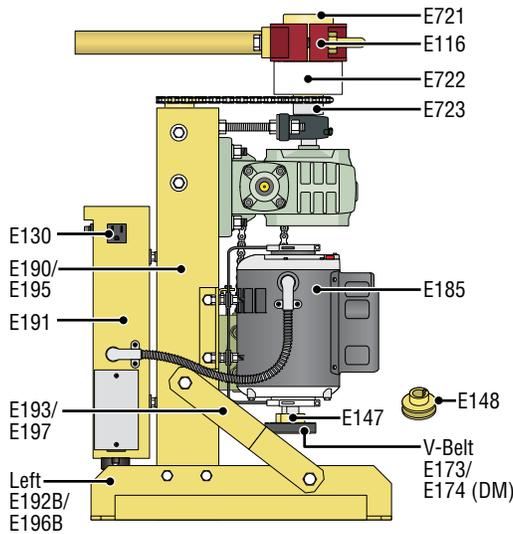
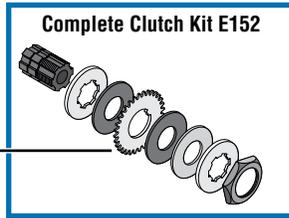
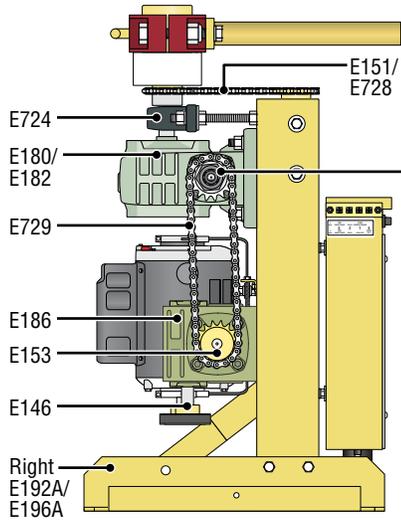
### Motor Wire Configurations



# Diamond Board ONLY

## Eagle-100 / Eagle-200 Series Replacement Parts

### Diamond Board Replacement Parts



### E-Number Part Description

- E101 - Eagle-100 Limit Switch Assembly (Complete)**
- E102 - Eagle-100 Limit Switch Bracket
- E103 - Limit Switch
- E104 - Eagle-200 Limit Switch Bracket
- E105 - Eagle-200 Limit Switch Assembly (Complete)**
- E111 - Eagle-100 Operator Cover
- E114 - Eagle-100 Release Cover
- E115 - Eagle-100 Release Cover Cap
- E116 - Easy Release Main Swing Arm
- E130 - Electrical Outlet
- E131 - Power Switch
- E146 - Pulley (SGR)
- E147 - 2 1/2" Motor Pulley (1/2 HP or 1 HP)
- E148 - 2" Motor Pulley (DM)
- E151 - Eagle-200 limit Chain #35
- E152 - Clutch Kit (Complete)**
- E153 - Eagle-200 Sprocket (SGR)
- E173 - 1/2 HP V-Belt (Single Motor)
- E174 - 1 HP/Dual Motor V-Belt
- E175 - Limit Switch Activator
- E180 - Eagle-200 Primary Gear Reducer (PGR)
- E182 - Eagle-100 Primary Gear Reducer (PGR)
- E185 - 1/2 HP Motor
- E186 - Secondary Gear Reducer (SGR)
- E190 - Eagle-200 Chassis
- E191 - Control Board Box
- E192A - Eagle-200 Right Chassis Leg
- E192B - Eagle-200 Left Chassis Leg
- E193 - Eagle-200 Leg Bracket
- E195 - Eagle-100 Chassis
- E196A - Eagle-100 Right Chassis Leg
- E196B - Eagle-100 Left Chassis Leg
- E197 - Eagle-100 Leg Bracket
- E222 - Eagle-200 Operator Cover
- E223 - Operator Cover Door Frame
- E224 - Operator Cover Door
- E225 - Eagle-200 Release Cover
- E226 - Eagle-200 Release Cover Cap
- E471 - Large Arm
- E472 - Small Arm
- E473 - Arm Attachment Plate
- E475 - Extension Arm
- E476 - Weld Plate (Gate Attachment Bracket)
- E515 - Swing Arm Assembly (Complete)**
- E525 - Plastic Eagle Logo Plaque
- E555 - Diamond Control Board
- E721 - Arm Hub
- E722 - Plastic Cup
- E723 - Sprocket (PGR)
- E724 - Pillow Block
- E725 - Limit Sprocket
- E726 - Limit Shaft
- E727 - Limit Box
- E728 - Eagle-100 Limit Chain #35
- E729 - Drive Chain #50 (Side Position)

If you are uncertain about a specific part you may need, please call us for assistance:

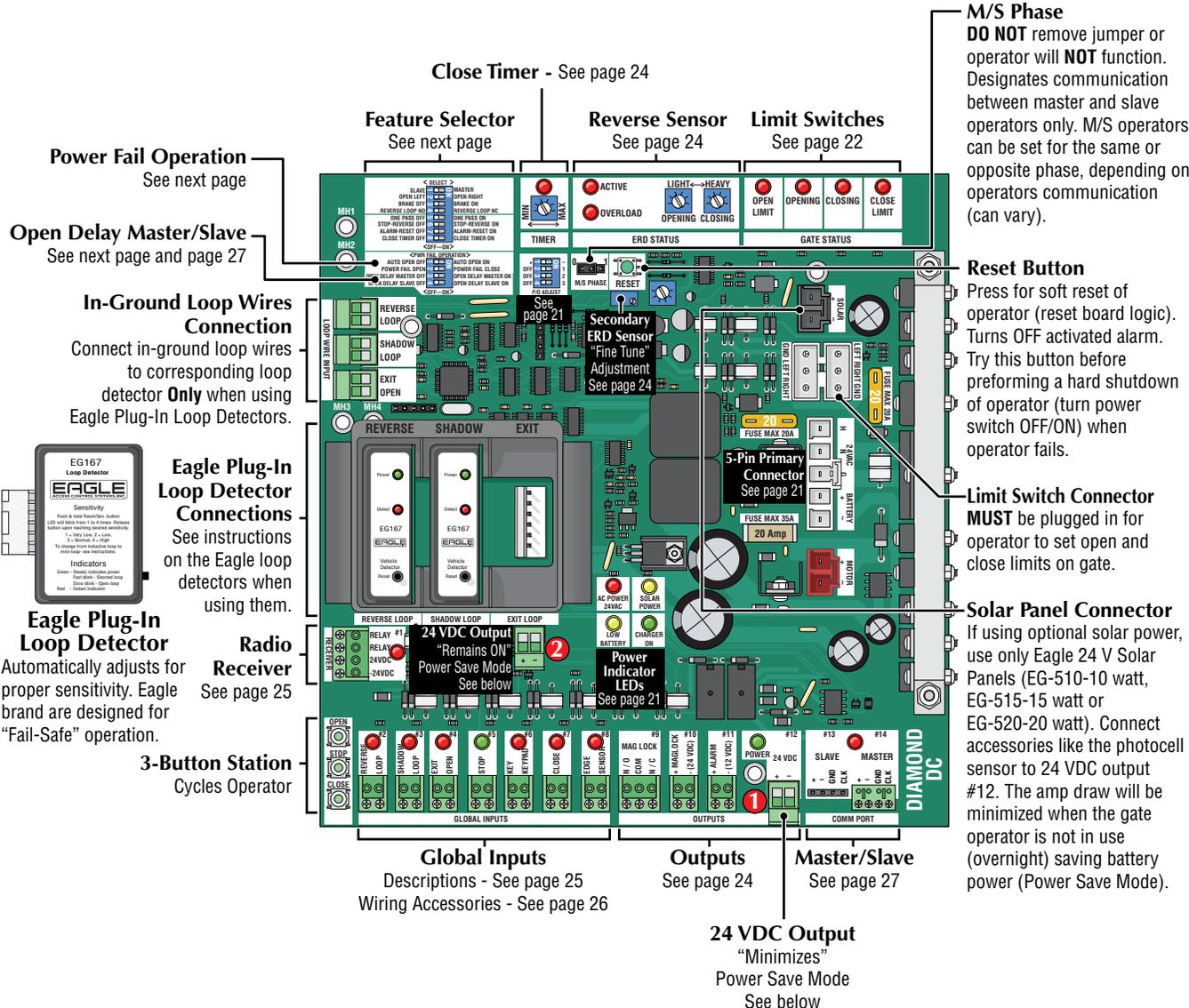
**1-800-708-8848**

# Diamond DC Board ONLY

## DIAMOND DC BOARD ADJUSTMENTS AND WIRING

### Pre-Installation Battery Charging

Prior to installation, make sure the batteries are fully charged. The Battery Pack has been fully charged at the factory, but the batteries will get depleted over time and charging may be necessary before installation. The batteries WILL NOT CHARGE unless the 5-pin primary plug is connected to the Diamond DC board and 115 VAC input power has been connected to the gate operator. The night before installation, connect the gate operator AC power wires (See page 22) to a reliable 115 VAC power source or an adequate portable generator in the field/job site and plug in the 5-pin primary plug (White Plug) into the 5-pin primary connector on the board. Charging takes place automatically if the batteries require it and will be fully charged by morning. The power indicator LEDs will let you know what is taking place with the operator. Disconnect 115 VAC input power and remove 5-pin primary plug from Diamond DC board before installation.



### Power Save Mode

The Diamond DC board **automatically** goes into POWER SAVE MODE when AC power is **NOT** present (operator is powered by batteries ONLY) **OR** the gate operator has not been active for 30 seconds when using **ONLY** battery power (solar-only power). This increases the number of gate cycles when using ONLY battery power. The board will go to “Sleep” after 30 seconds of inactivity to conserve power. It appears non-functioning at this time (all LEDs are OFF) until a command is received by the radio receiver, reset button, on-board 3-button station or an exit open loop. Two 24 VDC power accessories outputs are available. ① (#12 - 24 VDC) **MINIMIZES** the power draw in POWER SAVE MODE when the gate operator is not in use (overnight). ② (24 VDC Output - located below the plug-in exit loop detector on the board) **REMAINS ON** and draws full power continuously. It is **NOT** recommended using this output when using “Solar-Only” power.



# Diamond DC Board ONLY

## Feature Selector Switches #1 - #8

### The Feature Selector Descriptions:

**NOTE:** The power MUST be turned OFF before changing the features selector switches.

**Switch #1:** Slave/Master - Sets the operator to work as Master or Slave. Single operator MUST be set to MASTER.

**Switch #2:** Gate Opening - designates left or right opening direction.

**Switch #3:** Motor Brake - This switch MUST remain OFF for DC operator. The brake feature CANNOT be used for a DC motor.

**Switch #4:** Reverse Loop - Sets the reverse loop to be normally open (NO) or normally close (NC). It is useful in fail-safe applications. Normal setting is OFF (Normally Open).

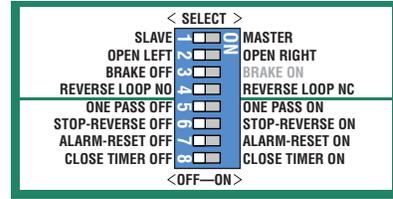
### Switches #5 - #8

**Switch #5:** One Pass (ON/OFF) - This tailgating feature works with the reverse loop to allow only one vehicle to pass the gate. After the vehicle passes, the gate closes instantly. If a second vehicle approaches, the gate stops. The gate resumes closing after the vehicle leaves.

**Switch #6:** Stop-Reverse (ON/OFF) - The radio feature allows the transmitter to work as a three-button station and is useful for a partial opening. If selected, the first command will open the gate, the second command will stop the gate and the third command will close the gate.

**Switch #7:** Alarm Reset (ON/OFF) - If the ON position is selected, after the five minute "Shutdown" time period, the operator will reset and any input will be accepted. Normally, the power must be turned of to reset.

**Switch #8:** Close Timer (ON/OFF) - Turns the close timer ON or OFF. See page 24.



## Power Fail Operation Switches #1 - #2

**NOTE:** Reset button MUST be pressed after changing the switches.

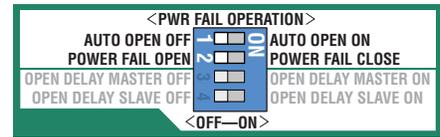
**Switch #1: AUTO OPEN OFF:** When AC power fails, the gate **REMAINS OPERATIONAL** until AC power is restored. **NOTE:** When using solar power, "AUTO OPEN OFF" **MUST** be used.

**AUTO OPEN ON:** When AC power fails, the gate will move to the **FULL OPEN POSITION** and remain open until AC power is restored. **NOTE:** After power is restored, gate will remain open until a close command is made.

**Switch #2:** Operator will automatically shut down before battery power gets too weak to continue safe operation.

**Power Fail Open - OFF:** When battery voltage drains to its minimum allowable level, the gate will move to the **FULL OPEN** position and remain open until AC power is restored or battery voltage returns to normal.

**Power Fail Close - ON:** When battery voltage drains to its minimum allowable level, the gate will move to the **FULL CLOSED** position and remain closed until AC power is restored or battery voltage returns to normal.



## Open Delay Switches #3 - #4 (Master/Slave Setup ONLY)

**NOTE:** These 2 switches remain OFF EXCEPT when using bi-parting overlapping gates. See page 27 for Master/Slave Setup.

### Switch #3: Open Delay Master

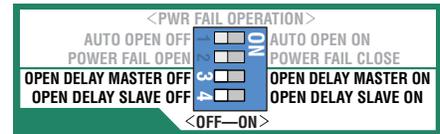
**Open Delay Master OFF:** Master opens and closes at the same time as slave.

**Open Delay Master ON:** Master starts opening 1.5 seconds **after** slave. Master starts closing 1.5 seconds **before** slave. Switch #4 MUST be OFF.

### Switch #4: Open Delay Slave

**Open Delay Slave OFF:** Slave opens and closes at the same time as master.

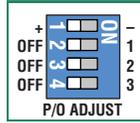
**Open Delay Slave ON:** Slave starts **opening** 1.5 seconds **after** master. Slave starts **closing** 1.5 seconds **before** master. Switch #3 MUST be OFF.



# Diamond DC Board ONLY

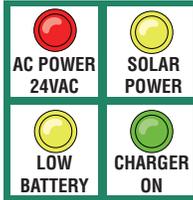
## P/O Adjust Switches #1 - #4

Not used, leave in **OFF** position.



## Power Indicator LEDs

When **ON**, Indicates AC input power is connected to operator and functioning normally.

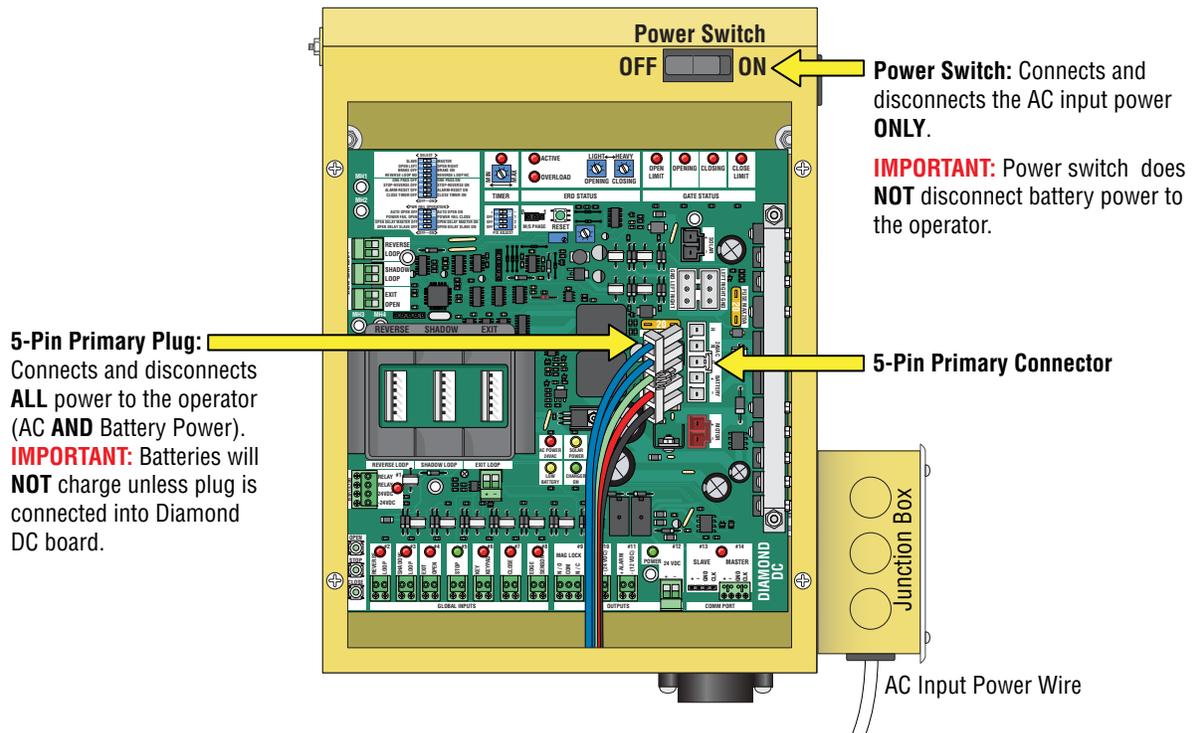


When **ON**, Indicates battery pack is connected to operator and functioning normally.

When **ON**, Indicates low battery power. Charging will automatically start when operator is able.

When **ON**, Indicates battery charging is taking place.

## Power ON/OFF Switch and 5-Pin Primary Plug for Diamond DC Board



Diamond DC Board

## Battery Replacement When Necessary

Normal battery deterioration will take place over time and batteries will need to be replaced eventually. Remove the 5-Pin Primary Connector (White Plug) from Diamond DC Board BEFORE replacing the Eagle Battery Pack.

**IMPORTANT:** Use only Eagle Battery Pack in your Eagle gate operator.

# Diamond DC Board ONLY

## Diamond DC Board 120/240 VAC Input Power Connection

**WARNING:** Eagle Access Control Systems, Inc. is not responsible for researching and complying with local building codes. Be sure to check all local building codes before installation.

### CAUTION

Be sure that the circuit breaker for the line input power is turned **OFF** before connecting the input power to the operator.

All operators **MUST** be properly grounded. Installing surge protection is recommended.

Input Power Connection

### 120 VAC

#### Operator Wire Color Description

- Black** - 120 VAC (Hot)
- White** - Neutral
- Green** - Ground (from an approved grounding method)

Black wire to Black wire.  
White wire to White wire.  
Green wire to Green wire.

120 VAC Input Power Wire

#### Single Operator 120 VAC Input Wire Guidelines

14 AWG	12 AWG	8 AWG	6 AWG
25 ft	50 ft	100 ft	200 ft

### 240 VAC - Single Phase

#### Operator Wire Color Description

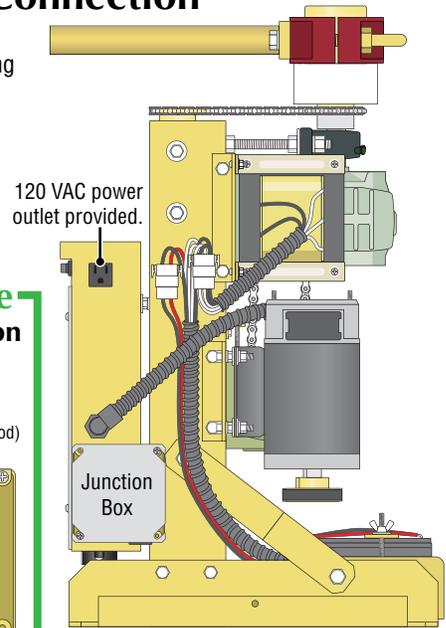
- Black** - 120 VAC (Hot)
- Gray** - 120 VAC (Hot)
- Green** - Ground (from an approved grounding method)

Only use 2 wires of the 3 phase input power wire. Terminate 3rd wire (Do not use).

240 VAC Three Phase Input Power Wire

#### Single Operator 240 VAC Input Wire Guidelines

14 AWG	12 AWG	10 AWG	8 AWG
50 ft	100 ft	150 ft	200 ft



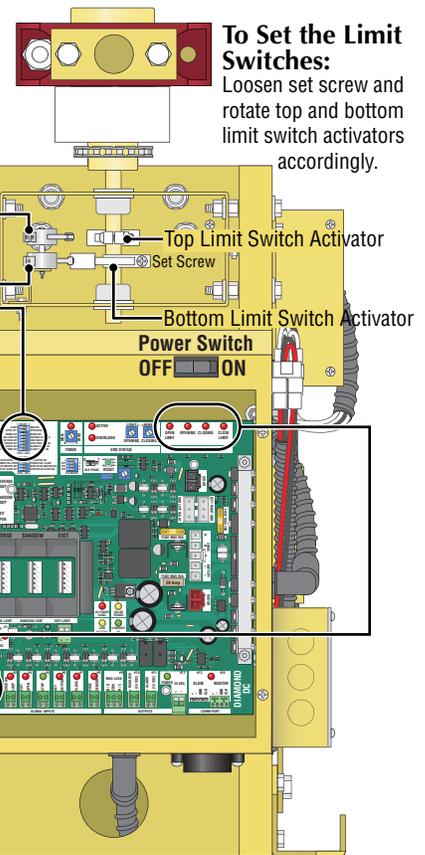
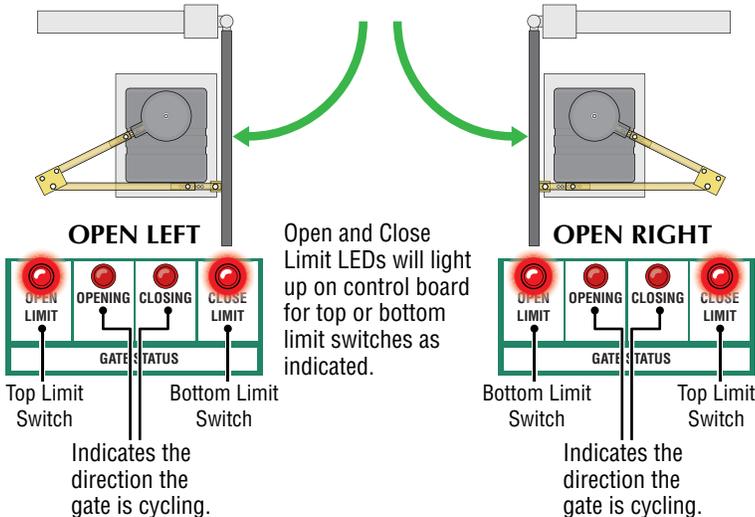
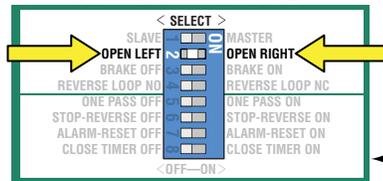
**MASTER/SLAVE LINE INPUT POWER NOTE:** The VAC input power for the master and slave operators **MUST** be on the same circuit breaker.

**IMPORTANT: DO NOT** cycle the operator **before** setting the limit switches. Damage or injury could occur if limit switches are **NOT** set. (See below)

## Setting the Limit Switches

The limit switches **MUST** be set so the gate stops at the correct open and close positions. the control board **MUST** have power for the limit LEDs when setting the limit switches. Adjust the close limit switch **FIRST** when the gate is in the closed position.

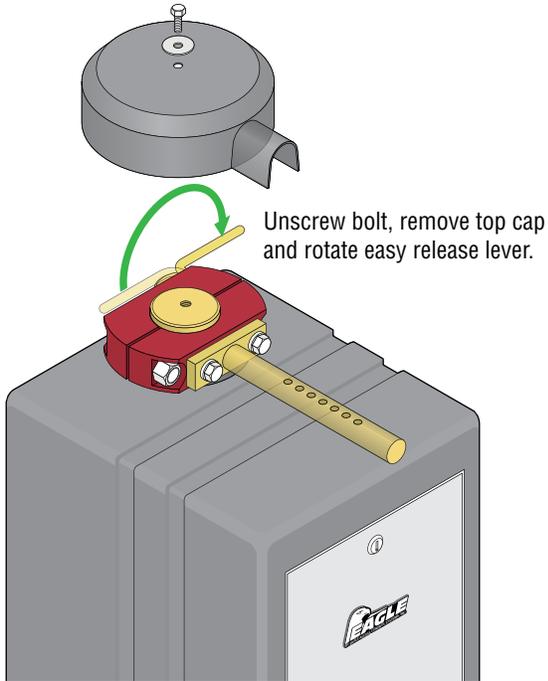
### Feature Selector #2



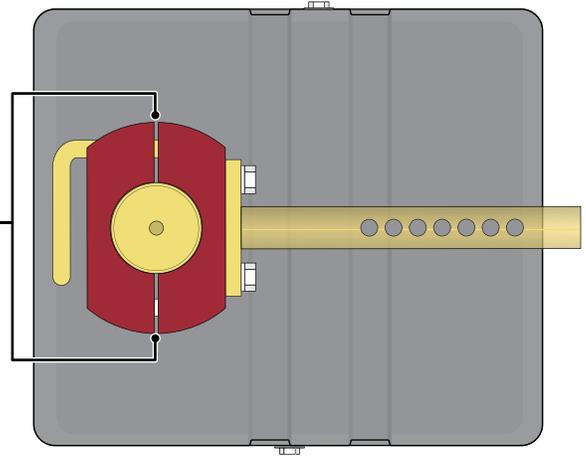
Limit Switches

# Diamond DC Board ONLY

## Emergency Release



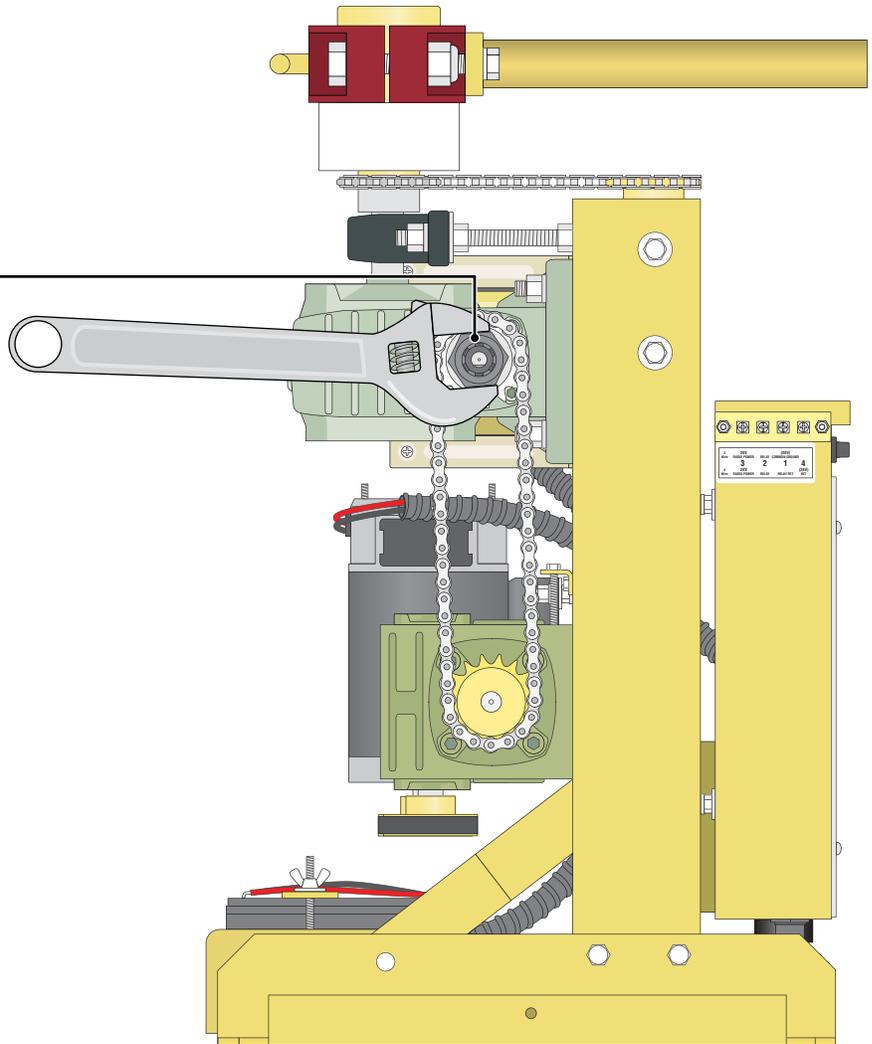
These two gaps should remain even for proper fit.



Emergency Release

## Adjusting the Clutch

Depending on the weight of the gate, clutch slippage may occur. Typical clutch slippage is about 1/4 turn. If it does not slip, re-adjust the clutch accordingly.



Clutch

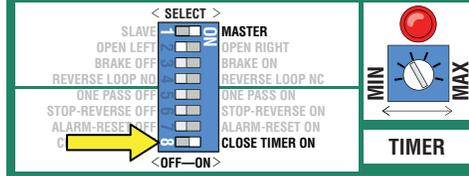
# Diamond DC Board ONLY

Timer

## Close Timer for a Single or Master Operator

Turn the close timer **ON** (#8) and adjust the **TIMER** from 1 to 60 seconds.

Feature Selector #8 (Switch #1 must be ON)



**NOTE:** See page 27 for master/slave close timer setup.

Reverse Sensor

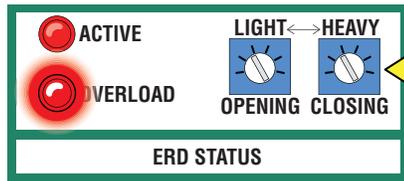
## Two-Way Adjustable Reverse Sensor / ERD Emergency Reversing Device

Proper function of reverse sensor (ERD):

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 again after 4-6 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 will sound until manually reset.**



**IMPORTANT:** The level of sensitivity has to do with the weight of the gate and the condition of the installation. A heavier gate will require **LESS** sensitivity and a lighter gate will require **MORE** sensitivity.

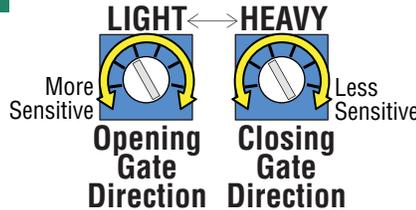
**OVERLOAD LED:** The OVERLOAD LED warning light will light up when the gate is heavier than normal for the operator. During this warning, the operator will **NOT** function properly.

### CAUTION

Only a qualified service technician must make all adjustments to these sensors.

The Diamond Control Board has a sensitivity adjustment for the **OPENING** direction and **CLOSING** direction of the gate. **Both MUST be adjusted.**

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



### When adjusting the sensors sensitivity:

**TOO sensitive** - If the gate stops or reverses by itself.

**NOT sensitive enough** - If the gate strikes an object and does **NOT** stop or reverse.

### Factory Set ERD Sensor "Fine Tune" Adjustment:

**Please call Eagle Access before adjusting this sensor!**

Fine tune adjustment is **ONLY necessary** when stopping force **cannot be achieved** within normal reverse sensor ERD range.

Three (3) full turns sets ERD in the "Normal Range":

- Turn **Clockwise** for **MORE force** beyond normal range.

- Turn **Counter-Clockwise** for **LESS force** than normal range.



Outputs

## Output Connection Descriptions

**#9 MAGLOCK RELAY:** (NO-COM-NC Relay) - Can be used to control higher powered maglocks that can't be powered by the Diamond DC board's #10 output connection.

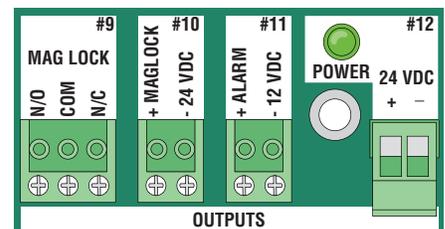
**#10 MAGLOCK (24 VDC):** Provides a 24 VDC and relay output for maglock or solenoid locks.

**#11 ALARM (12 VDC):** Safety Alarm - If the gate hits an obstruction twice while closing or opening, the system will shut down for 5 minutes. On the Diamond DC board, you have two options of reset mode (Feature Selector switch #7):

**OFF setting** - The system will require a "Manual Reset" of the board after the gate hits an obstruction twice while closing or opening.

**ON setting** - The system will automatically reset itself.

**#12 POWER (24 VDC):** Connect accessories to this when using the POWER SAVE MODE to maximize operating cycles when AC power is not present. See page 19.



# Diamond DC Board ONLY

## Global Input Descriptions

**#2 REVERSE LOOP:** Momentary or continuous signal - This input is active only when the gate is closing or when its fully open, if this input is active. The close timer is disabled. Vehicle loop detectors and photo sensors should be connected here. Multiple devices may be connected in parallel.

**#3 SHADOW LOOP:** Momentary or continuous signal - This input is active only when the gate is at rest in the fully open position. The input has no effect on the gate when fully closed or while closing or opening. Continuous activation will prevent the gate from moving in the close direction. When the input is removed, normal operation is resumed. The input is intended for a vehicle loop detector to sense a vehicle in the gate path. Multiple devices may be connected in parallel.

**#4 EXIT LOOP:** Momentary or continuous signal - Once activated, the gate will fully open. Activation while the gate is closing will cause the gate to re-open. Continuous activation while the gate is open will disable the close timer from automatically closing the gate.

**#5 STOP:** Momentary or continuous signal - This function overrides all other signals. Once activated, the gate will immediately stop and wait for a new command to be given. If the stop input is continuously activated, the gate will not move. A jumper wire has been factory installed in this input for the operator to function normally. It must be removed **ONLY** when using the 3-Button Station, see next page.

### #6 KEY / KEYPAD:

**Close Timer ON** - Momentary or continuous signal - Once activated, the gate will fully open. Activation while the gate is closing will cause the gate to re-open. Continuous activation while the gate is open will disable the close timer from automatically closing the gate.

**Close Timer OFF** - Momentary input - This function must be released and reentered to be recognized. This input is to be used for COMMAND OPEN / COMMAND CLOSE applications. The first signal will cause the gate to begin opening. The second signal will close the gate only when the gate is in the fully open position.

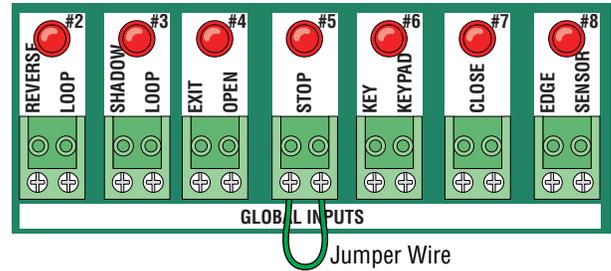
**#7 CLOSE:** Momentary or continuous signal - Once activated, the gate will fully close. Activation while the gate is opening will cause the gate to stop. Activating the gate again will close the gate.

**#8 EDGE SENSOR:** Momentary or continuous signal - This signal is active when the gate is opening and/or closing.

**If activated when the gate is OPENING:** The gate will stop, pause and reverse in the close direction for 1 1/2 seconds and stop.

Continuous activation will prevent the gate from moving in the opening direction. If the second activation occurs before the limit switch is activated, the gate will stop and reverse direction for 1 1/2 seconds and stop. Thus activating the ALARM MODE. At this point, the operator must be manually reset (OFF/ON) before normal operation can resume.

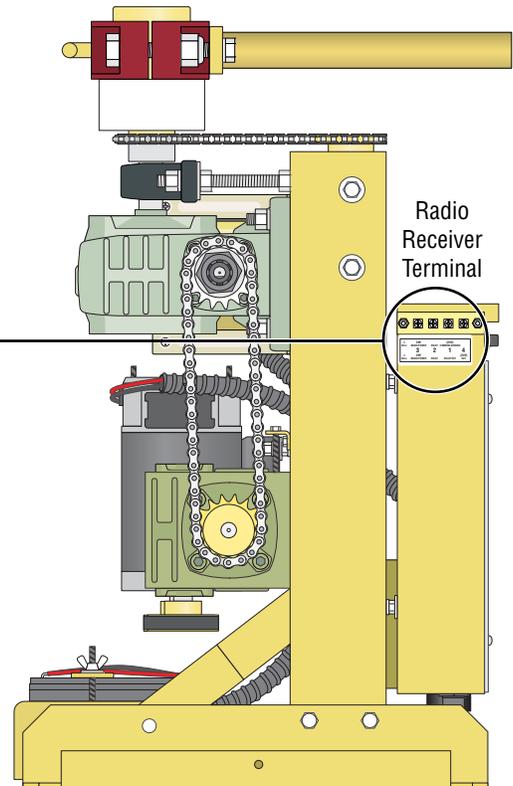
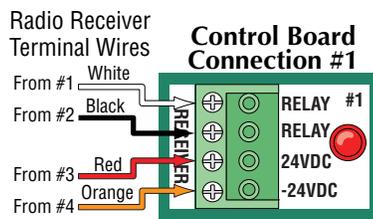
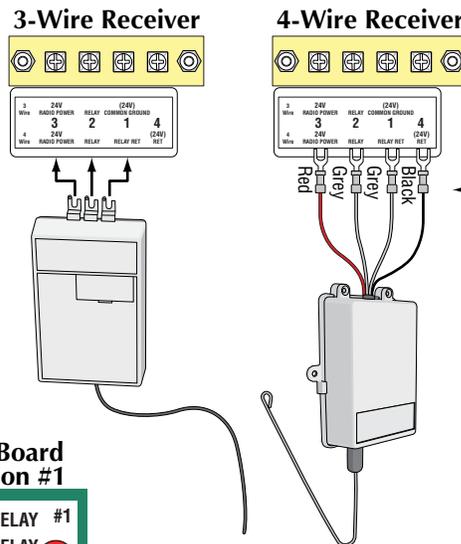
**If activated when the gate is CLOSING:** The gate will stop, pause and fully re-open. During this mode, the timer to close, reverse loop, exit loop and phantom loop are disabled. The key/keypad and receiver will cause the gate to close if a second activation occurs before the limit switch is activated. The gate will stop and reverse direction for 1 1/2 seconds and stop again, thus activating the ALARM MODE. At this point, the operator must be manually reset (OFF/ON) before normal operation can resume.



## Radio Receiver Connection

Radio receiver terminal is mounted on the outside of the control box for easy installation and is pre-wired for a 3-wire or a 4-wire receiver. The Radio receiver terminal is wired to the control board #1 as shown below.

**NOTE:** Radio Receiver can be connected to the master or slave operator for master/slave setup.



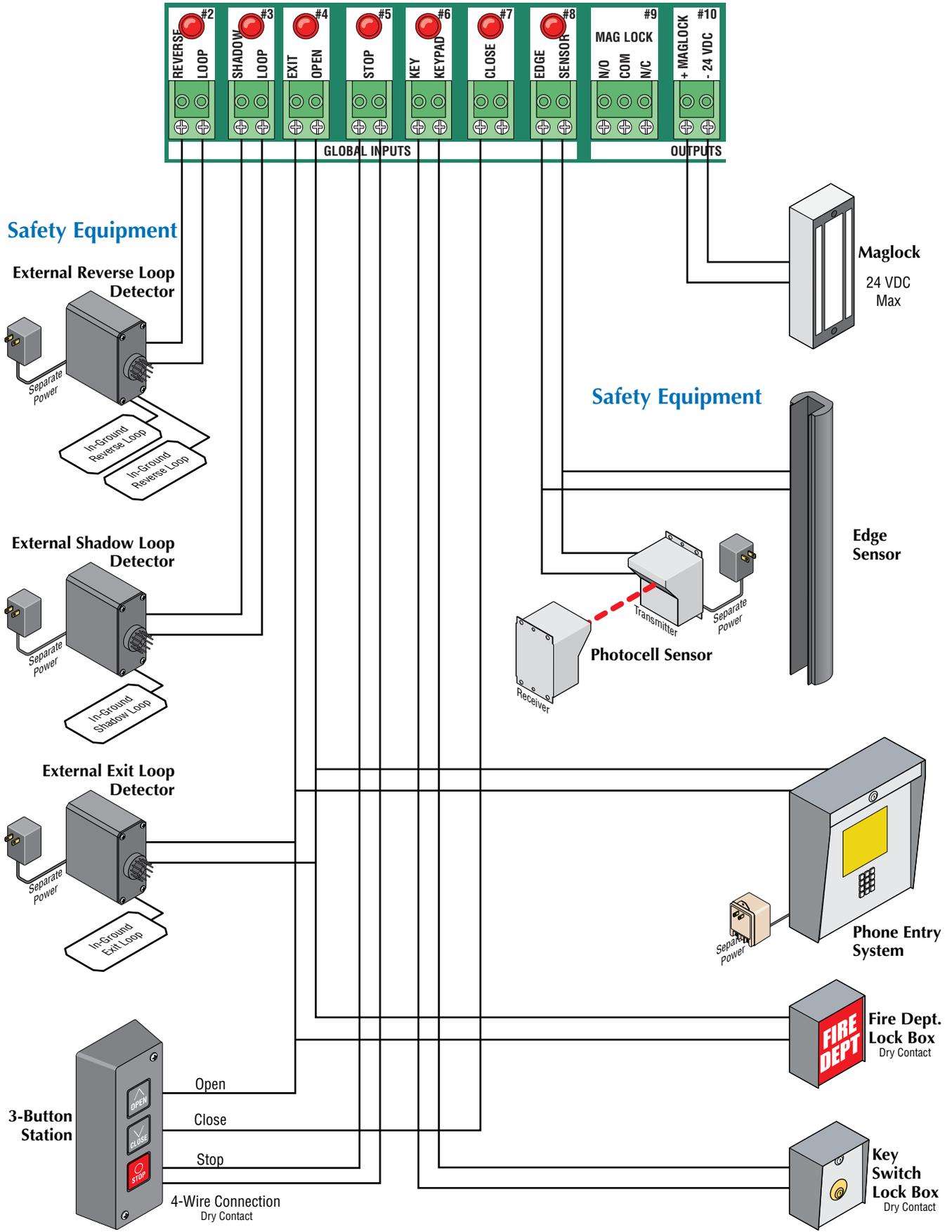
Global Inputs

Radio Receiver

# Diamond DC Board ONLY

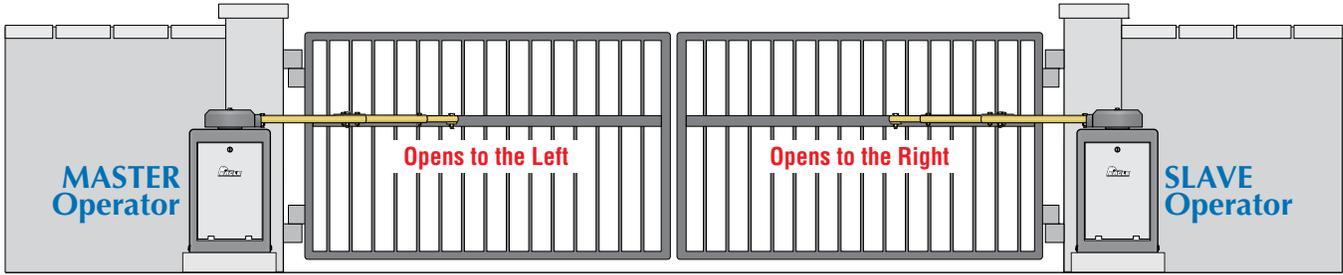
## Connecting Accessories

Connecting Accessories

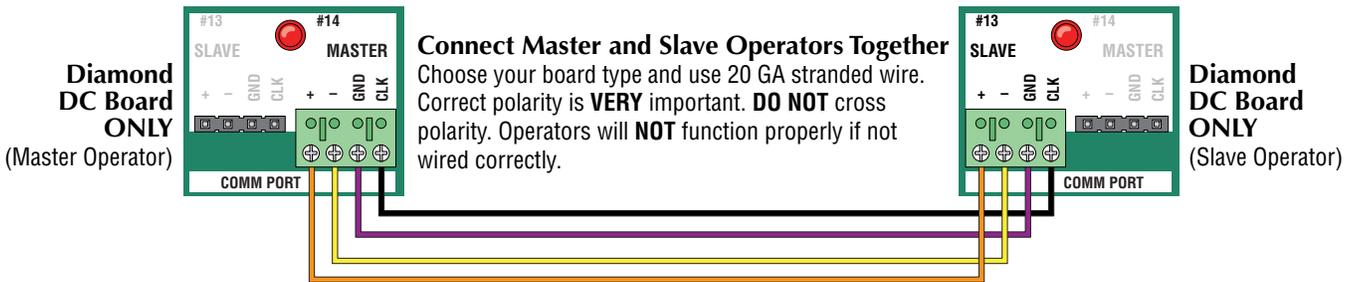


# Diamond DC Board ONLY

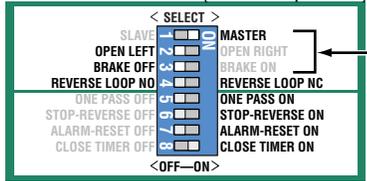
## Diamond DC Board Master / Slave Setup



**IMPORTANT:** The 115 VAC power for the master and slave operators **MUST** be on the same circuit breaker. It is recommended that each gate operator's initial set-up is completed (Direction of gate travel, limit switches, reverse sensor and feature selector switches #1 - #4) before connecting the operators together. After each operator functions individually, proceed to Master/Slave connection and operation.



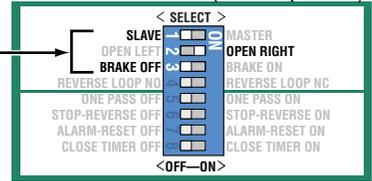
### Feature Selector (Master Operator)



Use the feature selector to choose #2 - #8 options for the master operator. **Switch #1 MUST be ON.** Refer to page 20 for more information about each of the features.

**NOTE:** #1 & #2 switch settings are based on the illustration above.  
Switch #3 **MUST** be OFF.

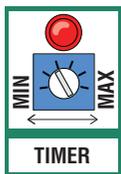
### Feature Selector (Slave Operator)



Use the feature selector to choose #2 - #3 options for the slave operator. **Switch #1 MUST be OFF.** Switch #4 is not used. Refer to page 20 for more information about each of the features.

**ACCESSORIES NOTE:** The Diamond DC Board allow you to connect accessories to the master or slave boards.  
See page 26 for accessory wiring connections.

### Close Timer (Master Operator)

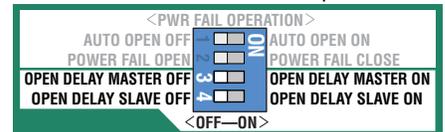


Use the Close Timer (#8 ON) to set the gates closing time 1 - 60 seconds.

## Open Delay Functions

For overlapping bi-parting gates

Set either Master or Slave operator



**If NO gate delay is needed:**  
Switches #3 - #4 **MUST** be OFF.

### Setting the OPEN Delay for Master or Slave operator:

**Switch #3: Open Delay Master ON:** Master starts **opening** 1.5 seconds **after** slave. Master starts **closing** 1.5 seconds **before** slave. Switch #4 **MUST** be OFF.

**Switch #4: Open Delay Slave ON:** Slave starts **opening** 1.5 seconds **after** master. Slave starts **closing** 1.5 seconds **before** master. Switch #3 **MUST** be OFF.

# Diamond DC Board ONLY

## Diamond DC Board Troubleshooting

SYMPTOMS	PROBABLE CAUSE	REMEDY
Gate stops and reverses direction in mid cycle and the OVERLOAD LED remains ON.	(A) Gate operator is not plumb and level.	(A) Remount operator.
	(B) ERD current sensor may be set too sensitive.	(B) Turn the ERD current sensor slightly in the clockwise direction.
	(C) Gate encountered an obstruction while cycling.	(C) Check and remove all obstructions
Gate will not close.	(A) The radio receiver's LED remains on.	(A) The radio receiver or remote control has malfunctioned in the "ON" position.
	(B) One or more of the global input LEDs remain active.	(B) Check global inputs for a short circuit.
	(C) Gate has re-opened because in encountered an obstruction while closing.	(C) Only Key/Keypad will resume normal operation.
	(D) The loop detector LED is on.	(D) Reset loop detector. Verify correct loop wiring. Set loop detector to a different frequency and/or change the sensitivity of the loop detector.
	(E) Switch #8 is not functioning.	(E) Be sure Switch #8 is in the "ON" position.
Gate will not open.	(A) Motor Overload LED is on.	(A) Let motor cool down.
	(B) Radio receiver is not "ON" when the remote control button is activated.	(B) Radio receiver has malfunctioned in the "OFF" position.
	(C) The green "Power" LED is off.	(C) Turn on operator power switch and/or reset the main circuit breaker.
	(D) The Fuse is blown.	(D) Check and/or replace the fuse with same amp fuse.

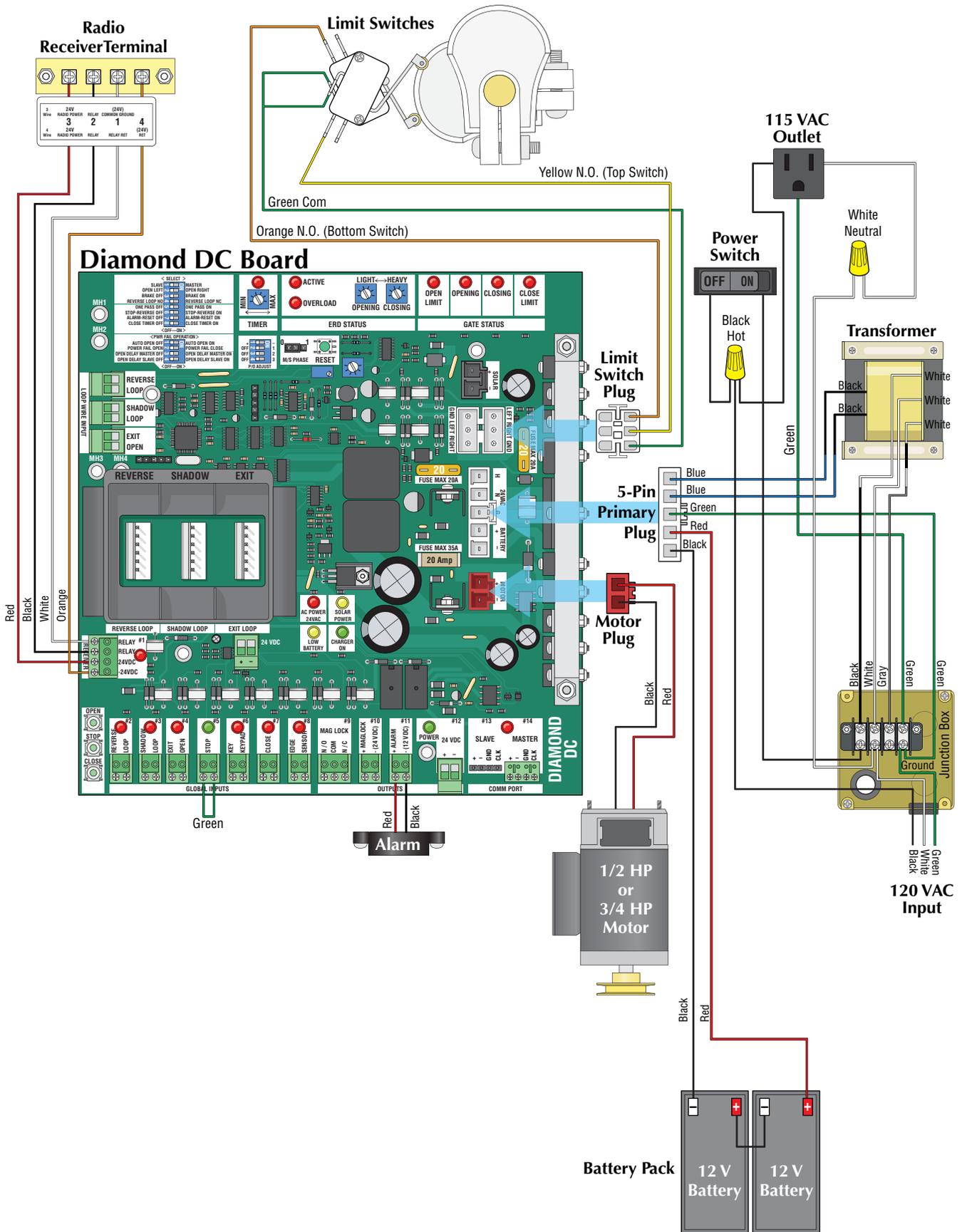
### COMMON OVERSIGHTS TO BE AWARE OF:

- Feature selector Switch #1 MUST be set to the "MASTER ON" position unless the operator is being used as a slave operator.
- Feature selector Switch #3 (Brake) MUST be set to the "OFF" position.
- Safety external loop detector must be connected to the "REVERSE LOOP" input (see pages 25 & 26).
- If the CLOSE TIMER feature is desired, switch #8 MUST be in the "ON" position.
- It is OK to call the Eagle Access Customer Service Department with any questions... we are here to serve YOU!

**1-800-708-8848**

# Diamond DC Board ONLY

## Eagle-100-DC / Eagle-200-DC 120 VAC Input Models Wiring Diagram

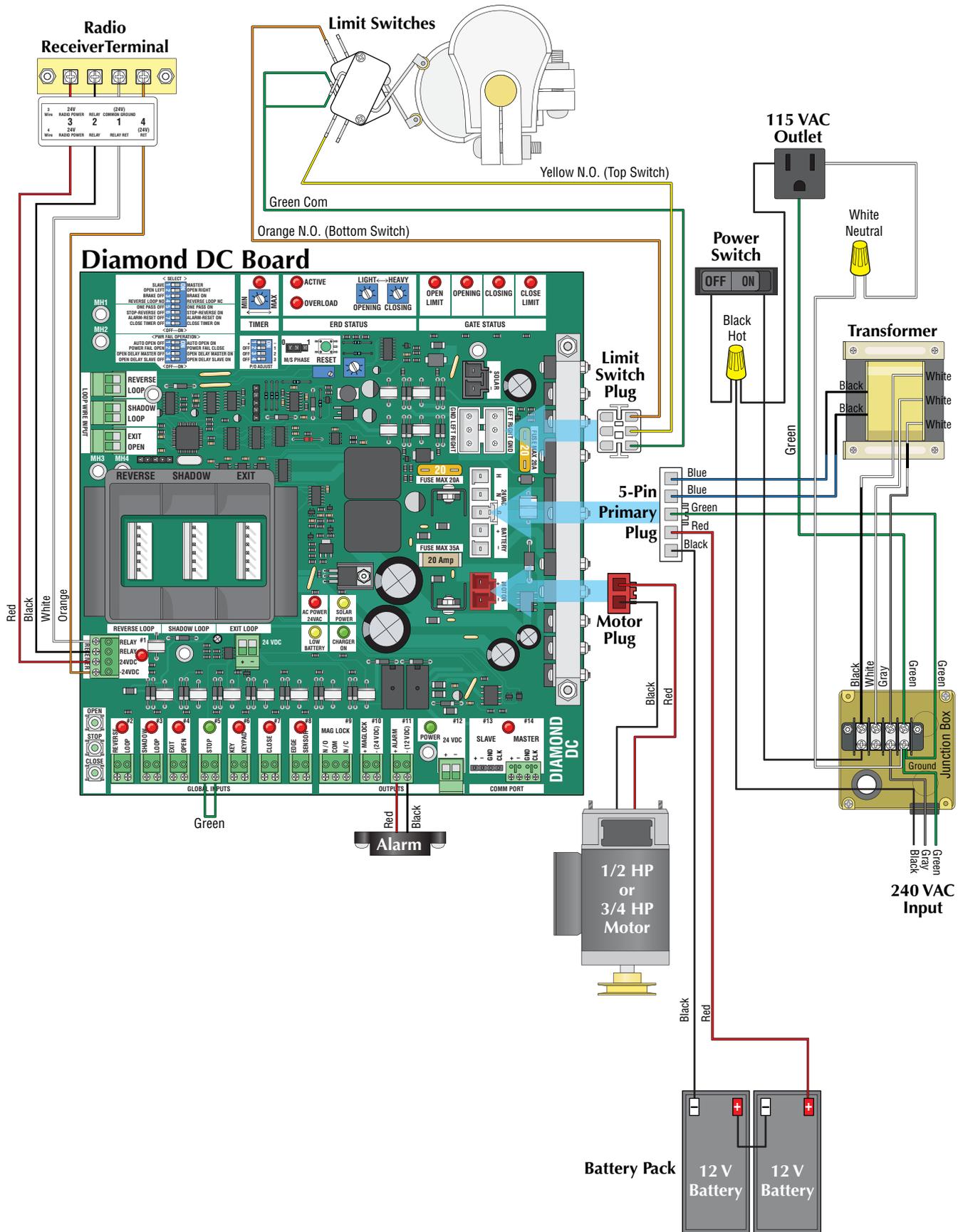


Diamond DC Board 120 VAC Input

# Diamond DC Board ONLY

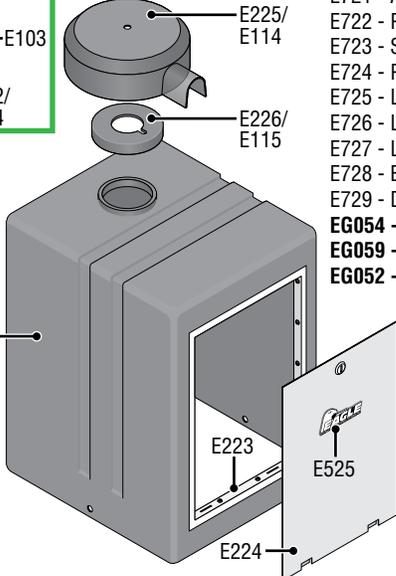
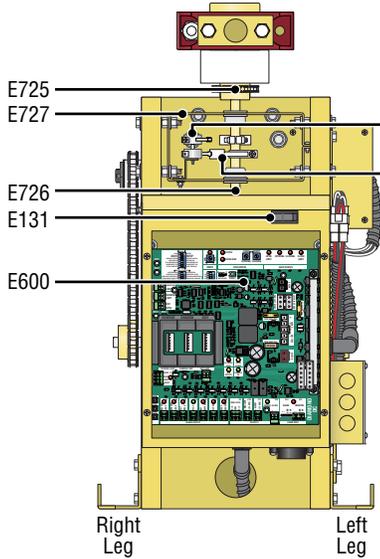
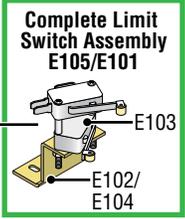
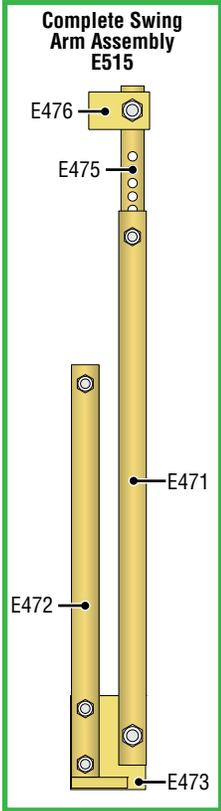
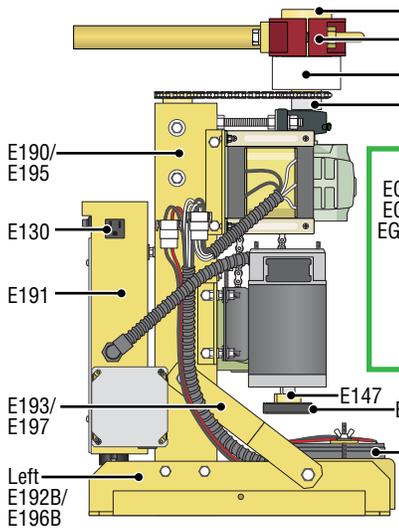
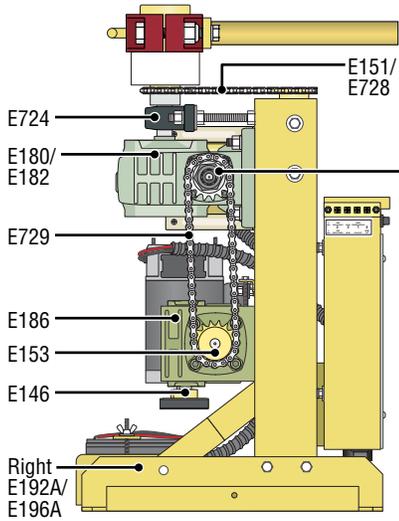
## Eagle-100-DC / Eagle-200-DC 240 VAC Input Models Wiring Diagram

Diamond DC Board 240 VAC Input



# Diamond DC Board ONLY

## Eagle-100-DC / Eagle-200-DC Series Replacement Parts



### E-Number Part Description

- E101 - Eagle-100-DC Limit Switch Assembly (Complete)**
- E102 - Eagle-100-DC Limit Switch Bracket
- E103 - Limit Switch
- E104 - Eagle-200-DC Limit Switch Bracket
- E105 - Eagle-200-DC Limit Switch Assembly (Complete)**
- E111 - Eagle-100-DC Operator Cover
- E114 - Eagle-100-DC Release Cover
- E115 - Eagle-100-DC Release Cover Cap
- E116 - Easy Release Main Swing Arm
- E130 - Electrical Outlet
- E131 - Power Switch
- E146 - Pulley (SGR)
- E147 - 2 1/2" Motor Pulley
- E151 - Eagle-200-DC Drive Chain (Top Position)
- E152 - Clutch Kit (Complete)**
- E153 - Eagle-200-DC Sprocket (SGR)
- E173 - V-Belt
- E175 - Limit Switch Activator
- E180 - Eagle-200-DC Primary Gear Reducer (PGR)
- E182 - Eagle-100-DC Primary Gear Reducer (PGR)
- E186 - Secondary Gear Reducer (SGR)
- E190 - Eagle-200-DC Chassis
- E191 - Control Board Box
- E192A - Eagle-200-DC Right Chassis Leg
- E192B - Eagle-200-DC Left Chassis Leg
- E193 - Eagle-200-DC Leg Bracket
- E195 - Eagle-100-DC Chassis
- E196A - Eagle-100-DC Right Chassis Leg
- E196B - Eagle-100-DC Left Chassis Leg
- E197 - Eagle-100-DC Leg Bracket
- E222 - Eagle-200-DC Operator Cover
- E223 - Operator Cover Door Frame
- E224 - Operator Cover Door
- E225 - Eagle-200-DC Release Cover
- E226 - Eagle-200-DC Release Cover Cap
- E471 - Large Arm
- E472 - Small Arm
- E473 - Arm Attachment Plate
- E475 - Extension Arm
- E476 - Weld Plate (Gate Attachment Bracket)
- E515 - Swing Arm Assembly (Complete)**
- E525 - Plastic Eagle Logo Plaque
- E600 - Diamond DC Control Board
- E721 - Arm Hub
- E722 - Plastic Cup
- E723 - Sprocket (PGR)
- E724 - Pillow Block
- E725 - Limit Sprocket
- E726 - Limit Shaft
- E727 - Limit Box
- E728 - Eagle-100-DC Drive Chain (Top Position)
- E729 - Drive Chain (Side Position)
- EG054 - 12 VDC 7 Amp Battery Pack**
- EG059 - 12 VDC 9 Amp Battery Pack**
- EG052 - 12 VDC 35 Amp Battery Pack**

Diamond DC Board Replacement Parts

If you are uncertain about a specific part you may need, please call us for assistance:

**1-800-708-8848**







# Eagle-100 Series Eagle-200 Series

Swing Gate Operators

ACCESS CONTROL SYSTEMS, INC.

Made in the USA

[www.eagleoperators.com](http://www.eagleoperators.com)

Toll Free: 1-800-708-8848

Phone: (818) 837-7900

Fax: (818) 837-7911

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Sylmar, Ca 91342