



# SL-3000-UL SERIES

UL325 UL991 compliant compliant





installation instructions and manual book for architects, general contractors and dealers

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# UL LISTINGS AND INSTRUCTIONS

#### Installation Instructions Regarding the Gate Operator

- A) Install the gate operator only when:
  - 1) The operator is appropriate for the construction and the usage Class of the gate.
- 2) All openings of a horizontal slide gate are guarded or screened from the bottom of the gate to a minimum of 4 feet (1.2 m) above the ground to prevent a 2 1/4 inch (57.15 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.
  - 3) All exposed pinch points are eliminated or guarded, and
  - 4) Guarding is supplied for exposed rollers.
- B) The operator is intended for installation only on gates used for vehicles. Pedestrians must be supplied with a separate access opening.
- C) 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.
- D) The gate must be properly installed and work freely in both directions prior to the installation of the gate operator.

E) -

- F) Controls must be far enough from the gate so that the user is prevented from coming in contact with the gate while operating the controls. Controls intended to be used to reset an operator after 2 sequential activations of the entrapment protection device or devices must be located in the line of sight of the gate outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.
- G) All warning signs and placards must be installed where visible in the area of the gate.
- H) For a gate operator utilizing a non-contact sensor such as a photo beam:
  - 1) See instructions on the placement of non-contact sensor for each Type of application,
  - 2) Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle trips the sensor while the gate still moving, and
  - 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.
- I) For a gate operator utilizing a contact sensor such as an edge sensor:
  - 1) One or more contact sensors shall be located at the leading edge, trailing edge and postmounted both inside and outside of a vehicular horizontal slide gate.
  - 2) One or more contact sensors shall be located at the bottom edge of a vehicular vertical lift gate.
  - 3) One or more contact sensors shall be located at the pinch point of a vehicular vertical pivot gate.
  - 4) 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.
  - 5) A wireless contact sensor such as the 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.

#### Important Safety Instructions

WARNING - To Reduce the Risk of Injury or Death:

- 1. READ AND FOLLOW ALL INSTRUCTIONS!
- 2. Never let children operate or play with gate controls. Keep the remote control away from children.
- 3. Always keep people and objects away from the gate while the gate is in operation. NO ONE SHOULD CROSS THE PATH OF A MOVING GATE.
- 4. 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, retest the gate operator, Failure to adjust and retest the gate operator properly can increase the risk of injury or death.
- 5. Use the emergency release only when the gate is not moving. Make sure the power for the gate operator is off.
- 6. KEEP GATES PROPERLY MAINTAINED. Read the manual. Have a qualified service person make repairs to the gate or gate hardware.
- 7. The entrance is for vehicles only. Pedestrians must use separate entrance.
- 8. SAVE THESE INSTRUCTIONS

#### UL LISTINGS AND INSTRUCTIONS

**Gate** – A moving barrier such as a swinging, sliding, raising lowering, rolling, or like, barrier, that is a stand-alone passage barrier or is that portion of a wall or fence system that controls entrance and/or egress by persons or vehicles and completes the perimeter of a defined area.

**Vehicular horizontal slide-gate operator (or system)** – A vehicular gate operator (or system) that controls a gate which slides in a horizontal direction that is intended for use for vehicular entrance or exit to a drive, parking lot, or the like.

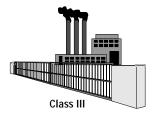


**Residential vehicular gate operator – Class I –** A vehicular gate operator (or system) intended for use in a home of one-to four single family dwelling, or a garage or parking area associated therewith.

#### Commercial/General access vehicular gate operator - Class II

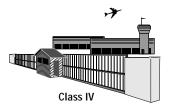
– A vehicular gate operator (or system) intended for use in a commercial location or building such as a multi-family housing unit (five or more single family units) hotel, garages, retail store or other building servicing the general public.





Commercial/General access vehicular gate operator – Class III – A vehicular gate operator (or system) intended for use in a industrial location or building such as a factory or loading dock area or other locations not intended to service the general public.

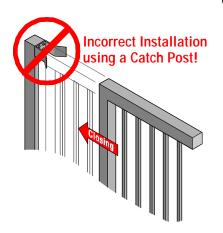
Restricted access vehicular gate operator – Class IV – A vehicular gate operator (or system) intended for use in a guarded industrial location or building such as an airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented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

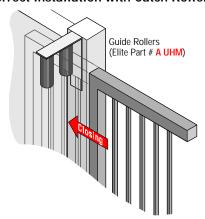


# GATE POST WARNING

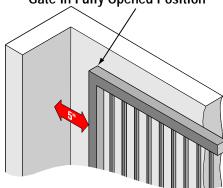
IMPORTANT! Because gate coasting distance varies with temperature, Elite DOES NOT recommend the installation of a catch post. This could cause the gate to collide with the post.

# **Correct Installation with Catch Rollers**



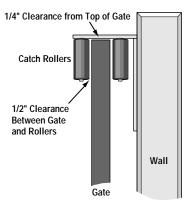


# **Gate in Fully Opened Position**



Minimum Clearance of 5" Between Back of Gate and Wall or Other Objects in Gate's Path

# **Gate Clearances**





For safety reasons, a physical stop MUST be installed on the gate prior to installation of the gate operator. This will assure that the gate does not exceed movement limits and derail while in motion.

# WARNING SIGNS



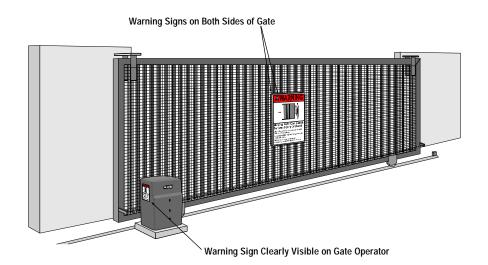
# **IMPORTANT NOTICE!**

Installers are required to adhere to this procedure: The UL required Warning Signs must be installed in plain view and on both sides of each gate installed. Each sign is made with fastening holes in each corner and should be permanently secured in a suitable manner. Also the warning sticker should be placed on the operator so it is clearly visible.

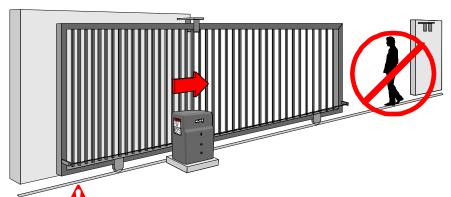
without prior warning.

Do not let children operate the gate or play In the gate area.

This entrance is for vehicles only. Pedestrians must use separate entrance.



# WARNINGS AND PRECAUTIONS



Owners Must Never Let Pedestrians Cross the Path of a Moving Gate!



CAUTION

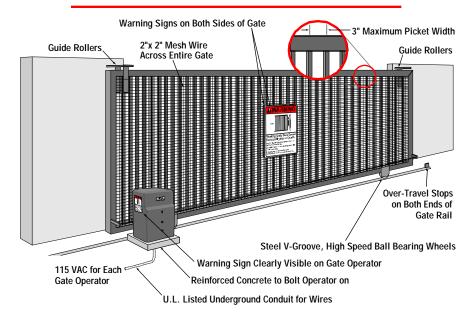
Owners Must Never Mount Any Gate Operating Devices Accessible In Between the Gate and the Wall!





Owners Must Never Mount Any Gate Operating Devices Accessible Through the Gate!

# ELITE RECOMMENDED SETUP



# Pedestrians MUST have a Separate Walkway!

#### SL-3000-UL-DM

Two-1/2 hp Motors, 120 VAC, 4.7 amp. Maximum Gate Length – 37 feet Maximum Gate Weight – 800 lbs.

#### SL-3000-UL

1/2 hp Motor, 120 VAC, 4 amp. Maximum Gate Length – 37 feet Maximum Gate Weight – 1000 lbs.

#### SL-3000-UL-1HP

Two-1/2 hp Motors, 120 VAC, 8.4 amps. Maximum Gate Length – 37 feet Maximum Gate Weight – 2000 lbs.



Be sure to read and follow all Elite and UL instructions before installing and operating any Elite products. Elite Access Systems, Inc. is not responsible for improper installations or failure to comply with local building codes.

# TYPE OF INSTALLATIONS



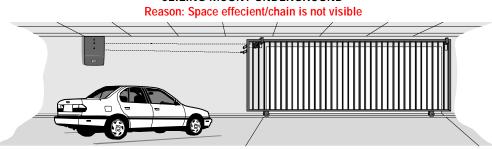
It is highly recommended installing over-travel stops at both ends of the gate rail in any type of installation, to prevent derailing.



# REAR INSTALLATION Reason: Chain is not visible

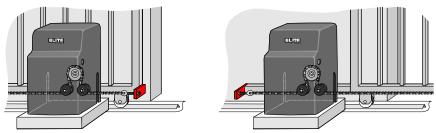


# **CEILING MOUNT UNDERGROUND**



# CONNECTING THE CHAIN

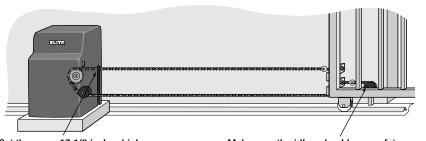
## FRONT INSTALLATION



Weld front bracket with gate in open position.

Weld rear bracket with gate in closed position.

# **REAR INSTALLATION**



Cut the cover 17 1/2 inches high.

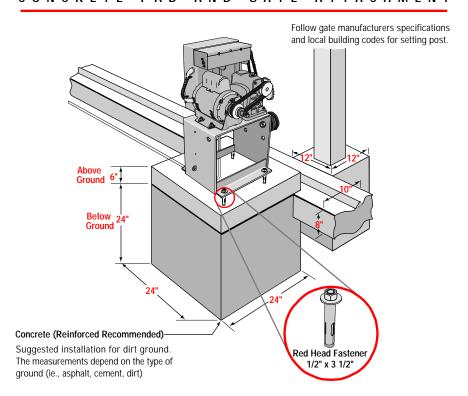
Make sure the idler wheel has a safety cover.

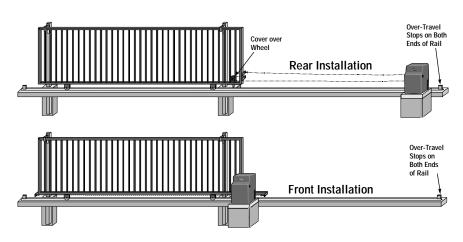
# REAR INSTALLATION COVER MODIFICATION



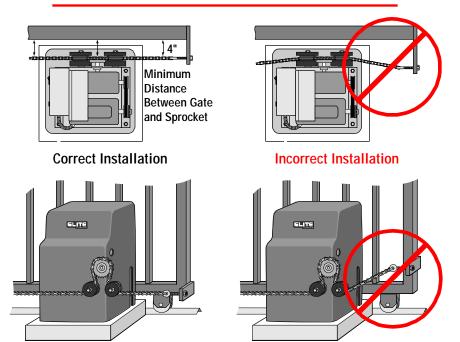
Important: For safe operation of the gate opener do not cut the slots any wider or longer than shown. DO NOT modify the housing in any way other than specified.

# CONCRETE PAD AND GATE ATTACHMENT

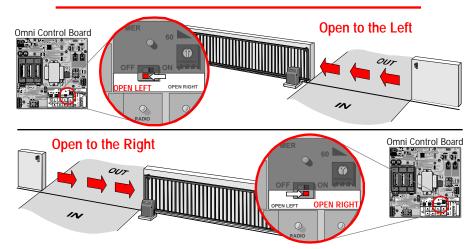




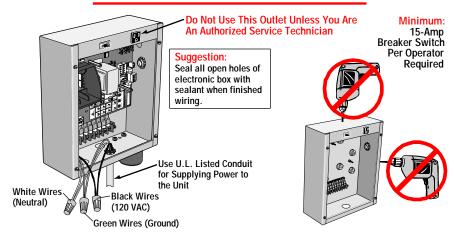
# GATE AND OPERATOR DISTANCE



# CHOOSING MOVEMENT DIRECTION



# HOW TO CONNECT POWER



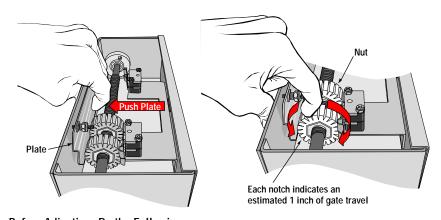
#### WIRE GUAGE REQUIREMENT FOR 120 VAC POWER SUPPLY: 1/2 HP AND DUAL MOTOR ONLY

16 Gauge	14 Gauge	12 Gauge	10 Gauge	8 Gauge	4 Gauge
150 Feet	250 Feet	400 Feet	650 Feet	1000 Feet	2200 Feet

Caution: ELITE ACCESS SYSTEMS, INC. is not responsible for conflicts between the information listed in the above chart and the requirements of your local building codes. The information is for suggested use only. Check your local codes before installation.

Gate Operator MUST be properly grounded.

# ADJUSTING GATE TRAVELING DISTANCE

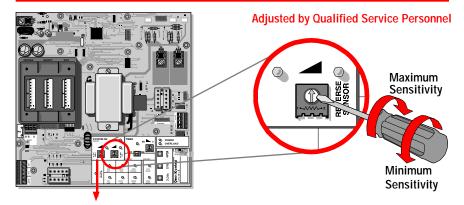


# Before Adjusting, Do the Following:

- 1.Turn the Power OFF!
- 2. Push the plate inward. Roll the nut to the direction desired.

- 3. Place the plate back in the notch.
- 4. Turn the machine off.
- 5. If you need more adjusting, repeat the process.

# 2-WAY ADJUSTABLE REVERSING SENSOR



# **DO NOT Touch Alarm Sensor**

enough for false triggering to occur.

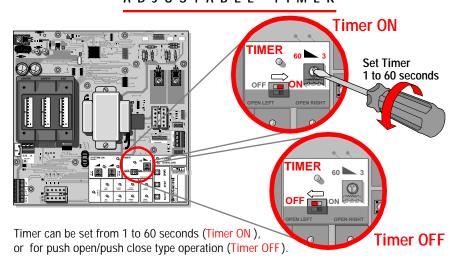
The level of sensitivity has to do with the weight of the gate and the condition of installation.

Too sensitive = if the gate stops or reverses by itself.

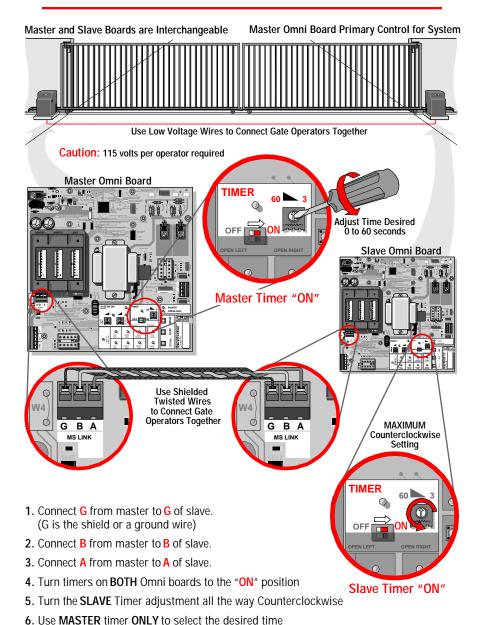
**CAUTION:** If the power supply to the gate operator is less than 99 volts, adjust the alarm by turning the alarm adjustment counter-clockwise enough to actuate the



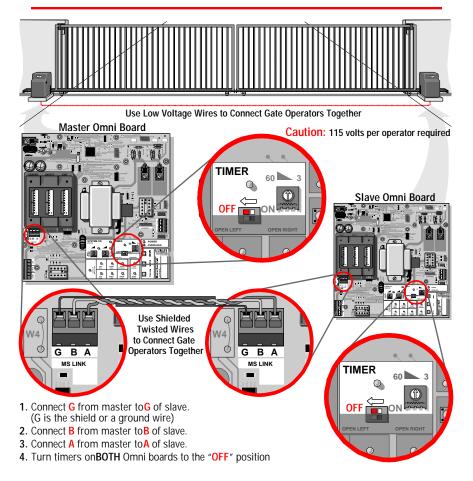
#### ADJUSTABLE TIMER



#### MASTER AND SLAVE WITH TIMER ON



## MASTER AND SLAVE WITH TIMER OFF



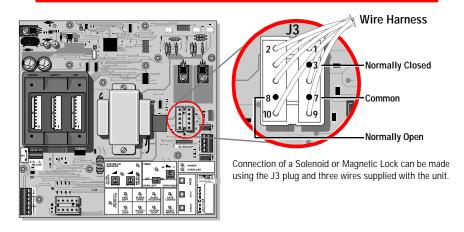
# PARTIAL MASTER/INDIVIDUAL CONTROL

## IN ORDER FOR THE FOLLOWING OPERATION TO OCCUR, FOLLOW THE INSTRUCTIONS.

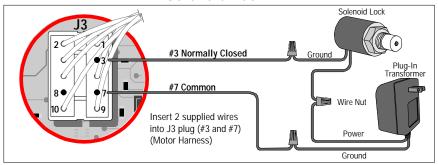
EXAMPLE: There is a double gate, the entry gate is to be opened with a radio transmitter and the exit gate with a free exit loop. Only one safety loop system is to open both gates, and a fire department switch should open both gates at the same time.

- 1. Connect the radio receiver to entry gate only.
- 2. Connect the exit loop to exit gate only.
- 3. Connect the safety loop to both entry and exit gates.
- 4. Connect the fire department switch to both entry and exit gates.

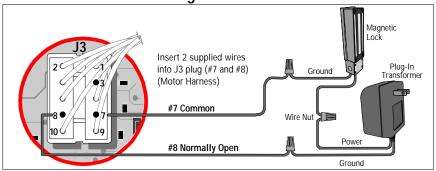
# SOLENOID/MAGLOCK J3 CONNECTION



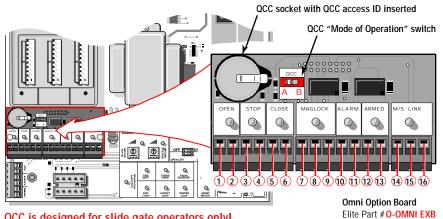
# Solenoid Lock



# **Magnetic Lock**



#### INSTRUCTIONS FOR OPTIONAL SYSTEMS



# QCC is designed for slide gate operators only!

10 & 11 - Burglar Alarm Output

1 & 2 - Open Command

3 & 4 - Stop Command

12 & 13 - Burglar Alarm Input

5 & 6 - Close Command

14 - Ground

7 - Common

15 - B

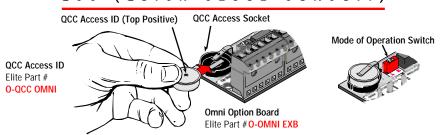
Maglock or Solenoid 8 - Normally Closed 9 - Normally Open

16 - A

Master/Slave

RS485

Q C C(QUICK CLOSE CURCUIT)

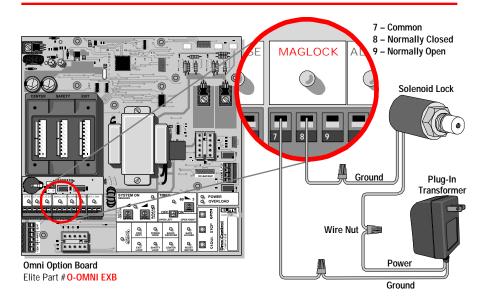


the QCC can operate in two different modes. The mode of operation will depend on the switch on the Omni option board.

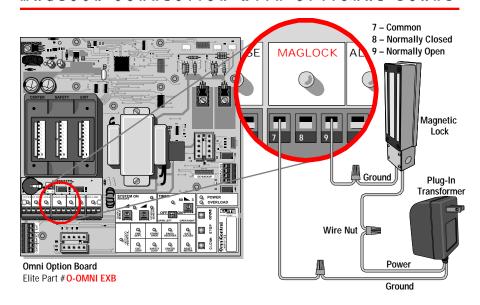
Mode A (switch off) If the gate is closing while a car is driving over the safety loop detector, the QCC will stop the gate for a second then open the gate while the car is over the safety loop detector. As soon as the car leaves the safety loop, the QCC will resume closing the gate.

Mode B (switch on) If the gate is closing, and a vehicle drives over the safety loop, the QCC will stop the gate. It will not open the gate. After the vehicle leaves the safety loop, the QCC will close the gate.

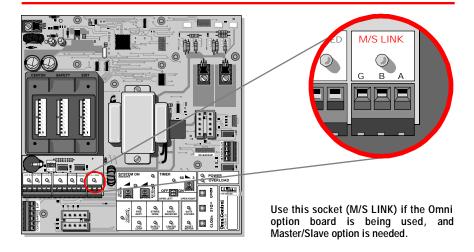
# SOLENOID CONNECTION WITH OPTIONAL BOARD



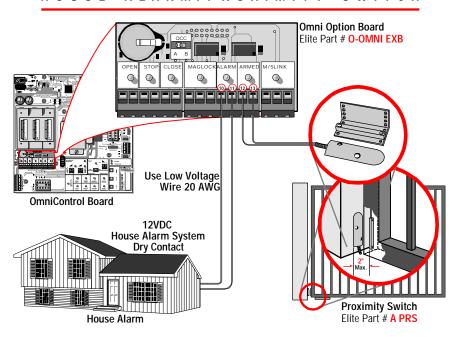
# MAGLOCK CONNECTION WITH OPTIONAL BOARD



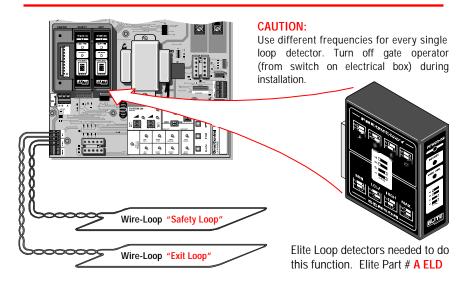
## MASTER/SLAVE WITH OPTIONAL BOARD



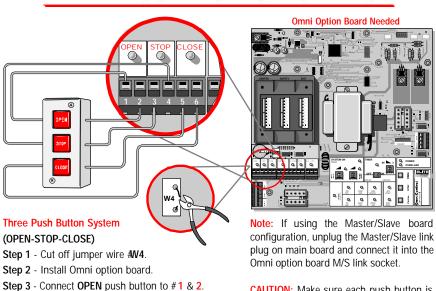
# HOUSE ALARM/PROXIMITY SWITCH



# OPTIONAL BUILT-IN LOOP DETECTORS



# THREE PUSH BUTTON STATION



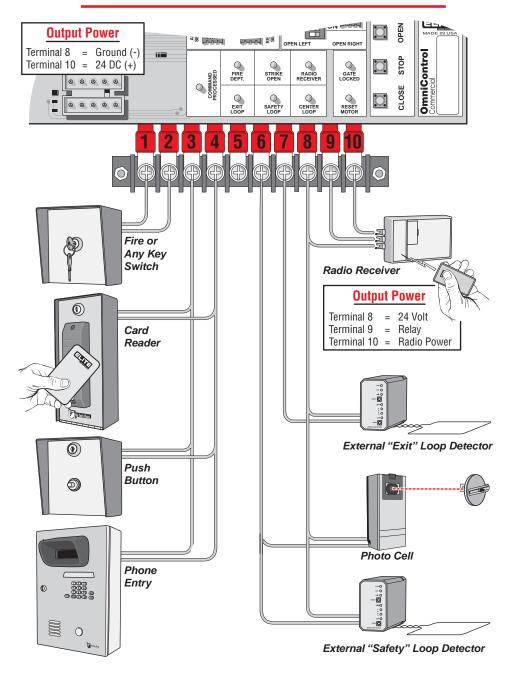
Step 3 - Connect OPEN push button to #1 & 2.

Step 4 - Connect STOP push button to #3 & 4.

Step 5 - Connect CLOSE push button to #5 & 6.

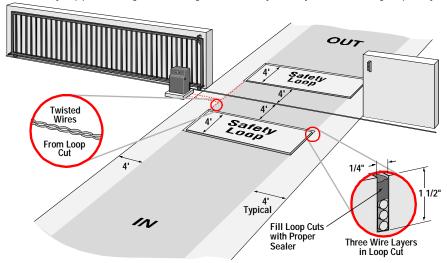
CAUTION: Make sure each push button is dry contact and there are no jumper wires between them.

# TERMINAL INPUT CONNECTIONS



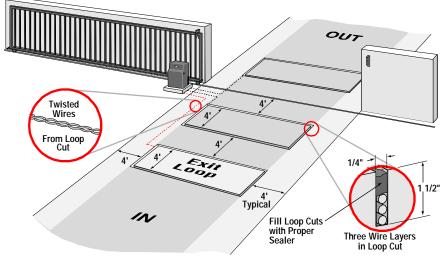
# SAFETY LOOP SYSTEM

The safety loop prevents the gate from closing while a car or any other object remains in the gates pathway.



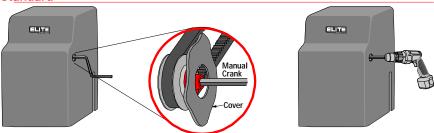
# EXIT LOOP SYSTEM

The exit loop automatically allows the gate to open when a car is exiting.



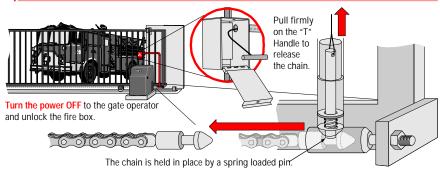
# EMERGENCY RELEASE

# **Standard**

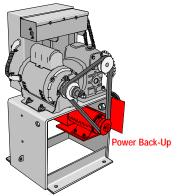


- 1. Turn the power OFF!
- 2. Make sure the crank tool fits the crank input, as shown above: Turn the crank to open the gate. To speed up the process you may use a wireless power drill (6 "/sec).

# Option 1: Elite Part # CP-17



# Option 2: Elite Part # DC-1000U-SL



#### Condition A:

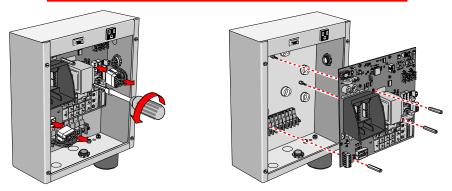
In case of power failure the gate opens automatically one time and stays open. when power is restored the operator returns to normal condition.

#### **Condition B:**

In case of power failure the gate will not open automatically until activated by a key switch or push button.

for More Details contact your Local Dealer

# REPLACING THE CONTROL BOARD



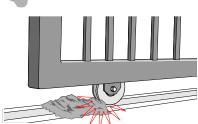
Disconnect 2 wire harnesses from OmniControl board. Unscrew3 nuts to remove board.

#### AUDIO ALARM

When one of the following events happens Twice Consecutively,

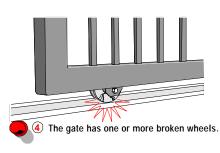
## an Alarm will Sound!

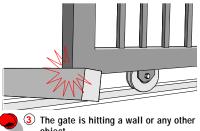
To turn alarm off, cut the power or use the optional stop button. Refer to "Stop Button Alarm"



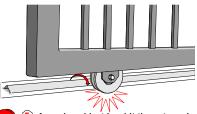
1 The gate is too heavy.

② Objects are on the gate's track such as mud, rocks dirt, etc.





object.

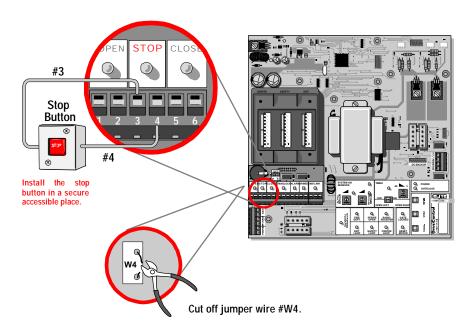


5 A moving object has hit the gate and the gate is off the track.

Refer to the Troubleshooting Table

# STOP BUTTON ALARM SHUT-OFF

# **Omni Option Board Needed**





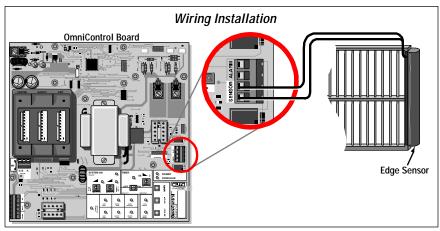
This is an important command required to stop the audio alarm in case it has been triggered. Otherwise the alarm will sound for 5 minutes and reset itself.

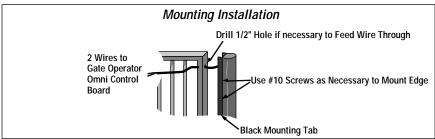
## **Use STOP Button:**

- •To stop the movement of the gate in case of potential entrapment.
- •To reset the audio alarm, (check for obstructions).
- •To stop the gate operator while traveling.

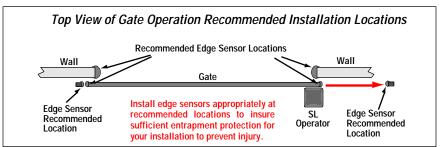
When using the Omni option board, use the "STOP" input to connect the stop button.

# SECONDARY ENTRAPMENT PROTECTION





All of the installed edge sensors are connected in parallel at the sensor input terminals on the Omni control board.



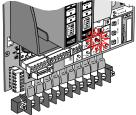
If you are going to use a contact sensor as a secondary entrapment protection you should use a recognized component to comply with the revised UL 325 for use in class I or class II gate operator.

Electric Sensing Edge, Miller Edge Models: MGR20 or MGS20

# TROUBLESHOOTING LED INFORMATION

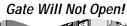
# Resetting Motor Reset Motor LED Light is "ON" Motor Reset Button Press firmly to reset thermal breaker on the motor.

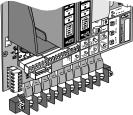
# Gate Will Not Close!



**Symptom:** The radio receiver LED on the control board remains "ON" when using the remote control.

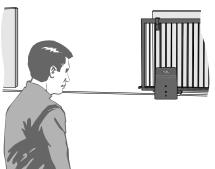
**Possible Solutions:** Stuck remote control button. The radio receiver has malfunctioned in the "ON" position.





**Symptom:** The radio receiver LED on the control board remains "OFF" when using the remote control.

**Possible Solutions:** Dead battery in the remote control. Remote control code switches are different from radio receiver code switches. The radio receiver has malfunctioned in the "OFF" position.

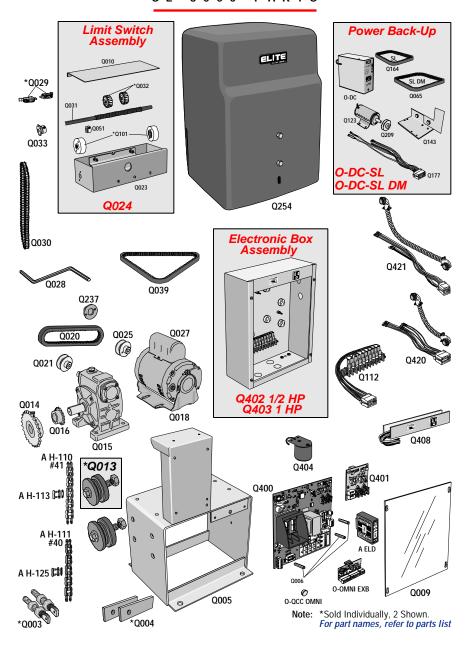




# TROUBLESHOOTING TABLE

CONDITION	POSSIBLE CAUSES	SOLUTIONS
OVERLOAD LED ON And POWER LED OFF	1.Short circuit at terminals 8 and 10 2.Short circuit at any of the loop detectors in the board 3.Short circuit in the control board	1.Remove the short circuit condition at the terminals     2.Remove the defective loop detector     3.Send the board to repair
OVERLOAD LED ON And POWER LED ON	1.Excessive current draw at terminal 10 2.Over-voltage at the 120 VAC line input	1.Reduce the accessories load from terminal 10     2.Verify your electrical power
SYSTEM ON LED FLASHING	1.One limit switch is faulty 2.Motor thermal fuse has poped-out	1.Test the limit switches and wire connections, fix the fault     2.Reset the motor
REVERSE SENSOR LED ON	1.Gate has encountered and obstruction during traveling     2.Reverse sensor is extra sensitive	1.Remove the obstruction     2.Turn the reverse sensor switch counter clockwise a little more and try again
ALARM SENSOR LED ON	1.Gate encountered an obstruction during traveling     2.Alarm sensor is extra sensitive	Remove the obstruction     Turn the alarm sensor switch counter clockwise a little more and try again
ALARM SENSOR LED ON	Gate encountered and obstruction during traveling     Alarm sensor is extra sensitive	1.Remove the obstruction     2.Turn the alarm sensor switch counter clockwise a little more and try again
COMMAND PROCESSED LED ON	1.There is a command hold active	This is a normal response of the gate operator. It does not represent necessarily that there is a problem.
TIMER LED BLINKING And COMMAND PROCESSED LED BLINKING	1.There is a command holding the gate open	This is a normal response of the gate operator. It does not represent necessarily that there is a problem. Check inputs for command.
TIMER LED BLINKING, COMMAND PROCESSED LED BLINKING And REVERSE SENSOR LED ON	Gate has reopened because it encountered an obstruction while closing.	1.Any re-new command will resume normal operation. Check for obstructions.
AUDIO ALARM ON	Gate has encountered two consecutive obstructions while trying to close or open	1.Any re-new command will resume normal operation but not a radio command. Check for obstructions.     2.You can stop the alarm by using the stop button.
ANY "LOOP LED" ON And NO VEHICLE ON THE SENSING AREA	1.The loop detector needs to be reset. 2.The wire loop has been disrupted 3.The loop detector needs to work in a different frequency 4.The loop detector is too sensitive	1.Reset the loop detector (If you use Elite Plug-in Loop detectors, change the setting for sensitivity and come back to your original setting). 2.Verify and correct connections 3.Set a different working frequency 4.Decrease the sensitivity of the loop detector

# **SL-3000 PARTS**



## SL-3000 PARTS LIST

#### AH-110 - Gate Chain No.41 (10 ft) Idler Sprocket Assembly A H-111 - Gate Chain No.40 (10 ft) Q013 A H-113 - Master Link, Nickel Plated A H-125 - Master Link Limit Switch Assembly Q003 - Chain Bolt Q010 - Limited Switch Box Cover Q004 - Chain Bracket 0023 - Limit Switch Box Q005 - SL-3000 Chassis Q031 - Limit Switch / Shaft Q006 - PC Board Nuts (1 Set) Q024 -Q009 - Electronic Access Panel Q032 - Limit Switch Adjustment Nuts Q014 - Drive Sprocket Q051 - Limit Switch / Shaft Bearing Q015 - Gear Reducer Q101 - Limit Switch Bearing Holder Q016 - Limited Switch Drive Sprocket Q018 - 1/2 HP Electric Motor Power Back-Up Unit Q020 - Drive Belt Q065 - Drive Belt (DM) Q021 - Gear Pulley Q123 - Back-Up Motor DC 12V Q025 - Motor Pulley Q143 - Chassis DC Back-Up O-DC-SL Q027 - Motor Capacitor Q164 - Drive Belt O-DC-SL DM Q028 - Manual Crank Q177 - Wire Harness DC-1000 Q029 - Limit Switch L Q209 - Pulley DC-1000 1/2 ID Q030 - Limit Switch / Chain Q033 - Limit Switch Sprocket Q039 - Drive Belt, DM and 1 HP Electronic Box Assembly Q112 - Wire Harness-B Terminal Block Q402 1/2 HP Q403 1 HP Q237 - Crank Input Q254 - Cover HD Polyethylene Flexible Assembly for 1/2 Horse Motor Q400 - OMNI Main PCB Q420 Wire Harness and Conduit Q401 - OMNI 1 Horsepower Board# Flexible Assembly for Dual Motor Q404 - OMNI Alarm Q408 - Electronic Power Strip Q421 Wire Harness and Conduit A ELD - Loop Detector # O-OMNI EXB - OMNI Option Board# Muliple Parts "Q" Numbers #OmniControl Board Accessories O-OCC OMNI - OCC Access ID#

## MAINTENANCE

- 1. Make sure the reversing sensor is functioning properly. *Refer to "Reverse Sensor"*.
- 2. Make sure the gate track is clear of dirt, rocks or other substances.
- 3. Make sure the wheels are operating smoothly on the track.
- 4. If you hear an Alarm, Refer to "Audio Alarm".
- 5. Clean the cover on a regular basis.
- 6. For part illustrations, Refer to "SL-3000 Parts".

If you need further assistance, please contact your local service company.

# AVAILABLE PRODUCTS

