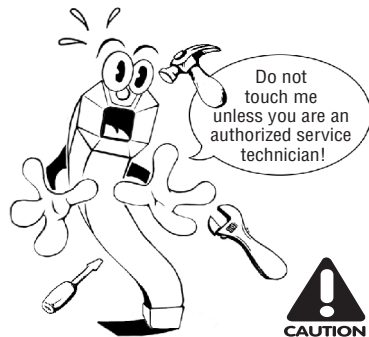


T A B L E O F C O N T E N T S

ATTENTION: This handbook is exclusively for qualified installation personal, and assistance and/or maintenance service. - The performances indicated in this handbook are valid only if a correct assembly has been carried out.

CLICK THE TOPIC OF YOUR CHOICE

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RELEASE 1

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 1/4inch (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.

UL LISTINGS AND INSTRUCTIONS

- 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
 - 3) 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.

UL LISTINGS AND INSTRUCTIONS

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.

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UL LISTINGS AND INSTRUCTIONS

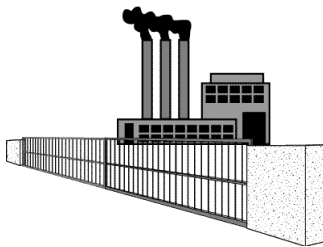
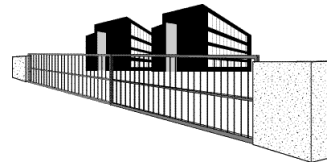
Gate – A moving barrier such as a swinging, sliding, raising lowering, rolling, or like, barrier, that is a stand-alone passage barrier or is that portion of a wall or fence system that controls entrance and/or egress by persons or vehicles and completes the perimeter of a defined area.

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.



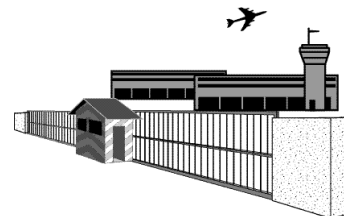
Residential vehicular gate operator – Class I – A vehicular gate operator (or system) intended for use in a home of one-to four single family dwelling, or a garage or parking area associated therewith.

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.



WARNINGS AND PRECAUTIONS

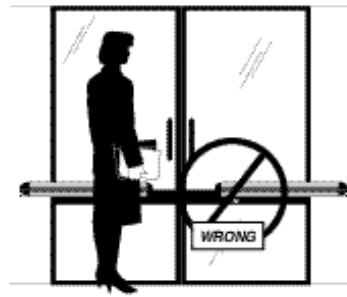
**WARNING: TO REDUCE THE RISK OF INJURY TO PERSONS
THE MIRACLE•1 IS FOR VEHICULAR GATE USE ONLY**



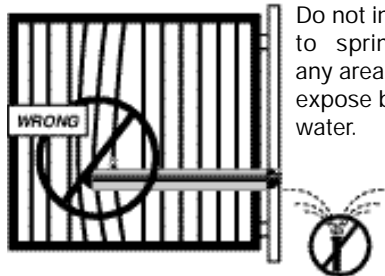
Be sure to read and follow all these important instructions before installation of the gate operator. Elite Access Systems, Inc. is not responsible for improper installations or failure to comply with local building and electrical codes.



Not for installation on any pedestrian gates.



Not for installation on any pedestrian passages or doorways.



Do not install next to sprinklers or any area that may expose bottom to water.

Do not install upside down. Do not install on pickets, weld a reinforcement bar across several pickets.



Do not install on uphill or downhill gates.



If the timer is to be left in the "on" position, then add a safety loop and center loop.



Do not over-bend the wire connection from the operator. To do so will cause the wires to eventually break.

IMPORTANT SAFETY INSTRUCTIONS

WARNING - To reduce the risk of severe 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 the moving gate in sight and away from people and objects until it is completely closed.

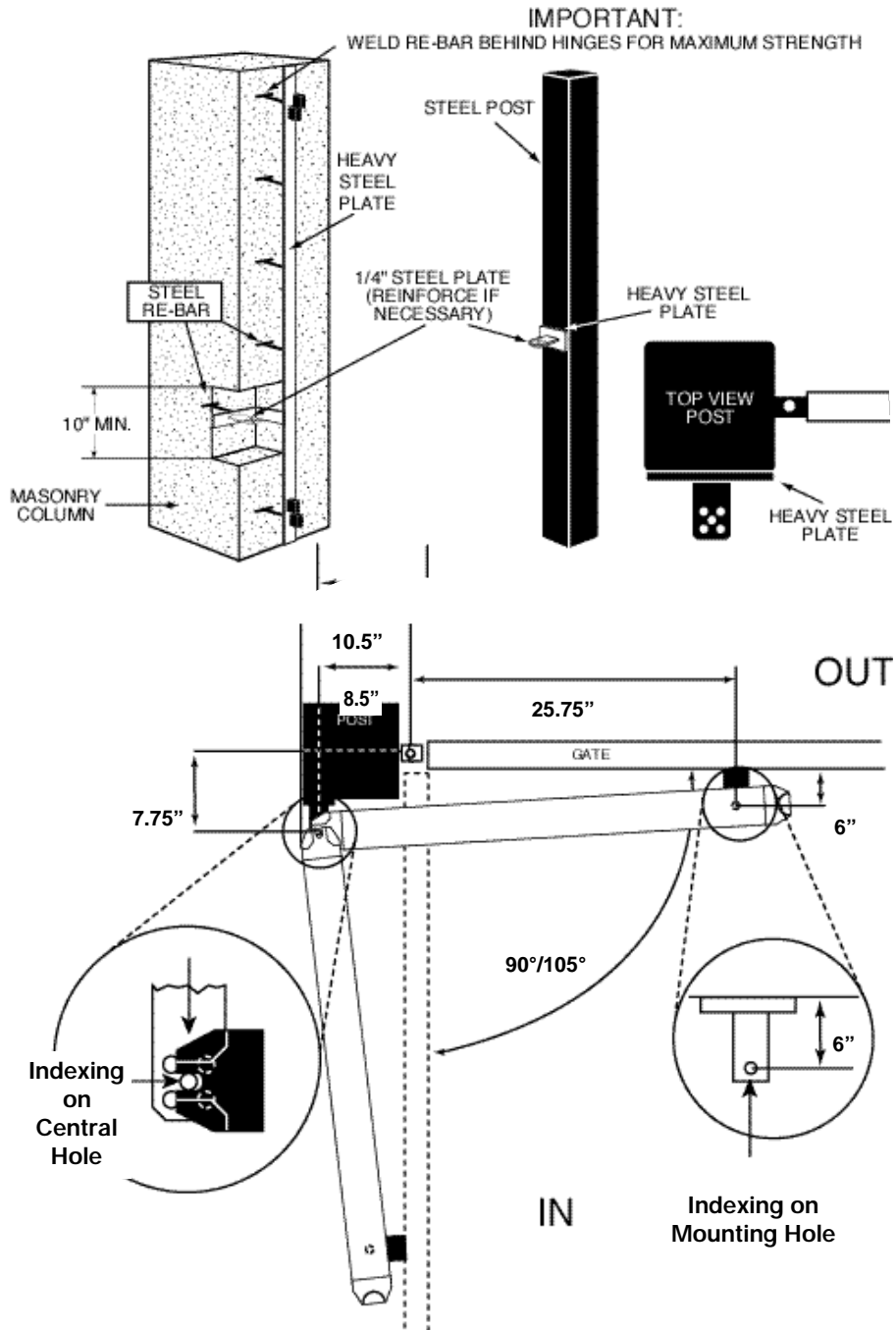
NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.

4. KEEP GATES PROPERLY MAINTAINED. Read the owner's manual. Have a qualified service person periodically inspect and make repairs to gate hardware.
5. SAVE THESE INSTRUCTIONS.

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PROCEDURE FOR INSTALLATION

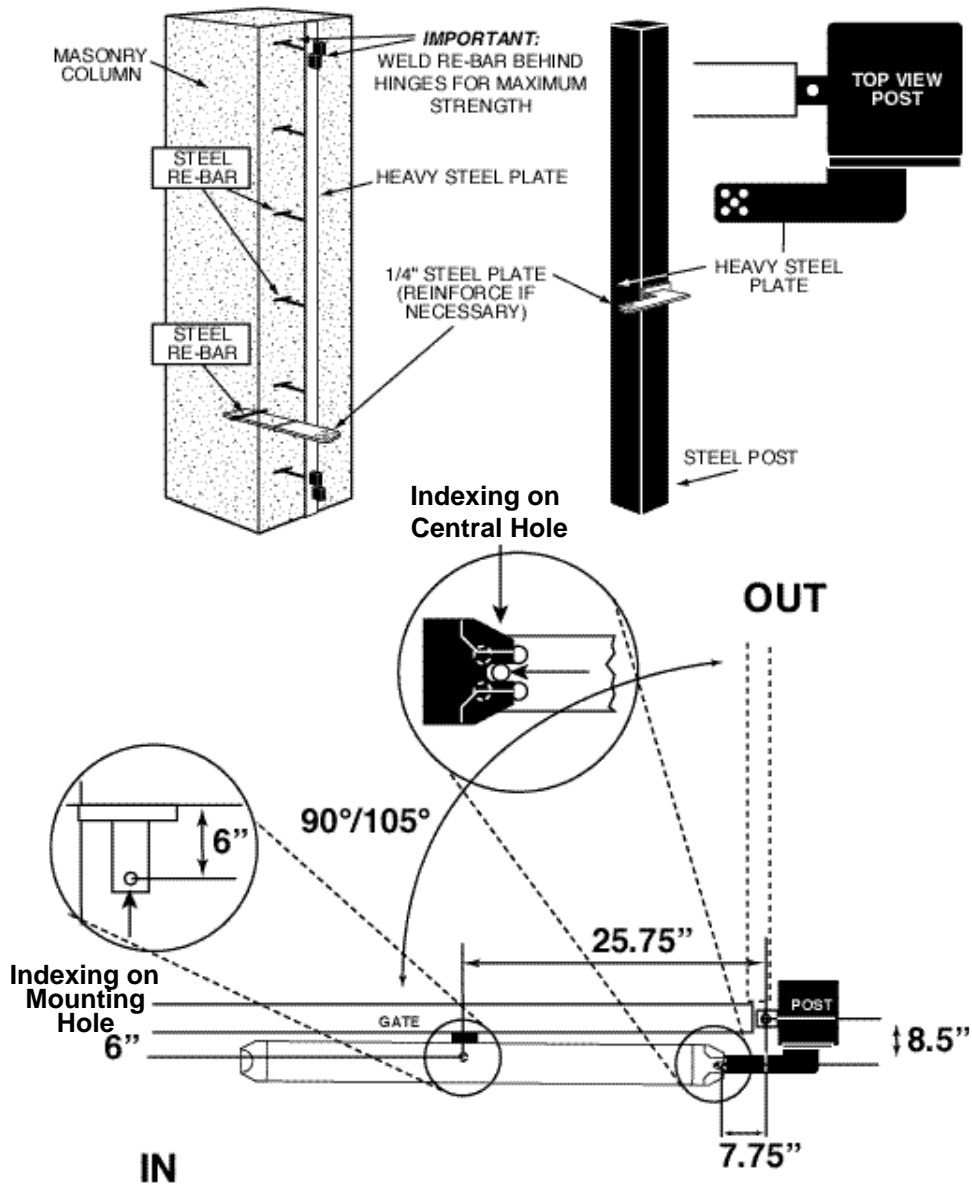
Open To The Inside



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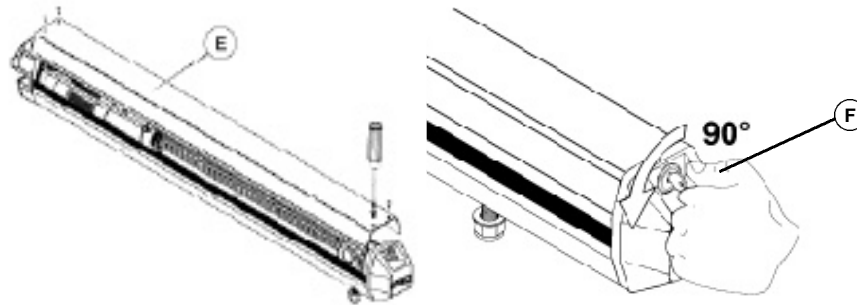
PROCEDURE FOR INSTALLATION

Open To The Outside



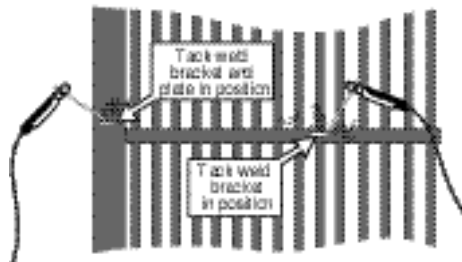
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PROCEDURE FOR INSTALLATION (cont.)



STEP 1: Remove the cover - E - by removing 4 screws.

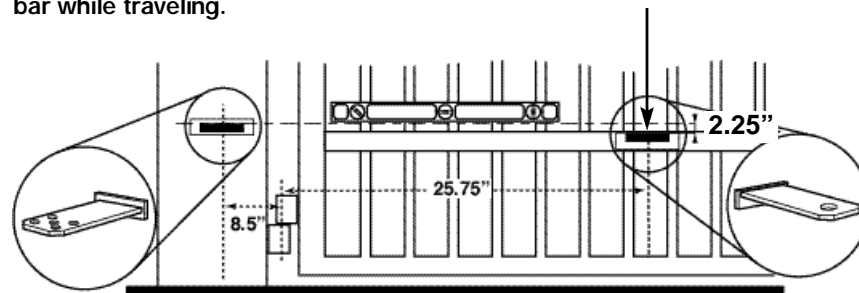
STEP 2: Release the mechanical lock by turning Key - F - to the horizontal position.



STEP 3: Position and level the operator brackets and plates (SEE BELOW AND PAGE 3). Tack weld plate and brackets in position.

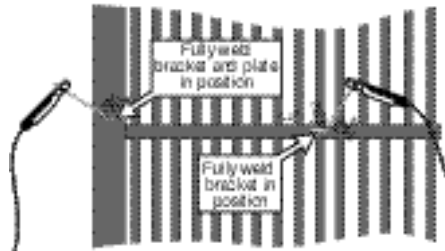
With gate closed, position the plates on the gate taking care that the operator is kept level.

IMPORTANT: Weld front bracket at the top of the bar so operator will not hit bar while traveling.

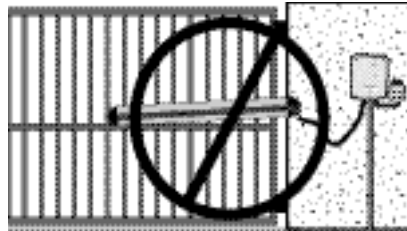


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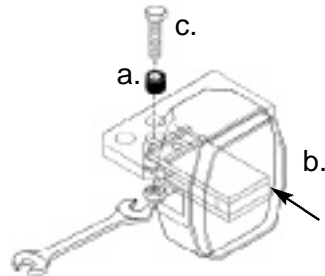
PROCEDURE FOR INSTALLATION (cont.)



STEP 4: Remove operator and fully weld the plate and brackets top, bottom and sides. **CAUTION: WELDING WITH OPERATOR IN PLACE MAY DAMAGE THE OPERATOR.**

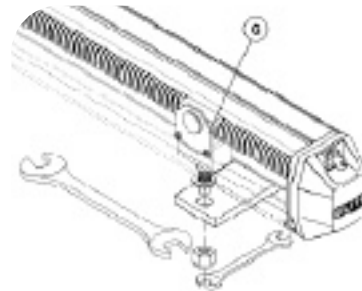


STEP 5: MAKE SURE THE OPERATOR IS LEVEL or the operator will not function properly. An off-level installation may cause the gate or operator to fail prematurely.

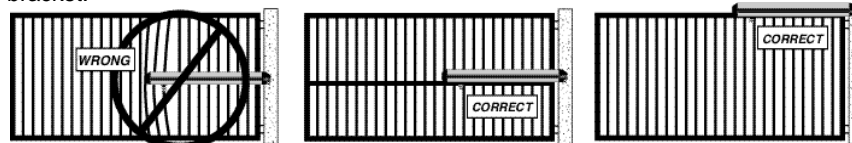


STEP 6: Remove bolt and bushing from back of operator. Fit the operator to the pier using the hole which is the most suited to the opening dimensions required.

- a. Place metal bushing into the bracket hole you will be using.
- b. Fit operator bracket over hole with metal bushing.
- c. Use bolt and nut to secure operator to bracket.



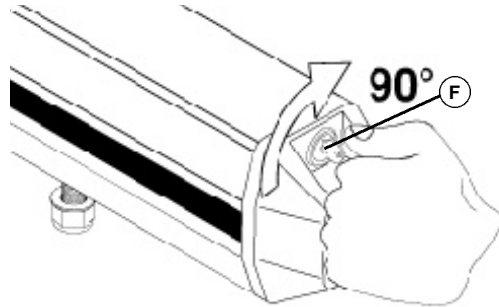
STEP 7: Remove nut from bolt on front of operator. Fit the group - G - to the gate. Manually move the gate open and close. check for smooth and unobstructed movement. Fully tighten the nut.



PLACEMENT OF MIRACLE•1 ON GATE

For strength purposes, the front bracket must be welded in an area that can withstand heavy forces. Do not weld a cross bar on just a few pickets or the pickets will bend. Weld a cross bar across all of the pickets or weld the front bracket at the top of the gate directly to the frame.

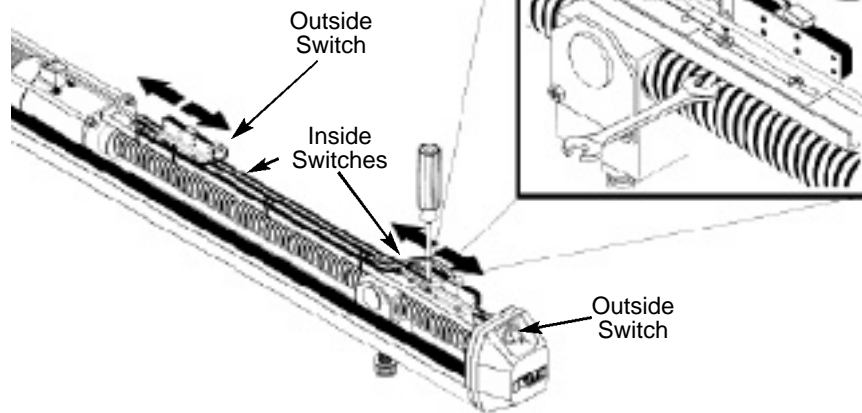
PROCEDURE FOR INSTALLATION (cont.)



STEP 9: Carry out all appropriate connections in the following pages of the manual to power the unit. Then go to step 10.

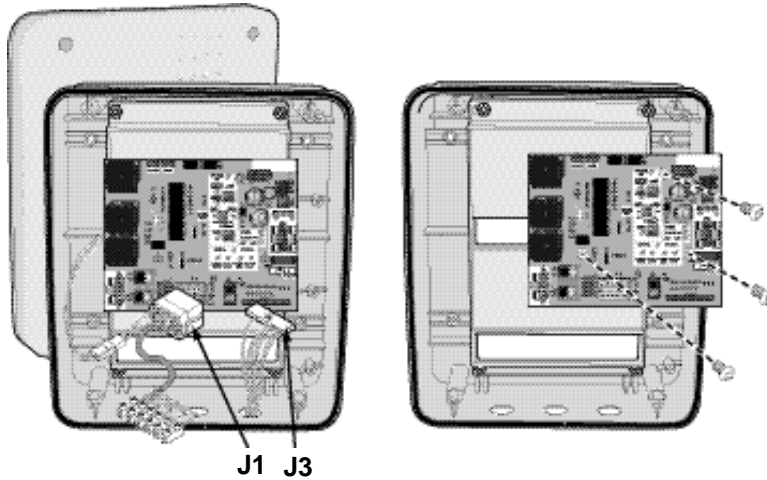
STEP 8: Lock the operator by turning key - F - to the vertical position while pushing or pulling on the gate until you hear the key release click into place.

STEP 10: Adjust the traveling distance with the outside limit switch of each set.



STEP 11: Re-install the cover.
(REFER TO STEP 1)

REMOVING THE CONTROL BOARD

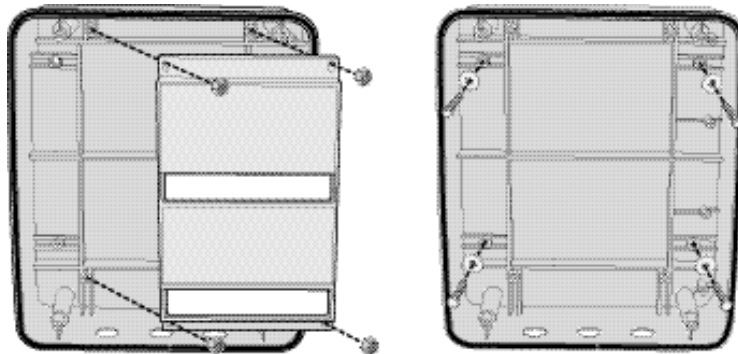


Detach the J1 and J3 plug .

Remove the three, phillips head screws and remove control board. Reverse this process to install the control board.

MOUNTING THE CONTROL BOX

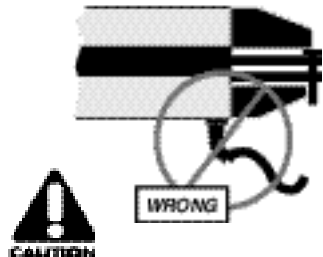
CAUTION: Do not make new mounting holes, or enlarge existing holes in control box. Use the four mounting holes provided.



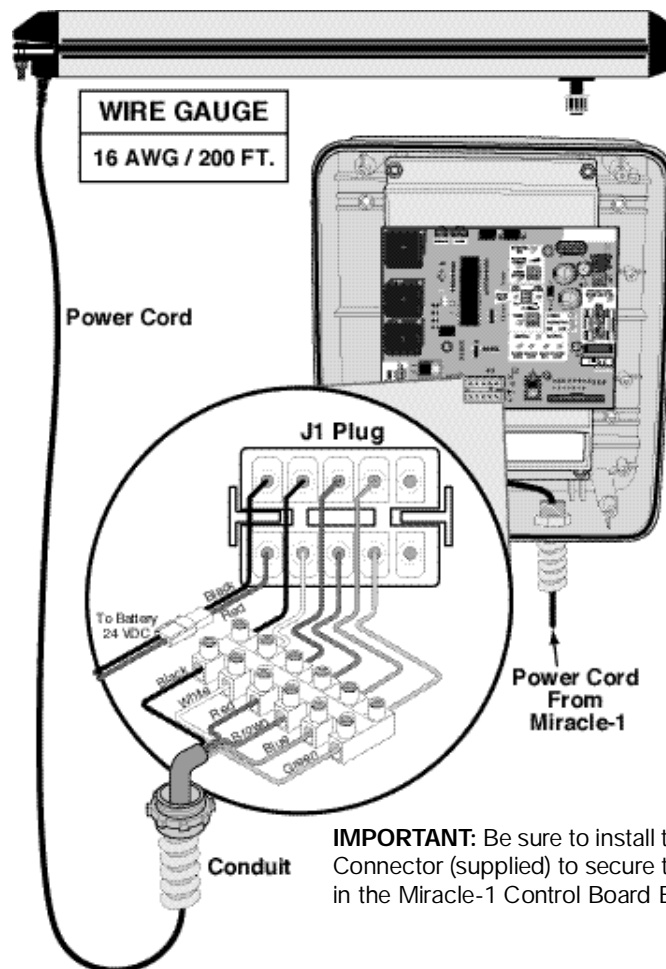
Remove the four nuts and remove battery rack. Reverse this process to reinstall.

Mount control box with four screws and washers (recommend #10 thru 1/4-20 Bolts or Screws) Don't over tighten.

CONNECTING POWER



CAUTION: Do not over-bend the wire connection from the operator. To do so will cause the wires to eventually break.

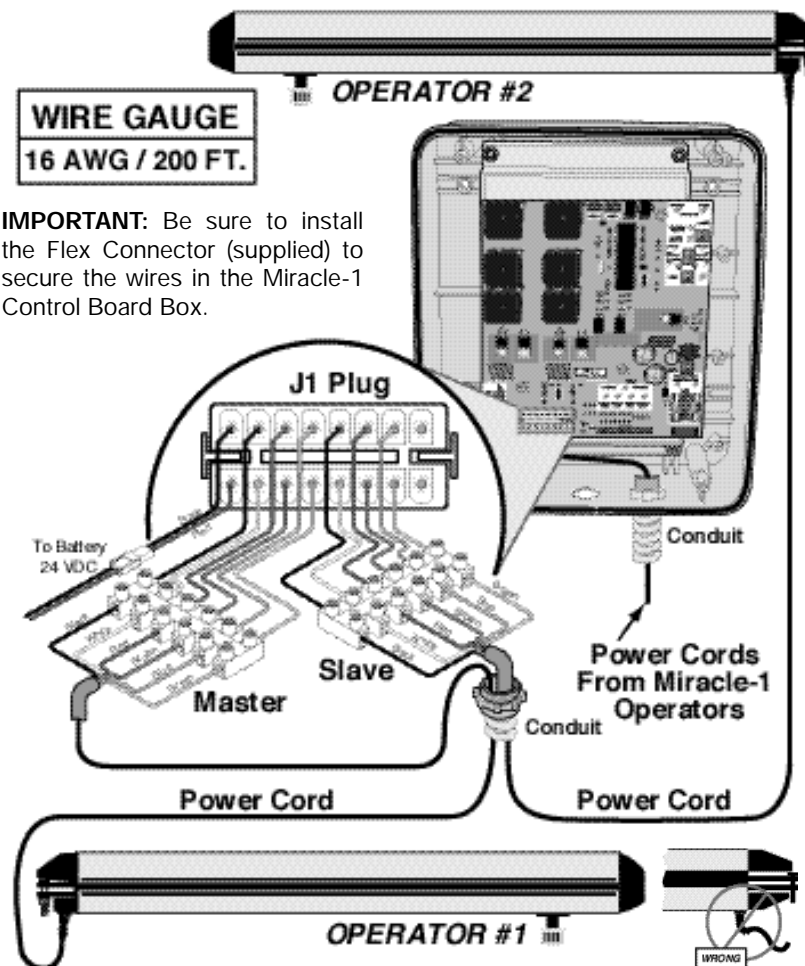
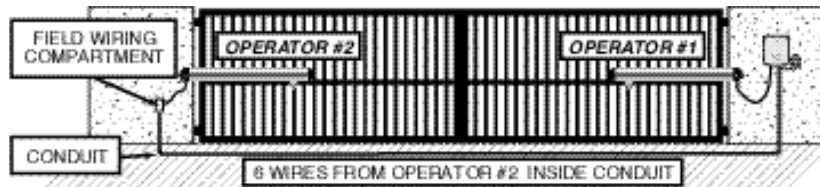


IMPORTANT: Be sure to install the Flex Connector (supplied) to secure the wire in the Miracle-1 Control Board Box.

PROPER GROUNDING IS IMPORTANT

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CONNECTING POWER Master / Slave



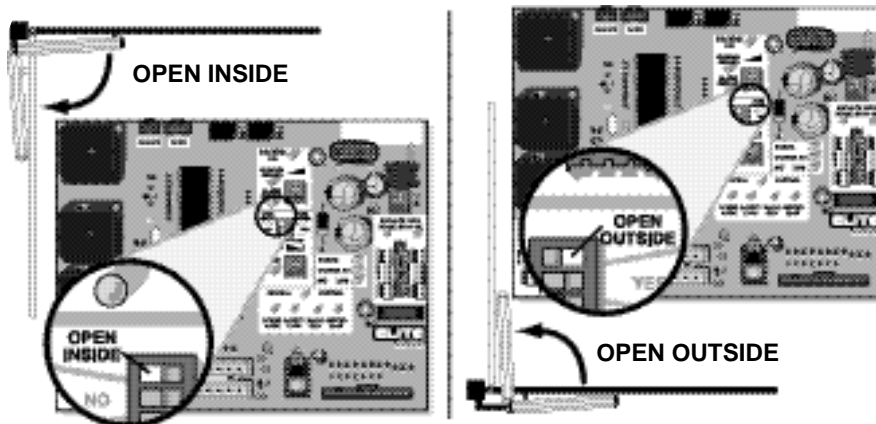
CAUTION: Do not over-bend the wire connections from the operators. To do so will cause the wires to eventually break.

PROPER GROUNDING IS IMPORTANT

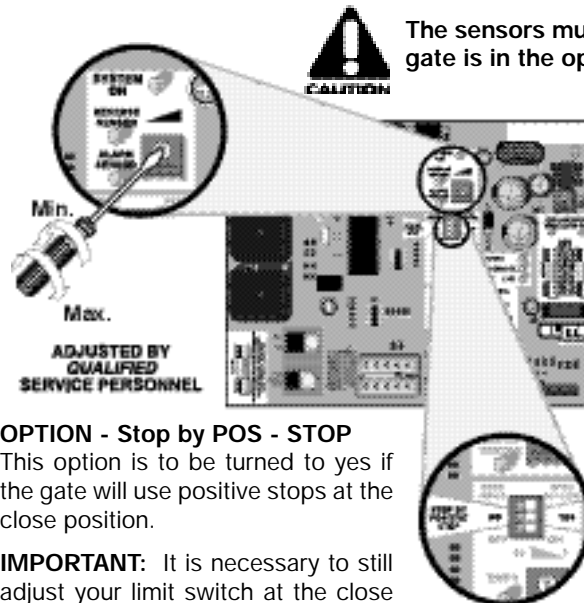
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CHOOSING MOVEMENT DIRECTION

Switch the "Open Inside / Open Outside" switch on the control board to the corresponding position for the proper direction.



SENSOR ADJUSTMENT



The sensors must be adjusted while the gate is in the opening or closing cycle.

Set the sensor adjustment so when the gate hits any object while opening, it will stop and when the gate hits any object while closing, it will reverse. **Note:** If you activate the operator and the gate stops in the middle of the driveway, the sensor is set too sensitive.

OPTION - Stop by POS - STOP

This option is to be turned to yes if the gate will use positive stops at the close position.

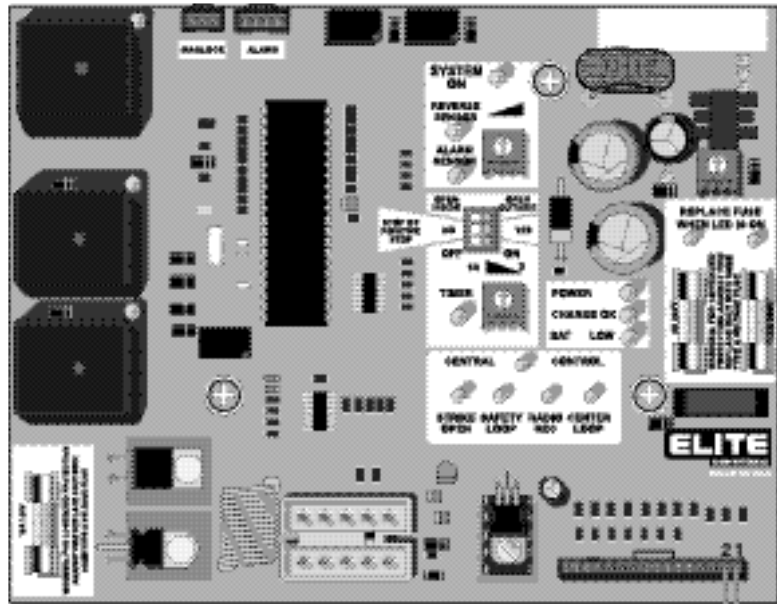
IMPORTANT: It is necessary to still adjust your limit switch at the close position. The controller will look for the limit close first and then it will look for the positive stop.

**Stop by
Positive
Stop Option**

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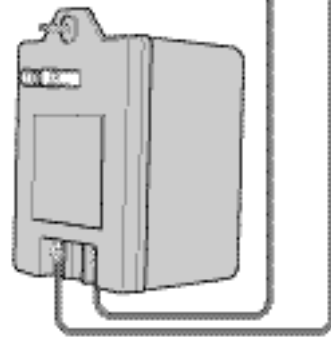
POWER SUPPLY

Use the plug-in transformer (sold by Elite Access System only) by hooking it up to 115V and use Two Conductor, low voltage, 14 gauge / 300 watt direct burial, landscape lighting cables (part #A W-100 or A W-500). Connect these wires to the two yellow wires from operator connector(J3), to the plug-in transformer. Connect the battery cable to the harness connector from J1. The Timer LED will blink 3 times. After the blinks, check the "charge ok" LED, it must be on.



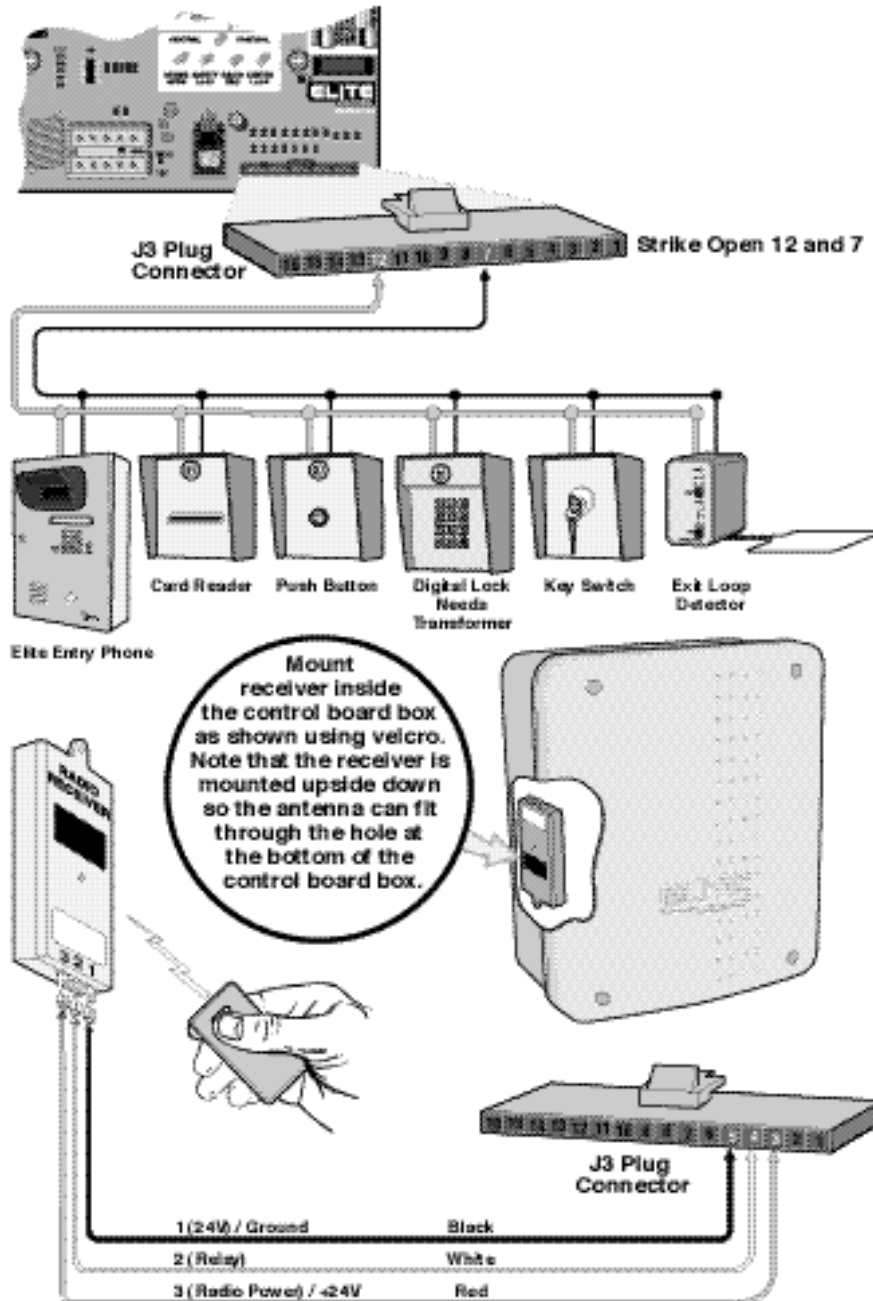
Yellow #2 Yellow #1
Polarity does not matter.

To 115v



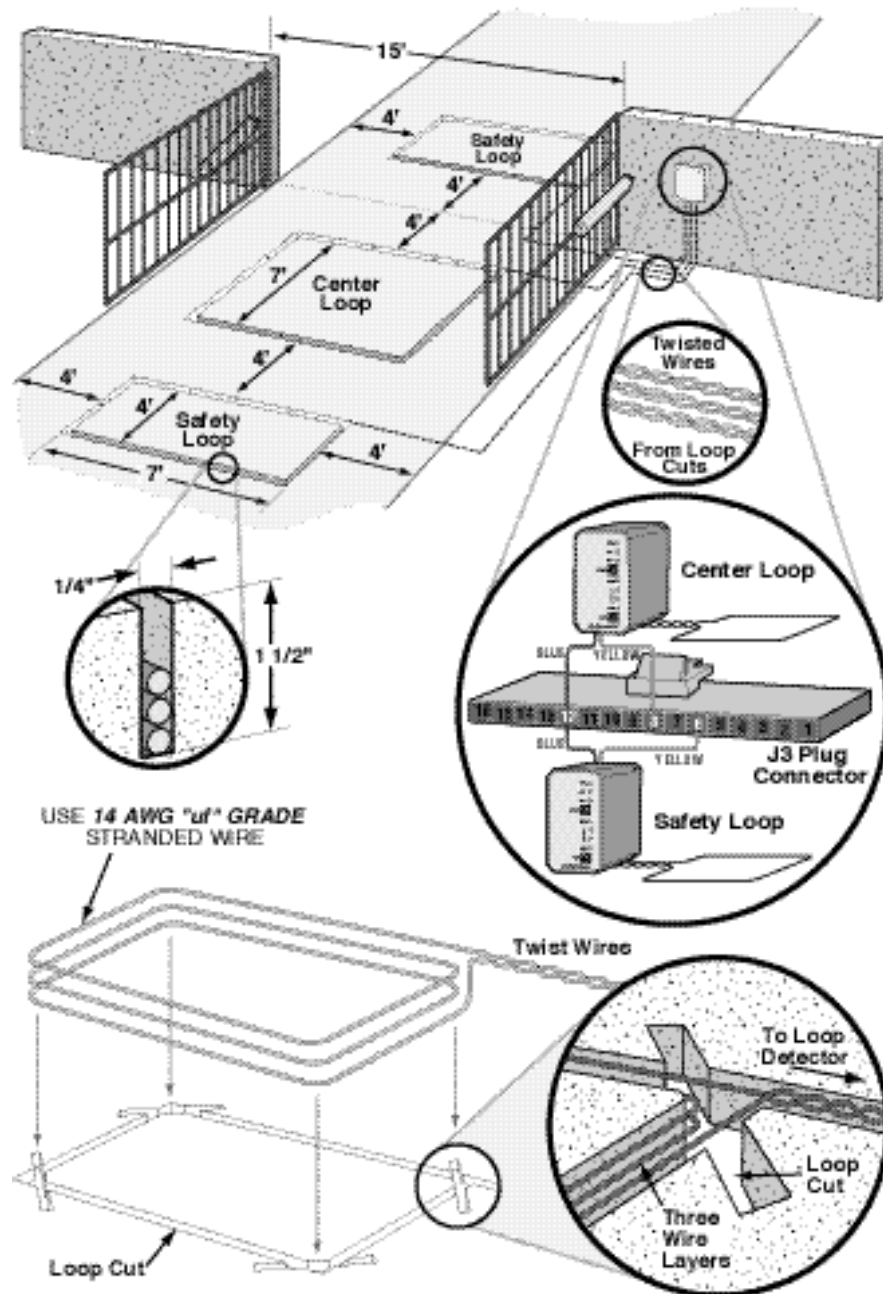
CAUTION
Maximum length of wire should not exceed 500 ft. If using more than 500 feet, use 10AWG wire up to 1000 feet.

DRY CONTACT & RECEIVER WIRING



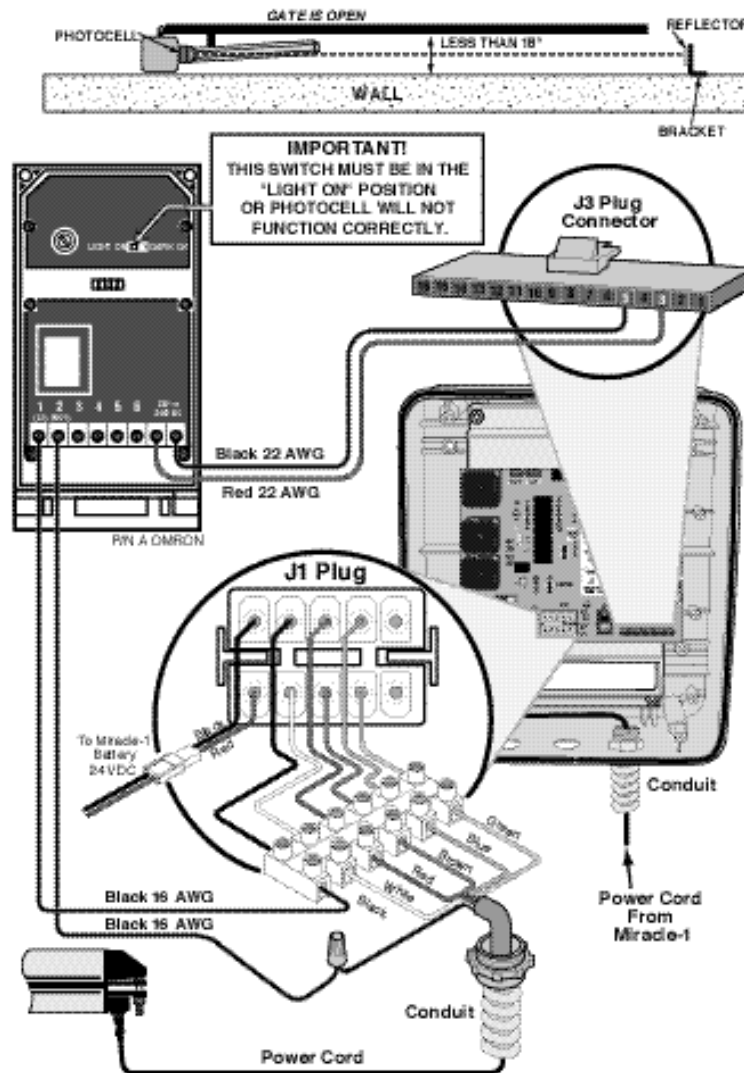
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SAFETY & CENTER LOOP INSTALLATION



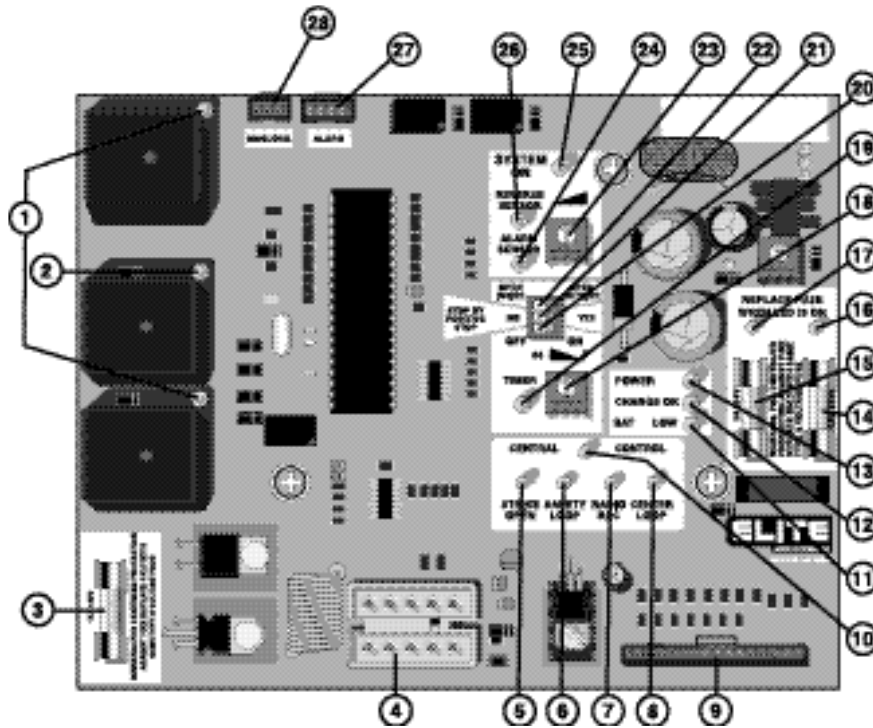
PHOTOCELL INSTALLATION

To reduce the risk of injury, Elite **HIGHLY RECOMMENDS** installing a PHOTOCELL SENSOR when the gate opens to less than 18" from a wall or any other object. Follow the installation instructions provided with the PHOTOCELL SENSOR for accurate placement of the PHOTOCELL and the REFLECTOR.



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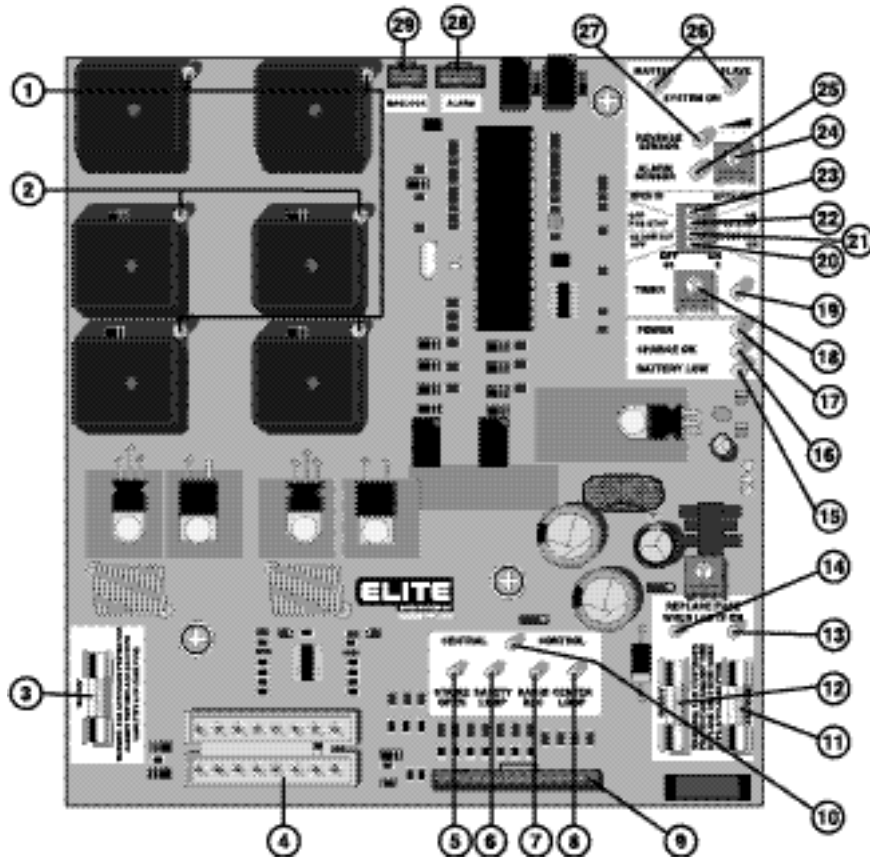
CONTROL BOARD DESCRIPTION



- | | |
|--|---|
| 1. Open or Close Relay LED | 15. Board Fuse |
| 2. Control Relay LED | 16. Replace Charging Power Fuse LED |
| 3. Motor Fuse | 17. Replace Board Power Fuse LED |
| 4. J1-Batteries and Motor Connector | 18. Timer Pot (3 to 60 sec.) |
| 5. Strike Open LED | 19. Timer Active LED |
| 6. Safety Loop LED | 20. Switch-Timer On / Off |
| 7. Radio Receiver LED | 21. Stop by Positive Stop Option Switch |
| 8. Center Loop LED | 22. Switch-Open Inside / Outside |
| 9. J3 Transformer & Input Commands Connector | 23. Reverse Sensor Adjustment |
| 10. Central Control LED | 24. Alarm Sensor LED |
| 11. Batteries Low LED | 25. System On LED |
| 12. Charger Ok LED | 26. Reverse Sensor LED |
| 13. Power LED | 27. Burglar & Alarm Sensor Output Connector |
| 14. Charging Power Fuse | 28. Maglock Connector |

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CONTROL BOARD DESCRIPTION Master / Slave



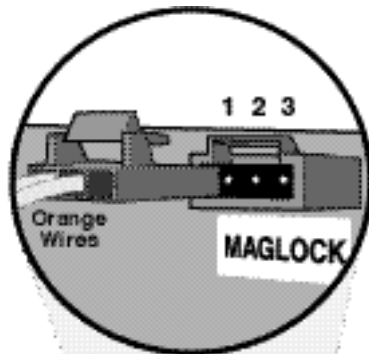
- | | |
|--|---|
| 1. Open or Close Relay LED | 15. Batteries Low LED |
| 2. Control Relay LED | 16. Charger Ok LED |
| 3. Motor Fuse | 17. Power LED |
| 4. J1-Batteries and Motor Connector | 18. Timer Pot (3 to 60 sec.) |
| 5. Strike Open LED | 19. Timer Working LED |
| 6. Safety Loop LED | 20. Timer Switch On / Off |
| 7. Radio Receiver LED | 21. Overlapping Gate On / Off |
| 8. Center Loop LED | 22. Stop By Positive Stop Option Switch |
| 9. J3 Transformer & Input Commands Connector | 23. Switch Open Inside / Outside |
| 10. Central Control LED | 24. Reverse Sensor Adjustment |
| 11. Charging Power Fuse | 25. Alarm Sensor LED |
| 12. Board Fuse | 26. System On LED |
| 13. Replace Charging Power Fuse LED | 27. Reverse Sensor LED |
| 14. Replace Board Fuse LED | 28. Burglar & Alarm Sensor Output Connector |
| | 29. Maglock Connector |

MAGLOCK & ALARM CONNECTORS

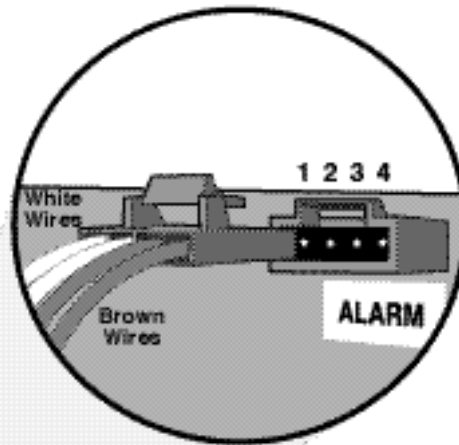
Contact Data

Contact Rating 125 VAC - 0.5 A

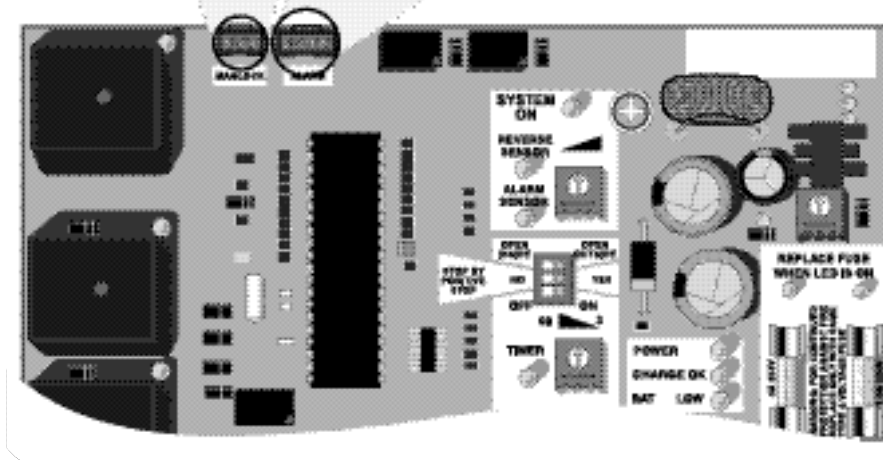
Use the harness provided with the unit to make your connections to these alarm outputs.



Maglock
1. Power-Opening Inside
2. Ground
3. Power-Opening Outside



Burglar Alarm Relay Output	Alarm Sensor Relay Output
1. Ground	3. Ground
2. N. C.	4. N. O.



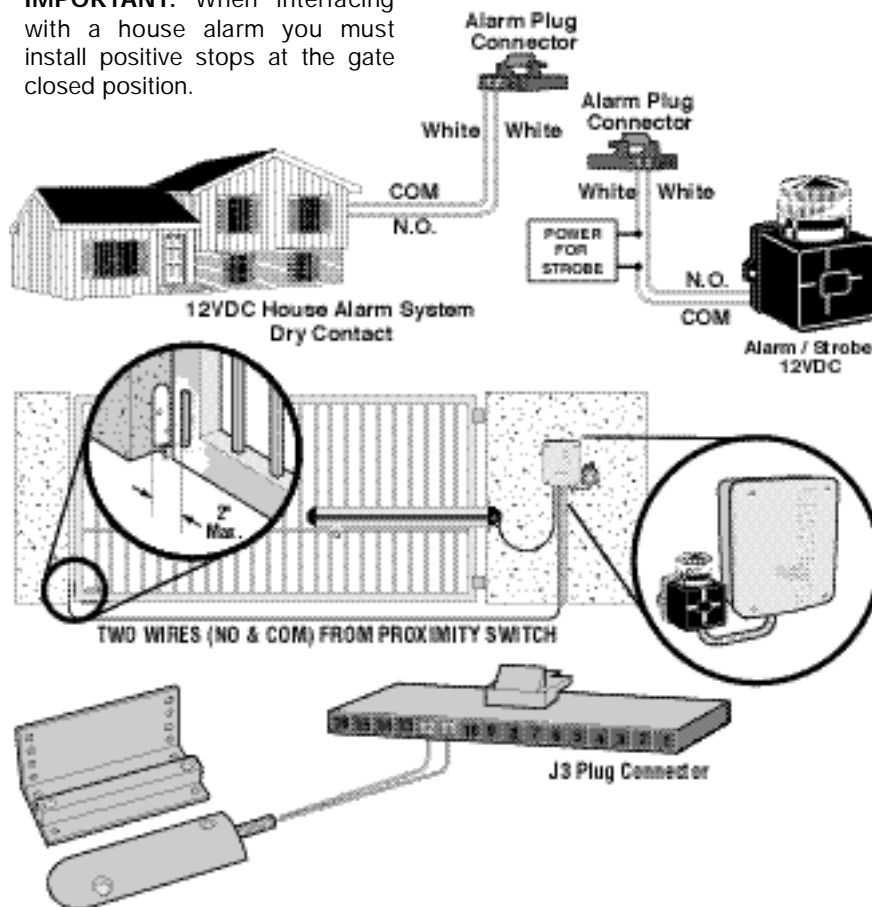
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BURGLAR ALARM

...HOUSE ALARM

IMPORTANT: When interfacing with a house alarm you must install positive stops at the gate closed position.

USE LOW VOLTAGE WIRE 20 AWG

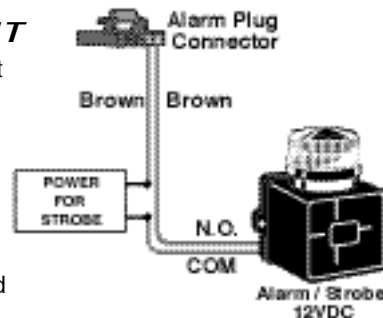


ALARM SENSOR OUTPUT

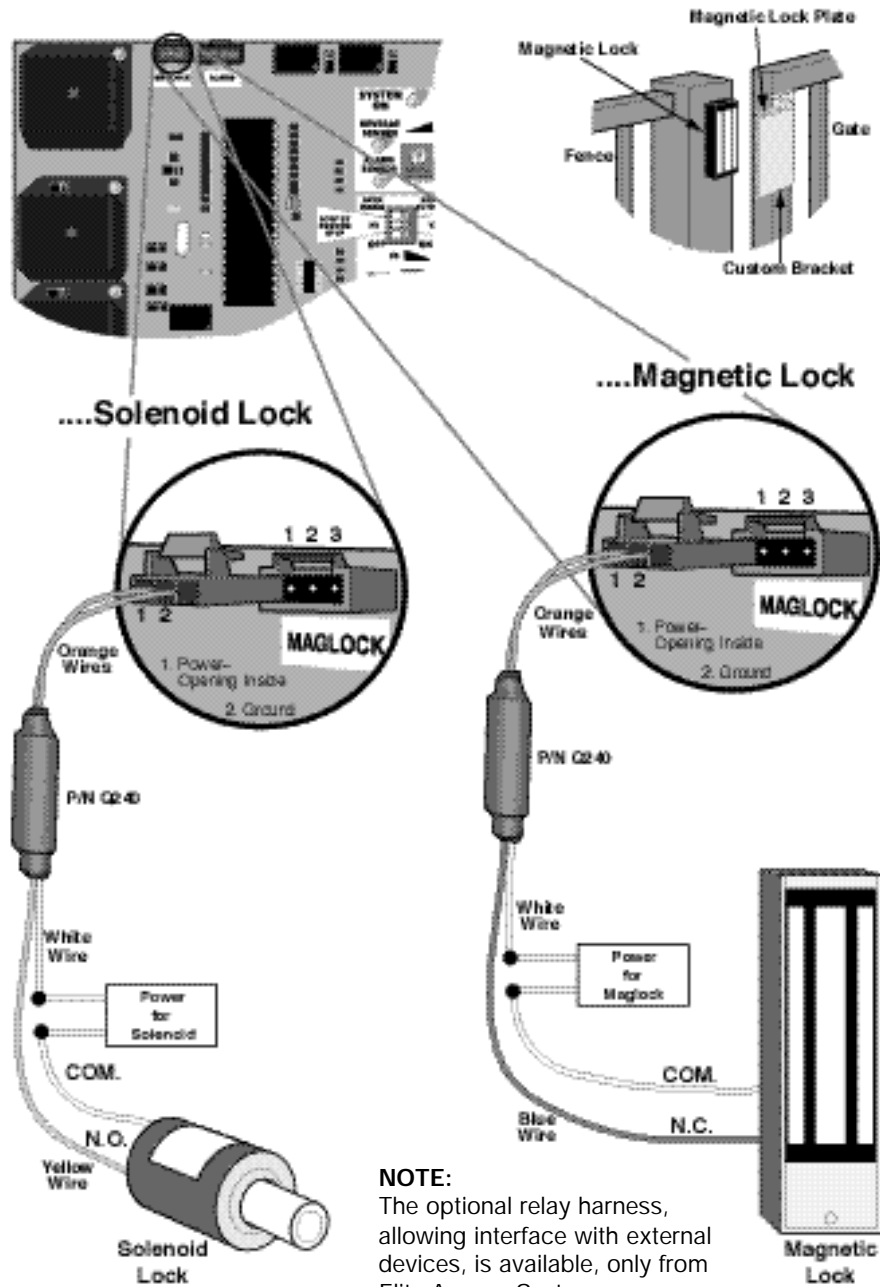
The Alarm Sensor Output will close a circuit as an indication of possible events:

- Heavy Gate*
- Traveling interrupted by an object (Adjust the reverse sensor for sensitivity)

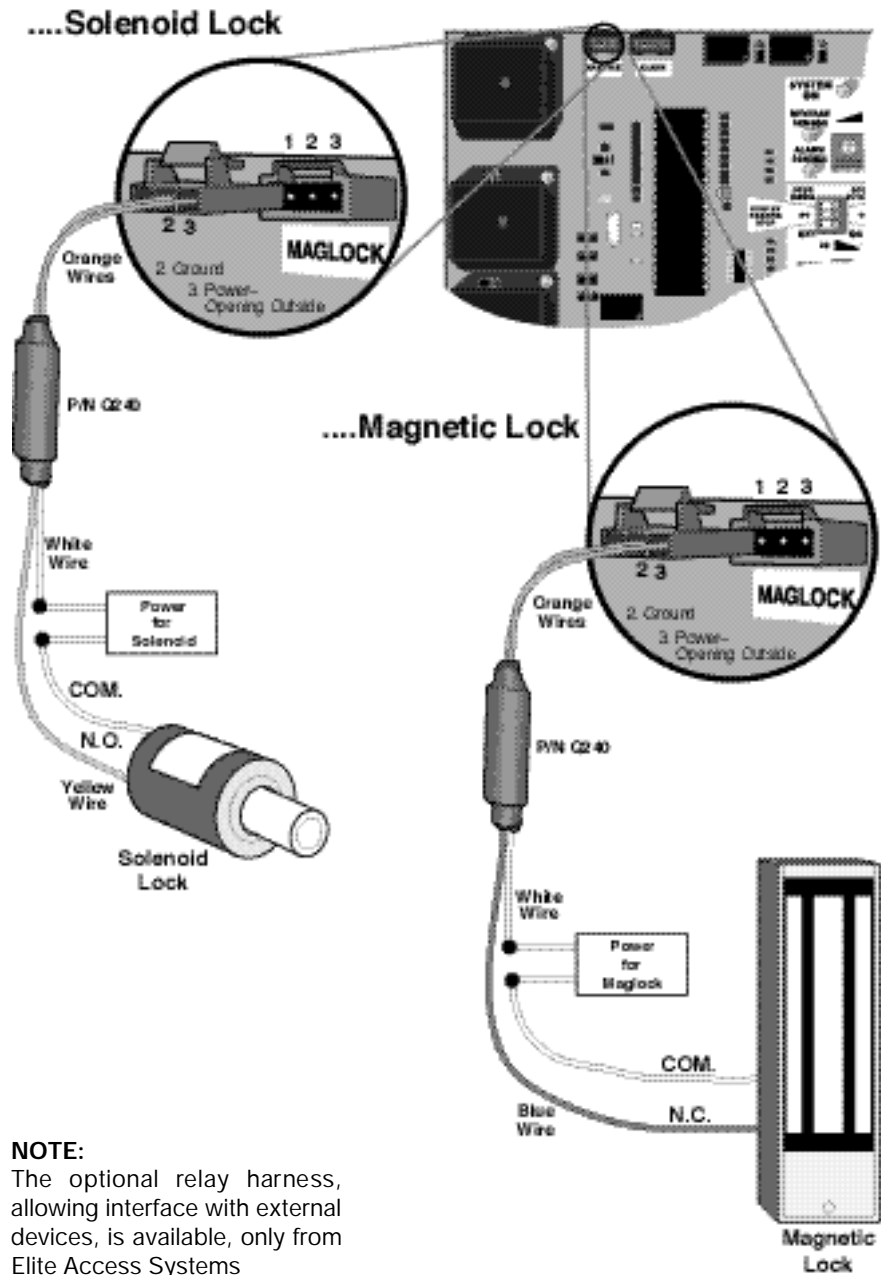
* This will disable the timer function and release mechanically the gate operation for manual movement until a new command is being issued.



GATE OPENING INSIDE INSTALLATION OF...



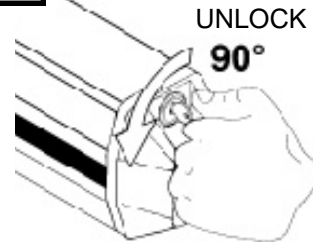
GATE OPENING OUTSIDE INSTALLATION OF...



EMERGENCY KEY RELEASE

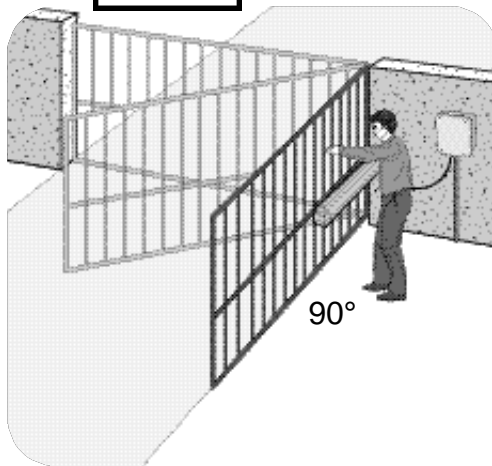
To move the gate during an emergency or power failure, insert the key (step 1) into the key release hole on the front of the operator. Turn the key counter-clockwise to release the gate. Move the gate manually (step 2) to the full open position.

STEP 1



KEY (PROVIDED)

STEP 2

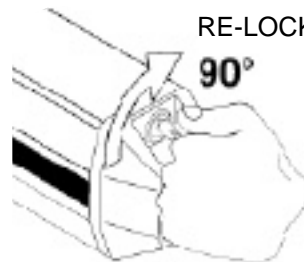


STEP 3

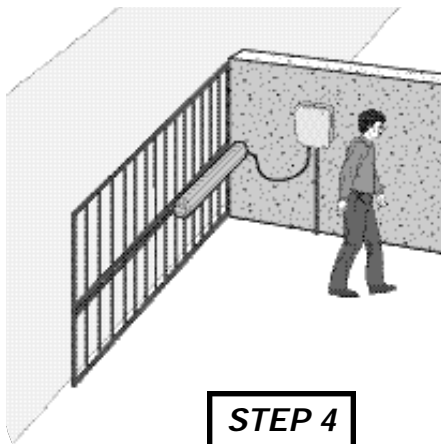


RE-LOCK

90°



STEP 4



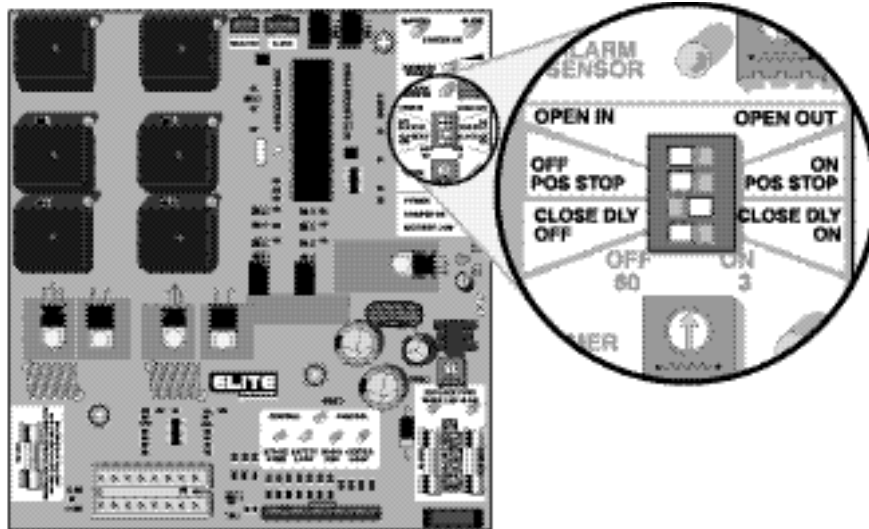
Re-lock the operator (step 3) by turning the key release clockwise while pushing or pulling on the gate until you hear the key release click into place. The operator can now resume normal operation as soon as power is restored (step 4).

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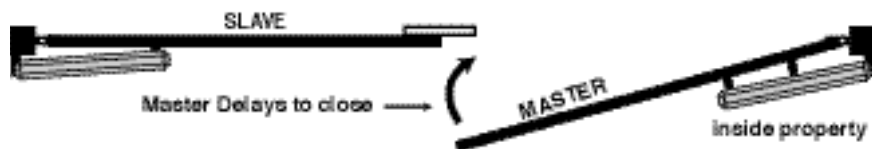
CLOSE DELAY OPTION

(Master / Slave only)

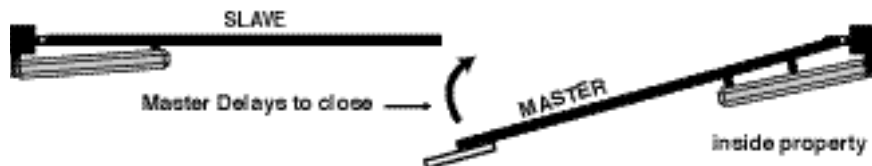
This option is to be used when there is an master/slave installation with overlapping gates.



OPENING INSIDE & OVERLAPPING TO THE OUTSIDE...



OPENING INSIDE & OVERLAPPING TO THE INSIDE...

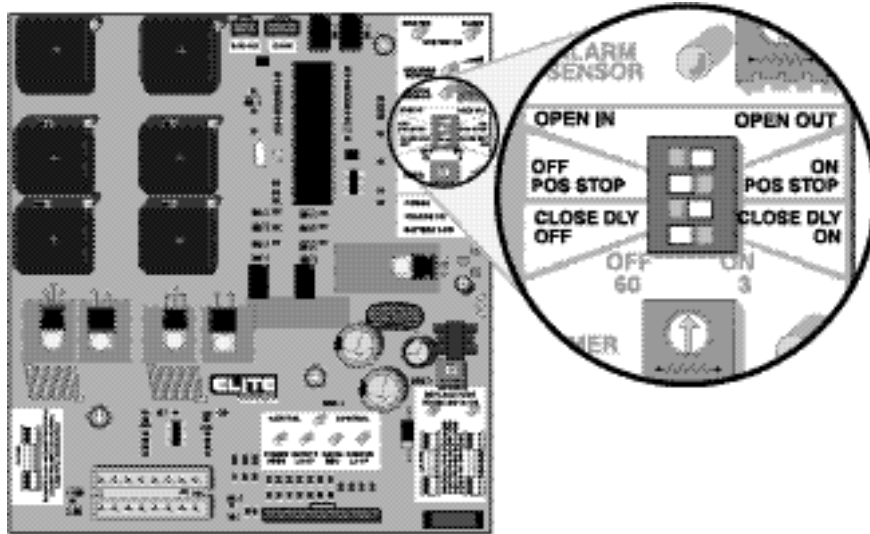


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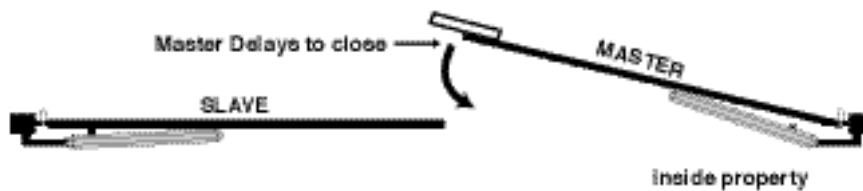
CLOSE DELAY OPTION

(Master / Slave only)

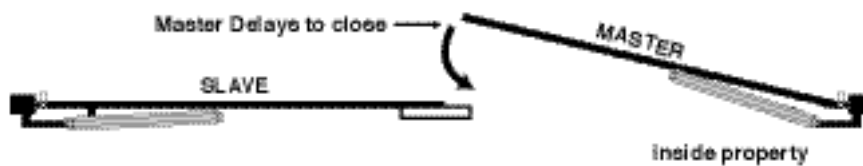
This option is to be used when there is an master/slave installation with overlapping gates.



OPENING OUTSIDE & OVERLAPPING TO THE OUTSIDE...



OPENING OUTSIDE & OVERLAPPING TO THE INSIDE...



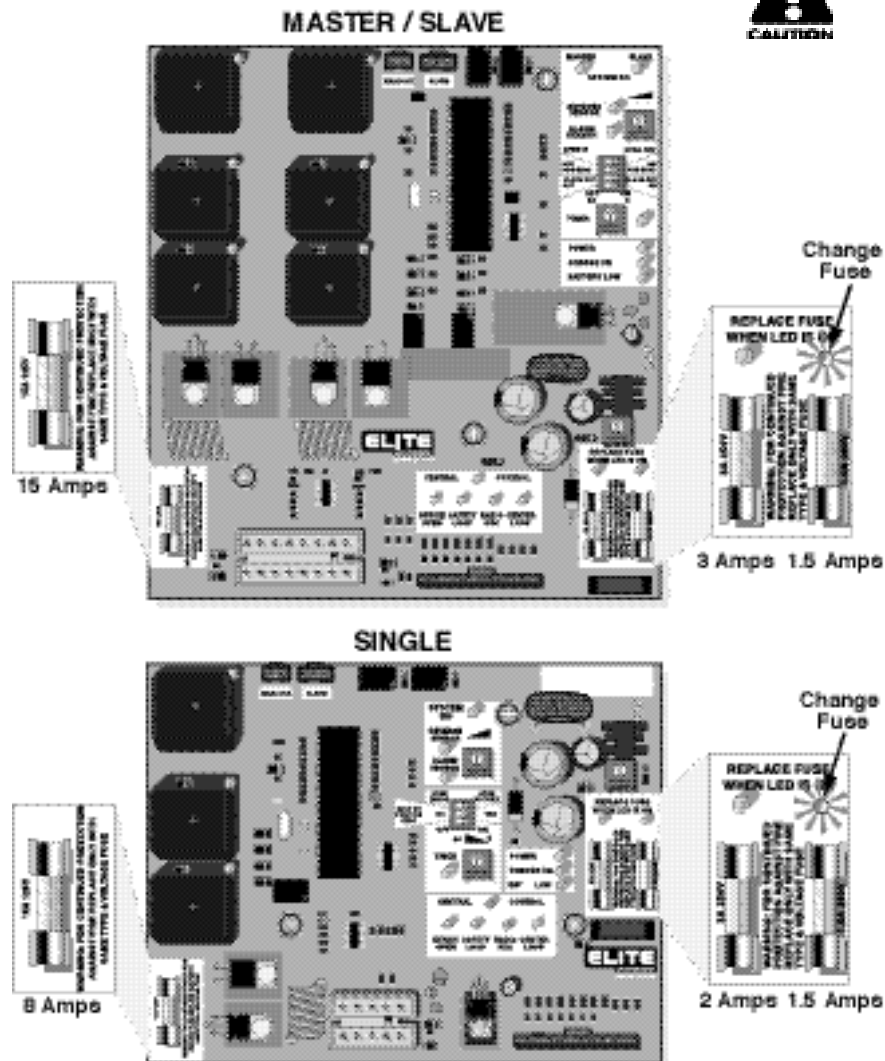
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TRUBLESHOOTING

Check the fuses

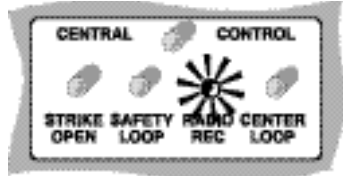
If the gate is not moving in any direction be sure to check all of the LED displays on the control board. If the board power or charging power LEDs are on, change the corresponding fuse on the right side of the board.

Replace fuse only with specified rating*
(supplied by Elite Access)



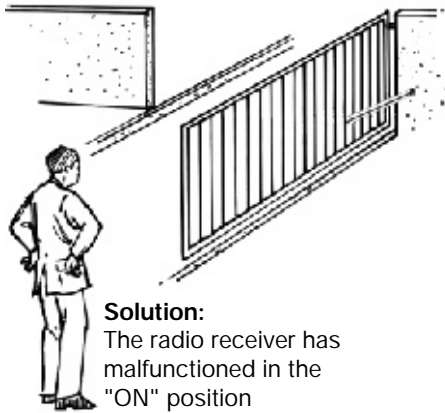
TROUBLESHOOTING

Checking Control Options (example - Radio Receiver)



Problem:

The radio receiver LED is on and the gate remains open.



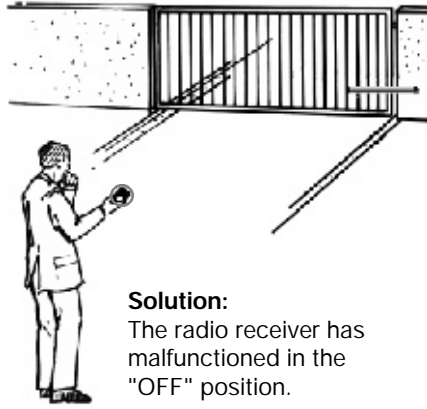
Solution:

The radio receiver has malfunctioned in the "ON" position



Problem:

The radio receiver LED is not on and the gate will not open with the radio receiver.

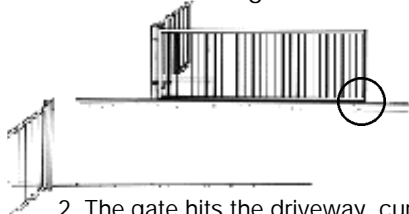


Solution:

The radio receiver has malfunctioned in the "OFF" position.

You will see the alarm sensor LED on when

1. The gate is too heavy or the arm is installed wrong.



2. The gate hits the driveway, curb or other and gets stuck in an awkward position.

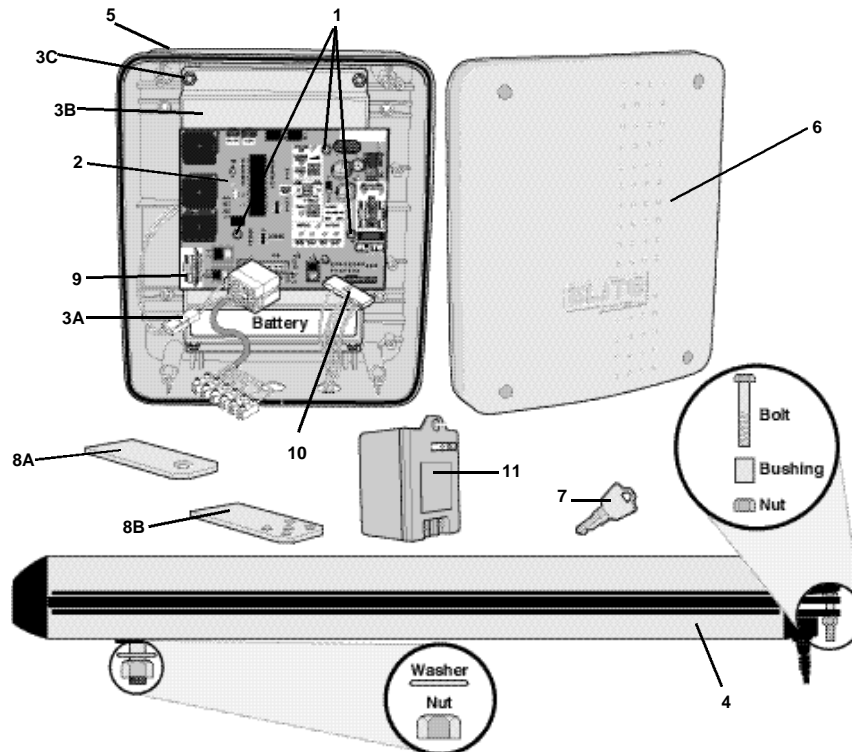


3. The gate hinges are too tight or broken and gate is not moving freely.



4. An object is on the gate frame while the gate is moving.

MIRACLE•1 PARTS LIST



- | | |
|-------------------------------------|-----------------------------|
| 1 - Control Board Screws (Set) Q006 | 10 - Accessory Harness Q231 |
| 2 - Control Board Q222, Q223 | 11 - Transformer A POW 3 |
| 3A - Backup Batteries A BT MIR | Alarm Harness Q242 |
| 3B - Battery Rack | 8 Amp Fuse Q243 |
| 3C - Battery Rack Nuts (Set) | Limit Switch Harness Q239 |
| 4 - Operator Q221 | Mag Lock Harness Q240 |
| 5 - Control Board Box Q227 | Key Pre 3/99 Q229 |
| 6 - Cover Q228 | Traveler Carriage Q300 |
| 7 - Key Release Q257 | 2 Amp Fuse Q258 |
| 8A - Front Mounting Plate Q230, | 3 Amp Fuse Q259 |
| 8B - Back Mounting Plate Q230 | 15 Amp Fuse Q260 (2) |
| 9 - Motor Harness Q224, Q226 | Bolt, Bushing, Nut Q233 |

MAINTENANCE

This swing gate operator is designed to be very low in maintenance. For intensive duty installations: (every six months) lubricate the operator fitting plates, lubricate the gate hinges, and check that electric connections are in good conditions. Any service must be performed by an authorized service technician.

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FEATURES AND SPECIFICATIONS

MECHANICAL SPECIFICATIONS

MOTOR - 24V DC, 12 Amps.

CYCLES - 100 / Day.

SHIPPING WEIGHT:

Single Unit: 58 lbs. - Master/Slave: 89 lbs

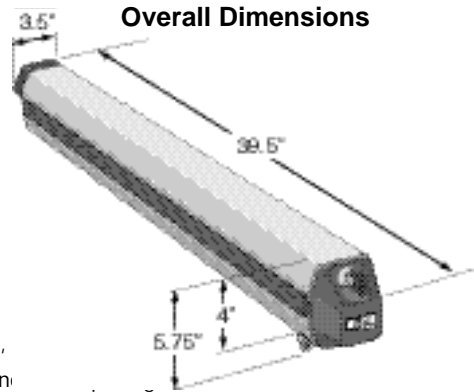
TORQUE - 600 lbs. of torque.

FINISHING - Aluminum.

DIMENSIONS - L 39 1/2", W 3 1/2", H 4".

CAPABILITIES - Maximum gate size 15' wide,

OPERATOR TRAVEL SPEED - 14 to 18 second



ELECTRICAL SPECIFICATIONS

RUNNING SYSTEM - Microcontroller with built-in watchdog system.

MODULAR BOARD - Uses LEDs to indicate all input and output functions of the gate operator.

SENSOR - When gate makes contact with an object while opening or closing, the gate will reverse for 1 second, then go into neutral, so it can be pushed by hand.

TIMER - Can be set from 3 to 60 seconds.

MASTER/SLAVE - Dictates synchronized movement between two gate operators.

SAFETY LOOP INPUT - Anti-tailgating system uses a "stop only" method of operation. Will not work as a commercial loop system.

ALARM OUTPUT - Can be interfaced with any home alarm system. Alarm will sound if the gate is forced open manually. Optional siren speaker can be installed within the control box.

SPIKE SUPPRESSORS - Protected by spike suppressors.

ALTERNATE OUTPUTS - Master/slave, alarm system, and magnetic lock interface.

ELECTRONIC INPUTS - Any type of radio receiver, full-control system "push-open/stop/close", safety loop, photocell, telephone entry, and key switch.

ELECTRONIC BOARD HOUSING DIMENSIONS - W 10 11/16" - H 13 1/4" - D 6 1/4"

HOUSING FINISH - Rain-proof steel box, gold plated and powder coated.

All specifications have been written and verified with our best attention. We do not take responsibility for possible errors or omissions. We reserve the right to introduce changes to the technological progress.

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