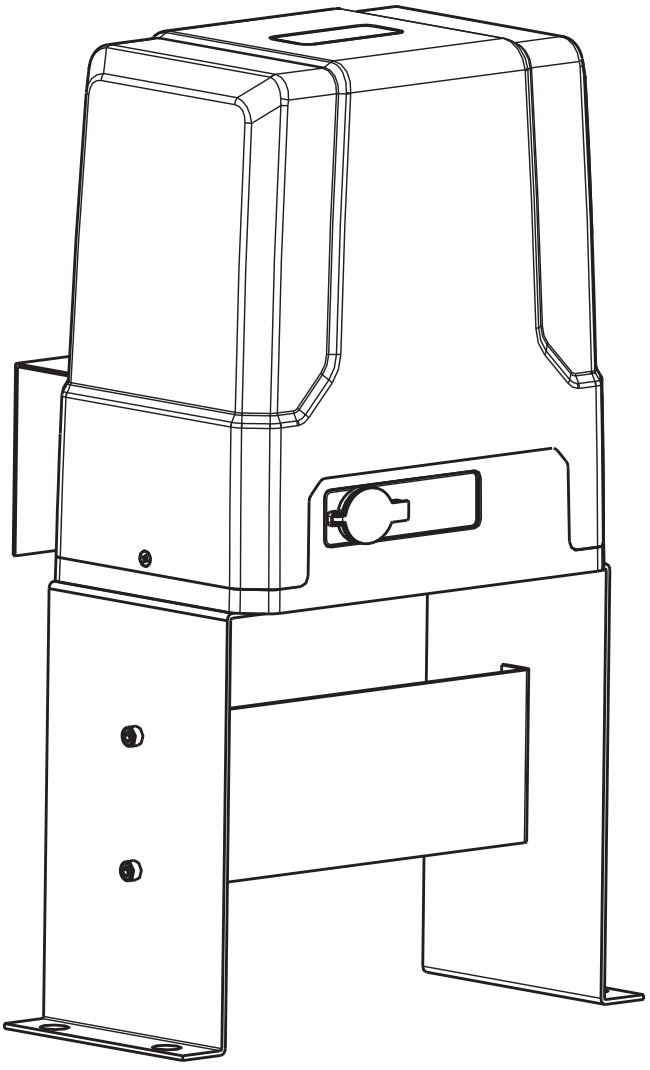
V20240123

Sliding Gate Opener
User Manual



Read Carefully Before Use
Keep for Future Reference

Contents

Safety Information

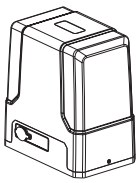
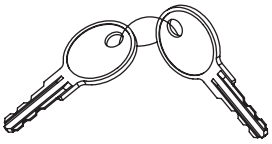
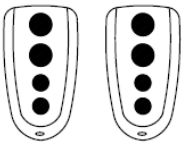
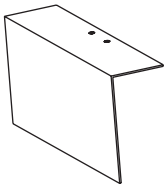
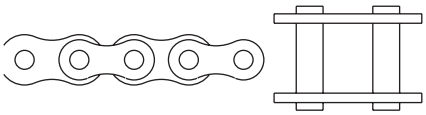
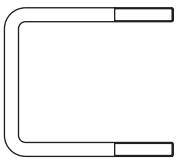
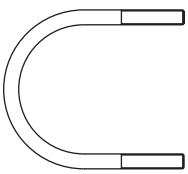
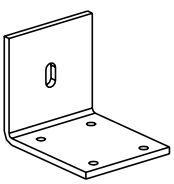
⚠ Warning

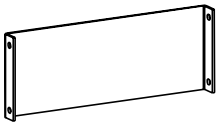
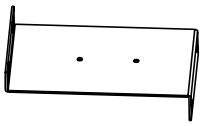
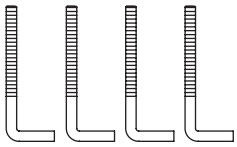
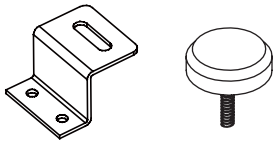
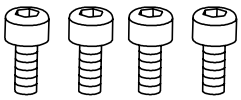
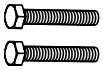
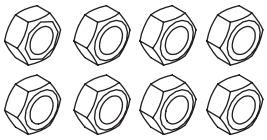
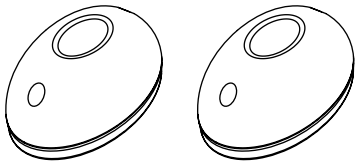
- Read these instructions completely before installation and use. Provide them to any technician used to install, maintain, or repair this device and provide them with the device if it is ever given or sold to a third party.
- Install and use this gate opener only in accordance with these instructions and all applicable local and national laws and regulations. Adding instructional or warning signage may be necessary in your area.
- **ONLY** use the device for its intended purpose, opening and closing a single sliding gate for vehicular traffic.
- **ALWAYS** aim to minimize public exposure to potential hazards such as pinch points. Failure to do so may result in serious property damage and severe personal injury.
- **ONLY** install and use this gate opener on firm level ground.
- **DO NOT** install this device in any area prone to flooding or in locations exposed to flammable or explosive fumes.
- **ANY** actions or elements not explicitly covered in these instructions are strictly prohibited.
- **ALWAYS** keep bystanders, pets, and any objects away from the automation operation area.
- **NEVER** let children operate or play with the gate controls and keep control devices out of the reach of children to prevent unintentional automation activation.
- **NEVER** cross the path of the gate while it is in motion. Even driving through when it is closing remains **EXTREMELY** dangerous.
- **DO NOT** initiate the gate opener unless you have a clear line of sight and can confirm that its pathway is clear of people, pets, or other obstructions. Maintain constant vigilance over the gate's entire range of motion.
- **NEVER** modify the automation components without explicit authorization from the factory. **NEVER** attempt to perform repairs on the automation system. **NEVER** replace any components with nonidentical ones. Making modifications or adding components by personnel without proper training or involving unauthorized parts will void the manufacturer's warranty. Seek professional assistance from qualified technicians if needed.
- **DO NOT** use if any component is missing, loose, worn, or damaged. Tighten, repair, or replace problematic parts before further use. **ONLY** replace components with identical parts and always fully replace damaged electrical cords.
- Maintain the gate opener as instructed herein. **ALWAYS** unplug the gate opener before performing any inspection, servicing, or maintenance.
- Keep your gate well maintained and its track free of grime and debris. Periodically confirm that it runs smoothly under manual operation.
- Keep nylon or polystyrene bags out of the reach of children.
- **ONLY** install the opener on the inside of the gate.
- Make sure the motor is unconnected from power when mounting, positioning or repairing this product.

Specifications

General Specifications		
Input Voltage & Freq.	110 V 60 Hz	
Motor Type	DC	
Motor Coil Material	Copper	
Brushed/Brushless Motor	Brushed	
Motor Rated Voltage	DC 24 V	
Motor Rated Current	7 A	
Motor Rated Power	170 W	
Torque	13 lb·ft	18 N·m
Motor Speed	2200 rpm	
Sprocket Speed	68 rpm	
Housing Material	Acrylonitrile Butadiene Styrene (ABS)	
Motor Base Material	Aluminum Alloy	
Noise Level	≤ 56 dB	
Sprocket Compatibility		
Max. Gate Width	39 ft.	12 m
Max. Gate Weight	1764 lb.	800 kg
Sliding Speed	59 ft./min	18 m/min
Operational Environment		
Ambient Temperature	−4 to 158°F	−20 to 70°C
Weatherproof Rating	IP44	
Remote Control		
System Capacity	32 Remotes	
Frequency	433.92 MHz	
Range	98 ft.	30 m
Gate Control Modes	Remote, Manual	
Battery		
Battery Type	Lead-Acid Battery	
Battery Capacity	12V/9Ah	
Functions		
Motor		
Thermal Cutoff	Yes	
Gate Operation		
Start Delay	Yes	
Stop Delay	Yes	
Obstruction Retraction	Yes	
Auto-Close Timer	15/30/45 sec.	
Pedestrian Mode	Yes	
Limit Switch Type	Magnetic Steel	
Notification		
Opening/Closing	Buzzer (Off by default)	
Obstruction	Buzzer (Off by default)	
Low Battery	Buzzer (Off by default)	
Remote Control		
Button Configuration	Single/Three Button Control	

Package List

No.	Picture	Name	Quantity
A		Main Body	1
B		Manual Release Keys	2
C		Remote Controls	2
D		Sprocket Cover	1
E		Chains	2
F		Tie Rod	2
G		Square Bolt	4
H		Round Bolt	4
I		Gate Brackets	2

No.	Picture	Name	Quantity
J		Horizontal Mounting Plate	1
K		Vertical Mounting Plate	2
L		M8 Foundation Bolts	4
M		Magnets & Bracket	2
N		M6×10 Screws	2
O		M4×10 Screws	2
P		M6×14 Screws	14
O		M8×60 Hex Bolts	6
P		M6×20 Hex Bolts	4
S		M8 Hex Nuts	8
T		M6 Hex Nuts	20
U		M6 Flat Washers	14
V		M8 Flat Washers	8
W		M6 Spring Washers	14
X		M8 Spring Washers	4
Y		Photocells	1

Preparation

This chapter describes the preparation that needs to be done before installation. Carefully read and follow the instructions. Failure to do so may cause unsuccessful installation, shorten the lifespan of your gate, or even result in personal injury and property damage.

Preparing Components and Tools

Check that all necessary accessories are intact and complete, preparing other helpful items as needed.

Components Not Included but Necessary

- Three-Core Cable: 16 AWG (1.5 mm²), usu. 6.6 feet (2 m) long
- Conduits
- 3-Prong U.S. Plug
- Infrared Sensor Connection Cables: Single or double-core.

Tools Needed for Installation

- Spirit Level
- Adjustable Wrench
- Socket or Sleeve Kit
- Flathead Screwdriver
- Phillips Screwdriver
- Tape Measure
- Marker/Pencil
- Chainsaw/Hacksaw
- Hammer Drill
- Wire Cutters
- Wire Strippers

Install Safety Guards

For your safety, adopt following safety protection measures:

- Post at least two warning signs at prominent positions on both sides of your gate.
- Controls intended for user activation **MUST** be located at least 10 feet (3 m) away from any moving part of your 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 MUST have a security feature to prevent unauthorized use.
- Exercise care to reduce the risk of nuisance tripping, such as when a vehicle trips the sensors while your gate is still moving in its opening direction.

Power Setup

⚠Warning

*This step is **ONLY** for setting up the cable for the gate opener. **DO NOT** connect it to power supply until the installation is finished. (Except in Testing the Gate Opener)*

Powering the Gate Opener

1. Prepare a 110V/60Hz power supply for the gate opener.

   ⚠Warning

   The circuit should be 3-core and at least 16 AWG (1.5 mm²).

2. Run the wiring from a GFCI outlet or a circuit breaker within sight of the gate.

   ***Note:** It is recommended this outlet or switch be located at least 5 feet (1.5 m) above the ground.*

⚠Warning

*The wiring connections **MUST** be able to withstand rain and other elements. It is recommended that the power cable run underground near the gate inside a PVC pipe.*

Powering the Photocells (Optional)

1. If using the infrared sensors (Y), prepare locations for them ion your gate so that they are on the same level.
2. The signal line from the receiver—the sensor with a 5-pin terminal—and any power lines should be prepared. The wires should be at least 22 AWG (0.5 mm²) thick.
3. Power the infrared sensors from the motor's circuit board or separately.

   ***Note:** It is recommended that these lines and lines from any other control or access system also be placed underground inside a separate PVC pipe than the one used for the motor's power cord.*

   ⚠Warning

   *All wiring connections **MUST** be able to withstand rain and inclement weather.*

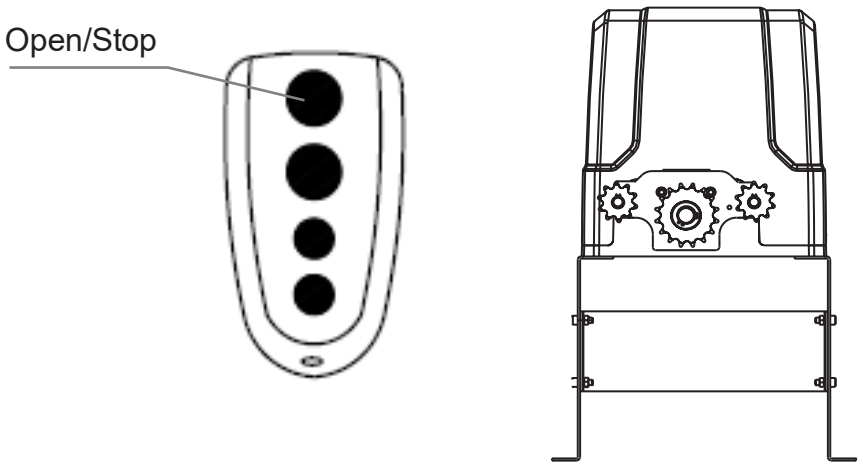
Testing the Gate Opener

Checking Remote Release

Before installation, you must test the gate opener.

1. Loosen the bolts fastening the plastic cover of the main body.
2. Locate the terminals for the main power.
3. Connect the 16 AWG cable (not included) to the terminals and your 3-prong plug (not incl.).
4. Replace the cover and retighten its fasteners.

5. Plug the gate opener to a power source.
6. Press the open button on the remote control, and the output sprocket should immediately start rotating counterclockwise.
7. Press the stop button, and the output sprocket should immediately stop rotating.
8. Press the close button, and the output sprocket should begin rotating clockwise.



⚠ Warning

Ensure the gate opener is unplugged before proceeding with installation. Keep fingers away from gate.

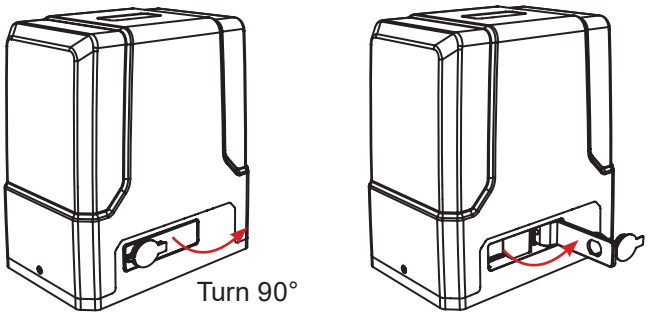
Checking Manual Release

⚠ Warning

With the manual release locked, the output sprocket is locked as well. Only use the manual release in case of power failure. ***DO NOT*** *connect to power when the manual release is activated.*

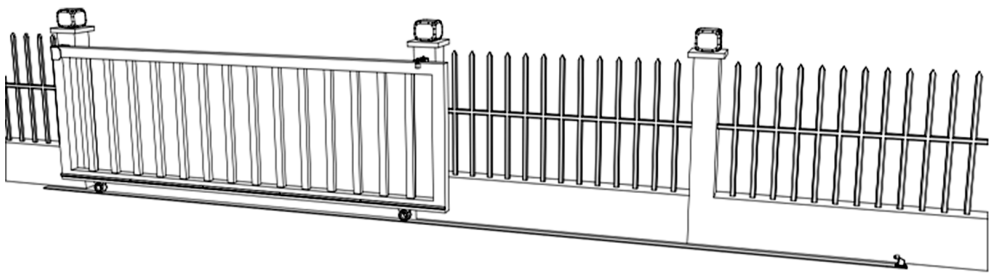
1. Open the key cover using the any of the manual release keys.
2. Insert the key and turn it 90° clockwise.
3. Pull the latch as shown perpendicular to the main body.
4. Rotate the motor output sprocket freely by hand.

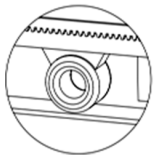
In an emergency, open the door following the steps above to manually open the gate.



Checking Installation Conditions

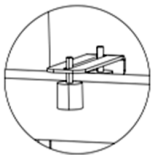
1. Ensure that your gate does not exceed your model's weight capacity and includes the following features or their equivalent.



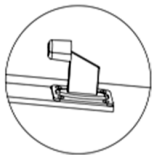


Track and Wheels

End Catch



Guide Rollers



End Stop

2. Ensure that your gate does not exceed 39 feet (12 m) in length.

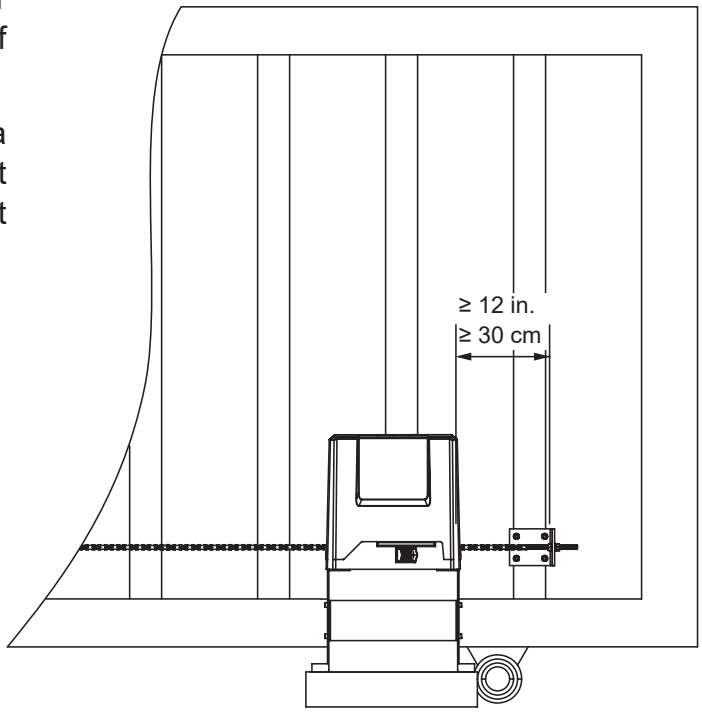
   ***Note**: If it exceeds, you will need to purchase additional ANSI #41 chain and connect it to those provided with your device.*

   ⚠ Warning

   ***NEVER** use incompatible chain sizes with this device and **ALWAYS** ensure the gate chain is securely fastened prior to use.*

3. Ensure that your gate is properly installed on firm level ground. It should move smoothly and horizontally along its entire range, and its sprocket and guides should rotate easily and be free of any corrosion, dirt, or grime. Any track should be cleaned and firmly mounted along its entire length. There should be adequate space at either end to avoid any pinching or crushing hazard once its movement is automated or the hazardous area should be blocked off and warnings posted.

4. Ensure that the gate opener will have a suitable location on firm level ground at least 12 in. (30 cm) inside the chain bracket on the nearest end of the gate.



5. Prepare a working power source nearby and arrange appropriate wiring routing.

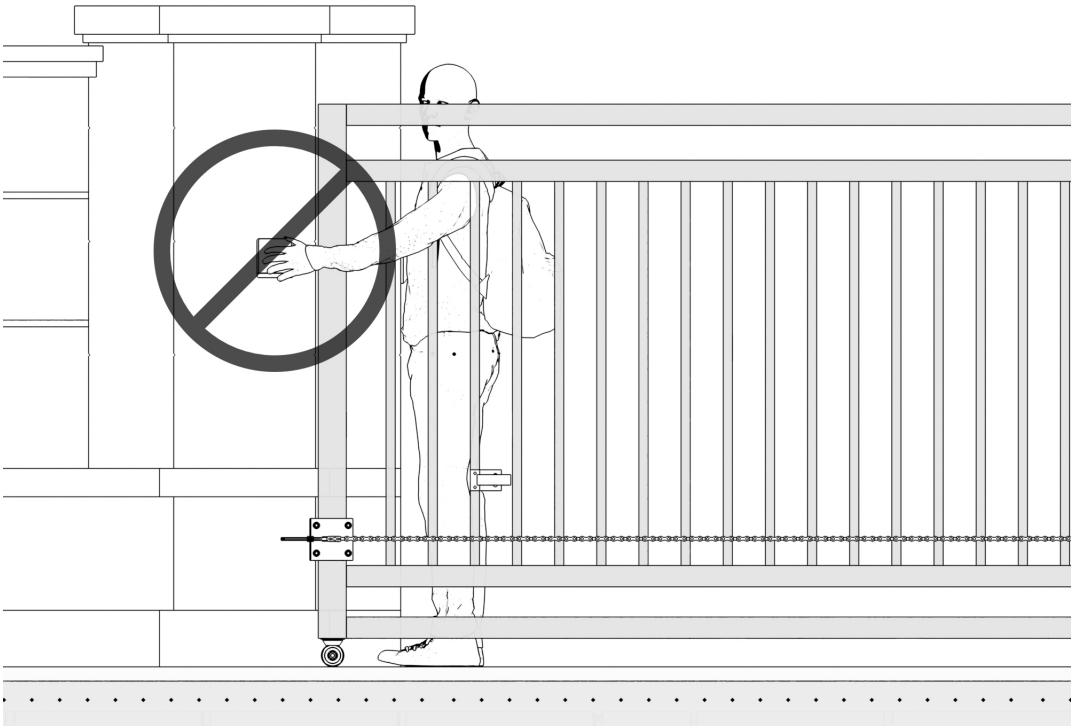
⚠ Caution

- *The power line should be covered by PVC conduits (not included).*
- *The external wiring should be buried underground to ensure safe use.*

6. Ensure there is a cement floor no less than 450mm long and 300mm wide and a minimum depth of 250mm for motor installation and the distance to your gate is no larger than 12 in. (30 cm).

⚠ Warning

***NEVER** install any control device where a user will be tempted to reach through the gate to operate the gate opener.*



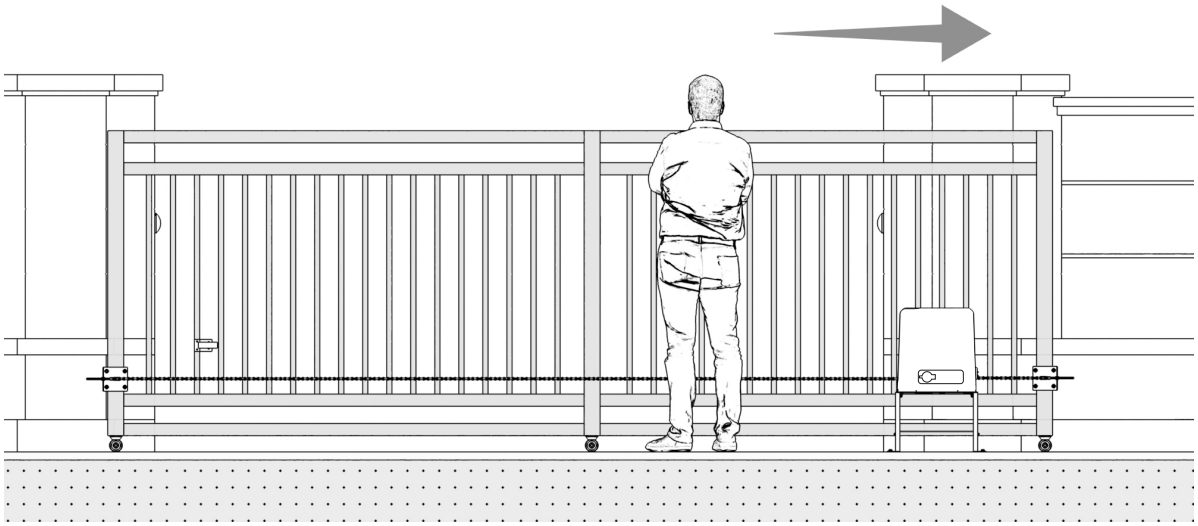
Determining the Sliding Direction

Sliding direction herein refers to the direction in which your gate slides when you are standing at the side of your gate opener and facing the gate.

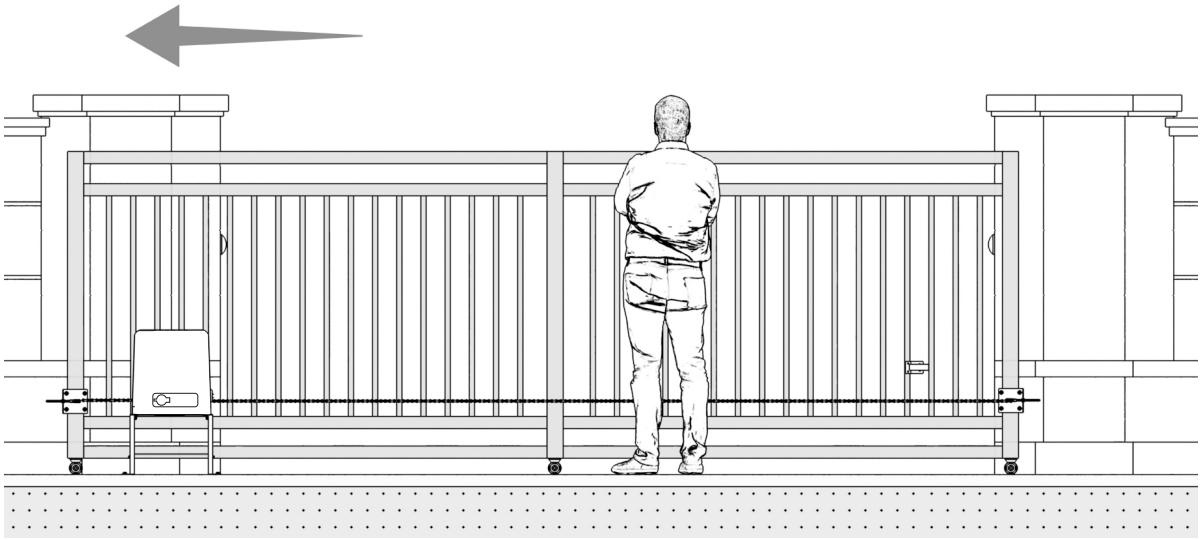
This device is designated for immediate use with gates that slide open to the right. The installation procedures for gates that slide open to the left are

basically, the same as that for gates that slide open to the right, except for installation procedure with respect to the electrical part.

Right-Slide Opening



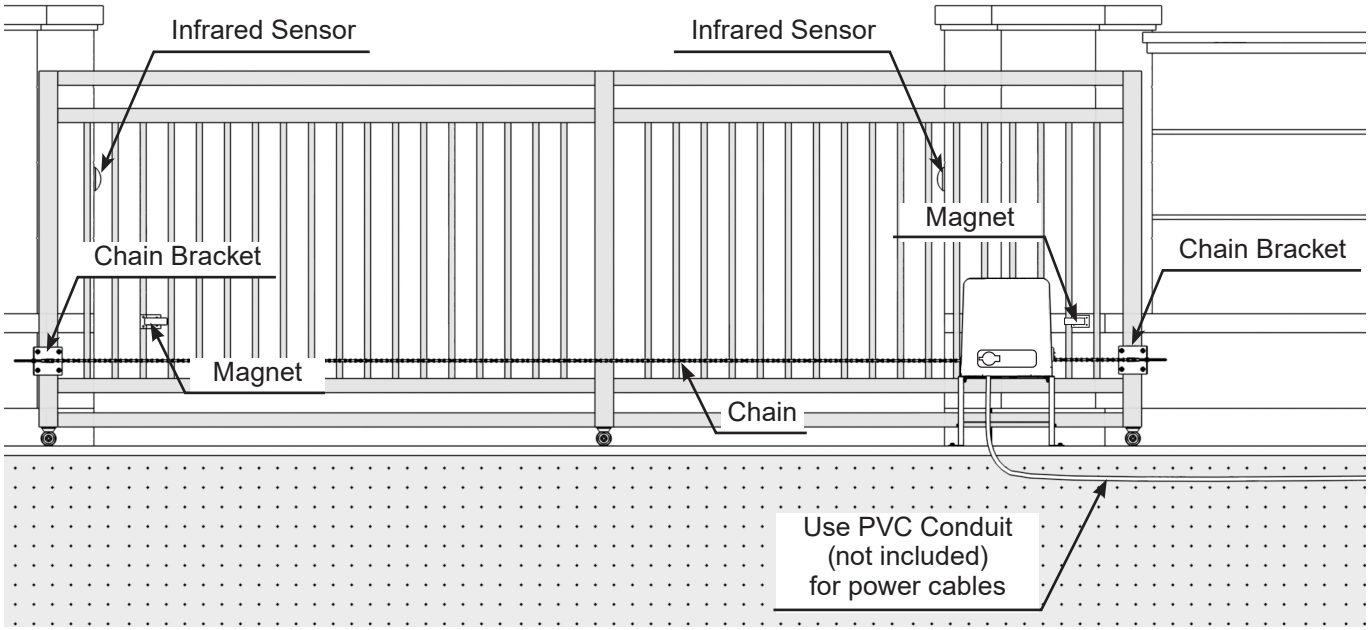
Left-Slide Opening



Notion:
Regardless of the door opening direction, the black magnet is always installed on the left side.

Customizing the Installation

Refer to the diagram below for where things should be for a proper installation.(applicable only to right slide opening)



⚠Warning

***ONLY** install the opener on the inside of the gate.*

Mechanical Installation

Base Installation

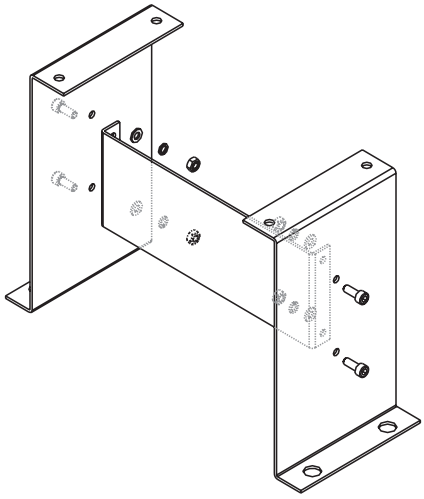
⚠Warning

*Your motor **MUST** be firmly secured for safe use. **DO NOT** attempt to use it loose or only secured to thin pavement.*

Parts to be used:

- M6×10 Screws (×4)
- M6 Spring Washers (×4)
- M6 Flat Washers (×4)
- M6 Hex Nuts (×4)
- Horizontal Plate (×1)
- Vertical Plates (×2)
- Foundation Bolts (×4)

1. Use the horizontal mounting plate (J) to brace the two vertical mounting plates (K) as shown.



2. If the area beside your gate already has concrete 10 inches (25 cm) or deeper, you can attempt to secure this base into it with your drill and suitable fasteners.

   Note: *If there is no concrete at the area beside your gate, dig a hole where the main body is going to be installed, and refer to the steps 3-9 for the concrete base.*

3. Prepare a form box with the same dimensions as the hole you dig and fit it into the hole. Nonstick spray can be used to minimize moisture absorption and ease its future removal.
4. arrange PVC pipes for the main power cable, photocell (if needed), and any other cables for optional accessories.
5. Fill the form box with concrete.

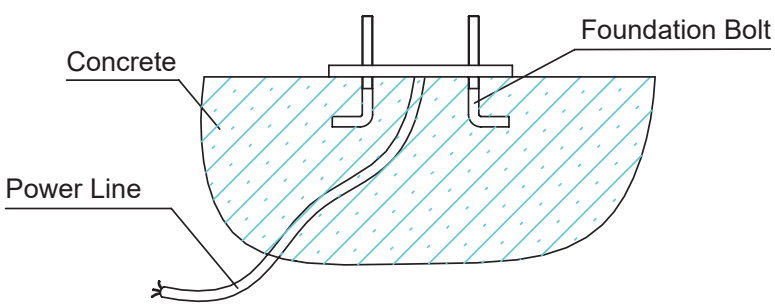
   Note: *You will need a minimum of 1.5 cubic feet (40 L) of concrete, equivalent to about four standard 60 lb. or three standard 80 lb. bags. A metal wire or cage frame can be added near the sides to further reinforce your concrete foundation.*

6. While the concrete is still wet,
   a. Adjust the cables' PVC pipes as needed.
   b. Insert the four M8 foundation bolts (L) as shown.

   Note:

   Allow for the additional 2 inches (5 cm) or so that the chain gears will need between the nearest foundation bolts and the gate.

   Coat the bolts with a protective solution to minimize corrosion during their time in the wet concrete and afterward.



7. Level the upper surface of the concrete.
8. Wait at least 24 hours for the concrete to set, protecting the area from any rain or other weather as needed.
9. Remove the form box from around the concrete and pack the soil tightly back into place.

   Adjust the concrete and surrounding dirt as needed to ensure it is snuggly fit, firmly positioned, and completely level.

   ⚠ Warning

   If you ever subsequently notice the gate opener rocking with the concrete during use, add additional concrete or further secure the base as needed.

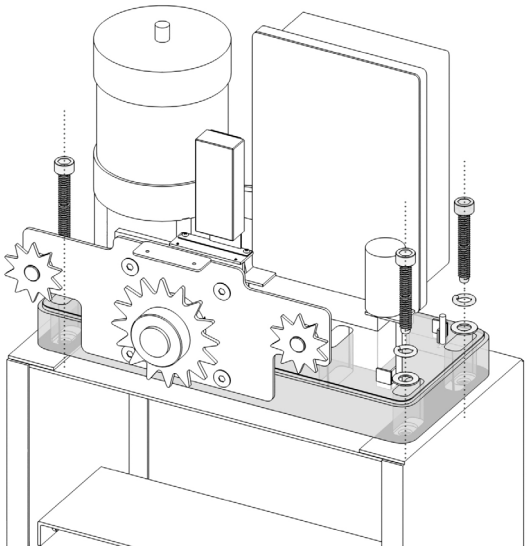
10. Fix the base onto the foundation bolts using the M8 spring washers (X) and flat washers (V) and hex nuts (S). Use additional washers as needed to keep the base completely level.

Base and Motor Mounting

1. Remove the screws from both sides of the motor (A).

2. Remove the protective cover.

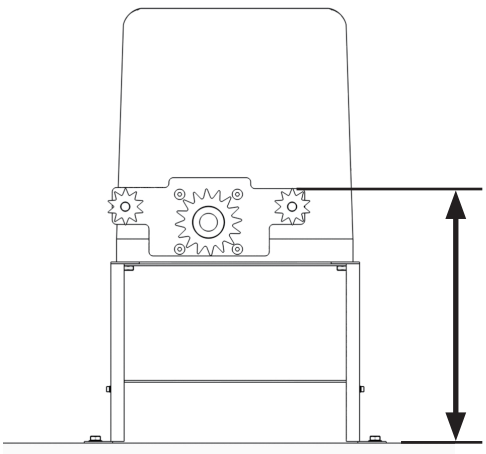
3. Attach the motor to its base using the following fasteners.
   - M8×60 Hex Bolts (×4)
   - M8 Spring Washers (×4)
   - M8 Flat Washers (×4)
   - M8 Nuts (×4)



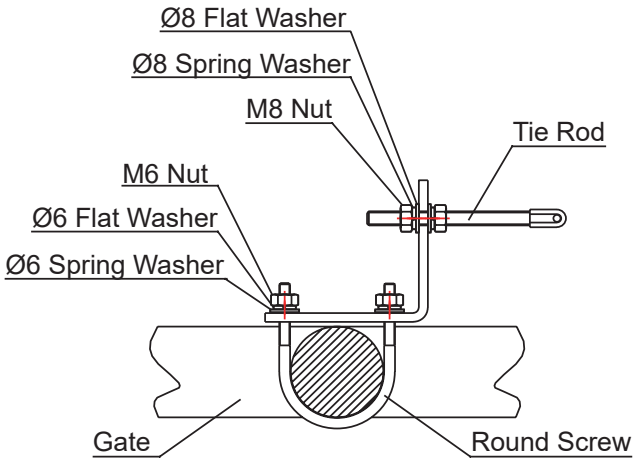
4. Attach the base with the motor to the foundation bolts using 4 M8 bolts and nuts.

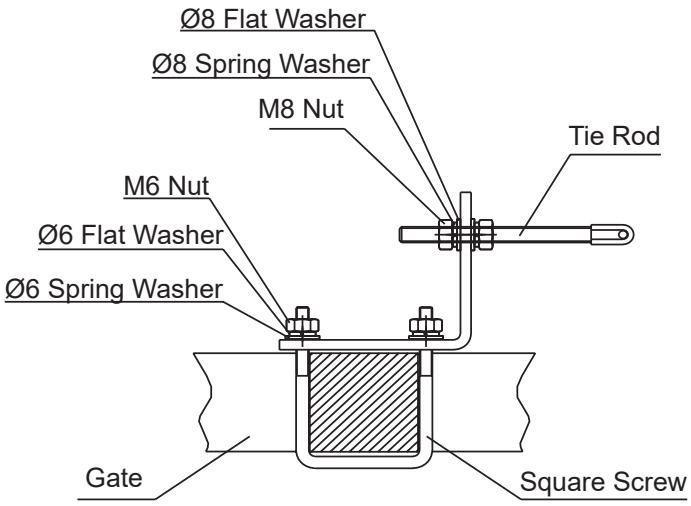
Chain Installation

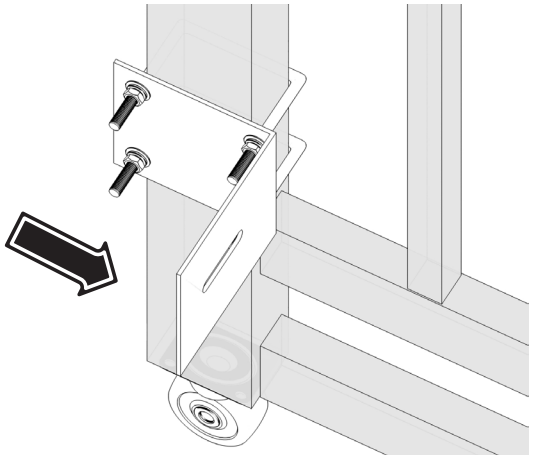
1. Close the gate.
2. Determine the height of the marked idler wheel using a tape measure (not included). This value denotes the mounting height of each chain bracket based upon its horizontal centerline. On your gate, mark the mounting height for both chain brackets.



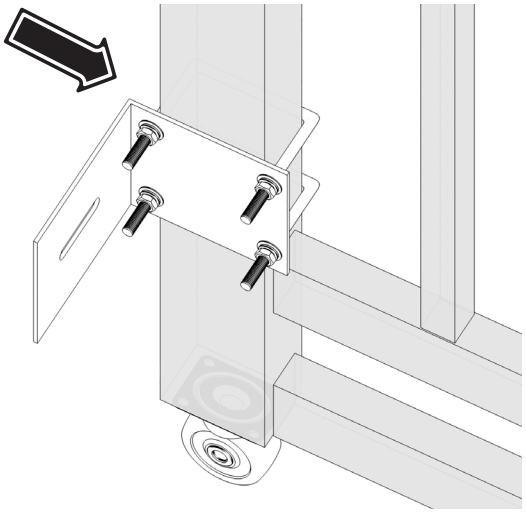
3. Install a gate bracket(I) on the left and right side of the gate at the same height as the two lower wheels on the motor, as shown below. Use the square bolt(G) for square frames and the round bolt(H) for round frames.



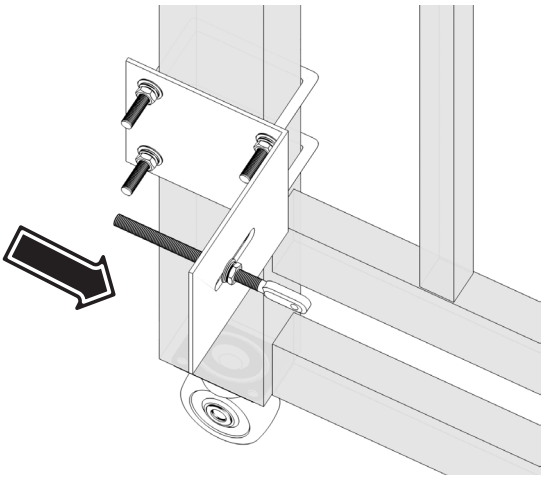




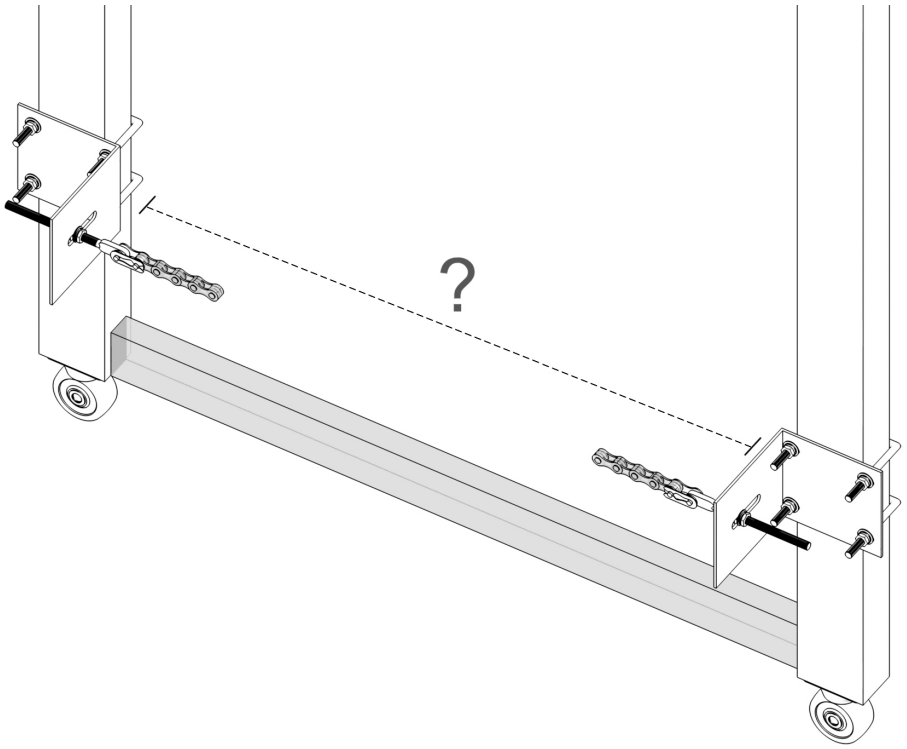
Note: *It is recommended that you position the brace for the chain bolt on the side of the gate frame nearer to the motor (as shown in the image above), but it can be used in an alternative position if necessary (as shown below).*



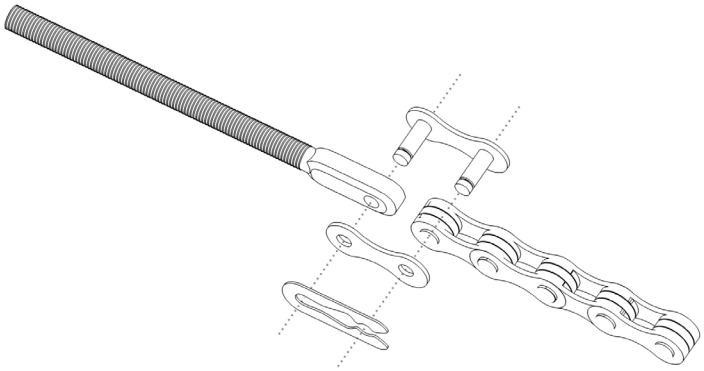
4. Pass the tie rods (F) through the brackets and secure it with M8 hex nuts, springs, and flat washers.

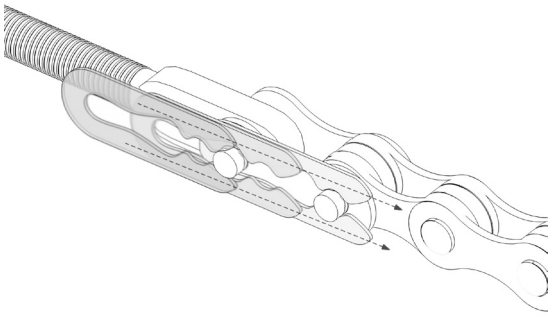


5. Measure the distance between the two chain brackets as shown to see the necessary length of the chain's extension. This package includes two chains, each being 9.8 feet (3 m) long.
   - If the distance is 9.8 feet (3 m) or less, cut off the excess chain section while leaving a certain amount as needed.
   - If the distance is 9.8–19.6 feet (3–6 m), join the two chains and make your cut as above.
   - If the distance is 19.6 feet (6 m) or more, use a #41 galvanized chain (not included).

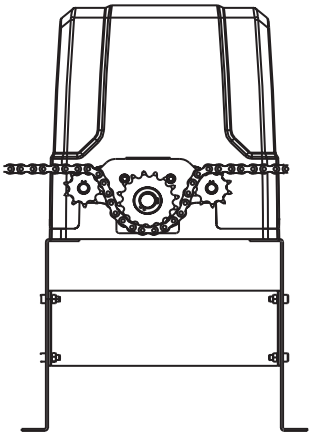


6. Connect the chain to the tie rod the way as shown.

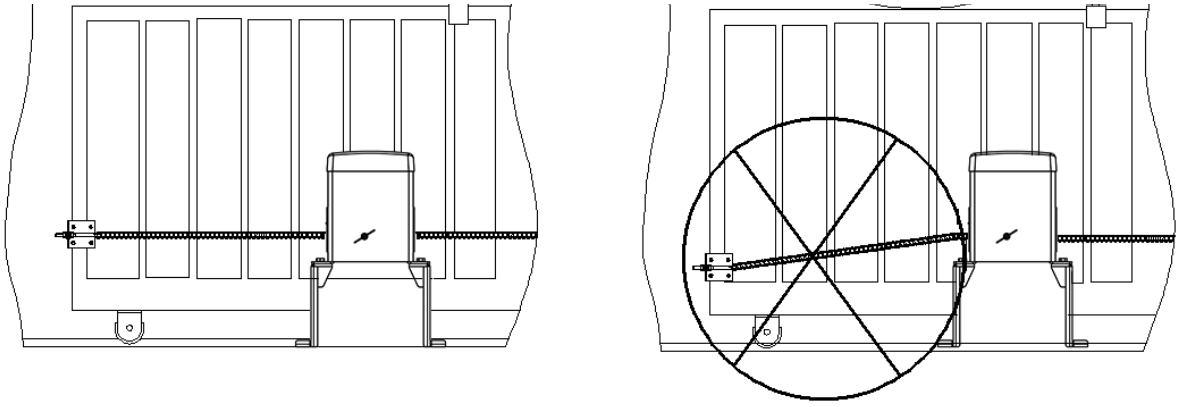




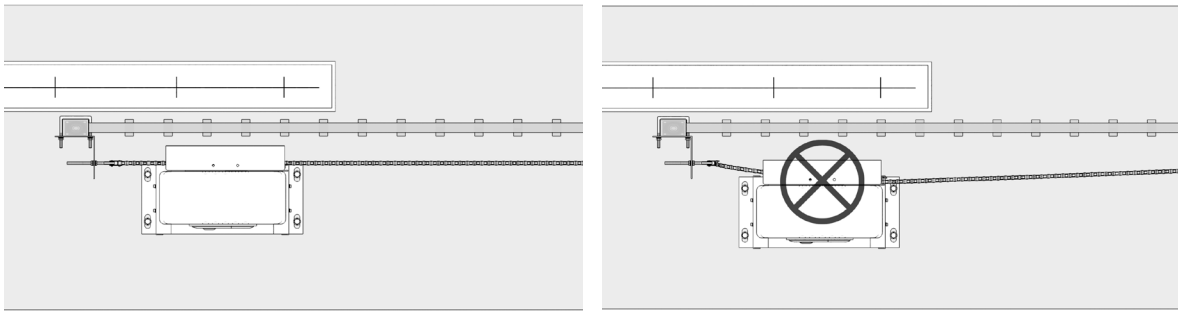
7. Unscrew the locking bolts from the chain box and then remove its protective cover. Run the chain through the idler wheels and chain sprocket. See illustration. Check that the chain between the gate post and the idler wheel is level; if not, adjust the height of the chain bracket.



8. Pull the chain onto the other bracket. Repeat Steps 6 to complete the connection and installation. If necessary, fine tune the tie rods to achieve your desired positioning.

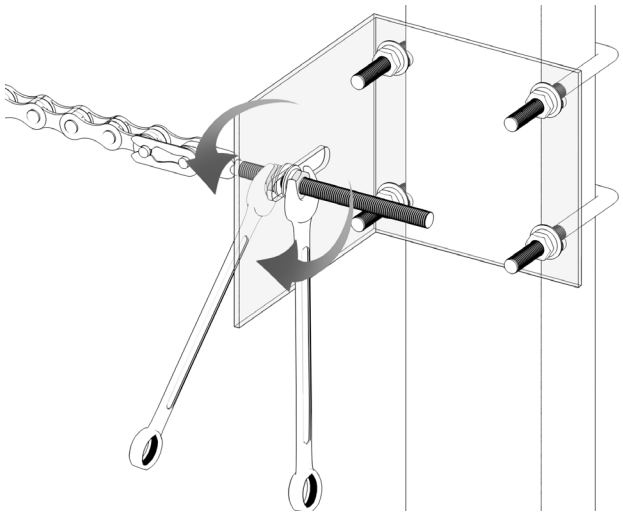


Front View



Top View

9. Adjust the nuts on each tie rod until your preferred tension is reached. Cut off any excess chain section if needed.



Testing the Chain

⚠ Warning

With manual release activated, the output sprocket can be turned manually. ***DO NOT*** *connect to power when the release is activated.*

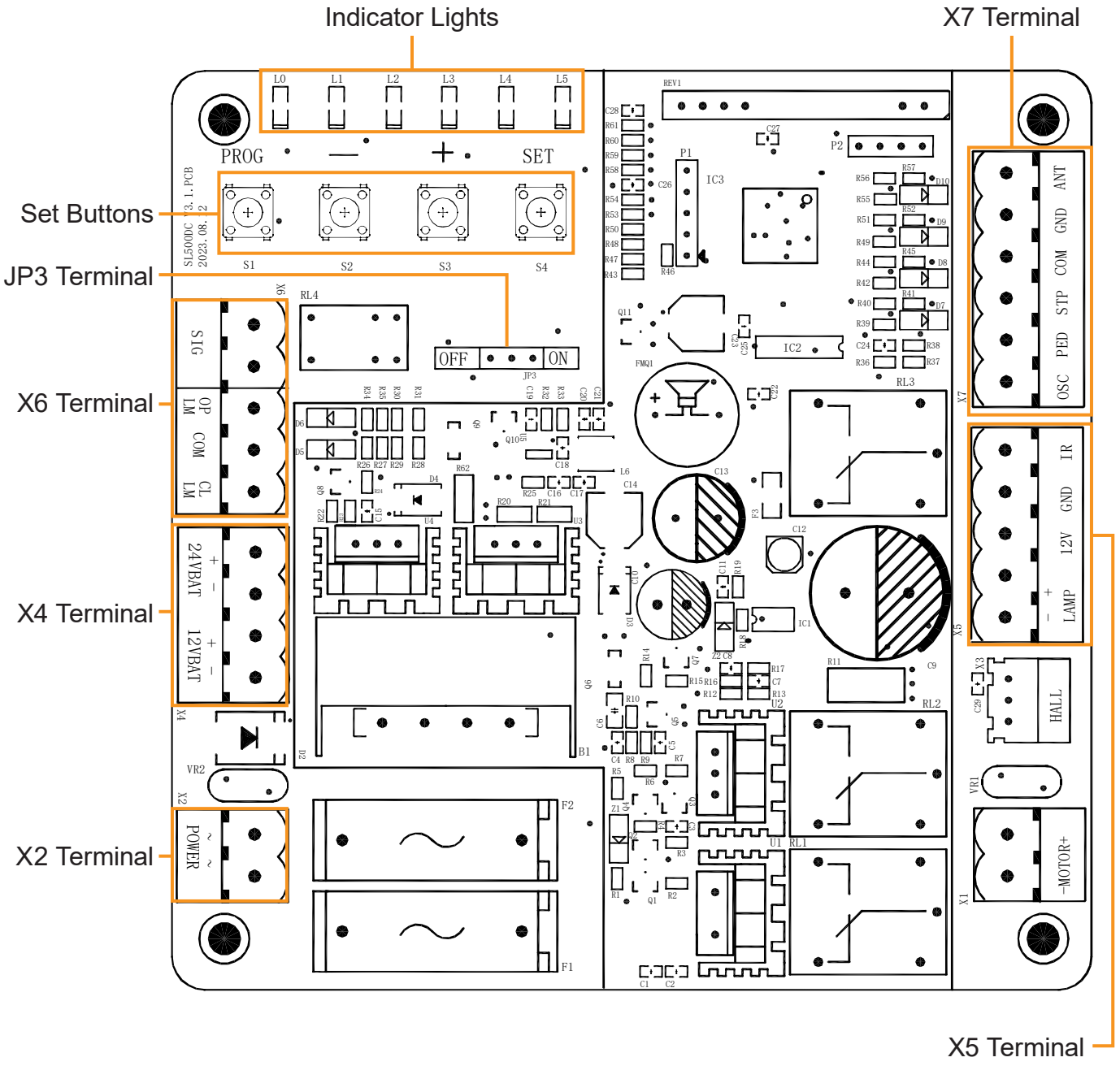
1. Open the key cover.
2. Insert one of the release keys and turn it 90° clockwise.
3. Pull the release lock to its maximum extent, and the sprocket is separated from the internal gears and is free to rotate.
4. Manually slide your gate, checking that it moves smoothly.

   Note: *If necessary, reposition the chain or replace the chain with a suitable one as mentioned above.*

5. Push the release lock back into place and deactivate the manual release.
6. Reinstall the removed protective cover onto the chain box using its fasteners.

Wiring

Control Board



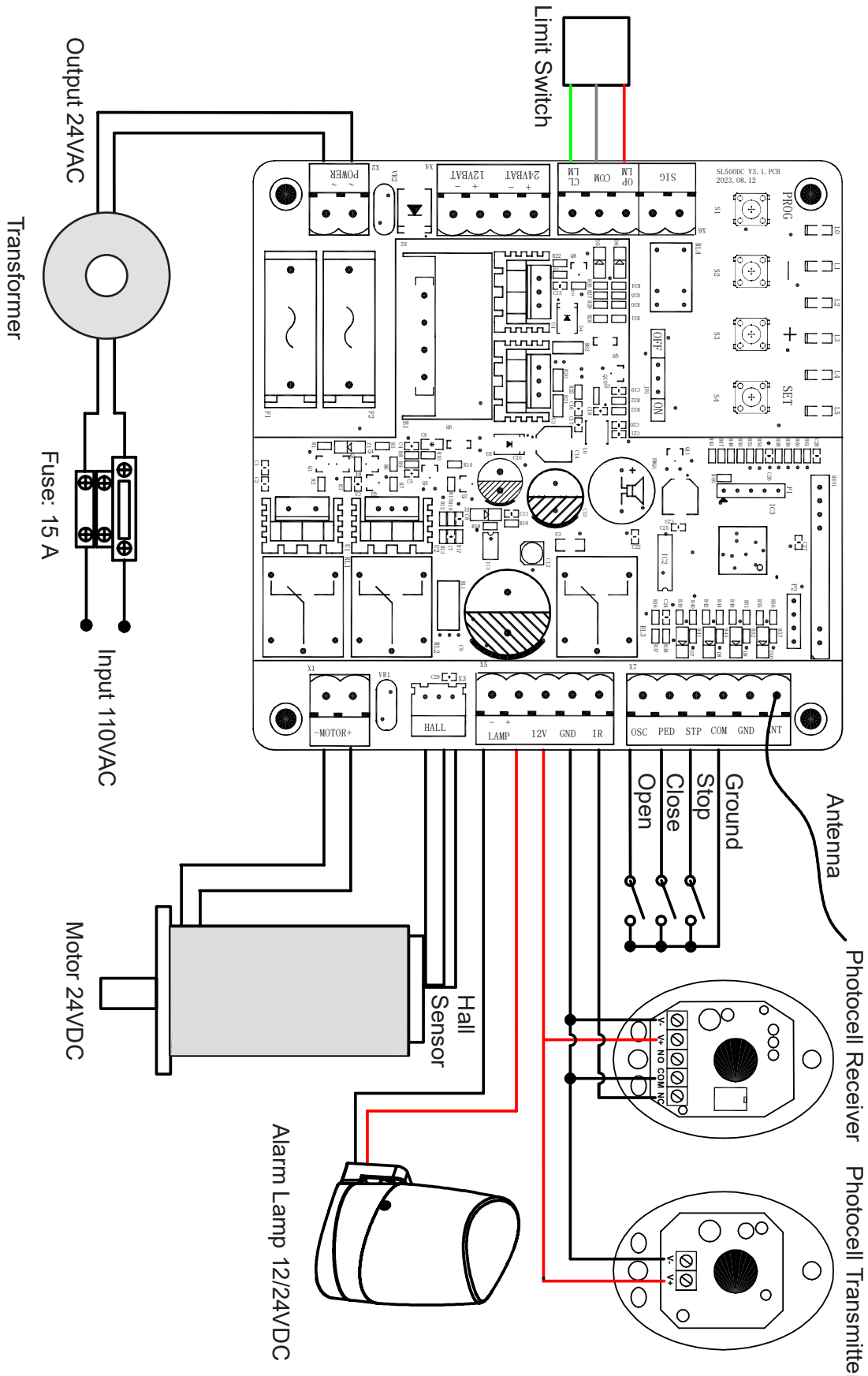
Control Board Description		
Item	**Name**	**Description**
Indicator Lights	L0 (Green)	Shines steadily when system is working properly or enters the menu.
	L1(Red)	Flash when any of the system enters the follow submenus: • Setting • Parameter • Errors • Battery level
	L2(Red)	
	L3(Red)	
	L4(Red)	
	L5(Red)	
Set Buttons (1)	PROG	Enters or exits the main menu.
	− and +	Toggles among the parameter submenus or change their values.
	SET	Enters the submenu of a parameter and confirms the value.
X6 Terminal	SIG	Outputs close signal after gate closed in place.
	OPLM	Open Limit Switch (Red Wire)
	COM	Limit Switch Common Terminal (White Wire)
	CLLM	Close Limit Switch (Green Wire)
X4 Terminal (2)	24VBAT+	Battery Positive
	24VBAT−	Battery Negative
	12VBAT+	Battery Positive
	12VBAT−	Battery Negative
X2 Terminal	Power	Power Supply (Transformer Output)
X7 Terminal	ANT	Extra Antenna Port
	GND	Extra Antenna Ground
	COM	Common Terminal for External Push Button
	STP	External Stop Push Button
	PED	External Close Push Button
	OSC	External Open Push Button
X5 Terminal	IR	Photocell Input Common Terminal for Photocell (NC)
	GND	Ground
	12V	Cuts off when the gate is closed in place.
	LAMP+	Alarm Lamp +12/24 V DC
	LAMP−	Alarm Lamp −12/24 V DC
JP3 Terminal (3)		Turns on/off the buzzer.

(1) A short press (within 1 sec.) or a or long press (over 2 sec.) of these buttons enters different menus.
(2) The polarity **MUST** be wired correctly. Wrong wring will damage the control board.
(3) To use the buzzer, you need to enter the **Other Menu** on the control panel first and enable the buzzer function.

Control Board Wiring

⚠ Warning

*All changes to these settings below **MUST** be completed by a licensed electrician. Disconnect the power before wiring.*



Connecting Method

⚠Warning

- *Wear appropriate PPE and obey the following instructions to prevent personal injury.*
- *Check that all metal parts are correctly grounded.*
- *Disconnect the power.*

1. Insert the exposed metal part of each cable into the right terminal and tighten the corresponding flathead bolt to secure this connection.
2. (Optional)To extend, use electrician's pliers (not included) to tightly twist the

   exposed metal parts of the two cables together and then wrap them with electrical tape around three times for optimal coverage. The tape's width should be greater than the lengths of the metal parts.

Installing Limit Switch Magnets

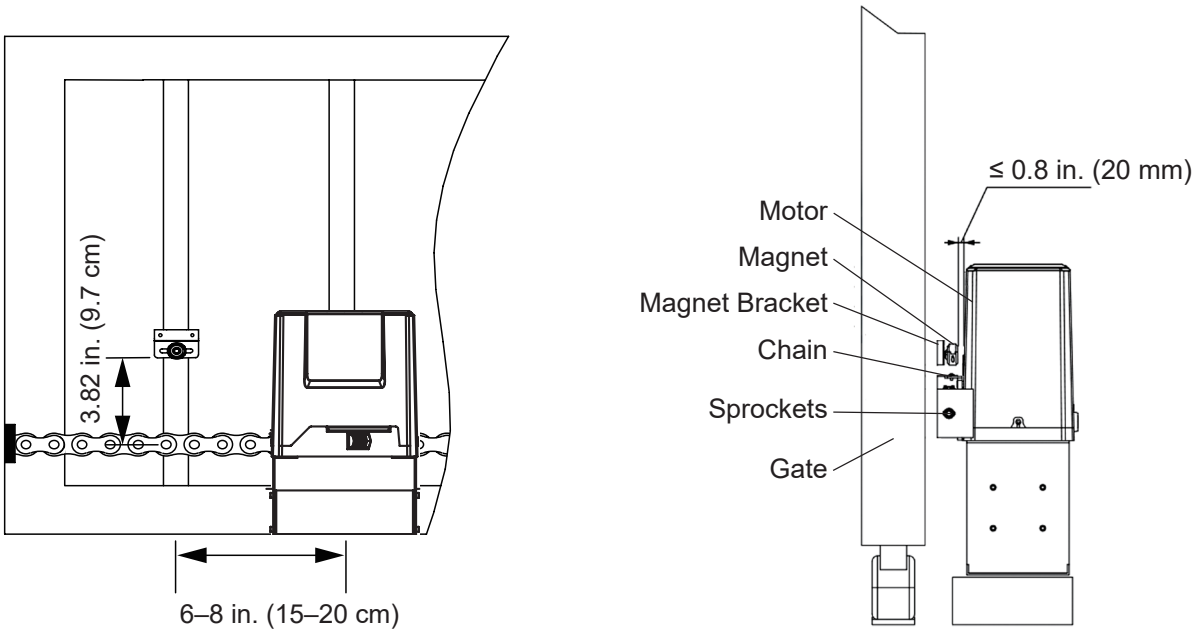
⚠Warning

Using this gate opener without its magnets installed at the correct position risks damage to the motor and to the gate, including possible derailment.

1. Use the release key to release the output sprocket.
2. Move the gate to its maximum open position.
3. Find the post on the open gate about 6–8 inches (15–20 cm) farther away from your driveway than the middle of the motor.
4. Find the position on that post exactly 3.98 inches (10.1 cm) above the middle of the taut chain.
5. Place black magnets (M) on the left using its bracket(M) and M6×14 bolts (P), spring (W) and flat washers (U), and nuts (T) or using any similar fasteners. The magnet must be held facing the opener with at least 0.4 inches (1 cm) between it and the motor casing.

   ⚠Warning

   *The magnets and brackets are interchangeable, but **DO** make sure the black one is installed to the right of the gate opener when standing facing it, no matter how the gate opener is mounted: slide-right or slide left.*



⚠ Warning

*This balck magnet will function as the **OPEN** limit switch because of the position of the sensors in the motor housing.*

6. Move the gate to its close position.
7. Find the post on the closed gate about 6–8 inches (15–20 cm) towards the driveway from the center of your motor.
8. Find the position on that post exactly 1.53 inches (3.9 cm) above the middle of the taut chain.
9. Place the blue magnet on the right using its bracket and fasteners or other similar fasteners.
10. When finished, use the gate opener to perform an open-and-close test to ensure the correct installation of the limit switch magnets.

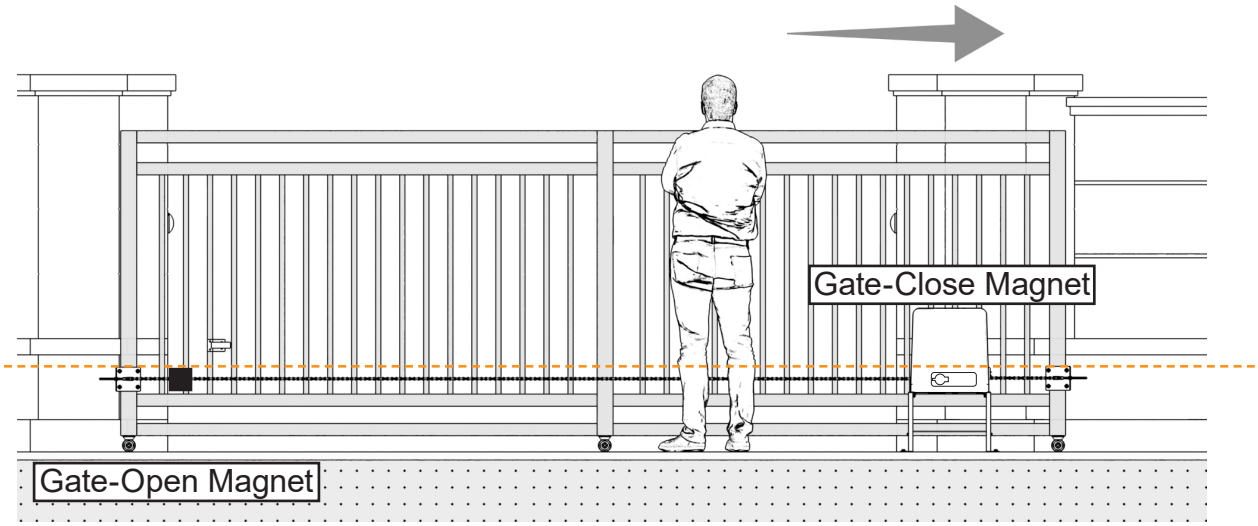
***Note:** The position of the magnets does not change the close/open direction of the gate.*

⚠ Warning

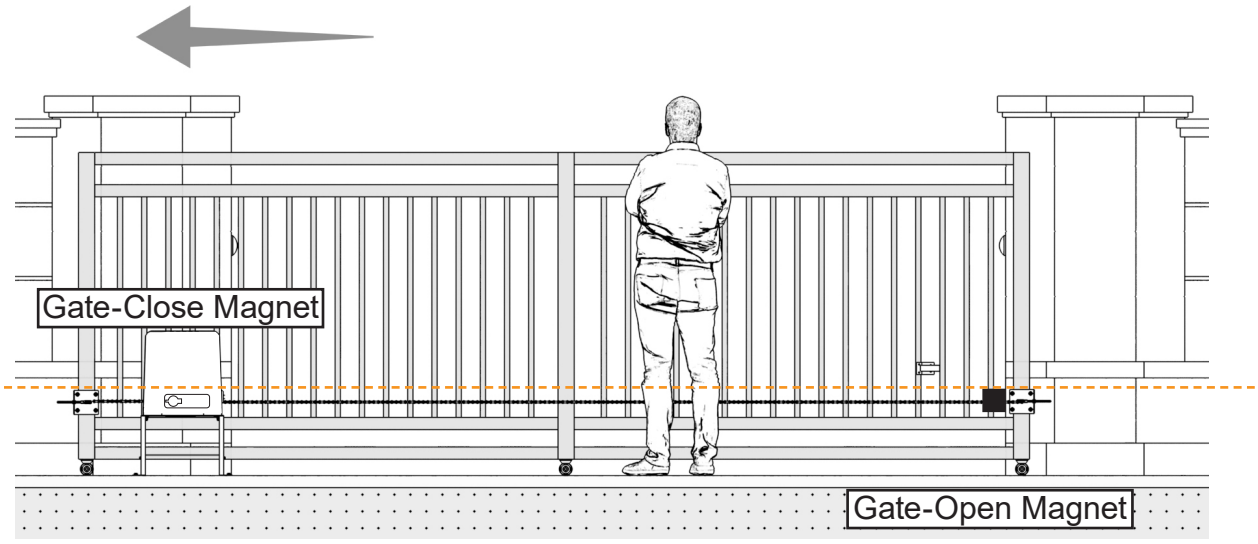
*The limit switches **MUST** be installed at both the open and closed positions of the gate, ensuring the correct polarity for each limit switch. If uncertain, test it using the manual release. Confirm that the limit switches are securely fastened, free of any looseness.*

If the gate does not stop after manually pulling it to the limit switch, lock the output sprocket by deactivating the manual release. Check if the magnets can trigger the limit switch within the sensing range and that the magnets are placed within the sensing range.

Right-Slide Opening

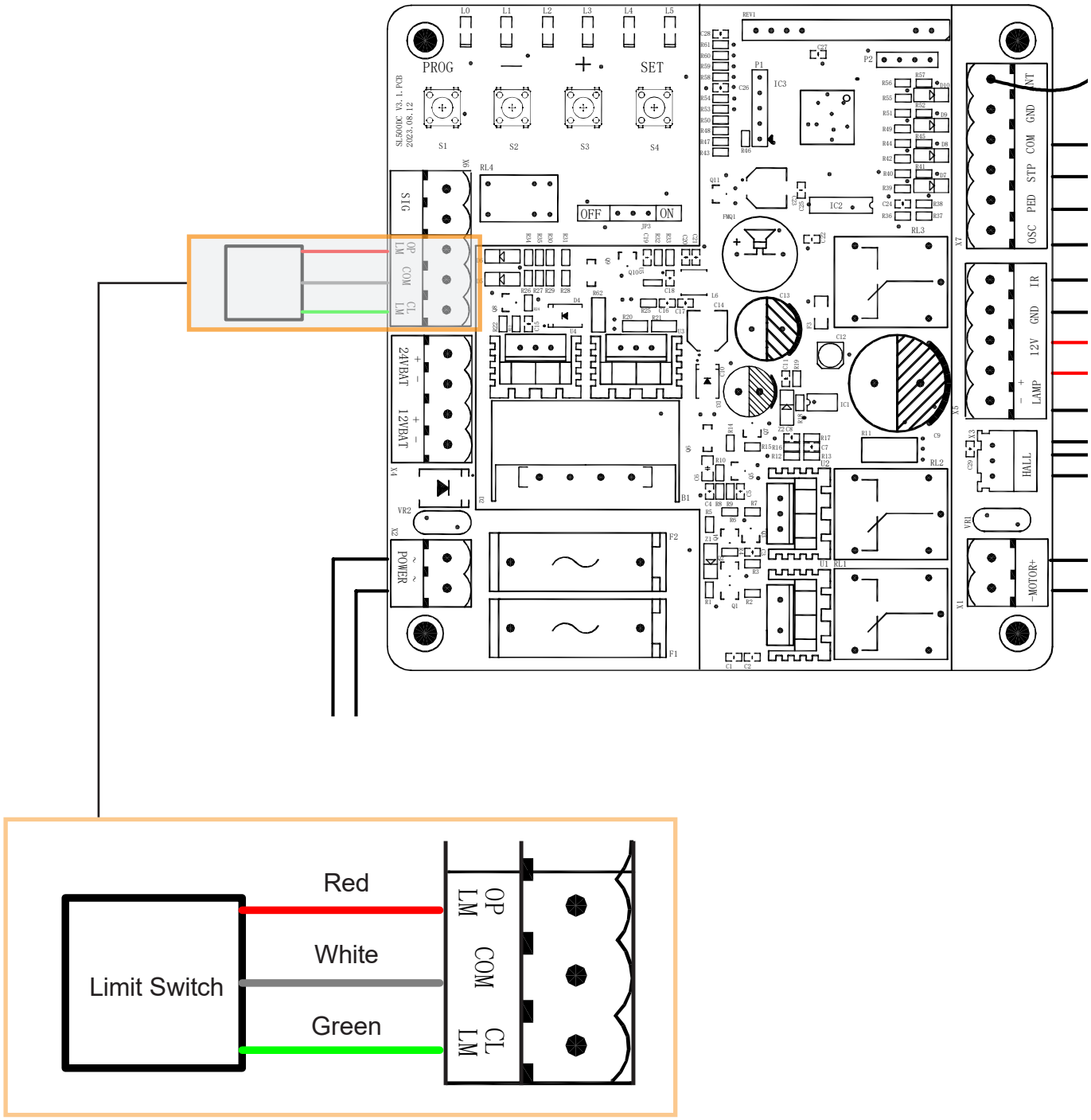


Left-Slide Opening



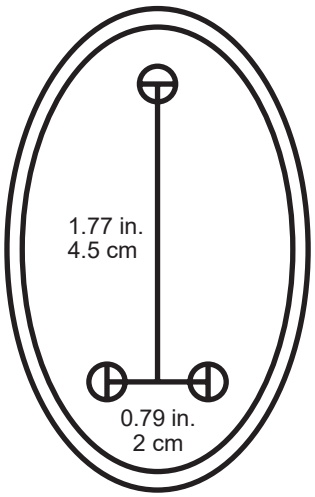
⚠ Warning

*The warning signs **MUST** face the street side.*



Installing the Photocells (Optional)

Locating the Photocells

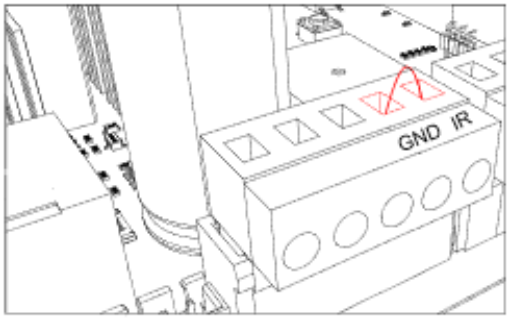


1. Locate them on opposite sides of your gate.
2. Directly across from one another at least 6′7″ (2 m) apart and no further apart than 65 feet (20 m).
3. Place pilot holes for their support bolts (not incl.) as shown.

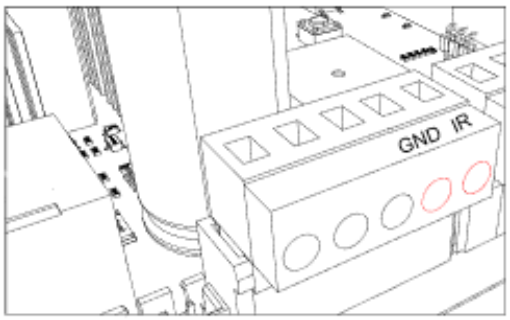
   Note: *It is recommended that they be placed out of direct sunlight if possible.*

Wiring the Photocells

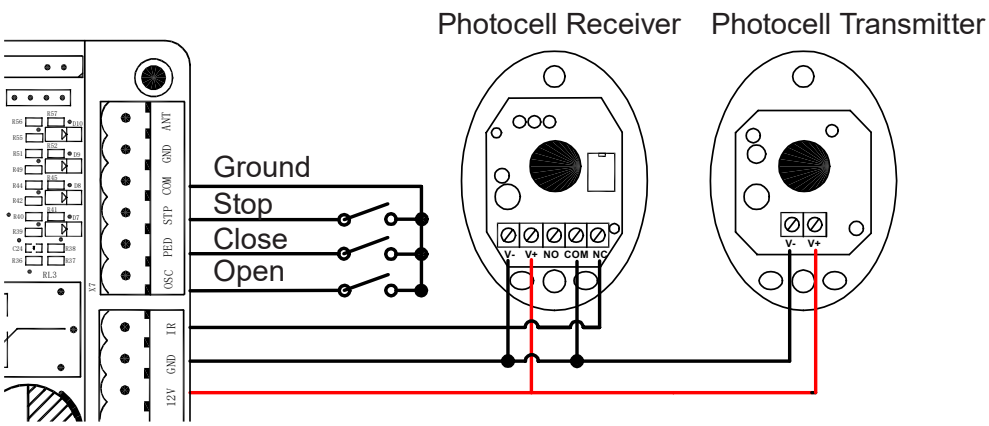
1. Loosen the IR and GND on X5 terminal.



2. Remove the thick wire from the motor's circuit board that connects the IR and GND pins in its photocell terminal.

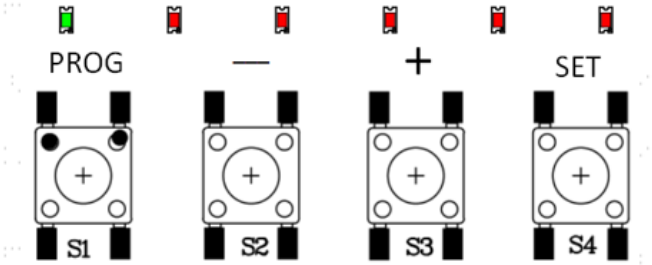


3. Connect the sensors' wiring to the control board according to figure below. The sensors' V+ pins should be connected to the 12V pin on the board; their V- pins and the receiver's COM pin should all be connected to the GND pin; and the receiver's NC pin should be connected to the IR pin.



Operation

Control Board Buttons



Indicator Lights	**L0 (Green)**	Shines steadily when system is working properly or enters the menu.
	L1(Red)	Flash when any of the system enters the follow submenus: • Setting • Parameter • Errors Battery level
	L2(Red)	
	L3(Red)	
	L4(Red)	
	L5(Red)	
Set Buttons (1)	**PROG**	Enters or exits the main menu.
	− and +	Toggle among the parameter submenus and change their values.
	SET	Enters a parameter submenu and saves the change.

(1) A short press (within 1 sec.) or a or long press (over 2 sec.) of these buttons enters different menus.

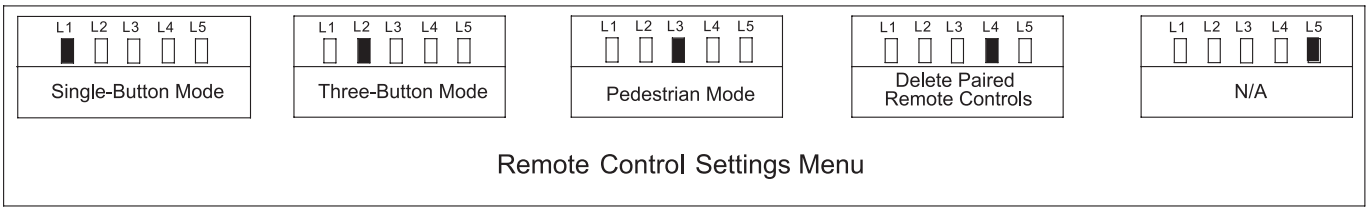
Basic Settings

Checking Battery Level

1. Press **SET** once.
2. The more indicator lights lit up, the higher the charge of the battery.
   Refer to the below table for approximates of battery charge.

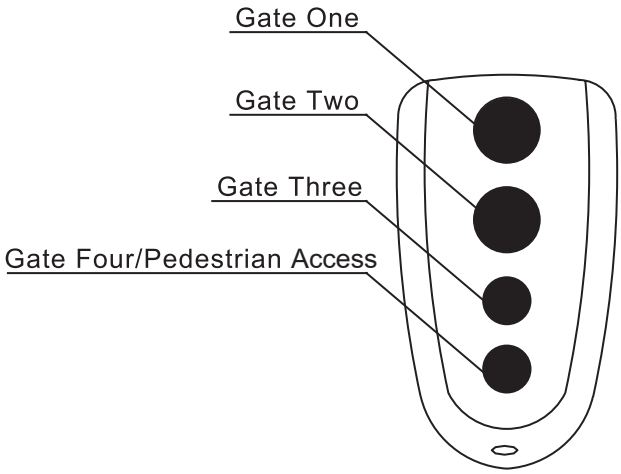
Remote Pairing

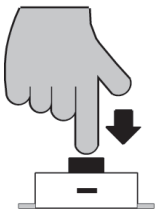
To enter remote pairing mode, hold **−** until **L1** lights up. The remotes can be paired in single-button mode or three-button mode. Either mode can also be used in combination with a pedestrian access button. Use **+/−** to toggle between these options and **SET** to enter them. Different indicator lights will be lit depending on which option is selected.



Single-Button Mode

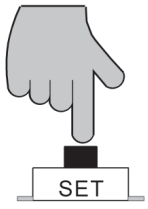
In this mode, a single remote control can control up to 4 gates with each button paired to a single gate. To pair gate openers in this mode, enter pairing mode as previously described, press **SET**, and press the button on the remote which you wish to pair to the gate. **L1–L5** will light up and your remote button will be paired. Press **PROG** to exit single-button pairing mode. This process can be repeated with different buttons for other gate openers.





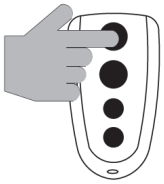
Hold **−**

L1 will light up



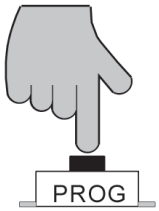
Press **SET**

L1 and **L5** will flicker



Press the button to be paired on the remote

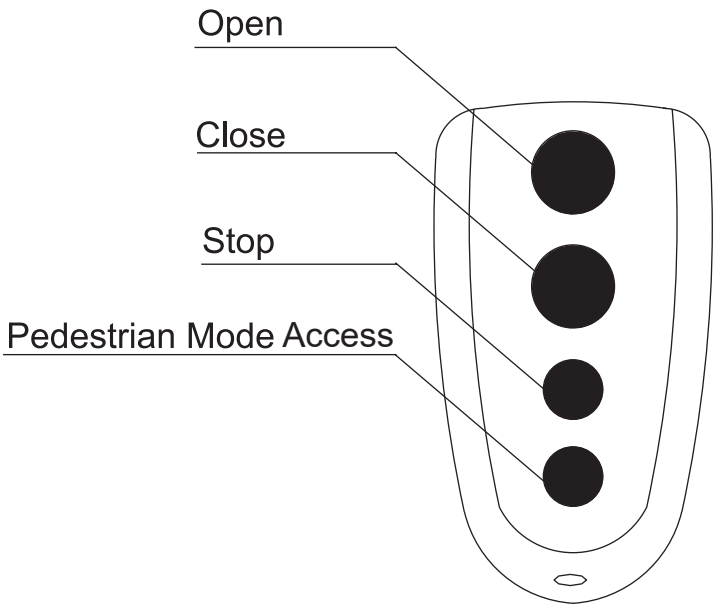
L1–L5 will light up



Press **PROG**

The system will automatically save and exit

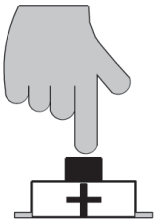
Three-Button Mode



In this mode, a single remote can control different functions of a single gate. The top button will open the gate completely, the 2nd button will close it, the 3rd will pause either action, and the bottom button will partially open the gate to accommodate pedestrians. To pair gate openers in this mode, enter pairing mode as previously described, press **–**, and press **SET**. Press any button on the remote to pair the gate in three-button mode. **L1–L5** will light and your remote will be paired. In this mode, the remote's buttons will function as shown in the above diagram. Press **PROG** to exit three-button pairing mode. This process can be repeated with other remotes on the same gate or on different gates.

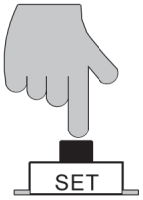
Hold **–**

L1 will light up



Press **+**

L2 will light up

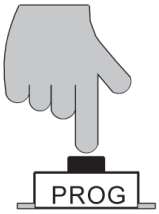


Press **SET**

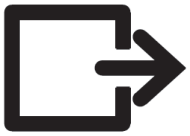
L3 and **L5** will flicker

Press any button

L1–L5 will light up



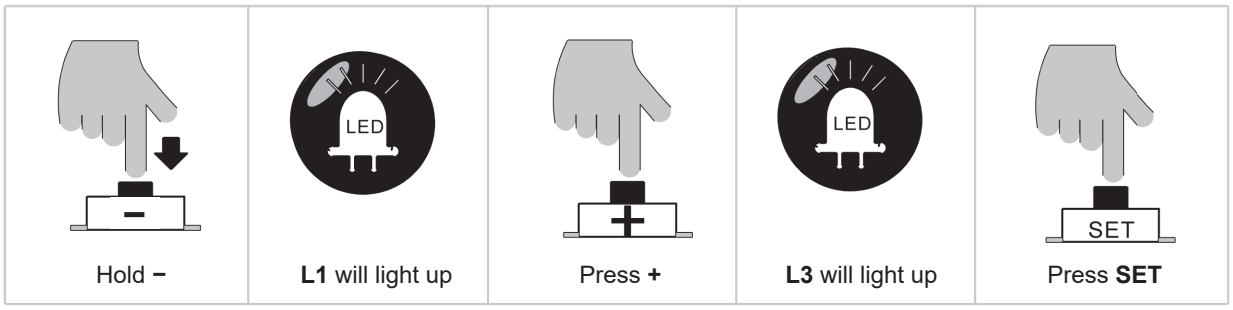
Press **PROG**



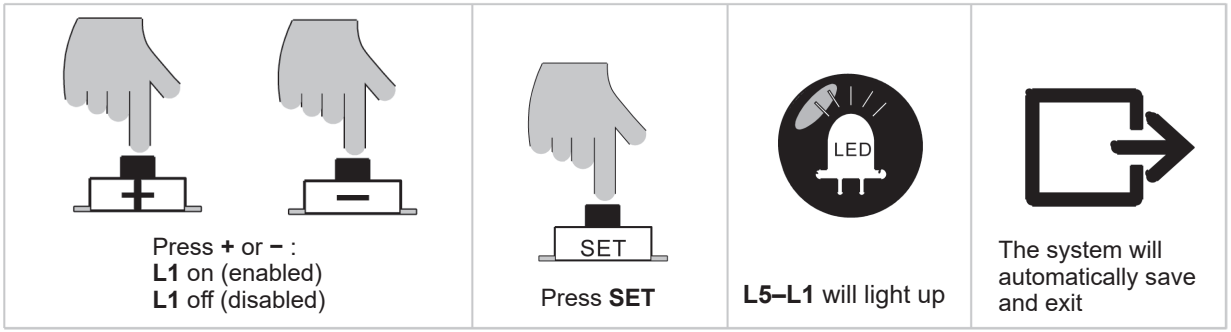
The system will automatically save and exit

Pedestrian Access

In either mode, the bottom button can be used to provide partial access for pedestrian traffic, opening the gate 3.3 feet (1 m). This function is enabled by default in three-button mode. To toggle pedestrian access, enter this mode, enter pairing mode as previously described, press **–** twice, and press **SET**. Press **+** to enable pedestrian access or press **–** to disable it. Press **SET** to save your setting and exit pedestrian access.



Hold **–** | **L1** will light up | Press **+** | **L3** will light up | Press **SET**



Press **+** or **–** :
L1 on (enabled)
L1 off (disabled)

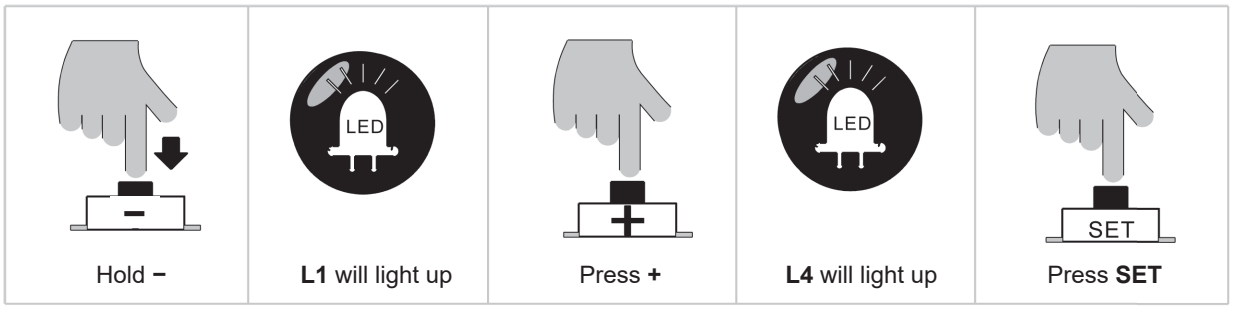
Press **SET**

L5–L1 will light up

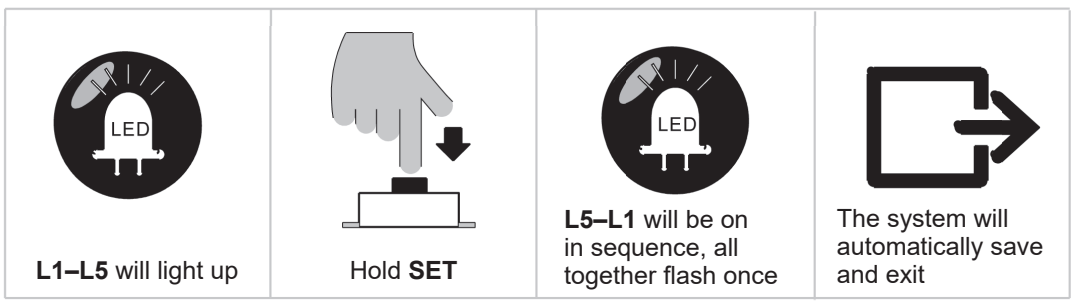
The system will automatically save and exit

Depairing Remotes

In this mode, paired remotes can be unpaired from the gate opener. To enter this mode, enter pairing mode as previously described, press **+** three times, and subsequently press **SET**, the **L1-L5** will light up. From here, press and hold **SET** until **L1-L5** light up in sequence, all together flash once. All remotes have now been unpaired.



Hold **–** | **L1** will light up | Press **+** | **L4** will light up | Press **SET**



L1–L5 will light up

Hold **SET**

L5–L1 will be on in sequence, all together flash once

The system will automatically save and exit

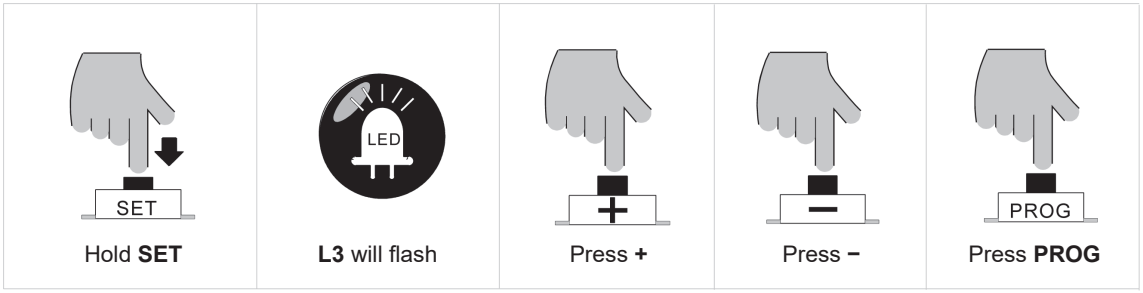
Intelligent Pairing

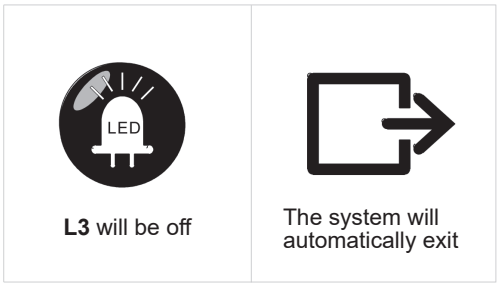
Intelligent pairing allows for the pairing of a remote to the gate opener without needing to use the control board. This pairing type is intended for use when a remote is already paired to a gate but for which another button on the remote is to be paired to the same gate. To do this, press and hold the 3rd and 4th buttons on the remote within 6.6 ft. (2 m) of the gate opener for 3 seconds. Next, press any button on the remote which is to be paired to the gate opener. Pairing is complete and pairing mode has been exited.

Manual Control Mode

The gate opener can be operated manually in a continuous manner in order to pre-test the gate opening system. To enter the manual control mode:

1. Press and hold **SET** for 3 seconds until indicator **L3** lights up.
2. Press **+** to open the gate.
3. Release **+** to stop.
4. Press **–** to close the gate.
5. Release **–** button to stop.
6. Press **PROG** to exit the mode. (Indicator **L3** turns off)





Note:

- *The system will automatically exit the settings if no buttons have been pressed in 60 seconds in manual control mode.*
- *Press **PROG** if you want to exit halfway.*

⚠ Warning

If the gate does not stop after manually controlling it to the limit switch, exit the manual control mode. Check if the magnets can trigger the limit switch within the sensing range and that the magnets are placed within the sensing range.

Setting Travel Limits

⚠ Warning

*The gate **MUST** be open before proceeding with the quick travel setting.*

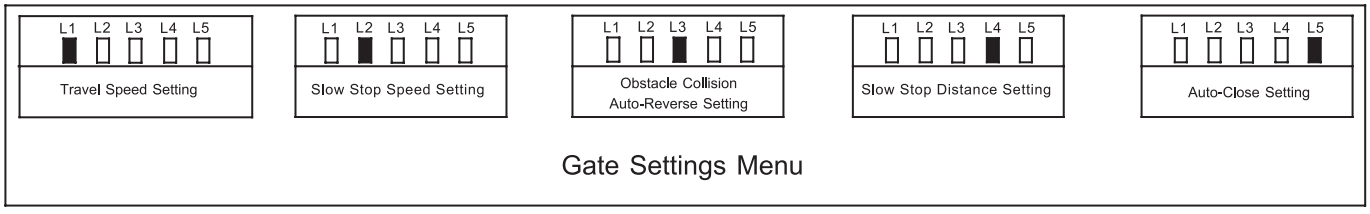
*Limit switches **MUST** be installed at both the open and closed positions of the gate, ensuring the correct polarity for each limit switch. If uncertain, switch into manual control mode for testing. Confirm proper installation of the limit switch, ensuring it is secure and cannot be moved or removed.*

1. Press and hold **+** for 2 seconds, and the gate will learn the travel automatically.
2. As the gate opens to its maximum open position, the indicator lights should light up one by one from **L1** through **L5**.
3. As the gate closes to its maximum close position, the indicator lights should light up one by one from **L5** through **L1**.
4. At the end of the automatic learning, the indicator lights start lighting up one by one from **L1** through **L5**, followed by a single flash from **L1** to **L5** before turning off.

   ***Note:** During the travel limit setting, errors may be encountered. Refer to the following table to interpret possible errors.*

Indicator Light Status: ☐ Off ■ On ◪ Flash	**Status Indication**
L1 ◪ L2 ☐ L3 ☐ L4 ☐ L5 ☐	Closing travel distance is too long (≥40 ft. or 12 m)
L1 ☐ L2 ◪ L3 ☐ L4 ☐ L5 ☐	Closing travel distance is too short (≤1.6 ft. or 0.5 m)
L1 ☐ L2 ☐ L3 ◪ L4 ☐ L5 ☐	Opening travel distance is too long (≥40 ft. or 12 m)
L1 ☐ L2 ☐ L3 ☐ L4 ◪ L5 ☐	Opening travel distance is too short (≤1.6 ft. or 0.5 m)
L1 ☐ L2 ☐ L3 ☐ L4 ☐ L5 ◪	Magnet is not detected
L1 ◪ L2 ◪ L3 ☐ L4 ☐ L5 ☐	**STOP** button is pressed, travel setting is interrupted
L1 ◪ L2 ☐ L3 ◪ L4 ☐ L5 ☐	Hall sensor signal is not detected
L1 ◪ L2 ☐ L3 ☐ L4 ◪ L5 ☐	**PROG** button pressed to exit travel limit setting mode
L1 ■ L2 ■ L3 ■ L4 ■ L5 ■	Set travel limit position successfully (lit for one second)

Gate Setting Menu

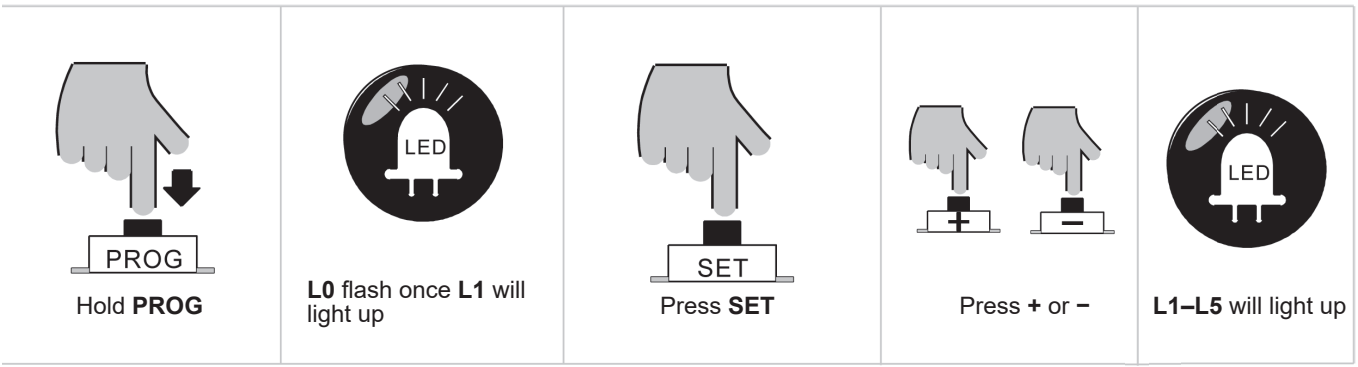


Gate Settings Menu

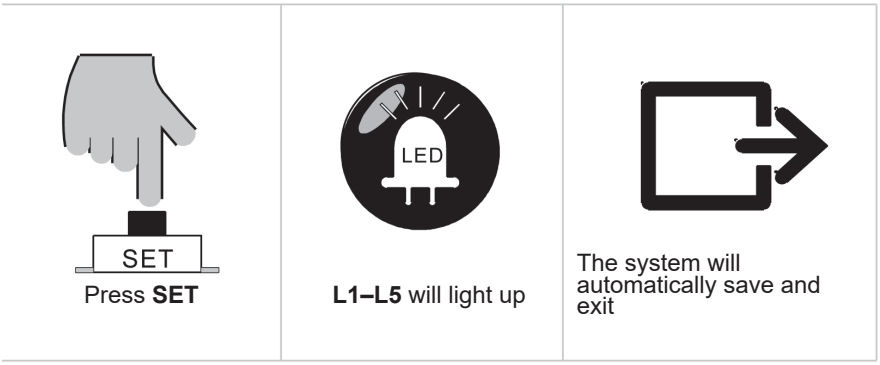
Setting Travel Speed

1. Press **PROG** and hold it for 3 seconds until **L0** flashes once.
2. Press **SET** once to enter the travel speed submenu.
3. Use **+/−** to increase or decrease the travel speed of the gate.
4. Refer to the indicator lights to determine the travel speed.

   The more lights are on, the faster the rate of travel.
5. Once the desired travel speed is selected, press **SET** and the system will automatically save and exit.



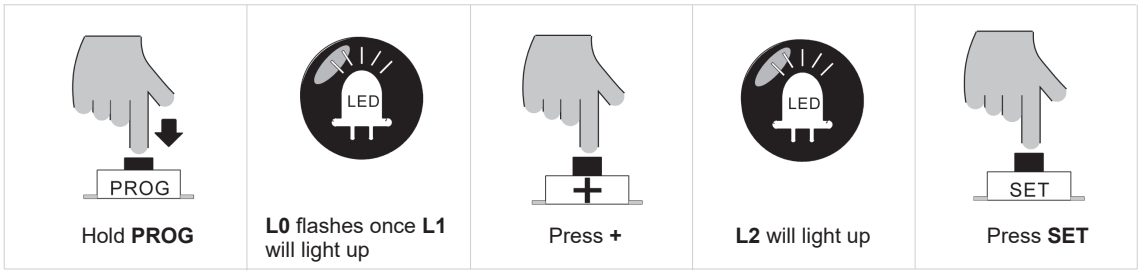
Hold **PROG** | **L0** flash once **L1** will light up | Press **SET** | Press **+** or **−** | **L1–L5** will light up



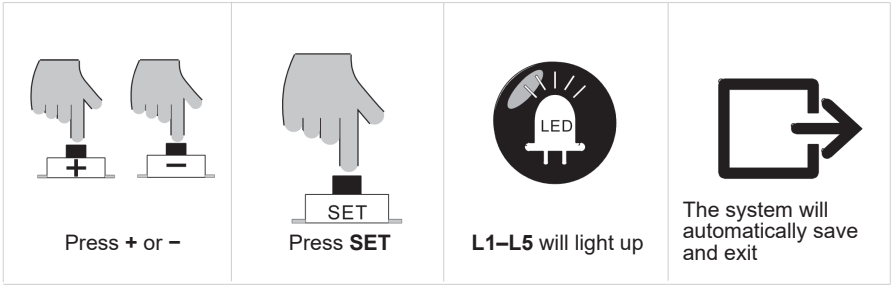
Press **SET** | **L1–L5** will light up | The system will automatically save and exit

Setting Slow Stop Speed

1. Press **PROG** and hold it for 3 seconds until the **L0** flashes once and **L1** lights up.
2. Press **SET** once to enter into the slow stop speed submenu.
3. Use **+/−** to adjust the slow stop speed.
4. Refer to the indicator lights to determine the rate of slow stopping. The more lights are on, the faster the rate of speed.
5. Once the desired slow stop speed in selected, press **SET** and the system will automatically save and exit.



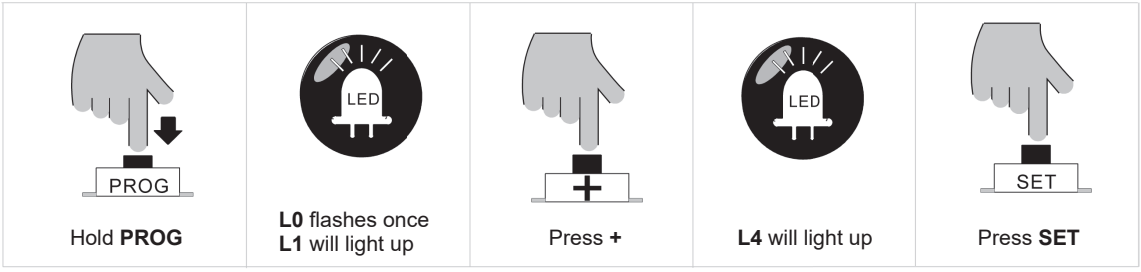
Hold **PROG** | **L0** flashes once **L1** will light up | Press **+** | **L2** will light up | Press **SET**



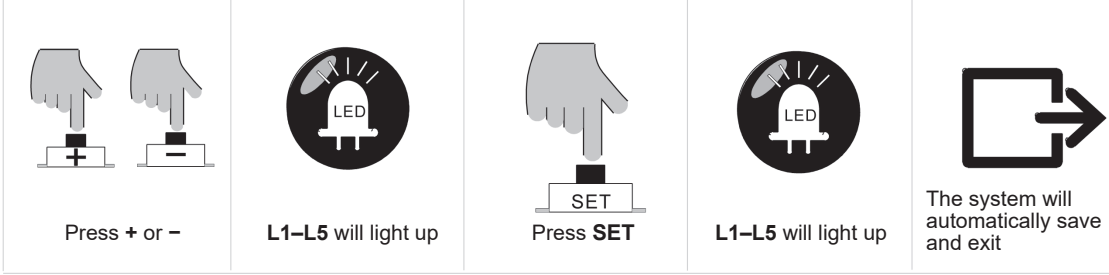
Press **+** or **−** | Press **SET** | **L1–L5** will light up | The system will automatically save and exit

Setting Slow Stop Distance

1. Press **PROG** and hold it for 3 seconds until the **L0** flashes once and **L1** lights up.
2. Subsequently press **+** three times to enter the slow speed setting submenu and **L4** lights up.
3. Press **SET** once to enter the current setting slow stop distance.
4. Use **+**/**−** to adjust the slow stop distance.
5. Refer to the indicator lights to determine the distance at which the slow stop kicks in. The more lights are on, the farther the distance.
6. Once the desired slow stop distance is selected, press **SET** and the system will automatically save and exit.



Hold **PROG** | **L0** flashes once **L1** will light up | Press **+** | **L4** will light up | Press **SET**



Press **+** or **−** | **L1–L5** will light up | Press **SET** | **L1–L5** will light up | The system will automatically save and exit

Setting Obstruction Sensitivity

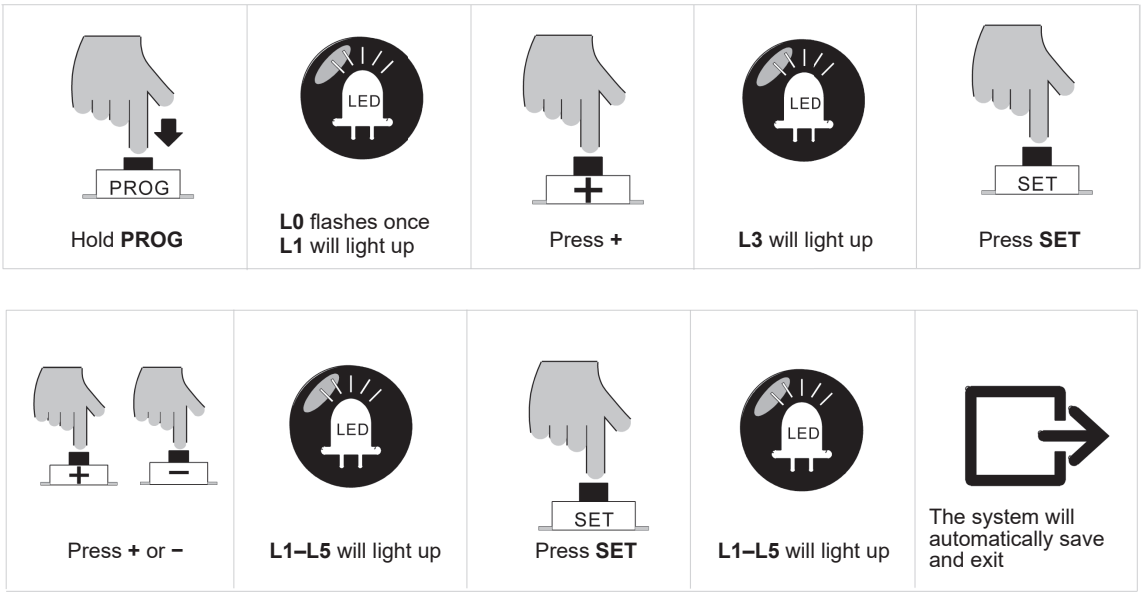
The sensitivity to obstruction can be adjusted following the steps below.

1. Press **PROG** and hold it for 3 seconds until the **L0** flashes once and **L1** lights up.
2. Subsequently press **+** two times to enter the travel limits setting submenu and **L3** lights up.
3. Press **SET** once to enter the obstruction sensitivity submenu.
4. Use **+/−** to adjust the sensitivity.
5. Refer to the indicator lights to determine the obstruction sensitivity. The more lights are on, the more sensitive the gate will be obstructions and the less force it will apply to push against obstructions.

   ⚠ Caution

   Experiment will inanimate objects to find the optimal sensitivity.

6. Once the desired sensitivity is found, press **SET** and the system will automatically save and exit.



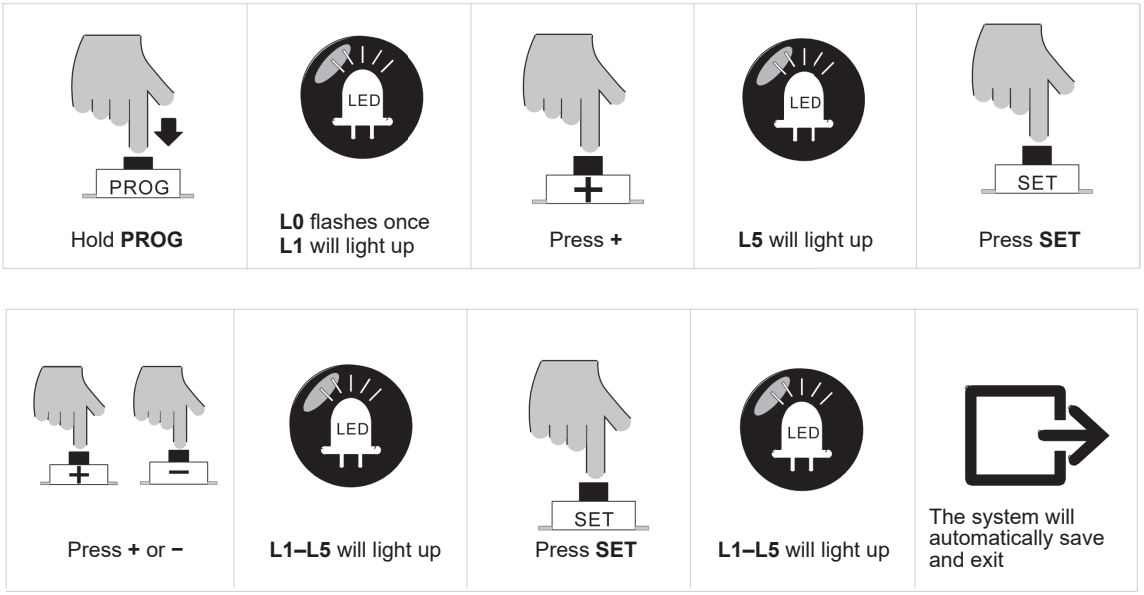
⚠ Warning

The default sensitivity was reached with 500 kg gates with a smooth track. Adjust the sensitivity as needed for optimal results if the gate encounters obstruction but doesn't reverse or reverses frequently due to variations in weight or track smoothness.

Setting Automatic Closing Delay

The gate opener can be configured to close the gate after a set amount of time or delay.

1. Press **PROG** and hold it for 3 seconds until the **L0** flashes once and **L1** lights up.
2. Subsequently press **+** four times to enter the automatic closing delay submenu, and **L5** lights up.
3. Press **SET** once to enter the submenu.
4. Use **+/−** to adjust the automatic closing delay.
5. Refer to the table below to determine the amount of time at which the automatic closing feature will kick in.
6. Once the desired time is selected, press **SET** and the system will automatically save and exit.



Hold **PROG** | **L0** flashes once **L1** will light up | Press **+** | **L5** will light up | Press **SET**

Press **+** or **−** | **L1–L5** will light up | Press **SET** | **L1–L5** will light up | The system will automatically save and exit

Indicator Light Status: ☐ Off ■ On	**Status Indication**
L1 ☐ L2 ☐ L3 ☐ L4 ☐ L5 ☐	Auto close function disabled
L1 ■ L2 ☐ L3 ☐ L4 ☐ L5 ☐	Auto close after 10 sec.
L1 ■ L2 ■ L3 ☐ L4 ☐ L5 ☐	Auto close after 20 sec.
L1 ■ L2 ■ L3 ■ L4 ☐ L5 ☐	Auto close after 30 sec.
L1 ■ L2 ■ L3 ■ L4 ■ L5 ☐	Auto close after 40 sec.
L1 ■ L2 ■ L3 ■ L4 ■ L5 ■	Auto close after 50 sec.

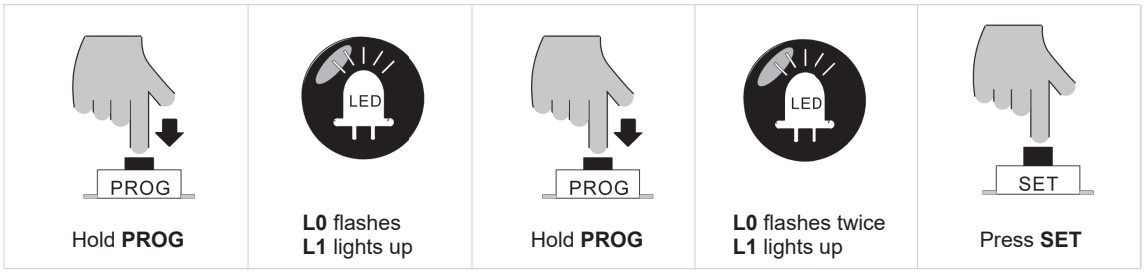
Advanced Settings Menu

Setting Operating Mode

The control board of this product offers 3 different working modes. Choose one that best suits your needs.

Mode / Terminal	Standard Mode (L1 lights up)	Three Button Mode (L2 lights up)	Community Mode (L3 lights up)
OSC	Single Button Control	Opening Button	Single Button Control
PED	Pedestrian Button	Closing Button	Pedestrian Button
STP	Stop Button	Stop Button	Stop Button

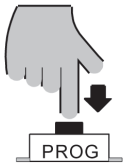
1. Press and hold **PROG** for 3 seconds to enter into basic settings, and the **L0** flashes and **L1** lights up.
2. Press and hold **PROG** for 3 seconds again to enter the advanced settings menu, the **L0** flashes twice and **L1** lights up.
3. Press **SET** once to enter operating mode submenu.
4. Use **+**/**−** to select a operating mode.
5. Refer to the table above to select the desired mode.
6. Once the desired mode is selected, press **SET** and the system will automatically save and exit.



Setting Travel Acceleration

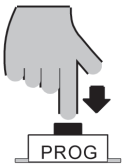
The rate at which the gate accelerates during travel is adjustable. Follow these steps to adjust.

1. Press and hold **PROG** for 3 seconds to enter into basic settings, the **L0** flashes and **L1** lights up.
2. Press and hold **PROG** for 3 seconds again to enter into advanced settings, the **L0** flashes twice and **L1** lights up.
3. Subsequently press **+** once and then **SET** to enter into the travel acceleration setting submenu.
4. Use **+/−** to adjust the gate travel acceleration.
5. Refer to the indicator lights to determine the travel acceleration rate. The more lights are on, the faster the gate starts and accelerate.
6. Once the desired rate is selected, press **SET** and the system will automatically save and exit.



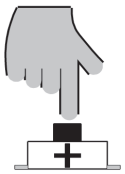
Hold **PROG**

L0 flashes once
L1 will light up



Hold **PROG**

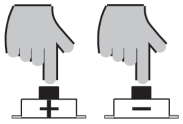
L0 flashes twice
L1 will light up



Press **+**

L2 will light up

Press **SET**



Press **+** or **−**

L1–L3 will show the current acceleration

Press **SET**

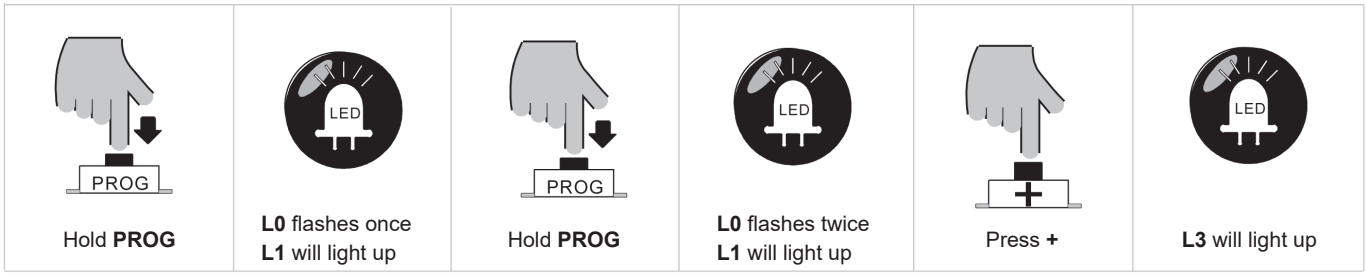
L1–L5 will light up

The system will automatically save and exit

Setting Start-Up Delay

The predetermined amount of time which the gate waits to respond to a signal after being in power saving mode can be altered. Making use of this mode is recommended as the gate will power up more quickly than accessory components (e.g., photocells). In such, the gate may operate without key safety features.

1. Press and hold **PROG** for 3 seconds to enter into basic settings, the **L0** flashes and **L1** lights up.
2. Press and hold **PROG** for 3 seconds again to enter into advanced settings, the **L0** flashes twice and **L1** lights up.
3. Subsequently press **+** twice and then **SET** to enter into the start delay setting submenu.
4. Use **+**/**−** to adjust the gate's start delay time.
5. Refer to the table below to determine the delay time.
6. Once the desired delay is selected, press **SET** and the system will automatically save and exit.



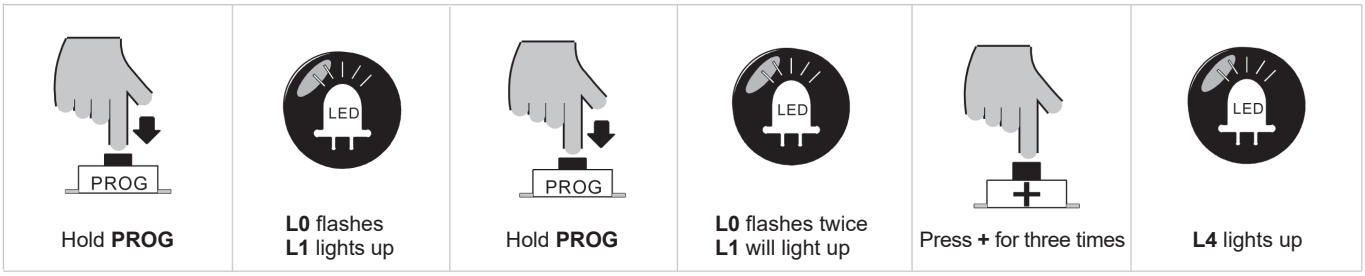
Indicator Light Status ☐ Off ■ On	**Status Indication**
L1 ☐ L2 ☐ L3 ☐ L4 ☐ L5 ☐	Start up delay function disabled
L1 ■ L2 ☐ L3 ☐ L4 ☐ L5 ☐	Delay for 0.5 sec.
L1 ■ L2 ■ L3 ☐ L4 ☐ L5 ☐	Delay for 1 sec.
L1 ■ L2 ■ L3 ■ L4 ☐ L5 ☐	Delay for 1.5 sec.

Setting Opening Direction

This setting allows the change of the rotational direction of the motor without replacing the motor wire. However, do not forget the positions of the magnets. For details, see **Installing Limit Switch Magnets**.

1. Press and hold **PROG** for 3 seconds to enter the basic settings menu, the **L0** flashes and **L1** lights up.
2. Press and hold **PROG** for 3 seconds again to enter into advanced settings menu, the **L0** flashes twice and **L1** lights up.
3. Subsequently press **+** three times and then **SET** to enter the opening direction setting submenu.
4. Use **+/−** to set opening direction.
5. Refer to the **L1** to determine the opening direction.

   L1 on: open to right-hand; **L1** off: open to left-hand.
6. Press **SET** and the system will automatically save and exit.



Hold **PROG** | **L0** flashes **L1** lights up | Hold **PROG** | **L0** flashes twice **L1** will light up | Press **+** for three times | **L4** lights up

Press **SET** | Press **+** or **−** | Press **SET** | **L1–L5** individually lights up and then flashes | The system will automatically save and exit

⚠ Warning

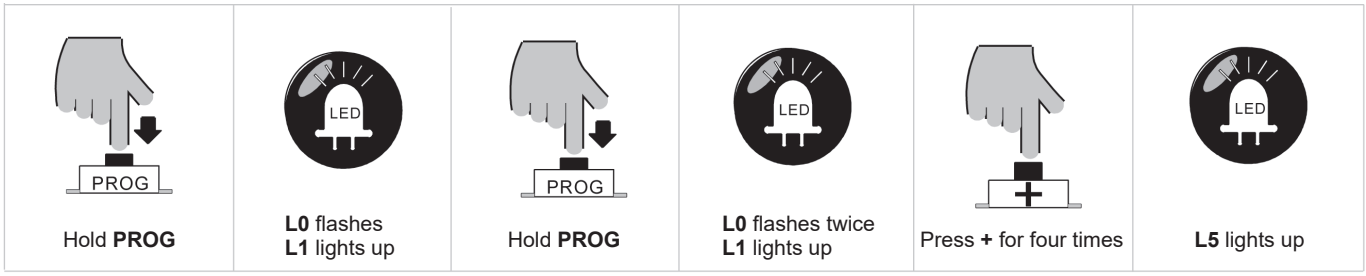
*After resetting the opening direction, **L1** and **L2** will flash at the same time, indicating that the travel limits have to be relearnt. Before relearning the travel, enter the manual control mode, ensure the polarity of the limit switch magnets, and the gate stops at the correct close and open positions.*

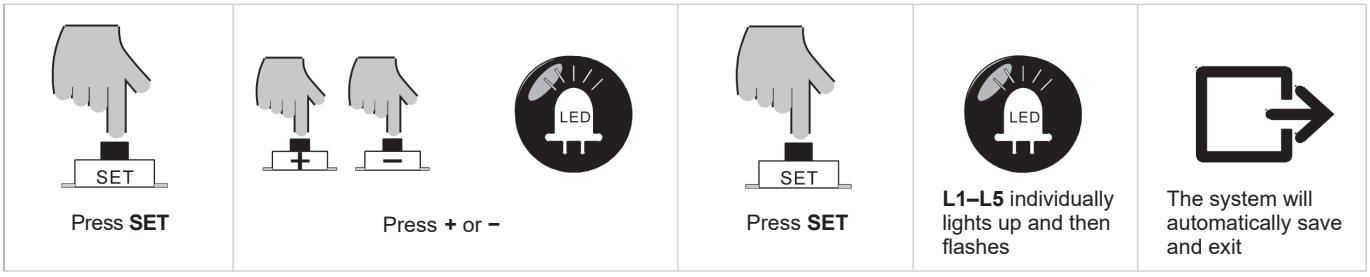
Setting Alarm Lamp

The control board can be configured for alarm lamps. Follow the steps below.

1. Press and hold **PROG** for 3 seconds to enter into basic settings, the **L0** flashes and **L1** lights up.
2. Press and hold PROG for 3 seconds again to enter advanced settings menu, the **L0** flashes twice and **L1** lights up.
3. Subsequently press **+** four times and then **SET** to enter into the alarm lamp setting submenu. (**L5** on, **L1** off at default)
4. Use **+/−** to set the working modes of the alarm lamp.

   L1 off: flash; **L1** on: steady
5. Press **SET** and the system will automatically save and exit.



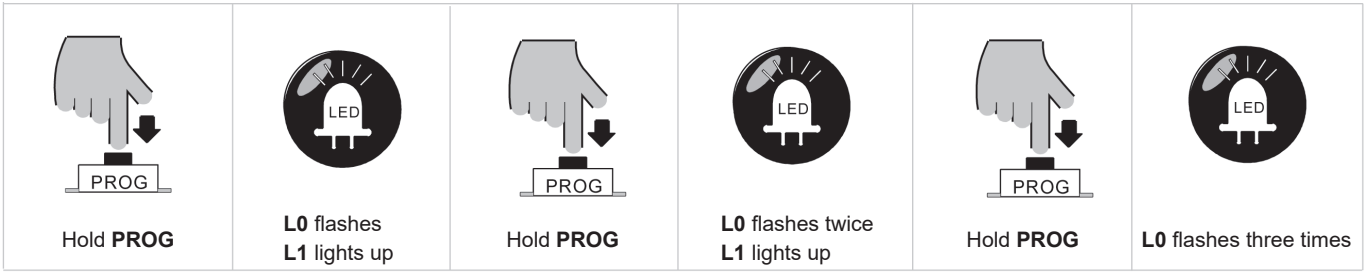


Other Settings

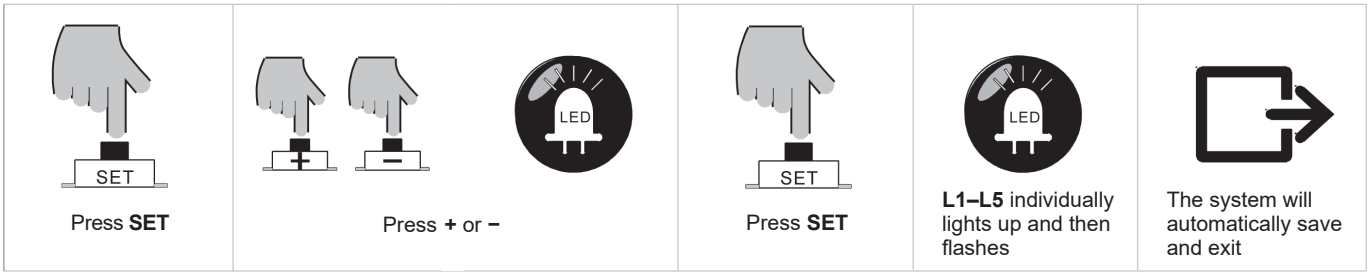
Setting Emergency Stop Distance

1. Press and hold **PROG** for 3 seconds to enter basic settings menu, the **L0** flashes and **L1** lights up.
2. Press and hold **PROG** for 3 seconds again to enter into advanced settings menu, the **L0** flashes twice and **L1** lights up.
3. Press and hold **PROG** for 3 seconds a third time, the **L0** flashes three times and **L1** lights up.
4. Press **SET** to enter into emergency stop distance setting submenu.

   The emergency stop distance is denoted by the number of indicator lights on. The more lights on, the longer the distance the door slides before coming to a full stop. The distance is **L2** by default.
5. Use **+/−** to set distance.
6. Refer to the indicator lights to determine the distance. The more lights are on, the farther the distance will be and the better the buffering effect will be when the gate stopped.
7. Press **SET** and the system will automatically save and exit.



Hold **PROG** | **L0** flashes **L1** lights up | Hold **PROG** | **L0** flashes twice **L1** lights up | Hold **PROG** | **L0** flashes three times



Press **SET** | Press **+** or **−** | Press **SET** | **L1–L5** individually lights up and then flashes | The system will automatically save and exit

⚠ Warning

- *Non-professionals should not adjust the emergency stop distance as it significantly impacts the performance of the infrared emergency stop.*
- *Only when the emergency stop distance is at the minimum (only **L0** on), triggering the infrared during gate closing will promptly halt and retract the opener. Keep in mind that the impact force during emergency stops may reduce the opener's lifespan.*
- *The gate opener **ONLY** halts immediately when (1) the stop distance is set to **L0**, (2) the photocell is triggered and (3) the door is closing. Mind that setting the distance to **L0** ensures the immediate stop but it **WILL** significantly shorten the lifespan of the gate opener.*

- *Increasing the emergency stop distance (excluding **L0**) slows down the opener before halting and retracting during infrared-triggered closing. While this setting reduces damage during emergency stops, it also decreases the sensitivity of the infrared-triggered emergency stop. Professionals should adjust it carefully to avoid improper settings leading to injury or property damage.*
- *With the stop distance set (excluding **L0**) and photocells triggered during closing, the gate will slide slowly before coming to a full stop and traveling back to the open position. That sliding distance buffers the impact of the sudden stop. But mind that the photocell triggered emergency stop may become less sensitive after a trigger. Have a certified electrician to calibrate the distance before resuming use of the gate opener. If not, serious personal injuries and severe property damage could happen.*

Setting the Buzzer

Enable or disable the buzzer as needed. But mind that the buzzer is a key indicator of the functionality of the gate opener. Refer to the list below for the information it conveys.

There are four working status to the buzzer, each indicating a corresponding working status of the opener:

1. A short repeated beep, indicating the gate opening is working properly.
2. A shorter repeated beep with shorter intervals and only lasts for 6 seconds, indicating the 24V lead-acid battery is working properly.
3. A shorter repeated beep with shorter intervals and only lasts for 3 seconds, indicating the battery is running out of energy.
4. A long-lasting acute beep, indicating the control board is malfunctioning.
5. To mute or unmute the buzzer,

    a. Press and hold **PROG** for 3 seconds to enter basic the settings menu, the **L0** flashes and **L1** lights up.

    b. Press and hold **PROG** for 3 seconds again to enter the advanced settings menu, the **L0** flashes twice and **L1** lights up.

    c. Press and hold **PROG** for 3 seconds a third time, the **L0** flashes three times and **L1** lights up.

    d. Subsequently press **+** twice and then press **SET** to enter the buzzer setting.

    L2 lights up and **L1** is off by default.

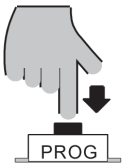
    e. Use **+**/**−** to enable or disable the buzzer.

    L1 on: buzzer enabled, **L1** off: the buzzer disabled.

    f. Press **SET** and the system will automatically save and exit.

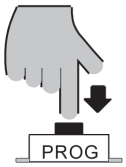
Hold **PROG**

L0 flashes
L1 lights up



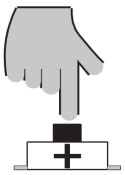
Hold **PROG**

L0 flashes twice
L1 lights up



Hold **PROG**

L0 flashes three times
L1 lights up



Press **+**

L2 lights up

Press **SET**

Press **+** or **–**

Press **SET**

L1–L5 lights up one by one and then flashes

The system will automatically save and exit

⚠ Warning

- *When powered by the battery, the buzzer is not mutable.*
- *After activating the buzzer function, check if the JP3 terminal is plugged while the buzzer is not audible during normal motor operation.*

  *If the buzzer remains mute after it has been enabled and when the motor is working properly, access the control board and check if the terminal on JP3 is connected to "**ON**".*

Reset to Factory Settings

1. Press and hold **SET**, **+**, and **–** simultaneously for three seconds.

   L1-L5 should light up one by one , and then all flash once and dim.
2. Release all three buttons and press **SET**.

Press and hold **SET**, **+**, & **–**

L1-L5 will be on in sequence

L1-L5 will flash once and dim

Save and exit

Control Board Error Instruction

The indicator light will display the error during gate running:

Indicator Light Status: ☐ Off ■ On	Status Instruction
L1 ■ L2 ☐ L3 ☐ L4 ☐ L5 ☐	Meeting obstacles during gate opening
L1 ☐ L2 ■ L3 ☐ L4 ☐ L5 ☐	Meeting obstacles during gate closing
L1 ☐ L2 ☐ L3 ■ L4 ☐ L5 ☐	Running time over 60S
L1 ☐ L2 ☐ L3 ☐ L4 ☐ L5 ■	Infrared photocell disconnecting
L1 ■ L2 ☐ L3 ■ L4 ☐ L5 ☐	No hall sensor
L1 ■ L2 ■ L3 ☐ L4 ☐ L5 ☐	No travel

Maintenance

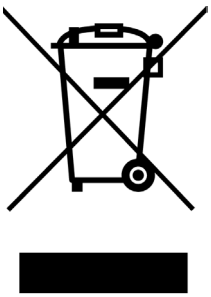
- Always supervise children and pets near the gate, the motor, and their controls to prevent accidents.
- Always fully disconnect your motor from its power supply before removing its cover or making any adjustments to its wiring. Use trained and licensed electricians for rewiring or electrical repair work.
- Keep your sprocket and guide tracks clean and free of any corrosion, grime, or obstructions.
- Lubricate gears and rollers as needed.
- If your gate is not in regular use, test your gate opener's operation at least once a month. If any problems are noticed during testing or normal use, disconnect the motor from power, unlock the gate, and test manually that the gate still moves smoothly on its own. Tighten, repair, or replace problematic parts as needed.
- **ONLY** use identical components and always fully replace damaged or malfunctioning electrical cables.
- In climates where temperatures reach 34°F (1°C) or less, spray silicone on the motor & chain every 4–6 weeks to prevent freezing.

Troubleshooting

Potential Problems	Possible Solution(s)
The opener cannot open or close, the lights are off.	Verify that the power supply is functioning properly.
	Check the fuse is not blown. If blown, replace it with an identical 15 A 250 V fuse.
	Have a certified electrician rewire your system.
The gate opens but does not close.	Remove any obstacles that might be in the gate's path.
	Check if mounting positions of the IR sensors are aligned center to center.
	If the IR sensors have been removed, replace the short wire between the IR terminal and GND; If the IR sensors are still in use, check the wiring for the sensors.
A remote control doesn't work.	Change the remote control's battery.
	Pair the remote to the board again.
	Remove any obstruction between the remote and the gate opener.
The motor makes noise but the gate does not move.	Remove any obstruction from the motor, main sprocket, track, or gate path.
	Have a certified electrician check the gate opener's capacitor. Replace or rewire it if necessary.
The gate cannot stop while arrived at the limit.	Replace limit switch.
The circuit breaker trips repeatedly.	Remove any other devices from the circuit providing the motor's power and confirm it is not unstable or experiencing surges.
	Have a certified electrician check the power supply line and motor line for short circuits. Repair if necessary.

Disposal

Electrical products should not be disposed of with household products. In the EU and UK, according to the European Directive 2012/19/EU for the disposal of electrical and electronic equipment and its implementation in national laws, used electrical products must be collected separately and disposed of at the collection points provided for this purpose. Locations in Australia, Canada, and the United States may have similar regulations. Contact your local authorities or dealer for disposal and recycling advice.



Contact Us

Thank you for choosing our products! If you have any questions or comments, contact us at **contact@cssupportgroup.com** and we'll resolve your issue ASAP!

For a .pdf copy of the latest version of these instructions, use the appropriate app on your smartphone to scan the QR code to the right.

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