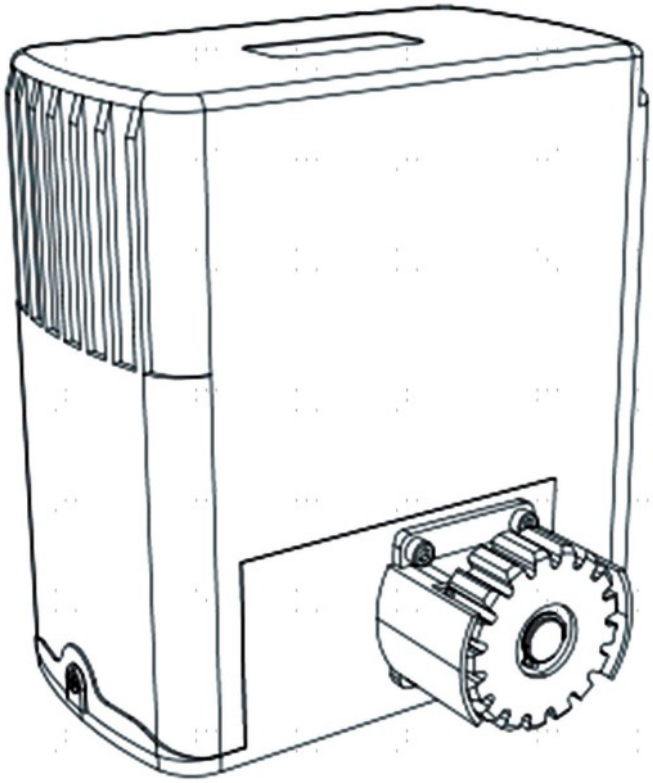
JOYTECH SL600AC Sliding Gate Opener User Manual

JOYTECH

Read Carefully Before Use
Keep for Future Reference
SL600AC
SLIDING GATE OPENER
USER MANUAL



Contents

SAFETY INFORMATION

Warning!

- Read these instructions CAREFULLY 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 clearly visible warning signs is a requirement for UL 325 compliance and may be necessary in your area. Only use the device for its intended purpose, opening and closing a single sliding gate for Class I residential 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.
- Install and use this gate opener only on firm level ground. Install and use this device so that its motor and other hazardous components are not in public areas and are protected as much as possible from unauthorized access and use. There should be adequate clearance between your gate and any nearby structures to prevent any possibility of a pinching or crushing hazard during use. If this is impossible, the area should be guarded as well as possible and warnings clearly placed nearby.
- ONLY allow trained technicians to install and repair this device and its electrical connections. Disconnect all power from electronic components during installation and maintenance except as instructed for safely testing functionality.
- Confirm BEFORE any digging that there are no nearby gas, power, or other utility lines or that all such lines have been fully disabled and cleared to allow safe work.
- ONLY use this device for a single sliding gate intended for vehicular traffic. Pedestrians should be provided with a separate access point far enough away to ensure they never come into contact with the moving vehicular gate.
- DO NOT install this device in any area prone to flooding or in locations exposed to flammable or explosive fumes.
- ONLY use this device with gates of compatible weight and size and stable, compatible, and well-grounded power sources. Do not use with ungrounded power strips, 3-to-2 prong adapters, DC batteries, or DC solar power systems.

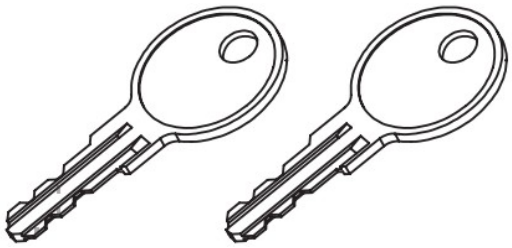
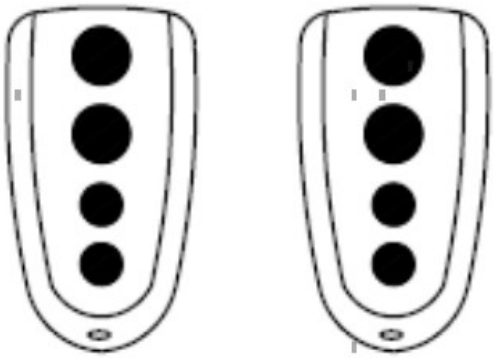
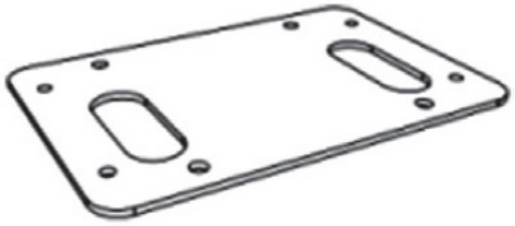
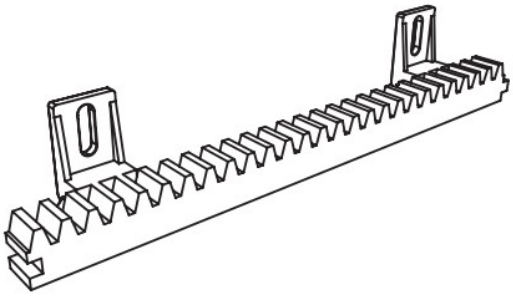
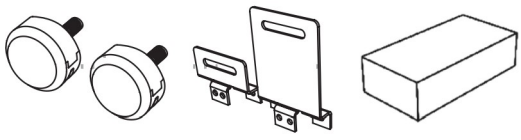
- ONLY use well-connected and maintained Module 4 gate racks with this device. Never use this device for gates wider than 40 feet (12 m) and never allow the sprocket to carry the weight of the gate. Keep the rack correctly positioned so all weight is distributed to the gate's own wheels during operation.
- ONLY install fixed controls for the gate where they cannot be reached over, under, around, or through the gate. They should also be far enough away that operators cannot contact the moving gate during use. For full UL 325 compliance, there should be a clear line of sight between the controls and the gate but it should be located at least 6 feet (2 m) away from any of the gate's moving parts.
- NEVER allow children to play on or around this device or its attached gate. Keep controls away from children and out of their reach at all times and warn them of the gate's danger.
- NEVER pair a remote control for this device with any other control board. Never attempt to operate this device with two or more remotes or control devices at the same time.
- All provided components of this device are weatherproofed to withstand normal rain. Ensure adequate insulation and protection of all electrical connections and never direct pressurized water against any part of this device.
- Keep your gate well maintained and its track free of grime and debris. Periodically confirm that it runs smoothly nder manual operation.
- 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.

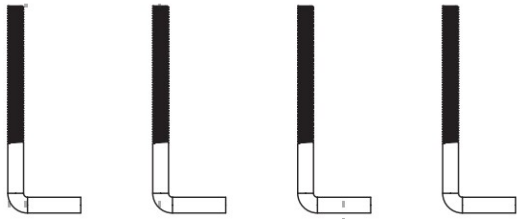
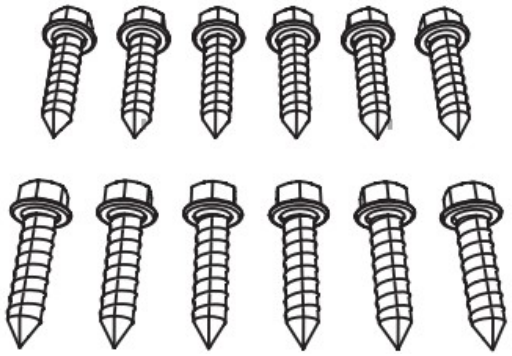
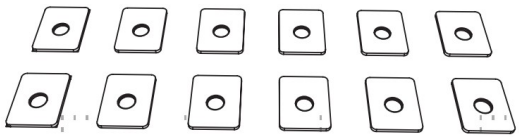
SPECIFICATIONS

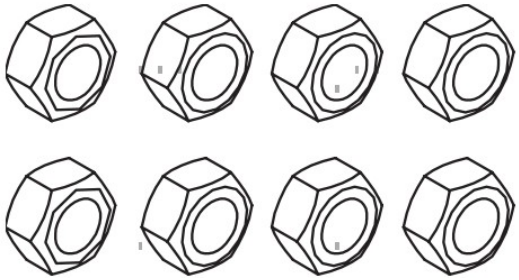
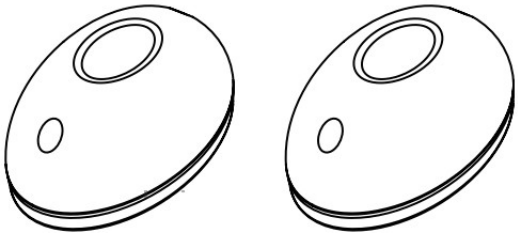
Model	**SL600AC**	
Input Power	**110-120 V- 60 Hz**	
Rated Power	0.37 hp	280 W
Torque	11.8 lb.-ft.	16 N-m
Duty Cycle	S2 20 min.	S2 20 min.
Max. Gate Weight	1300 lb. 0.65 T	600 kg 0.6 MT
Max. Gate Speed	42.5 fpm	13 m/min.
Gear/Rack Type	Module 4	Module 4
Provided Rack Length	13 ft.	396 cm
Max. Gate Length	40 ft.	12.2 m
Max. Noise	56 dB	56 dB
Temp. Range	-4° to 158°F	-20° to 70°C
Weatherproofing	IP44	IP44
Max. Remotes	40	40
Remote Range	98.4 ft.	30 m
Remote Frequency	433.92 MHz	43192 MHz

PACKAGE LIST

When you first receive your new gate opener, confirm that you have received all of the following parts. A few additional fixtures and washers are included as spares. You may wish to keep the original packaging through your warranty period to speed any returns, but be sure to prevent any children or pets from playing with it.

No.	Picture	Name	Quantity
A		Motor and Control Board	1
B		Manual Release Keys	2
C		Remote Controls	2
D		Mounting Plate	1
E		Module 4 Racks	12
F		Limit Switches with Accessories	2

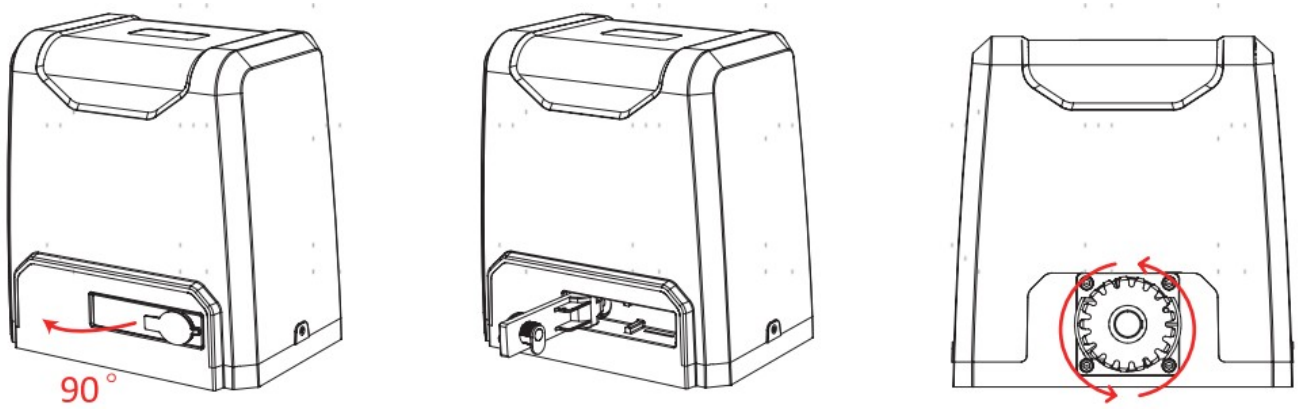
G		M8 Foundation Bolts	4
H		M6x18 Mounting Bolts	4
I		M8 x40 Hex Bolts	4
J		Self-Tapping Screws	24
K		Mounting Lugs	24
L		M8 Flat Washers	10
M		M8 Spring Washers	10

N		M8 Nuts	12
0		Infrared Sensor Set	1

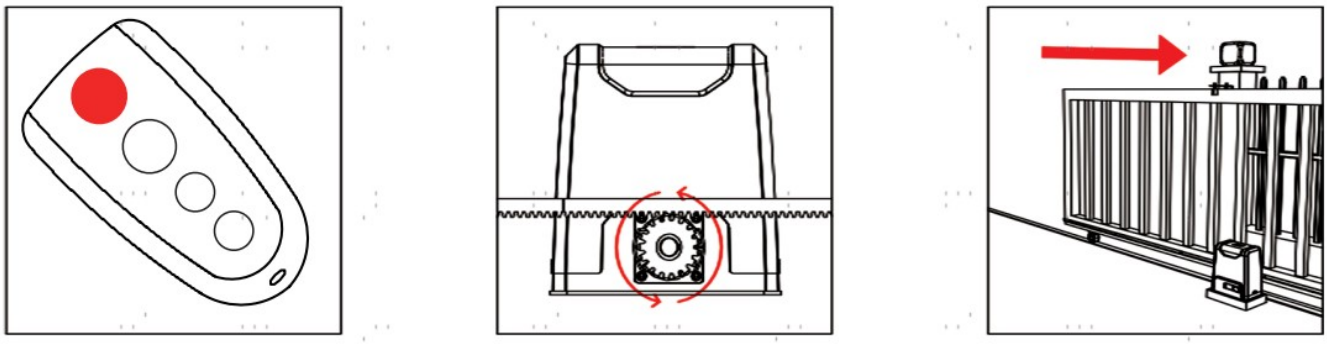
INSTALLATION

Initial Testing and Setup

1. When you first receive your motor (A), use one of the manual release keys (B) to open the motor's release bar 90°. This releases the main gear's normal locking mechanism for manual testing. Confirm that the gear rotates freely and smoothly by hand. Close the release bar and lock the gear back into its normal operation.

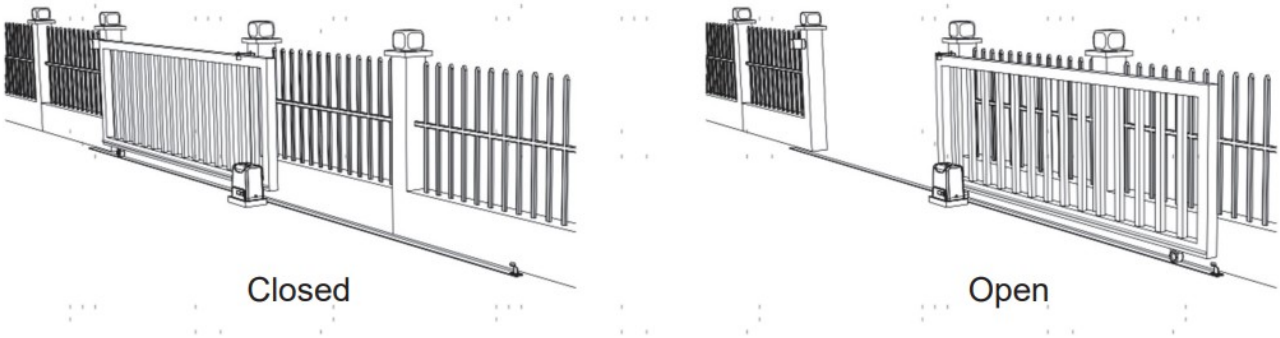


2. Plug the motor into any stable, compatible, and well-grounded power source. Use one of the provided remote controls (C) to confirm its operation. The top button on both remotes should come already paired to your motor's circuit board. If they are not, see the instructions for Remote Pairing below.

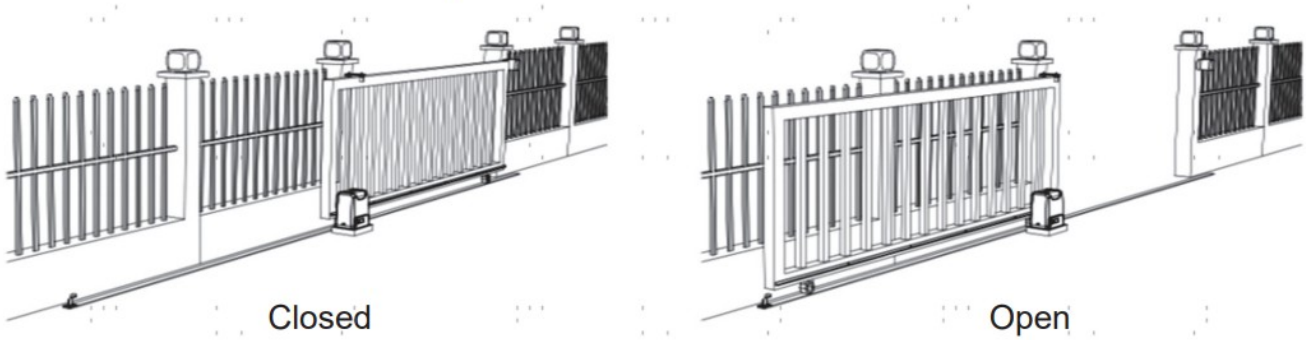


The default setting for this gate opener is single-button control, which helps prevent accidents and malfunctions from contradictory inputs. Press the top button once to start the motor. This should cause the main gear to begin turning counterclockwise, which opens gates towards the right. If you will need to install your opener on the left side of your gate, see the instructions for Reversing Direction below.

Standard Right Side Installation



Optional Left Side Installation



Press the button again to stop the gear. Press the button a third time to start the motor again in reverse. This should cause the gear to begin turning clockwise, which closes gates from the right. Press the button a fourth time to stop it again.

3. Test the magnetic limit switches (F) by starting the motor turning in either direction and bringing one of the magnets close. The detector is located inside the case above and to the right of the turning gear. Move the magnet around to find the exact location, marking it if needed. Confirm that each magnet stops the wheels turning in each direction when brought near the detector. If there is any problem or issue with the magnetic limit switches, contact Customer Service before continuing with installation.

 Keep the motor and other devices FULLY disconnected from power for the rest of installation, except as instructed for testing operation.

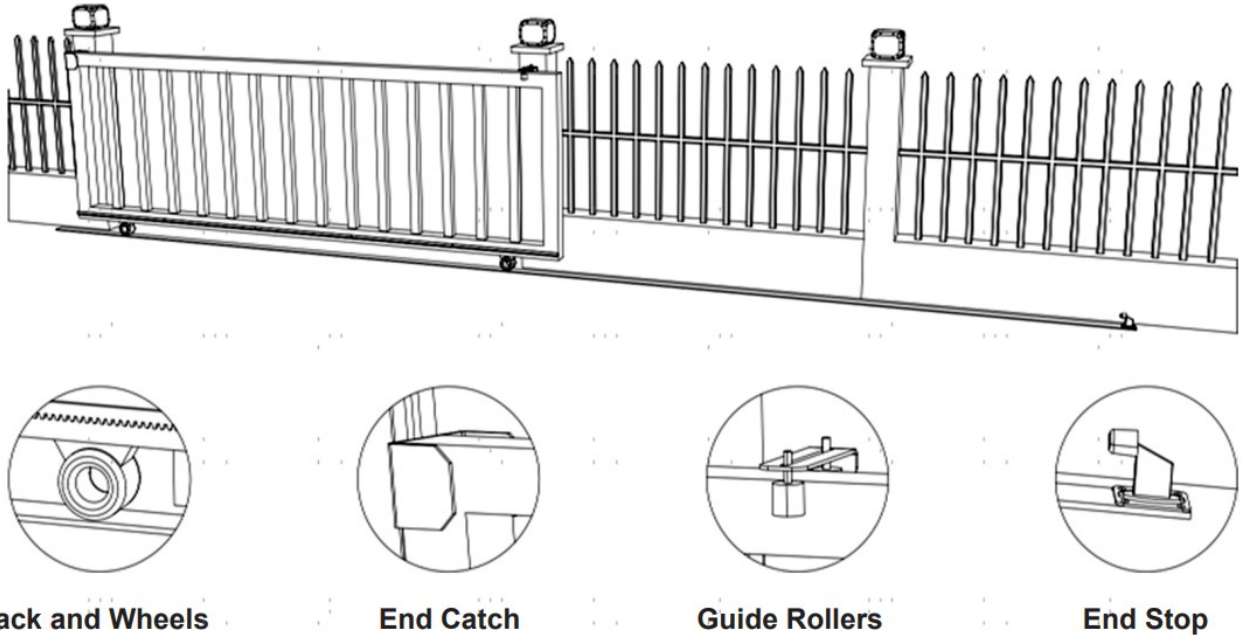
4. Double check your gate's weight and size. Confirm that your gate opener will be able to provide the necessary torque for safe and consistent operation. Confirm that your gate does not exceed 40 feet (12.2 m) in length. Check how far your gate will need to move to open and close as needed. If your gate will need to move more than 13 feet (4 m), you will need to purchase additional Module 4 racks and connect them with those already provided with your device. Be sure any additional track is completely identical and flush with the rest.

 NEVER use weak or incompatible track with this device and ALWAYS ensure the track is securely fastened and completely flush prior to any use.

5. Double check your gate's condition. Confirm that it is properly installed on firm and level ground entirely within your own property. Confirm that it moves smoothly and remains completely plumb and level both vertically and horizontally along its entire path. Its wheels 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 both ends to avoid any pinching or crushing hazard once movement is automated.

If it is impossible to eliminate hazardous areas around your gate, each one should be blocked off and clear warnings posted.

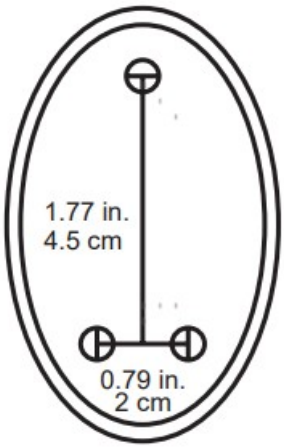
Confirm that your gate includes all of the following features or their equivalent. In particular, be sure it will be able to firmly mount the Module 4 rack and that end catches and stops on both sides are prepared so your gate can never roll off its designated path.



For full UL 325 compliance, place one or more warning signs so that they are clearly visible to anyone near the gate on either side. Such signs should warn of the possibility of serious injury or death from the moving gate, warn against allowing children nearby, and guide pedestrians to keep clear and use a separate entrance. As potential pinch points, access to exposed wheels must also be restricted using roller guards. Similarly, the gate and nearby fence or wall must be constructed so that they do not provide ANY openings below a height of 4 feet (1.2 m) above the ground where a 2¼″ (5.8 cm) diameter sphere would be able to pass through.

6. Provide a separate gate for pedestrians if needed. Once automated, the main gate should ONLY be used for vehicular traffic. Be sure the pedestrian access is clearly visible or clearly marked from the area of the gate, but it should be located safely away from the main gate's range of motion.
7. Provide a stable, compatible, and well-grounded power connection for the gate opener. The motor's outlet should be within sight of the gate, protected from the elements, and equipped with a GFCI, RCD, or circuit breaker. It should be at least 3 feet (1 m) high to minimize damage from weather. If possible, place the outlet higher than 5 feet (1.5 m) to limit access by children and animals.

   It is recommended that any wiring near the gate run underground inside PVC pipe or conduit to minimize any possibility of tripping or accidental damage. The wiring for the outlet or power connection should be a 3-core cable at least 16 AWG (1.5 mm^2) thick. If your gate's position is further than 300 feet (90 m) from the nearest power source, the wire should be at least 14 AWG (2.5 mm^2) thick. At distances beyond 1000 feet or 300 m, a professional electrician should be consulted to safely deal with the expected voltage drop.
8. When properly configured and activated, the gate opener's collision reaction system functions as a Type A entrapment protection and an attentive user and the device remote function together as a Type B1 non-contact sensor. Users should also install the provided infrared sensors, especially if any additional access method is added.



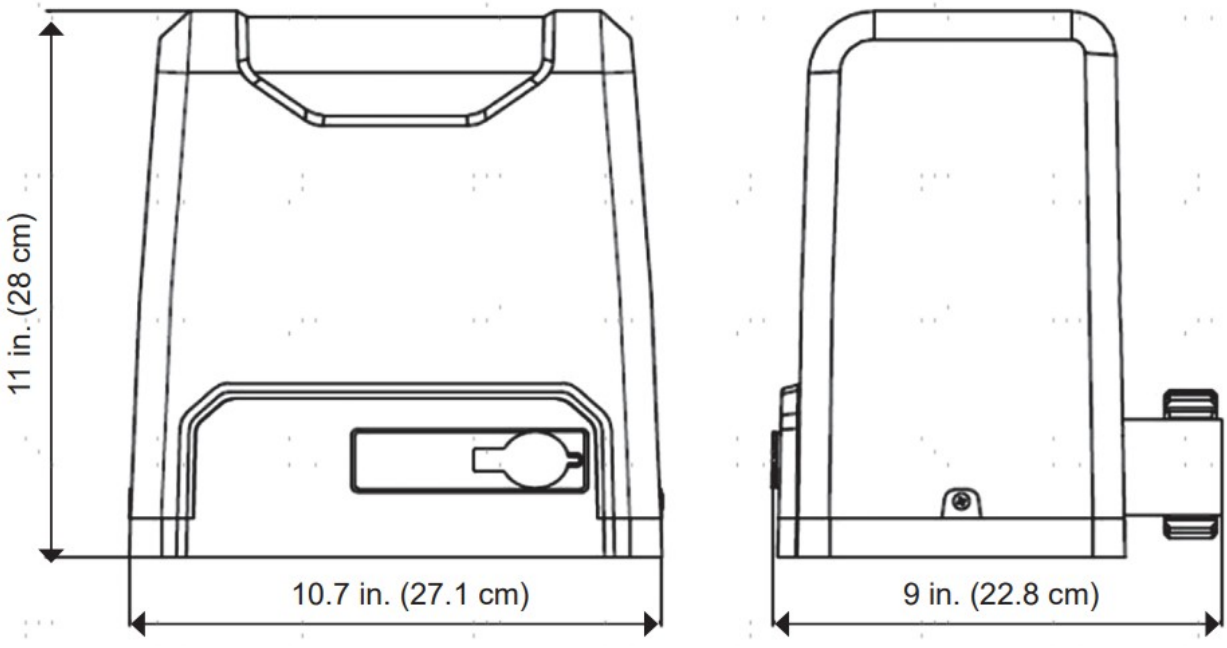
To use the infrared sensors, prepare locations for them on opposite sides of your gate. They should be directly across from one another at least 6′7″ (2 m) apart but no further apart than 65 feet (20 m). If possible, they should be placed where they will be shielded from direct sunlight. Pilot holes for their support bolts (not included) should be placed as shown.

Each sensor will need a connection to the circuit board and a source of 12V DC power. This can be provided from the motor circuit board's +15V pin (7) or separately. The signal line from the receiver—the sensor with a 5-pin terminal—and any power lines should be prepared ahead of time. Additional wires should be at least 22 AWG (0.5 mm²) thick. If possible, these lines and those from any other control or access system should also be placed underground inside a PVC pipe or conduit separate from the one used for the motor's power cord. Again, all wiring connections should be insulated and protected to withstand rain and inclement weather.

Base Installation

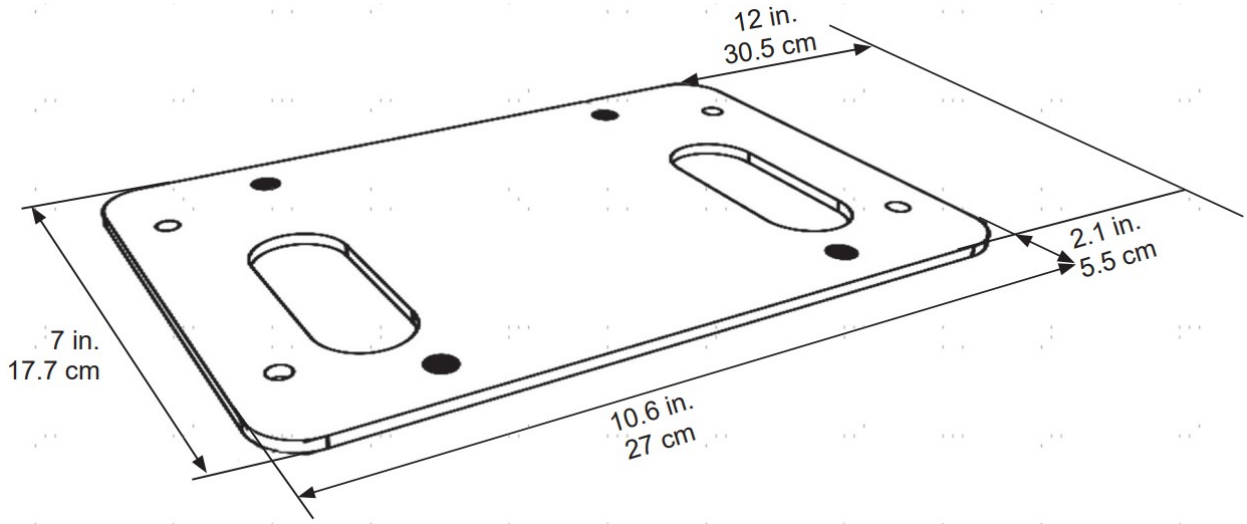
Your motor MUST be firmly secured for safe use. Do not attempt to use it loose or only secured to thin pavement.

1. Prepare a suitable location for the motor (A) beside either end of your gate. The default settings are for placement on the right side of your gate when facing out from your property. It can be installed on the left side but some settings will need to be reversed for some functions like automatic closure to work properly.
2. The motor itself will need an area of 10.7×9 inches (27.1×22.8 cm).

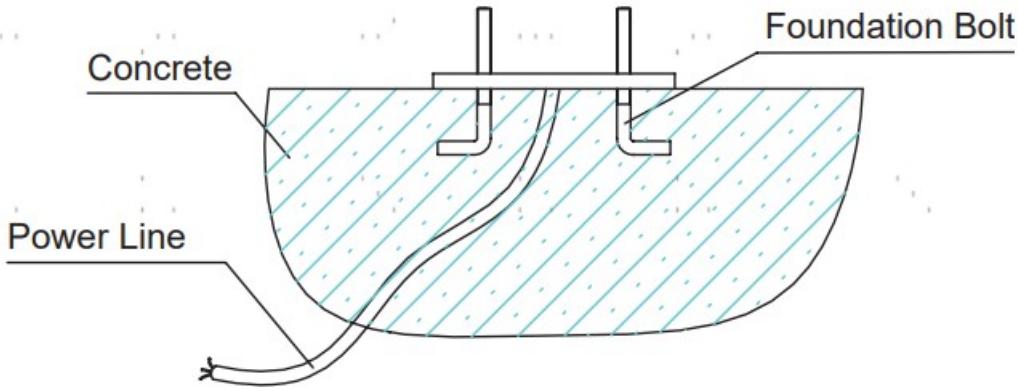


The outer edge of the gear will need to be positioned almost exactly ¾″ (19 mm) from the nearest part of the gate. The mounting plate (D) can be used to more easily check and mark initial placement, but its outer edge

will need to be positioned 2⅛″ (5.5 cm) from the nearest part of the gate to adjust for the width of the gear itself. The middle of the plate should be set at least one foot (30 cm) from the nearest end of the gate to allow enough space on the track for the limit switches and to avoid any possibility of derailment.



3. If the area beside your gate already has concrete at least 10 inches (25 cm) thick, you can attempt to secure the gate opener to it with a drill and suitable fasteners (not included). Simply find the right position for the mounting plate and use it to mark the locations for your anchor bolts.
   If the area beside your gate is covered with earth or thin pavement, you will need to create a concrete platform to fully anchor the motor. Dig a hole about 20 inches long, 14 inches wide, and 8 inches deep (50×35×20 cm). Prepare a form box with the same dimensions and fit it into the hole. Nonstick spray can be used to minimize moisture absorption and ease its future removal.
4. Fill the form with concrete. You will need a minimum of 1.25 cubic feet (35 L or 0.035 m^3) of concrete, equivalent to a bit more than two standard 80 lb. bags or three standard 60 lb. bags. Aim for at least a 4000 psi or C30 strength mix. A metal wire or cage frame can be added near the sides to further shape and reinforce your concrete foundation.
5. While the concrete is still wet, adjust the cables' PVC pipes as needed and insert the four M8 foundation bolts (G) as shown. Use the mounting plate to confirm that they are properly positioned and aligned, remembering to leave the correct distance from the future location of the motor to the gate. For best results, coat the foundation bolts in a protective solution to minimize corrosion during their time in the wet concrete and afterward.



   Alternatively, you can simply create a solid foundation, position the motor and wiring as needed once it dries, and then use your drill and suitable fasteners to anchor the motor to the concrete.
6. Carefully level the upper surface of the concrete.
7. Wait at least 24 hours for the concrete to set, protecting the area from any rain or other weather as needed.
8. Remove the form box from around the concrete. Pack the surrounding soil tightly back into place to hold the new foundation. Adjust the concrete and surrounding dirt as needed to ensure it is snuggly fit, firmly positioned,

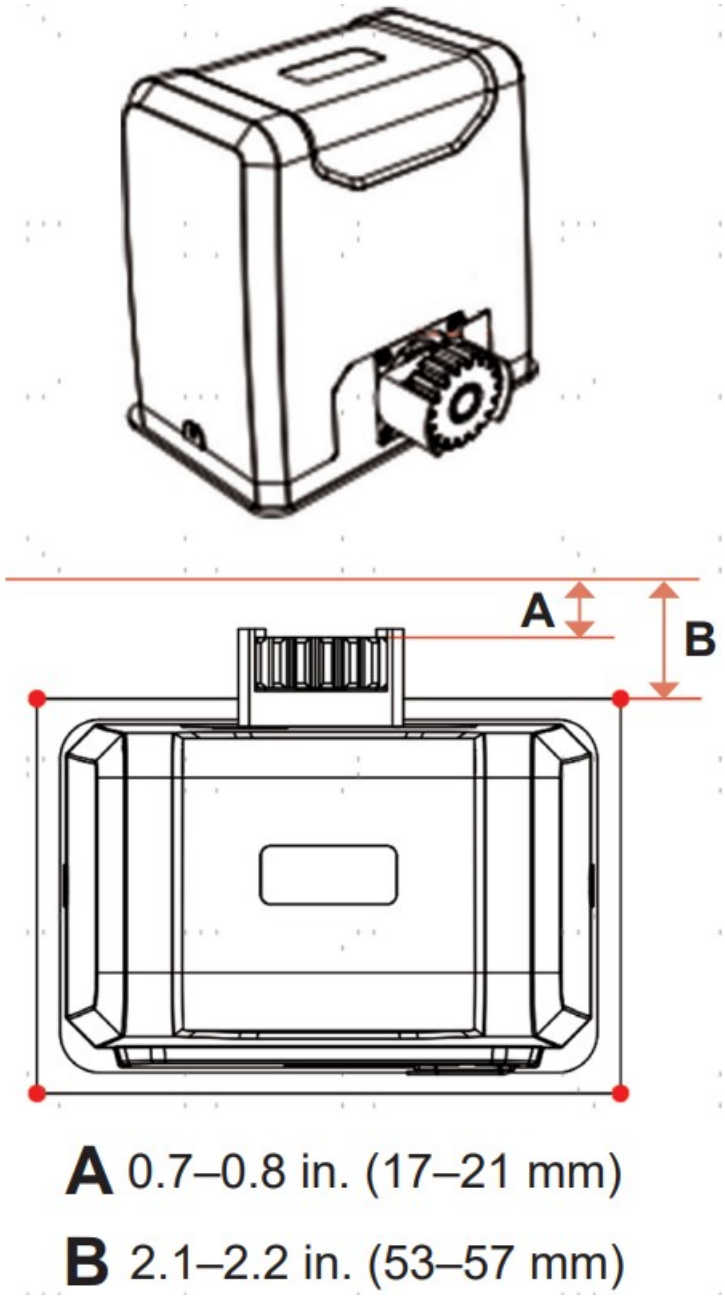
and completely level.

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

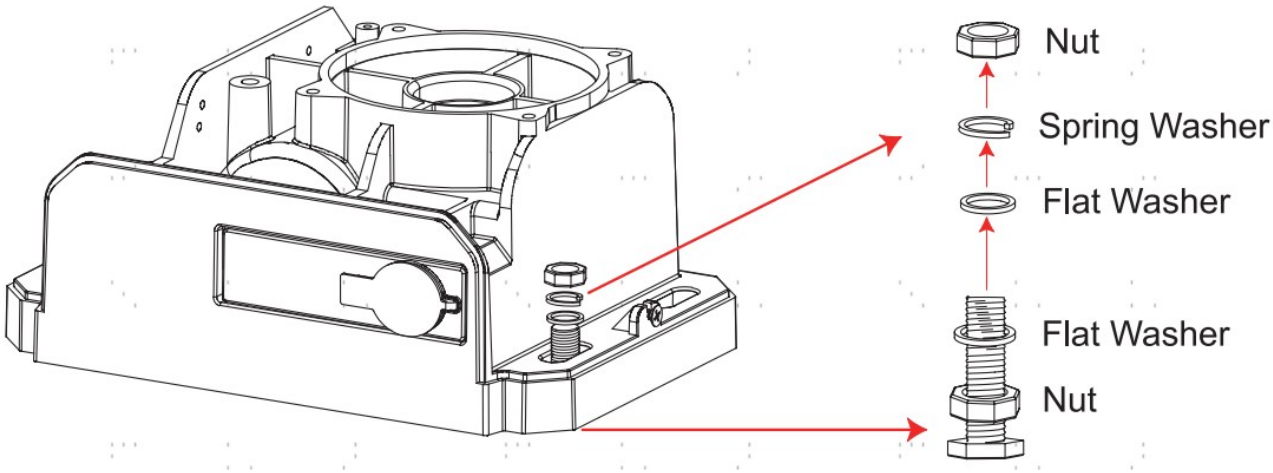
Motor Installation

Using two people may make some parts of the following process much easier.

1. Remove the bolts on each side of the protective casing of the motor (A). Use your release key (B) to unlock the gear again.
2. Position the mounting plate (D) loosely onto the foundation bolts (G) and position the motor loosely onto the mounting plate. You can place two M8 nuts (N) between them now to approximate the motor's final height or simply make the appropriate allowances in the following steps.
3. Position one of the Module 4 racks (E) so that it rests on top of the motor's main gear. Move the rack so that it is positioned properly— completely flush against the gate—while at the same time moving the motor as well to keep its main gear positioned properly under the rack's teeth. Once both rack and motor are well positioned, mark the locations on the gate and the foundation. It should match the diagram at the right.

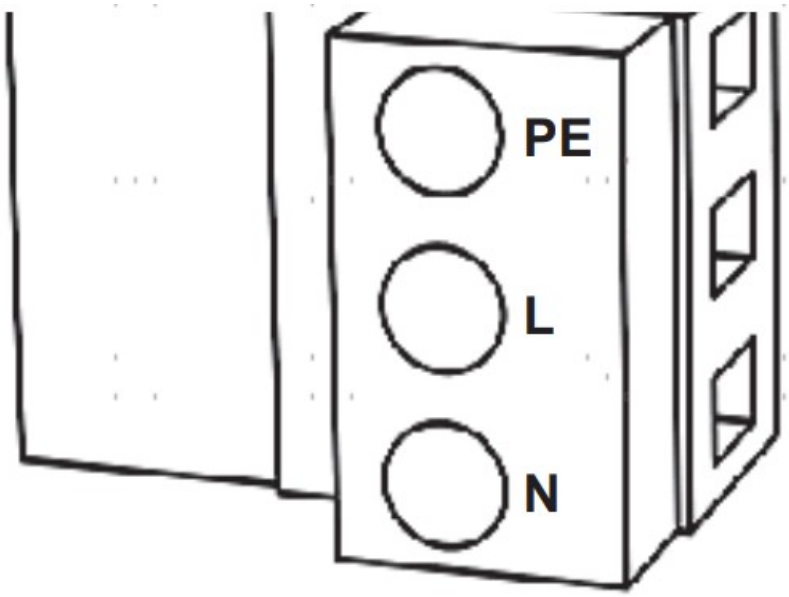


4. Hold both rack and motor in place while you manually move the gate along its entire length. The gate should be so smooth and well aligned that the rack slides along without a problem.
   Correct any alignment or binding problem with the gate until the motor and rack can be held smoothly in place and well aligned through the gate's entire range of motion.
5. Once the gate is completely open, confirm that there will be at least 1 foot (30 cm) between the middle of the main gear and the far end of the gate. This will allow enough room for the limit switch and help avoid any possibility of accidental derailment. If necessary, move the gate opener over and then repeat the positioning and alignment steps above.
6. Once the motor is fully correctly positioned, mark everything before removing the piece of track and the motor itself. You can hold the motor in place using only the foundation bolts and nuts—with or without the mounting plate—but it is recommended you use the mounting plate, the foundation bolts and nuts, and the M8×40 hex bolts (I). The additional components, along with their flat (L) and spring washers (M), should give your motor a firmer hold and give you more flexibility to carefully adjust its height and keep everything completely level.
   The recommended arrangement is shown below, but add or remove washers and make other adjustments as needed so that everything is completely level, well aligned, and firmly held in place once you're done.

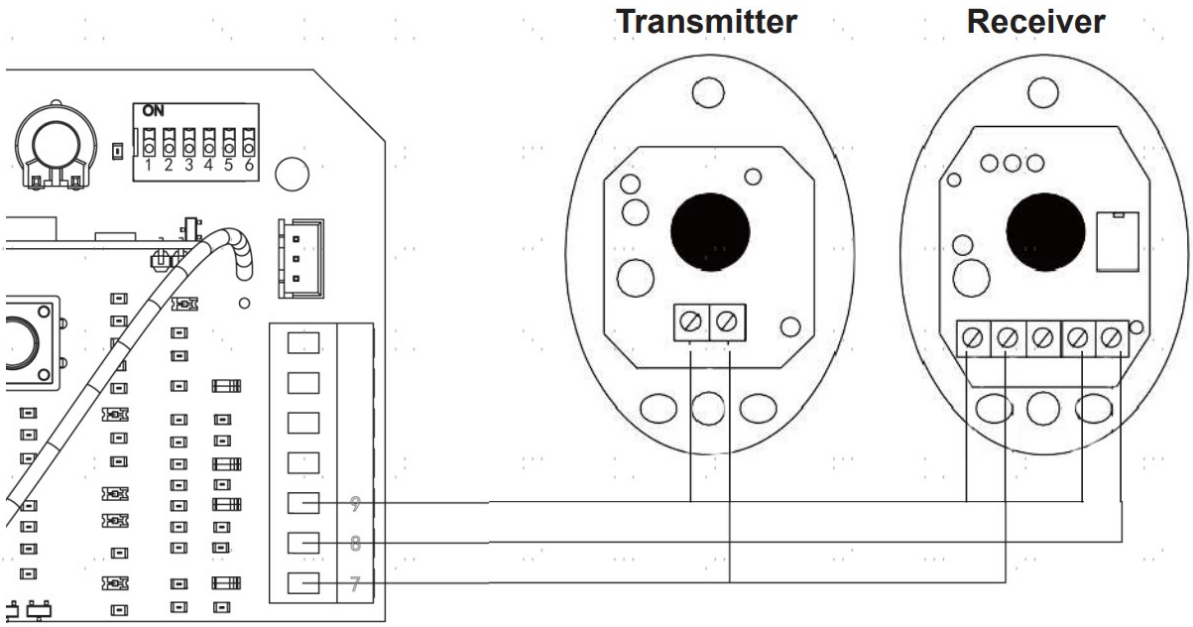


7. Remove the protective cover from the motor circuit board. Keep its fasteners nearby.

   NEVER make electrical connections while the motor's power supply is active. Disconnect the GFCI, RCD, or circuit breaker before any wiring attempt.
8. If you will need to directly wire your power source into the motor's circuit board, connect your wires to the main power terminal, the only one with three pin positions. Use a small flathead screwdriver to loosen and tighten the terminal screws as needed. Connect the ground wire to the top PE pin, the live wire to the central L pin, and the return or neutral line to the bottom N pin. Be sure no wiring is left bare and exposed.



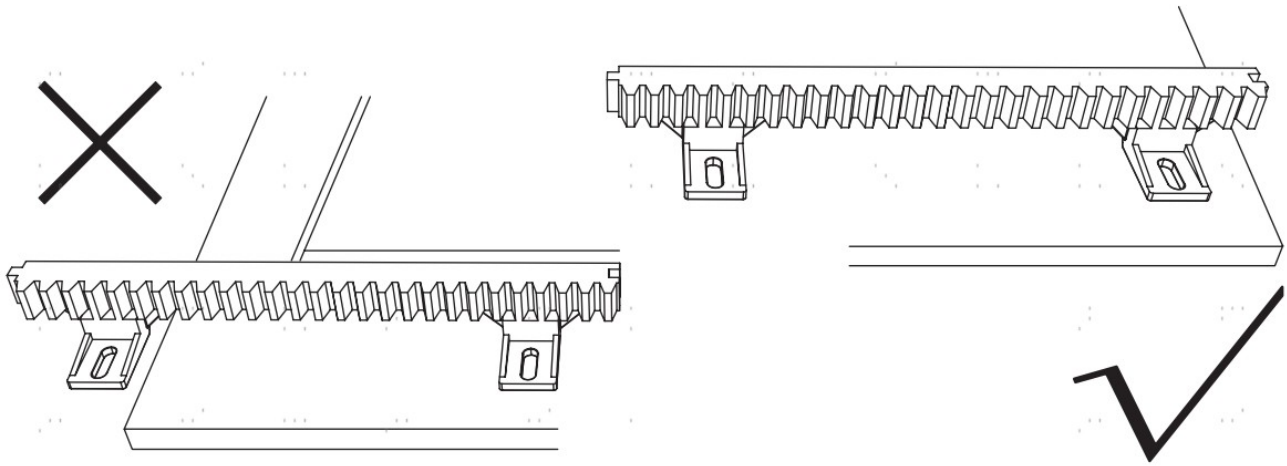
9. If you will be using the provided infrared sensors, find the long terminal next to the circuit board's DIP switches. Remove the wire shorting pins 8 and 9 together. Connect the wiring from your infrared sensors as shown. The sensors' V+ pins should be connected to the bottom +15V pin (7); the receiver's NC pin should be connected to the central NC pin (8); and the sensors' V– pins and the receiver's COM pin should all be connected to the top GND pin (9).



10. Arrange the wiring for your motor as needed, being sure it will be protected from the moving gate. Use conduit, silicone, or other sealant to minimize exposure to the elements and limit access by insects.

Rack Installation

1. Before placing your racks, lay them out in position along the entire length of the gate where they will need to be installed. Check that both ends have at least one foot (30 cm) beyond the expected position of the main gear for their limit switch and ensure that you will not end up with a small piece of a rack at the end that is only supported by a single brace.

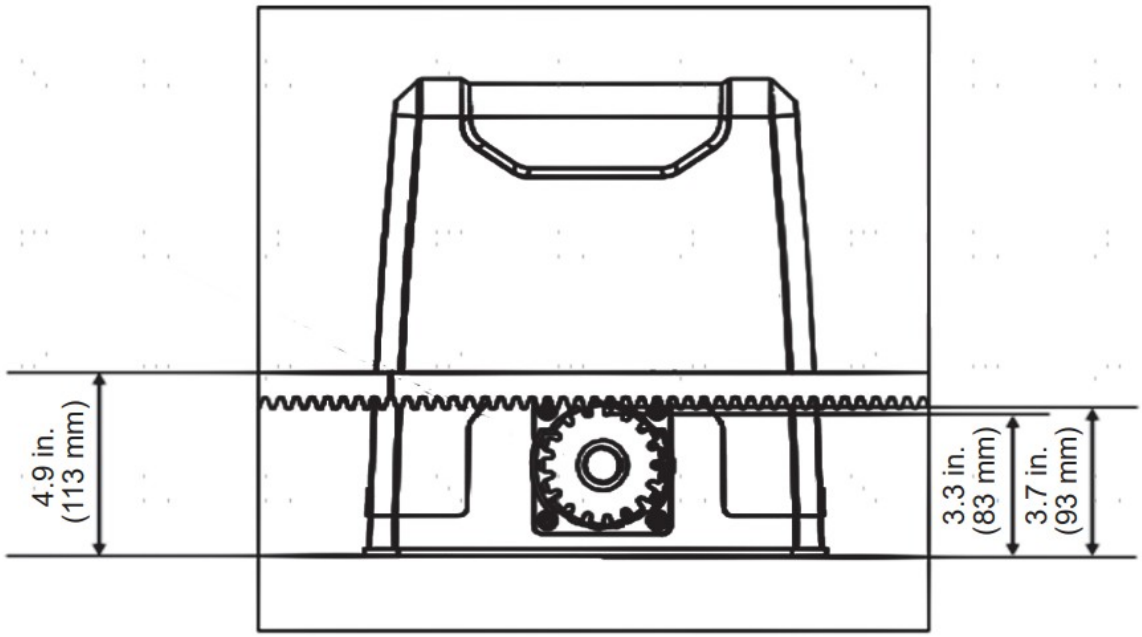


All of the gate racks you install MUST be supported by at least TWO separate braces to remain securely held and properly aligned over time.

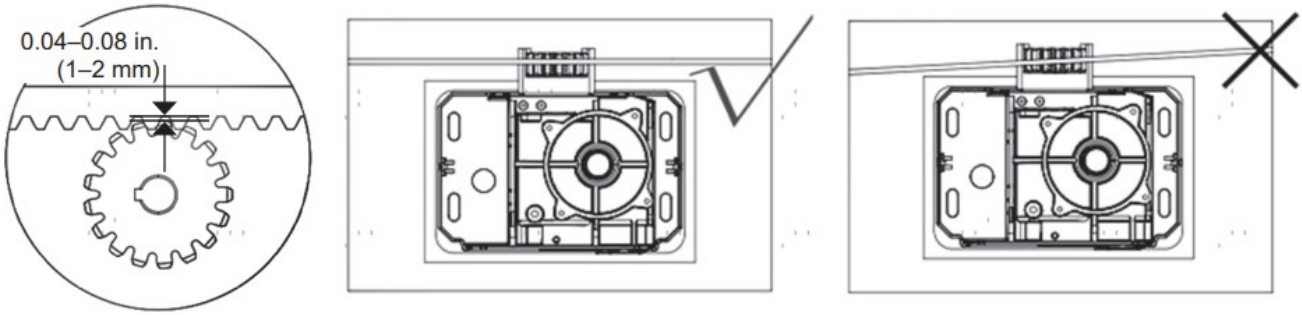
If you do end up with too little of a rack at the end, the best solution is to scoot all of the racks over together, so that enough space is created by moving the first that both braces on the last rack now fit onto your gate. If this is impossible, you can purchase a shorter or longer compatible Module 4 rack that will allow proper placement of the other pieces or simply use one fewer rack and move the gate less far out of the way.

Mark the final arrangement as needed.

2. Slide the gate nearly closed and position the first piece of the rack just above the motor's main gear. It may help to lock the main gear back into normal operation, holding it tight. Once the rack is precisely positioned, screw one of the mounting lugs (K) and self-tapping screws (J) into the nearest support bracket on the far side of the motor opposite your entrance. For best results, use an impact driver. Next, put another lug and another selftapping screw into a support bracket on the near side of the rack closer to your entrance. The distances should almost exactly match those in this diagram:



3. Unlock your main gear with your release key and move the gate back and forth. The gear should turn freely without binding along the entire length of the rack. The rack should remain in the same perfectly straight line over the gear from one end to the other, and there should be a space of about 40–80 mil (1–2 mm) between the gear and the rack along its entire length.



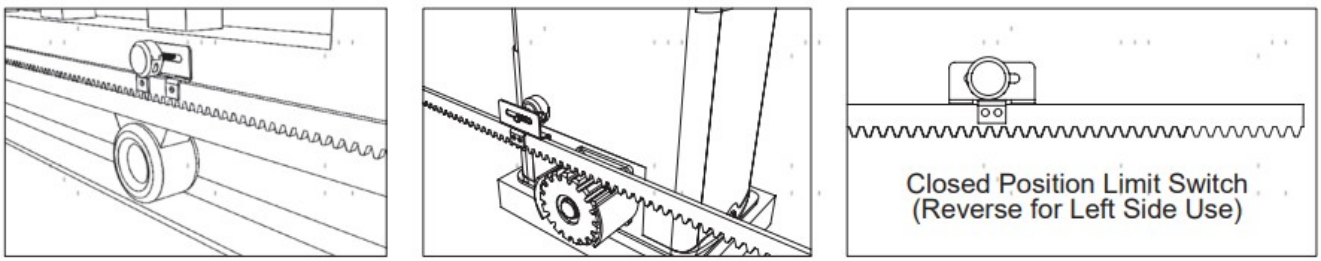
AT NO POINT should the main gear directly support the weight of the gate.

If the placement of any rack causes the gear to directly support the weight of the gate, this WILL cause malfunctions, premature failure, and void any warranty stated or implied. Loosen the screw, adjust the bracket around it, adjust any other parts of the racks to maintain alignment, and tighten everything back into place.

4. Repeat the same process, testing, and adjustment with the next length of rack. Slot it into place beside the first, support it using the mounting lugs and self-tapping screws, and adjust it as needed to keep everything level and smooth without forcing the main gear to directly bear the weight of the gate. Repeat this for the rest of the racks, confirming each time that the small gap between the rack and the gear's teeth is evenly maintained.
5. If the final position of the racks leaves dangerous or unsightly excess length sticking out either side of your gate, fully tighten the screws supporting all of its brackets and then remove the excess length with a hacksaw, angle grinder, or similar tool.
6. If any brackets were left unsupported as you went, close the gate back and add the additional lugs and selftapping screws. Continue checking the gear's placement and making any necessary adjustments as you go.

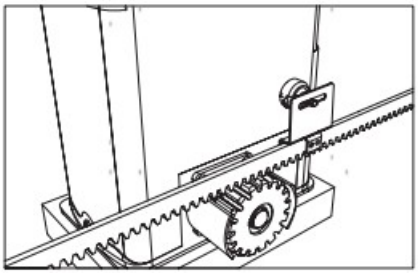
Limit Switch Installation

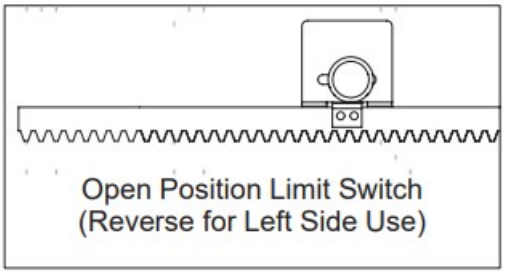
1. The two limit switches (F) are designed to attach to the rack, signaling to the motor when to stop in either direction. They should work in conjunction with your gate's end stops and brackets to automatically bring the gate to a gentle stop at the exact best position every time. Neither the limit switches nor the end stops and brackets should be used without the other.
2. To position the close limit switch, roll the gate to its completely closed position and then roll it back open about 6–7¾″ (15–20 cm). This will give your gate space to come to a more gentle stop once the limit activates.
3. Fit a magnet onto the shorter limit switch. Slide its bolt through the hole in the switch mount and tighten it into place with its M8 flat washer (L), spring washer (M), and nut (N). Fit the limit switch onto the rack as shown, positioning it beside the motor's internal magnetic limit detector and tightening it into place with two M6×18 bolts (H).



4. Repeat the process on the other side. Roll the gate to its completely open position and then roll it back closed about 6–7¾″ (15–20 cm) to provide space for it to roll to a stop ahead of your end stops and brackets. Fit the magnet onto the taller limit switch, fasten it into place, fit the limit switch onto the rack as shown, and tighten it

into place just like before.

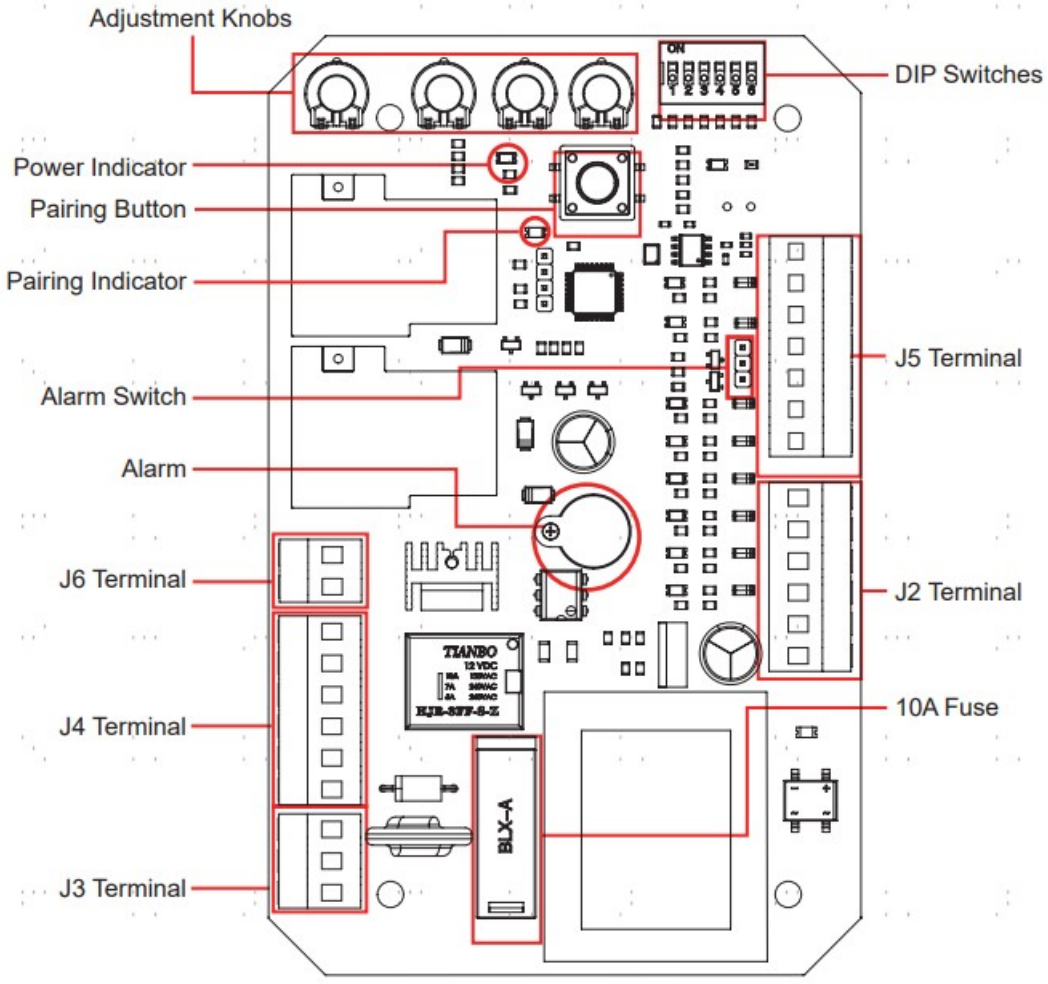




5. Roll the gate from one end to the other, checking that the limit switches do not touch the motor and move smoothly beside it. Use the manual release key to lock the motor back into standard operation.
6. If you have not already done so, mount the infrared sensors and fully connect and bind their wiring.

ADJUSTMENT

Circuit Board Diagram



Adjustment Knobs	
VR1	Obstruction Sensitivity
VR2	Braking Force
VR3	Slow Stop Distance
VR4	Starting Force

J4 Terminal	
MOT1	Live Motor Pin
MOT2	Neutral Motor Pin
MCOM	Common Motor Pin
LAMPL	Live Alarm Light Pin
LAMPN	Neutral Light Pin
PE	Ground Pin

J3 Terminal	
PE	Mains Ground Pin
L	Mains Live Pin
N	Mains Neutral Pin

DIP Switches	
1	Deactivate Slow Start
2	Reverse Direction
3	Autoclose Time
4	
5	Deactivate Collision Close
6	Remote Operation Mode

J5 Terminal	
13	Open Limit Pin
12	Common Limit Pin
11	Close Limit Pin
10	Sensor Signal Pin
9	IR Ground Pin
8	IR NC Signal Pin
7	IR 15V Supply Pin

J2 Terminal	
6	Pedestrian Signal Pin
5	Cyclical Signal Pin
4	Common Signal Pin
3	Stop Signal Pin
2	Open Signal Pin
1	Close Signal Pin

 **NEVER** adjust any wiring or board setting while the gate is connected to power unless specifically directed otherwise. Disconnect the circuit from power, make your adjustment, and then restore power to test the effect.

Reversing Direction

The default placement for this system is on the right side of sliding gates when looking out from the property. This is controlled by the up position of DIP Switch 2. If you are installing your system on the left side of your gate, make sure that this switch is flipped down away from the word ON before connecting the gate to power.

DIP2	Effect
UP	Right Side Operation
DOWN	Left Side Operation

Changing Command Modes

The default command mode for this system is single-button operation. Pressing a single button on the remote will cycle through the commands OPEN→STOP→CLOSE→STOP. This is controlled by the down position of DIP Switch 6. If you prefer to use four separate buttons for the different commands, make sure that this switch is flipped up towards the word ON before connecting the gate to power. Be aware that this setting makes accidents and excessive wear from contradictory commands more likely and is not recommended.

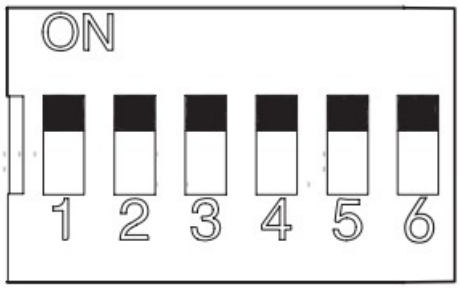
Toggling the Movement Alarm

By default, the circuit board produces an alarm or buzzing noise when the motor is active. This is controlled by the position of the small wire connecting Pins 1 and 2 on the Alarm Switch terminal. If you prefer to deactivate this safety feature, move the wire to connect Pins 2 and 3 on the Alarm Switch terminal instead. Be aware that this can make accidents more likely and is not recommended.

Activating Autoclose

By default, the gate remains open indefinitely until it receives a command to close. This is controlled by the joint down position of DIP Switches 3 and 4. To set the gate to close 12 seconds after reaching its maximum open position, flip switch 4 up towards the word ON. To set the gate to close 24 seconds after reaching its maximum open position, flip switch 3 up but leave switch 4 down. To set the gate to autoclose after 36 seconds, flip both switches up. Because of the additional risk involved in the gate moving without direct instruction and supervision, be sure that the gate's obstruction sensitivity, stop speed, and similar setting are working as intended. Using the movement alarm, infrared sensor, and other safety equipment is also highly recommended while autoclose is active. (DIP Switch 5 can be flipped up to disable the automatic closure that occurs when a collision is detected, but this is not recommended for most users.)

DIP3	DIP4	Effect
UP	UP	36 Second Delay
UP	DOWN	24 Second Delay
DOWN	UP	12 Second Delay
DOWN	DOWN	Manual Closure



Adjusting the Gate's Sensitivity

The leftmost adjustment knob VR1 controls obstruction sensitivity. The far left position is the most sensitive to any obstruction but may cause overreaction, e.g., to strong winds or leaves along the gate's track. Moderate settings are fine for most users, but careful trial and error can find the ideal settings for your situation.

Adjusting the Gate's Forcefulness

Various settings control the forcefulness of the gate. The gate normally minimizes wear by speeding up gradually as it begins moving. DIP Switch 1 can be flipped up to deactivate this soft start. (This can damage the system and is not usually recommended.) Similarly, the rightmost adjustment knob VR4 controls the gate's initial force. The far left position minimizes wear on the motor and gate but may cause it to react too sluggishly. The 2nd knob VR2 controls the braking force of the motor. Again, the far left position minimizes wear on the motor and gate but may react too slowly to obstructions and limit switches, causing a forceful collision with the end stops and brackets. The 3rd knob VR3 controls the sensitivity to the limit switches. The far left position responds immediately and disables any soft stop, but this can cause unnecessary wear and even cause your gate to stop before reaching its end bracket.

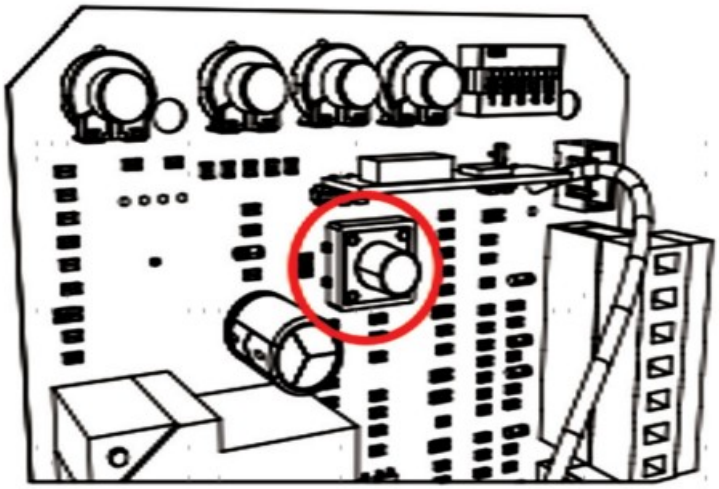
Remote Pairing

The top button of both included remotes (C) should come already paired with your gate opener. Up to 38 additional remotes or wireless control buttons can be paired to the gate's circuit board. Be sure that they use the 433.92 MHz (LPD433 Channel 35) radio band or can be configured to do so.

 NEVER pair the same button to 2 different gates or devices at the same time.

1. Remote pairing must be done with the circuit board exposed and connected to power. Be careful and only touch the pairing button while the circuit is live. Disconnect the motor's power while its casing is being removed and replaced or making any other adjustment besides remote pairing.
2. Press the remote pairing button long enough for the nearby indicator light to come on.

    DO NOT hold the button down, as this has a different effect.
3. Press the remote button to be paired or enter a passcode and press the open button on your wireless control.



4. Press the same button on the remote again or reenter the passcode and press the open button again on the wireless control. The remote indicator light should flash and then go out.
5. The button or keypad is now paired and can be used to open or close the gate. This pairing should remain stored in memory even when power to the gate opener is cut accidentally or at its circuit breaker.
6. Test that your gate responds correctly to commands from the new remote or keypad. When you are finished pairing and testing, disconnect the gate from power, replace the motor's covers and fasteners, and restore power.

Unpairing Remotes

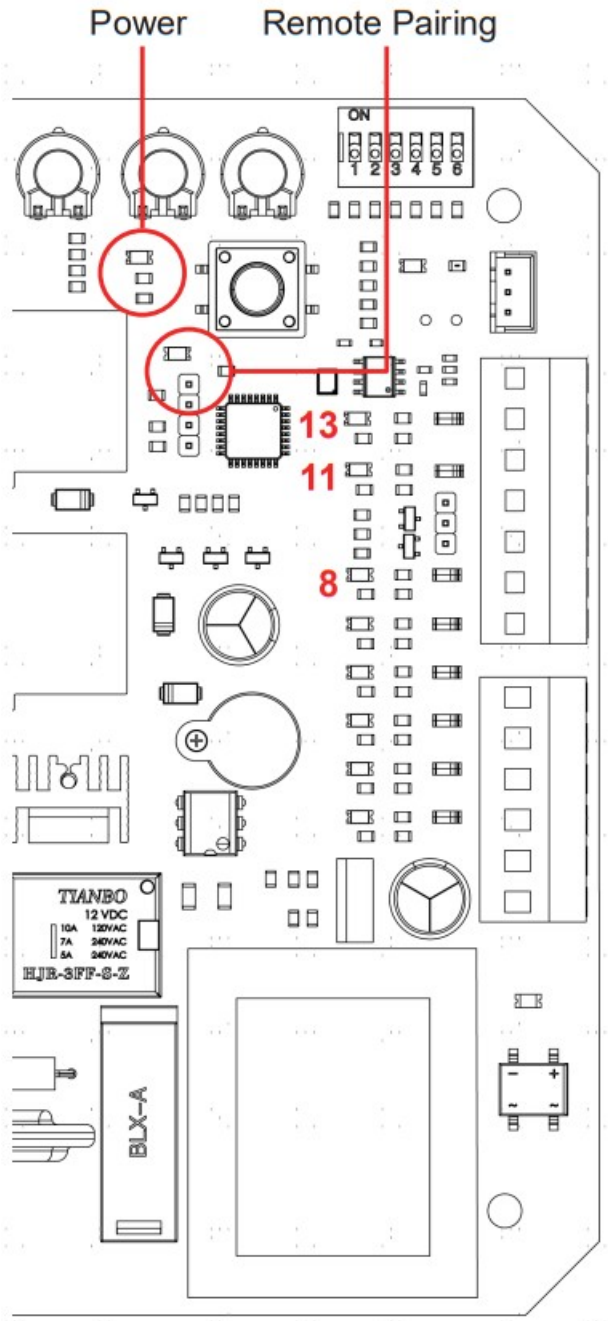
This board cannot unpair an individual remote. If you need to remove lost remotes from the system's memory, you will need to delete ALL stored remotes at once. Open the motor and circuit board casing as before, press and HOLD the pairing button, and wait for the indicator light to come on and then turn off. Use any remote to test that all stored remotes have been purged.
Once this process is successful, pair the remotes that you want to continue using in the same way as before.

INITIAL TESTING

1. If the motor is located on the right side of your gate, confirm that DIP Switch 2 is toggled up. If the motor is located on the left side, make sure that DIP Switch 2 is toggled down.
2. Clear any obstacles from the gate's path and keep all bystanders away.
3. Activate the power to your motor. The power and infrared (8) indicator lights should come on.
4. Test the infrared sensors by blocking the path between the two sensors with any obstacle. The infrared indicator light (8) should turn off. Remove the obstacle. The indicator light should come back on.
5. The top button on both of your remote controls should already be paired with your motor. They use a single control mode at a distance of up to 98 feet (30 m). Pressing either button should cycle through the commands OPEN→STOP→CLOSE→STOP. The remote pairing indicator light should come on each time a signal is received.
6. When the gate reaches the open limit switch, the open limit indicator light (13) should come on and the gate should come to a stop. Be ready to manually stop the gate using the remote if the limit switch does not activate correctly. If the limit switch is so close that it contacts the motor housing or is so distant that it fails to activate the motor's sensor, adjust its support bracket as needed to correct the problem. If the limit switch stops the gate too early or too late, adjust the location of the support bracket so that the gate will gently stop in the correct place.
7. If you have activated the automatic close function, test that it works correctly. Wait the set amount of time, and

see if the gate begins closing automatically. Confirm that the remote can still stop the gate when it is closing automatically.

8. When the gate reaches the close limit switch, the close limit indicator light (11) should come on and the gate should come to a stop. Again, be ready to quickly stop the gate with the remote if needed and adjust the support bracket as needed.
9. Test both remotes through the full cycle of commands.
10. Deactivate the power to your motor using its circuit breaker. If any abnormalities have been detected during testing, make the necessary adjustments—e.g. by repositioning the infrared sensors, realigning the limit switches, or adjusting the control panel's sensitivity settings—or contact Customer Service. Once everything is functioning, replace the circuit board and motor covers and their fasteners, reconnect power, and enjoy!



Indicator Lights

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 gear and guide tracks clean and free of any corrosion, grime, or obstructions.
- Lubricate wheels 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.

TROUBLESHOOTING

Possible Problems	Typical Solution(s)
The gate does not open or close normally and no indicator lights activate on the circuit board.	Verify that the power supply is functioning properly.
	Check that the fuse is not blown. If necessary, replace it with an identical 10A 250V 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 the placement of the limit switches.
	Check the gate direction switch on the circuit board.
	If it has been removed, replace the short wire between the NC and GND pins (Pins 8 and 9) on the circuit board's infrared sensor terminal or correct the wiring for your infrared sensors.
A remote control does not activate the gate.	Change the remote control's battery.
	Pair the remote control button to the board again.
	Remove any obstruction between the motor and the remote.
The motor makes noise but the gate does not move.	Remove any obstruction from the motor, main gear, track, or gate path.
	Have a certified electrician check the gate opener's capacitor. Replace or rewire it if necessary.
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.
The gate suddenly stops or reverses when moving.	Remove any obstacles that might be in the gate's path.
	Check the infrared sensors, their wiring, and the circuit board indicator lights, adjusting as necessary.
	Check the limit switches, their placement, and the circuit board indicator lights, adjusting as necessary.
An obstruction to the infrared sensors stops the gate from opening but doesn't stop it from closing.	Correct the direction settings on the circuit board to match your motor's placement.

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@b2csupportpro.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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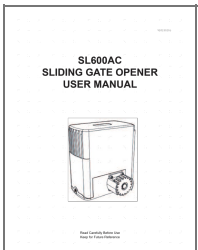
Documents / Resources

	JOYTECH SL600AC Sliding Gate Opener [pdf] User Manual SL600AC Sliding Gate Opener, SL600AC, Sliding Gate Opener, Gate Opener, Opener

References

- User Manual