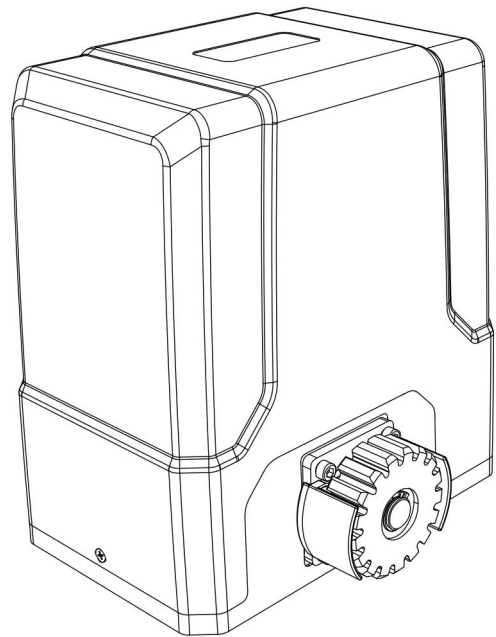
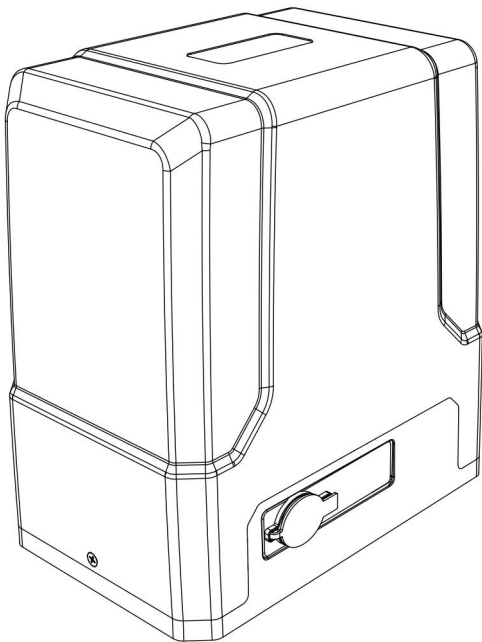


# Sliding Gate Opener

## User Manual

### SL500DC/SL800DC



## WARNING

**Instructions must be read before installation. Please follow these instructions carefully, incorrect installation could affect gate operation.**

**When mounting and positioning this product please ensure the power cable is unplugged.**

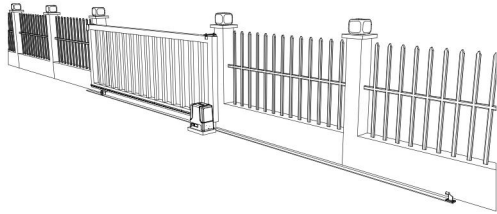
**The motor cover will need to be removed to mount the motor to the mounting plate or directly to the concrete footing. Any changes to the settings on this product can only be made by a licensed electrician. This product can be powered by AC110V/220V power supply or backup battery power and solar power.**

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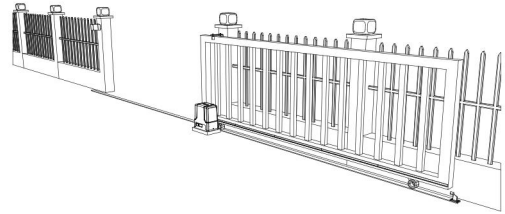
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# Default Setting Instruction

The gate opener will open the gate to the right-hand side as its default setting. By default, the opener mounts on the right-hand side. (Figure 1)



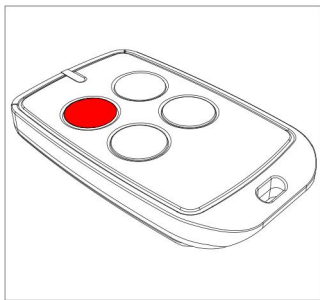
Gate in closed position



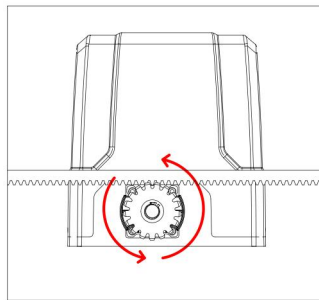
Gate in open position

Figure 1

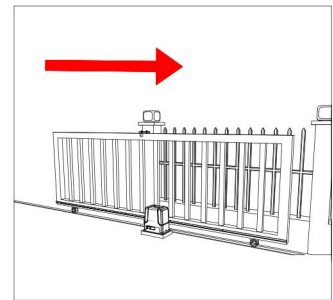
**Before installation:** Test the gate opener by plugging it into a power source and pressing the remote. Press the opening button, the output gear rotates, then press the stop button, the output gear stops rotating. Finally, press the closing button, the output gear rotates to the opposite direction. This will give you an understanding of the way in which the opener will move the gate.



Press the first/top button on the remote.



Rotating output gear will drive the gate frame.



Then the gate will move in the set direction.

Figure 2

**Note:** Ensure that the gate opener is unplugged before proceeding with installation. Please keep fingers away from the motor output gear whilst it is turning.

If your gate needs to open from the other direction (to the left, refer to figure 3), your opener needs to be mounted on the left-hand side as shown, the relative wires need to be swapped over, please check under “Terminal Instructions” for swapping. (Factory default setting is for right-hand opening: opener mounted on the right-hand side).

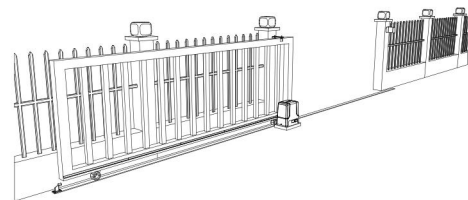
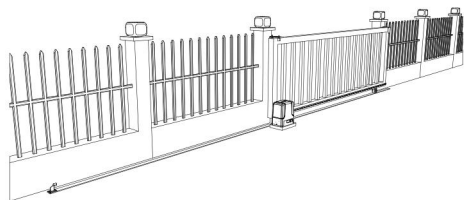


Figure 3

**Any works done to the gate opener must be completed whilst the power is off, and the opener is unplugged.**




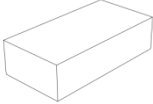






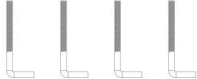
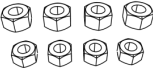


# Safety Instruction

**Warning:** Incorrect or improper use of this product can cause damage to persons, animals or properties.

- Please ensure that the input voltage used matches with the supply voltage of gate opener.
- All modifications to wiring or electrics, and any adjustment or maintenance to input voltage must be done by a qualified electrician.
- All potential hazards and exposed pinch points of the gate must be eliminated or guarded prior to installation of this gate opener.
- Never mount any device that operates the gate opener where the user can reach over (under, around or through) the gate to operate the controls. These must be placed away from any moving range of the moving gate.
- Ensure power plug is disconnected from the power socket during installation or maintenance.
- Keep remote control and other control devices out of children's reach, in order to avoid unintentional activation.
- To ensure safety, before installing the motor, mount a Gate End Catch and a Gate Stop at each end of the rail to prevent the gate travelling off the track.
- If required, install infrared photocell to detect obstructions and prevent injury to person or damage to property.
- Instruct all users about the control systems provided and the manual opening operation in case of emergency.
- Ensure that the power cable is connected to a RCD protected weatherproof power outlet installed by a qualified electrician.
- Do not install this product in an explosive atmosphere or where there is any danger of flooding.
- This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.
- Only use original parts for any maintenance or repair operation. Our company declines all responsibility with respect to the automation safety and correct operation when other supplier's components are used.
- Do not modify the automation components, unless explicitly authorized by our company.
- The user must avoid any attempt to carry out any works or repairs on this product, and should always request the assistance of qualified personnel.
- This product is suitable for use on one sliding gate only.
- Anything which is not expressly provided for in these instructions is not allowed and will void warranty.
- Dispose of all packing materials (plastic, cardboard, polystyrene etc.) according to current guidelines. Keep plastic bags and polystyrene out of children's reach.
- Save these instructions for future use.

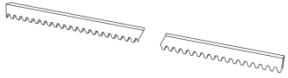
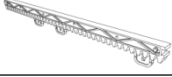



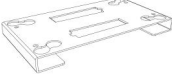

# Parts List

## Parts List (standard configuration)

No.	Picture	Name	Quantity
1		Motor	1
2		Manual Release Keys	2
3		Remote Controls	2
4		Accessories Box	1
4-1		Origin Marker Bracket	1
		Origin Marker	1
		Origin Marker Bracket Mounting Screws M6X18	2
		Nuts M8	4
		Flat Washers φ8	2
		Spring Washers φ8	2
5		Anchor Bolt M8	4
5-1		Nuts M8	8
5-2		Flat Washers φ8	8
5-3		Spring Washers φ8	8

Note: Extra flat washers and spring washers are spare parts.

## Parts List (optional)

No.	Picture	Name	Quantity
1		Galvanized Gear Rack	1m/pc
2		Nylon Gear Rack	1m/pc
3		Infrared Photocell	1
4		Wireless Keypad	1
5		Alarm Lamp	1
6		Mounting Plate	1
7		Hexagon Head Bolt M8X40	4

**Additional remote controls:** Spare/Additional remotes for the automatic gate kit, these will need to be paired to the motor.

**Infrared photocell:** Detects pedestrians, vehicles and objects that cross an infrared beam and prevents the gate from closing.

**Wireless keypad:** Allows secure access through the gate used with a user set code.

**Wired control:** Allow users to control the opening and closing of the gate through an external push-button.

**Alarm lamp:** Alerts people near the gate and users that the gate is in operation.

## Technical Parameters

Model	SL500DC	SL800DC
Power Supply	110VAC/60Hz; 220VAC/50Hz	
Motor Power	150W	170W
Gate Moving Speed	16-18m/min	
Maximum Loading Weight	500KG	800KG
Remote Control Distance	≥30m	
Remote Control Mode	Single button mode / Three button mode	
Limit Switch	Electronic limit switch	
Working Noise	≤60dB	
Working Duty	S2, 20min	
Recording of up Remote Controls	100	
Remote Frequency	433.92 MHz	
Working Temperature	-20°C - +70°C	
Package Weight	10KG	11KG
Battery Specification	12V/9Ah*1pc	

# Installation

## Before You Start

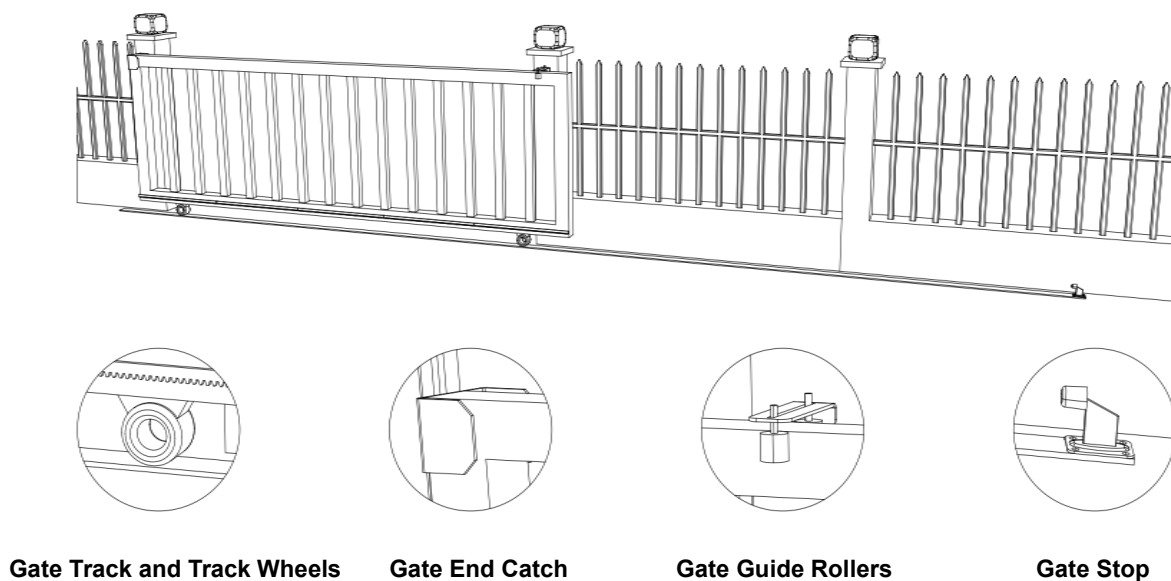
- SL500DC/SL800DC Sliding Gate Automation Kit is suitable for powering the opening and closing motion of gates up to 500, 800kg in weight, up to a length of 12m.
- Gate motion is achieved by the rotating output gear of the gate opener driving the gear rack (sold separately) fitted to the moving gate.
- The gate opener requires you to press the remote control once to open, and once again to close. This is a safety feature to ensure safe operation.
- The opener must be fitted within private property, never externally to a property's boundary.

**Any works done to the gate opener must be completed whilst the power is off and the opener is unplugged. Any modifications/alterations/works to AC power components must only be completed by a licensed electrician.**

## Tools Required

- Tape measure
- Level
- 12mm concrete drill and hammer (when uses expansion screws)
- Phillips head screwdriver
- Straight screwdriver

## Example Sliding Gate

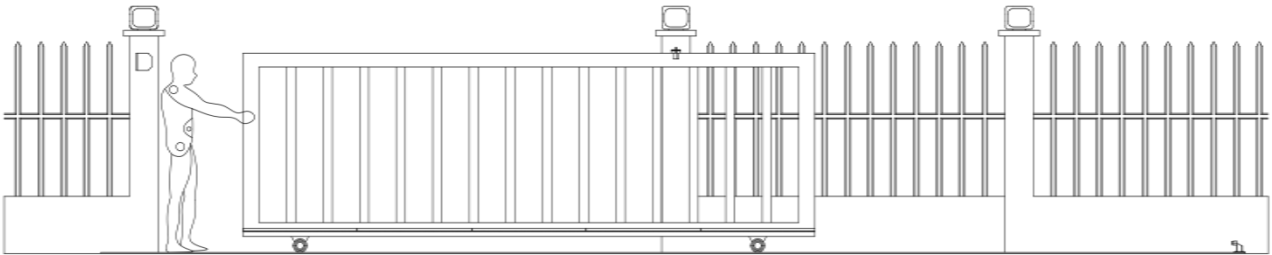


**Figure 4**

**Please ensure that the gate opener power cable is not plugged in at any stage before Step 8.**

## Step 1 - Gate Preparation

- Ensure that the sliding gate is correctly installed.
- The gate is horizontal and level and the gate can glide back and forth smoothly when moved by hand before installing the gate opener.
- Wheels and guide rollers should rotate easily and be free from dirt or grime.
- Track should be flat, level and firmly affixed.
- Any misalignment in the gate will affect performance of the automatic gate opener.

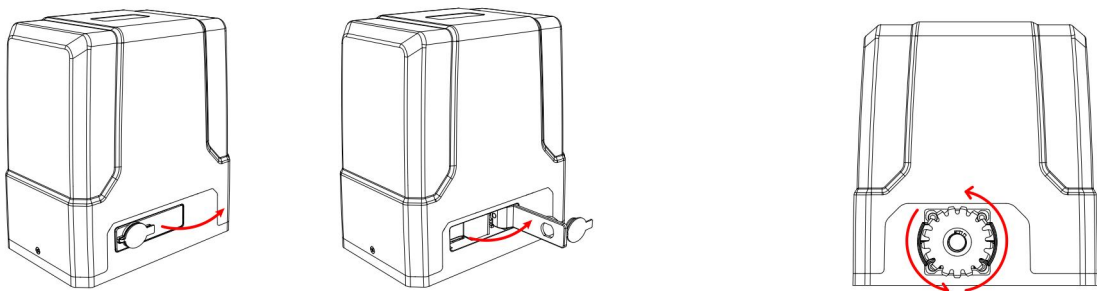


The gate should slide smoothly by hand before attempting to install the gate opener.

Figure 5

## Step 2 - Checking Manual Release

- Insert the key and open the manual release bar to enable the motor get into manual mode and check that the motor output gear rotates freely by hand (Figure 6).



To make the motor into manual mode, insert the key and open the manual release bar as shown.

In manual mode, the gear can turn freely and the gate can be operated by hand.

Figure 6

## Step 3 - Removing / Installing Motor Cover

- Unscrew the two cover screws located at each side of the motor cover.

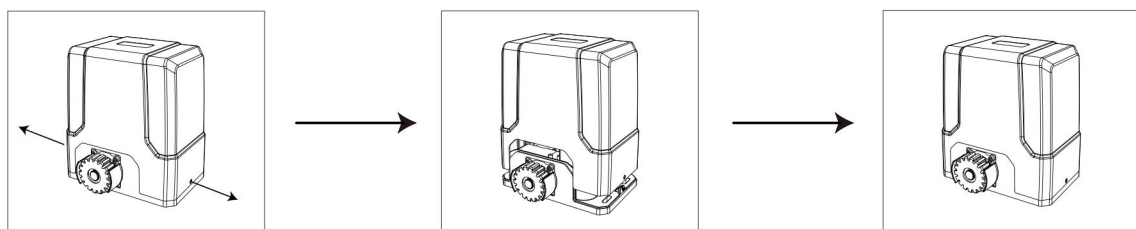
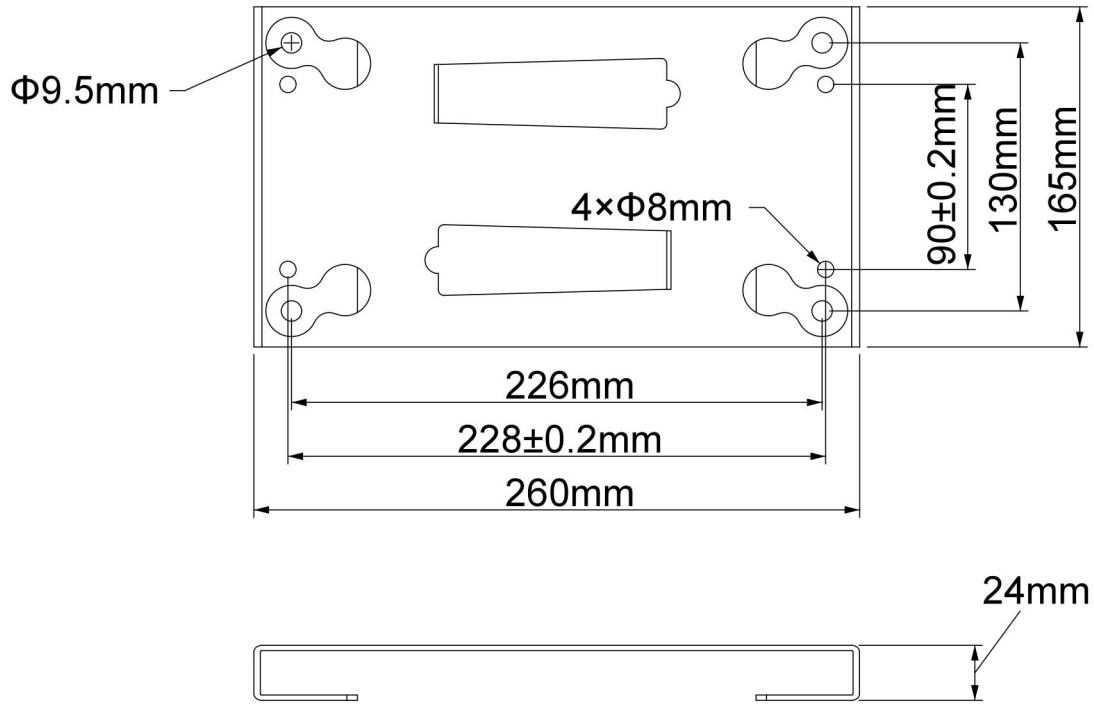


Figure 7



## Step 4 - Motor Pad Footing

- The motor pad concrete footing requires an area of no less than 450mm long x 300mm wide and a minimum depth of 200mm (Standard requirement).
- Ensure surface is level and parallel to the driveway.



Mounting Plate Dimensions

Figure 8

## Step 5 - Fitting Mounting Plate and Motor

### Without Mounting Plate

- Pre embed the anchor bolts according to holes in motor base before concreting (as per Figure 9).
- After concrete hardening, bolt the motor with M8x40mm bolts, spring and flat washers provided and tighten as required. (The height can be slightly adjusted by bottom bolts as per Figure 10).

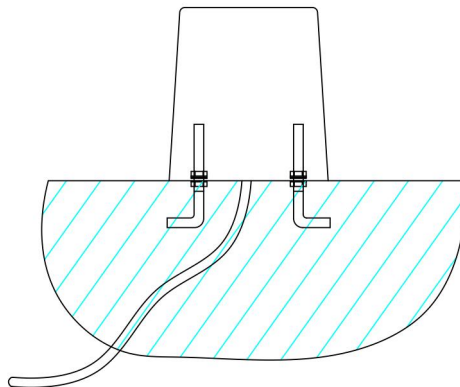
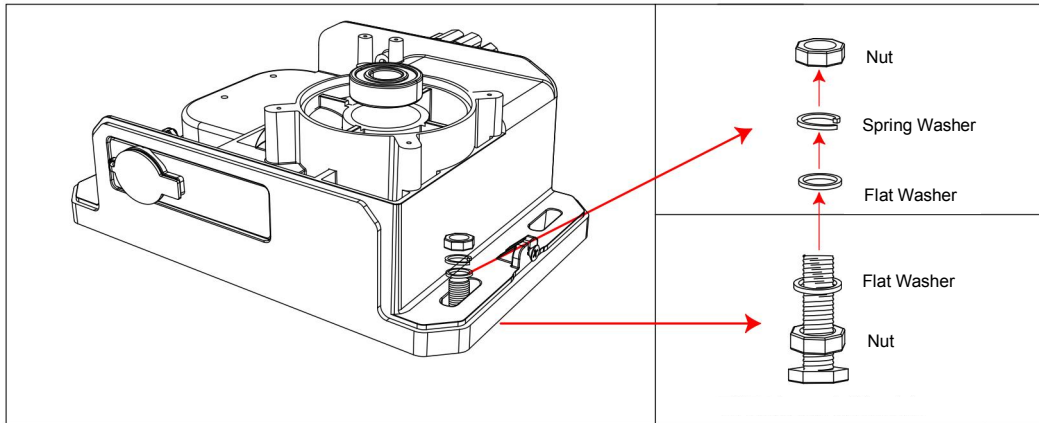


Figure 9



The bolts and flat washer between mounting plate and motor base are used for adjusting the height of the motor.

Figure 10

### With Mounting Plate

- Pre embed the anchor bolts as per  $\Phi 10$  holes in Figure 8 before concreting, after hardening, place the mounting plate, fit and tighten anchor bolts.(as per figure 11).
- Bolt motor to the mounting plate using the M8 x 40mm bolts with spring and flat washers provided and tighten as required (as per figure 12).

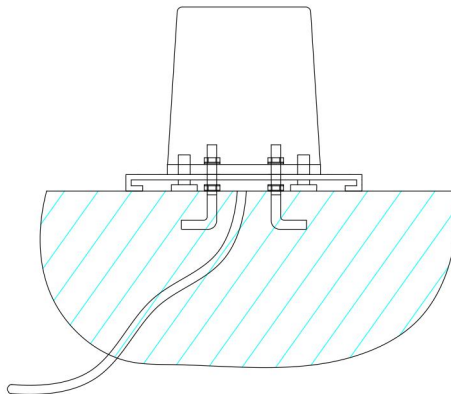
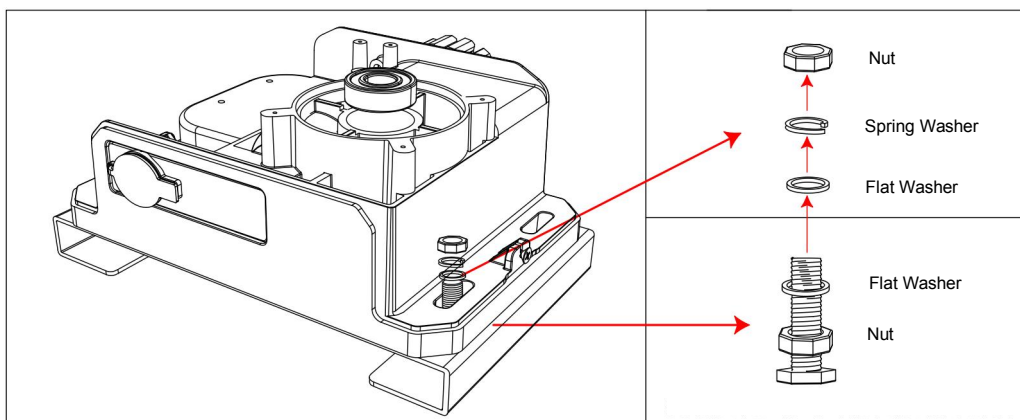


Figure 11



The bolts and flat washer between mounting plate and motor base are used for adjusting the height of the motor.

Figure 12

## Fitting Motor

- Fit motor and mounting plate(if with) on the concrete footing.
- Ensure the motor output gear and gear rack are correctly aligned. Gear and gear rack should be centered as much as possible.
- Take the motor away from mounting plate.

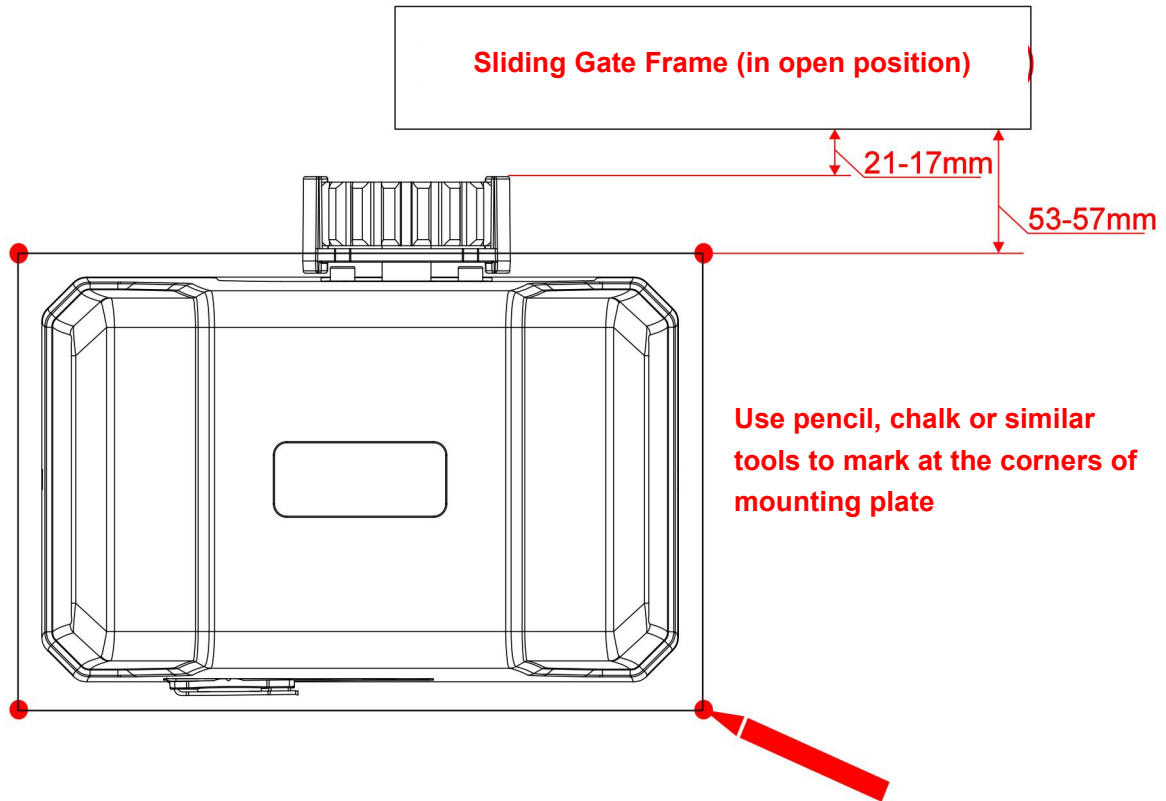


Figure 13

## Step 6 - Gear Rack & Motor Alignment

- See Figure 15 for recommended gear rack mounting height.
- Ensure that the output gear has a minimum clearance of 1-2mm along the entire length of gear rack fitted to the gate (as per Figure 14)
- Ensure output gear and gear rack are correctly aligned. Under no circumstances should the gate opener output gear carry any weight of the gate. It is the task of the gate castors or wheels to carry the weight of the gate (as per Figure 14).
- If the gate doesn't slide freely by hand, adjust the height of the gear rack accordingly until the full length of gate slides freely by hand.

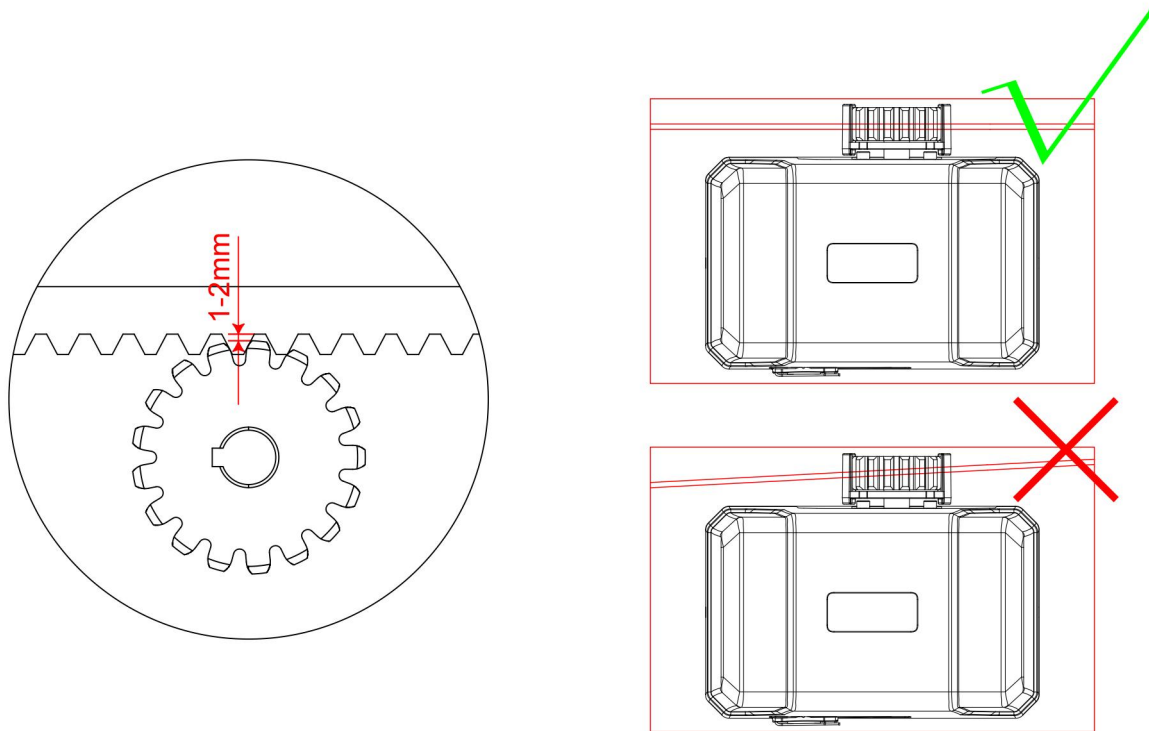


Figure 14

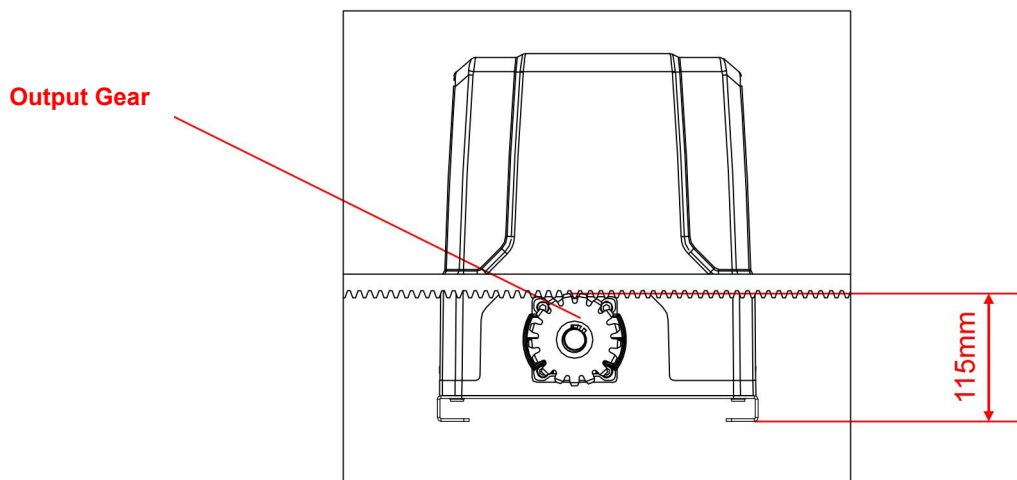
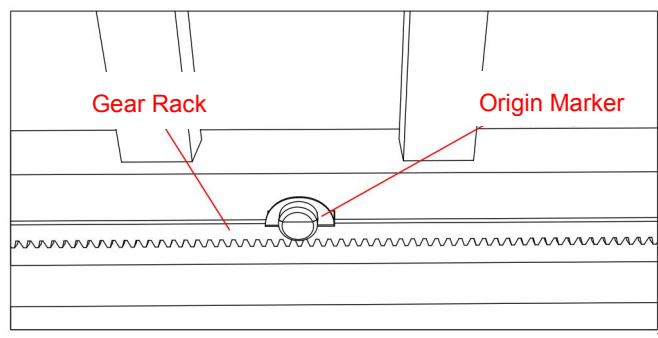


Figure 15

### Step 7 - Origin Marker

Included in your gate opener kit is an origin marker which must be fitted to the gear racks on your gate to ensure safe operation. One important note: the origin marker must be fitted in the middle position of the complete running travel you will set.



The origin marker is designed to recognize the gate running direction and its origin position. During gate moving, the origin sensor which is installed inside the motor will detect the original marker when it passes, after detecting, the control board will record the gate running direction and the origin position to enable the gate move to the setting limit position.

It is extremely dangerous that without or incorrect installation of the origin marker can cause crash of gate, damage of internal structure of the motor, moreover, the gate may slide off the guide rail.

### Setting the Origin Marker Position

- Fit the origin marker in the middle of the gate.
- Fit the origin marker onto the top of gear rack at the point where it meets the origin sensor on the motor.
- Tighten locking screws of the origin marker bracket.

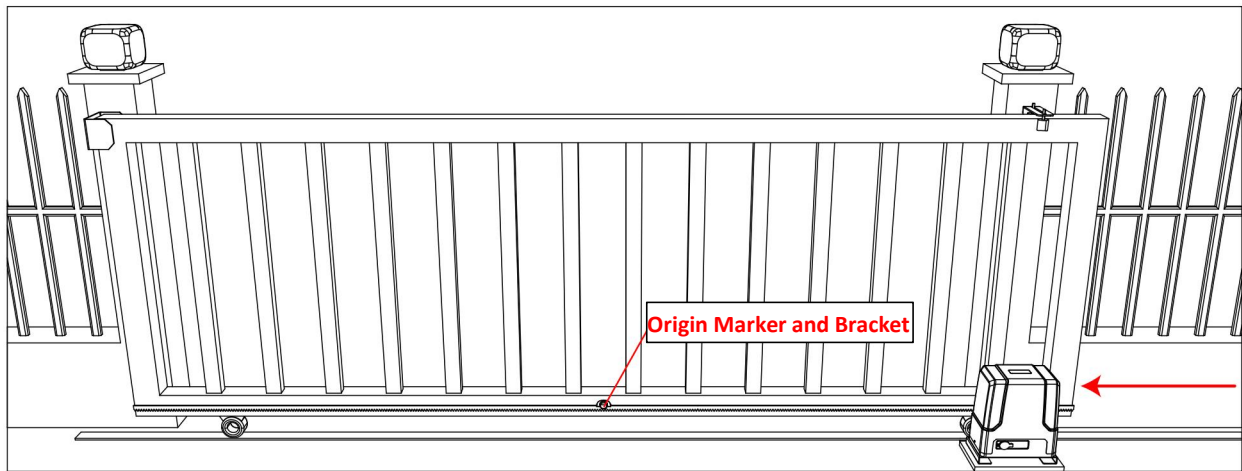


Figure 16

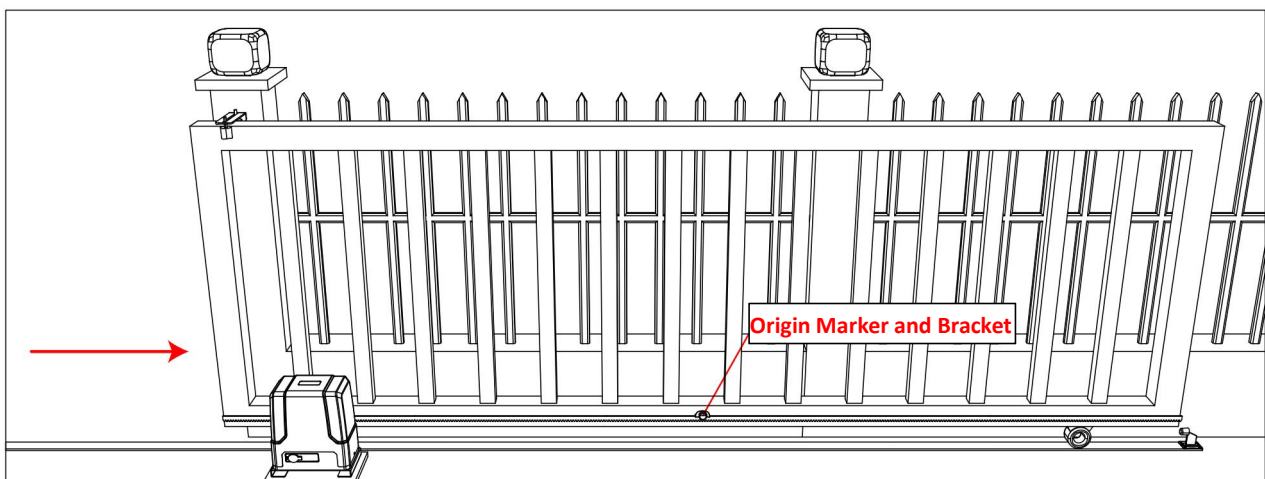


Figure 17

Test the origin marker by moving the gate manually until you hear a click, making sure contact is made with the origin sensor on the motor.

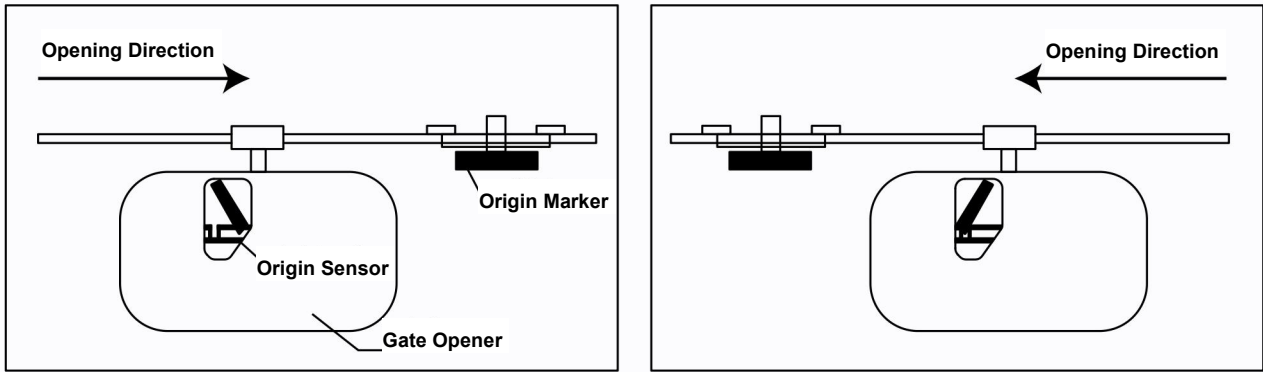


Figure 18

Origin Marker and Origin Sensor Working Diagram

## Step 8 - Powering on

- Ensure that the outer cover has been fitted and fastened back onto the motor base.
- Before powering up the gate opener make sure the gate can travel by hand in manual mode (key unlocked).
- Slide the gate to between the middle of the posts, approximately (see below diagrams).
- Lock the manual release spanner (key locked) in readiness for automatic mode.
- Plug the power cord into an approved RCD protected weatherproof outlet.
- Remote controls included in this kit are factory paired ready for use.

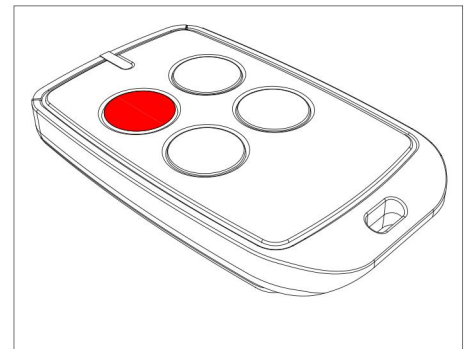
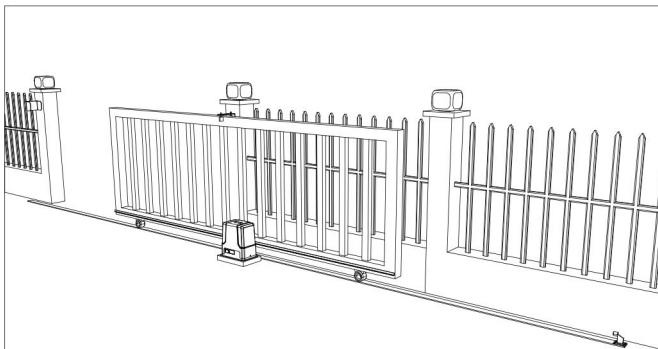
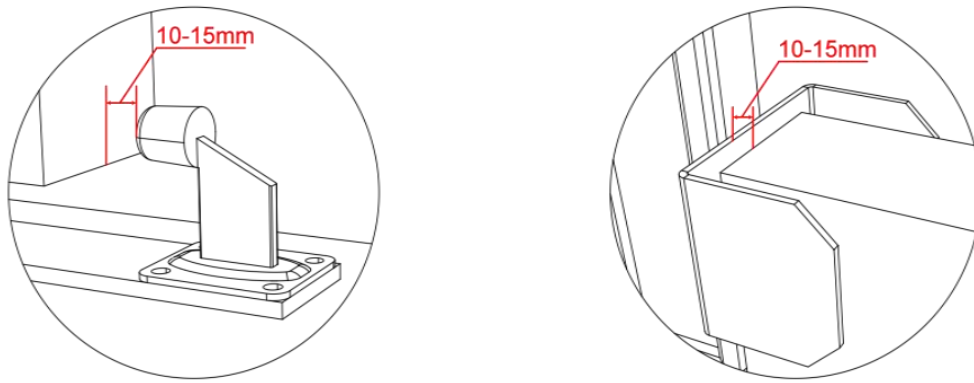


Figure 19

## Step 9 - Testing Travel and Limit Position

Ensure gate opener is installed as per step 4, 5 and 6 and the sliding gate is in the middle position. Origin marker is correctly installed and well contacted with origin sensor. Please refer to page 14-21 for the setting of open and closed limit position. If necessary, the desired limit position can be set manually. The ideal closed final position for the gate frame is 10-15mm from closed gate end catch.



**Figure 20**

### **Testing the Closed Position**

- Press remote (remotes included in kit are factory paired to the motor). The sliding gate will begin to close.
- After running to the setting closed position, the sliding gate will stop.
- You have now determined the closed position of the sliding gate..

### **Testing the Open Position**

- Press remote, the sliding gate will begin to open.
- After running to the setting open position, the sliding gate will stop.
- You have now determined the open position of the sliding gate.

Now the basic open and closed positions are set, for further setting functions and adjusting parameters, please refer to pages 14-41 in this manual.

# Programming and Wiring

Any works to the 110V/220V AC must only be performed by a licensed electrician.  
Ensure power is off before any modifications are made.

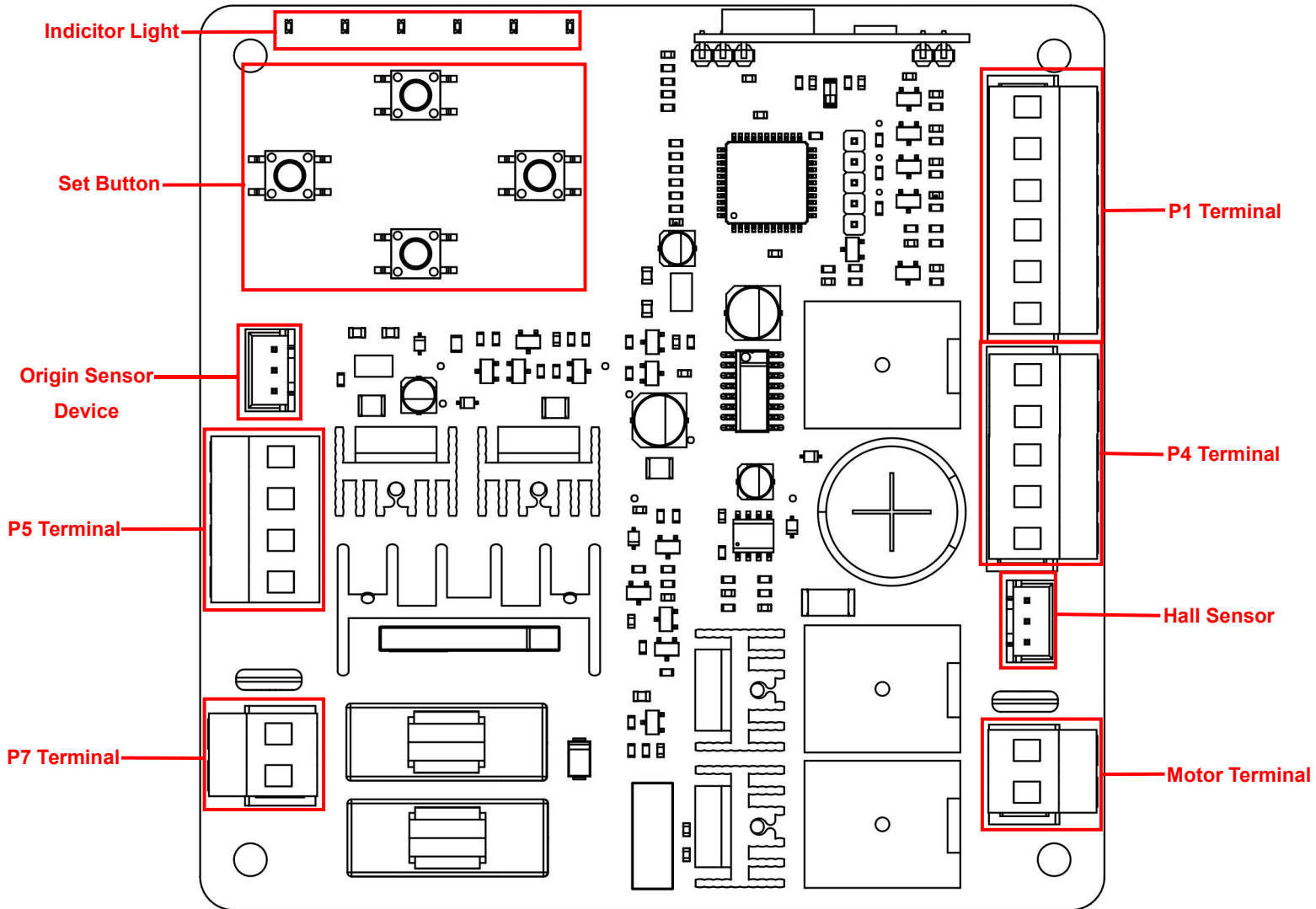
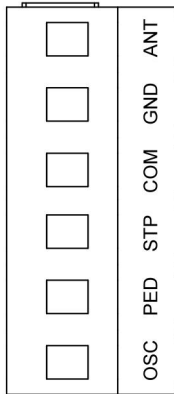


Figure 21



## Terminal Instructions

All changes to these settings below must be completed by licensed electrician.



### P1 Terminal: (as per Figure 21):

**ANT:** Extra Antenna

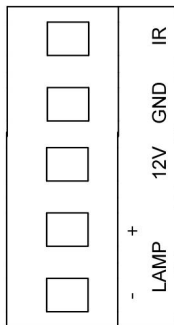
**GND:** Extra Antenna Shield

**COM:** Common Terminal for External Push Button

**STP:** External Stop Push Button Switch

**PED:** External Close Push Button Switch

**OSC:** External Open Push Button Switch



### P4 Terminal:

**IR:** Photocell Input Common Terminal for Photocell(N.C.)

**GND:** Ground

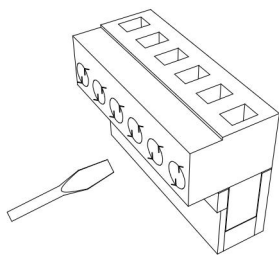
**12V:** Additional Accessories +12VDC

Additional accessories sold separately

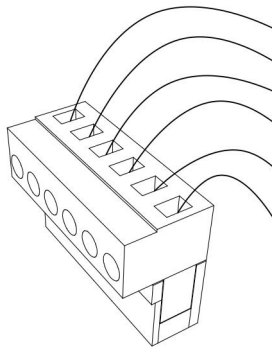
**LAMP+:** Alarm Lamp +12/24VDC

**LAMP-:** Alarm Lamp -12/24VDC

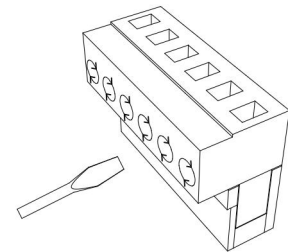
## Wiring to the Terminal



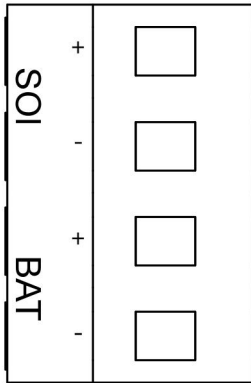
Using a screwdriver to loosen the screw on the side of the terminal.



Insert the wire into the number on the terminal that you are looking to connect to. Refer to Page 14.



Tighten with a screwdriver to secure the wire in place.



**P5 Terminal:**

**SOL:** Solar Panel

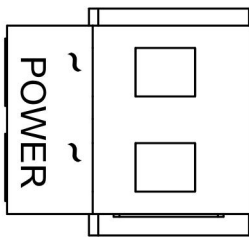
Solar Panel Specification: 17V/20W

**BAT:** Battery

+: Battery Positive

-: Battery Negative

Battery Specification: 12V/9Ah



**P7 Terminal:**

**Power:** Power Supply(Transformer Output)

Transformer Specification: 240VAC/22VAC or 120VAC/22VAC

Rated Power: 120W

**Motor Terminal:** If the gate runs to its opening direction after pressing the “-” button during travel setting, please press “PROG” button to exit the travel limit position setting first, then exchange the motor wires on Motor Terminal.

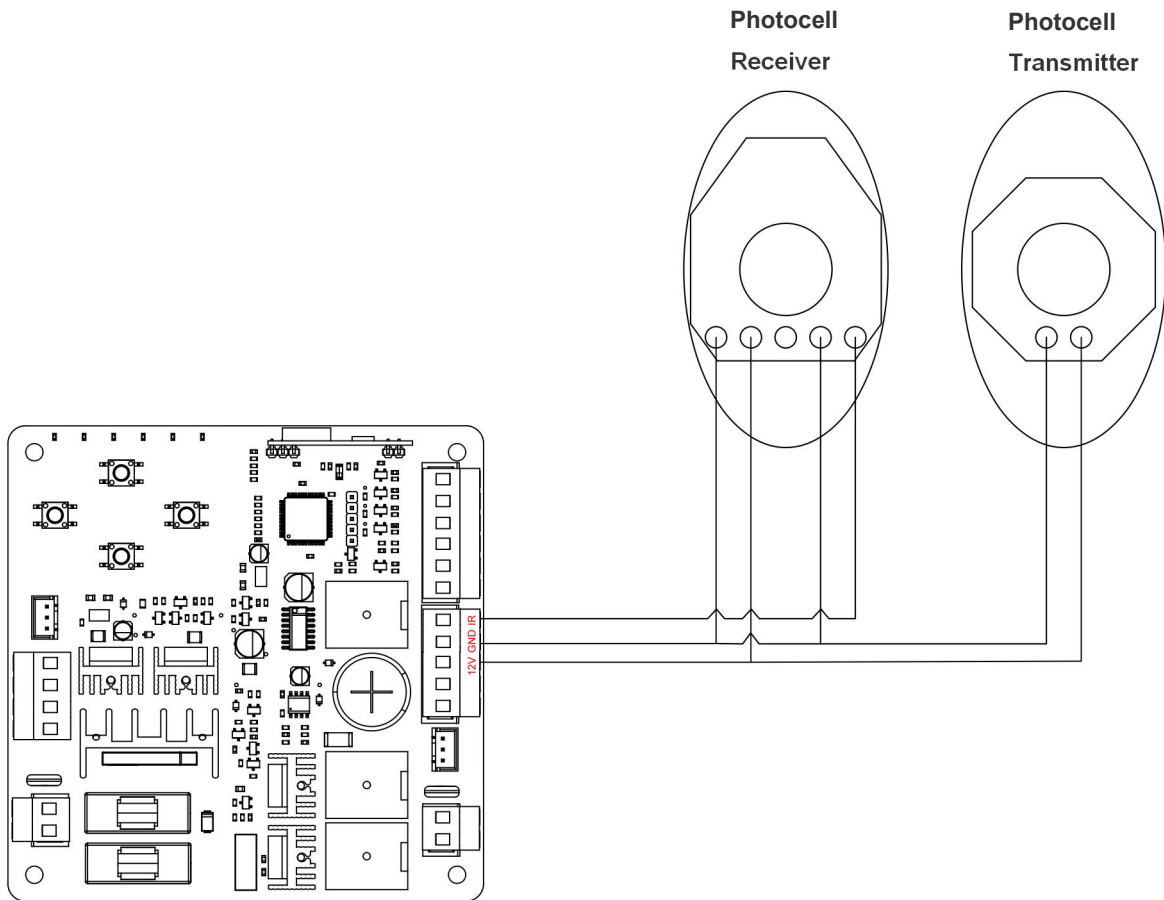
## Connecting Infrared Photocells

The below steps must be completed by licensed electrician.

Highly recommend the use of infrared photocells as an additional safety feature.

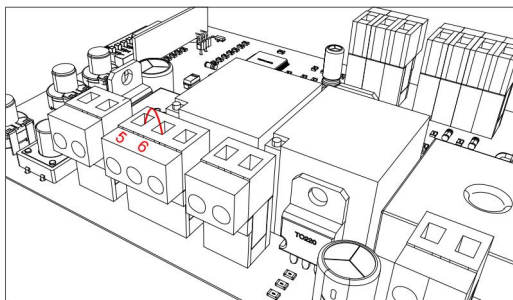
While closing, if the ray of the Infrared Photocell is blocked, the gate will stop and open immediately, to protect user and property security. To install photocells, connect wiring as per Figure 22. You must remove the wire jumper between terminal IR and terminal GND on P4 (ref to Figure 23).

The distance between photocell receiver and photocell transmitter should not be less than 2 meters; otherwise, the induction effect of photocell may be affected.

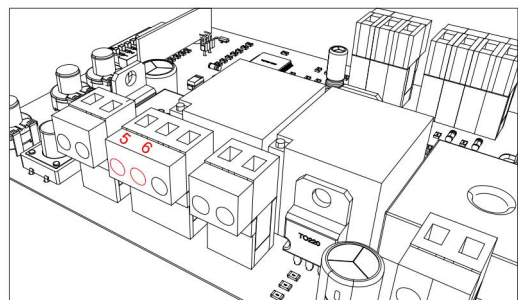


**Figure 22**

**Before Installing Photocells**



**Loosen IR and GND ports on P4 Terminal with a screwdriver. Make sure the power is disconnected before doing so.**



**Remove the wire jumper between ports IR & GND on P4 Terminal.**

**Figure 23**

## Operation Interface Instruction

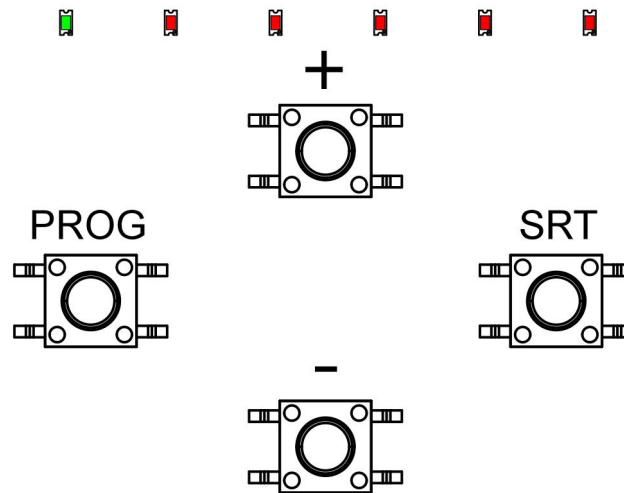


Figure 24

### Indicator Lights:

L0 (Green): Indicating the control board working status and menu status.

L1-L5 (Red): Indicating the settings, parameters, errors and battery level.

### Set Buttons:

PROG: Enter into or exit the setting menu.

- and +: Function select and parameter adjust.

SET: Choose the selection, confirm the setting.

### Note:

Press the setting button for a short while (within 1 sec.) or long press the button (over 3 sec.) will be for different functions.

## Travel Limit Positions Setting

### Precondition:

1. Before setting the limit position, please make sure that the gate is completely open.
2. Please install the origin marker in the middle of the gate, after installed, please do not move or remove it anymore.

### Note:

The limit position must be set according to the complete gate travel distance.

## How to Set the Travel Limit Positions:

### A. Operation Instruction

#### 1. Enter into Setting Mode:

- a. Press “-” button for 3 sec. to enter into travel limit position setting. → All indicator lights L1-L5 will flash together.
- b. Press “SET” button once to set the travel limit position. → The indicator lights will be on from L5 to L1 sequentially.

#### 2. Set the Closed Limit Position:

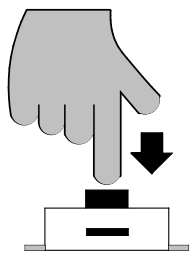
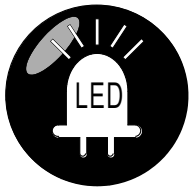
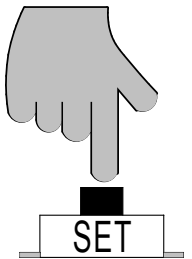
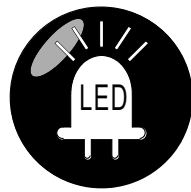
- c. Press and hold “-” button to enable the gate to run to its appropriate closed limit position. Then release the “-” button to stop running. Through pressing the “-” or “+” button to adjust, the closed limit position can be set accurately. **(If the gate runs to its opening direction after pressing the “-” button, please press “PROG” button to exit the travel limit position setting first, then exchange the motor wires on Motor Terminal and re-start to set the limit position.)**
- d. Press “SET” button to confirm the closed limit position. → The indicator lights will be on from L1 to L5 sequentially.

#### 3. Gate Open Limit Position Setting:

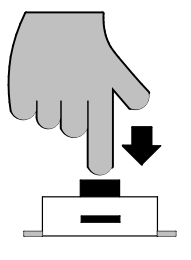
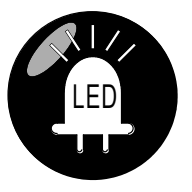
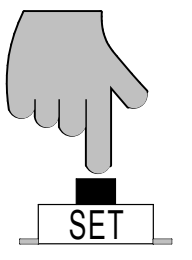
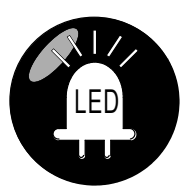
- e. Press and hold “+” button to enable the gate to run to its appropriate open limit position, then release the “+” button to stop running. Through pressing the “-” or “+” button to adjust, the open limit position can be set accurately.
- f. Press “SET” button to save the settings and exit automatically. → The indicator lights L1-L5 will be on for one sec.

### B. Operation Graphic Illustration

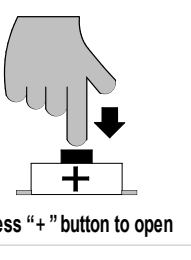
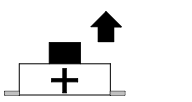
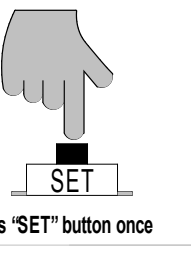
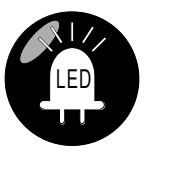
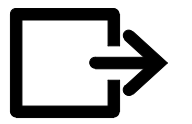
### 1. Enter into Setting Mode:

 <p>Press "-" button for 3 sec</p>	 <p>L1-L5 flicker simultaneously</p>	 <p>Press "SET" button once</p>	 <p>Indicator lights will be on in sequence from L5 to L1</p>
---	---	---	--

### 2. Gate Closed Limit Position Setting:

 <p>Press "-" button to close</p>	 <p>Release "-" button after arriving at the closing limit position</p>	 <p>Press "SET" button once</p>	 <p>Indicator lights will be on in sequence from L1 to L5</p>
---	---	--	---

### 3. Gate Open Limit Position Setting:

 <p>Press "+" button to open</p>	 <p>Release "+" button after reaching the opening limit position</p>	 <p>Press "SET" button once</p>	 <p>L1-L5 will be on for 1 sec</p>	 <p>Save and exit automatically</p>
---	---	--	---	--

### Travel Setting Tips:

During the travel setting, users can check the travel limit position settings against the indicator lights status. (Table 1 Travel Setting Tips)

Indicator light status : <input type="checkbox"/> Off <input checked="" type="checkbox"/> On <input type="checkbox"/> Flicker	Status Instruction
L1 <input checked="" type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Travel for closing is too long (>12m)
L1 <input type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Travel for closing is too short (<0.5m)
L1 <input type="checkbox"/> L2 <input type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Travel for opening is too long (>12m)
L1 <input type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input checked="" type="checkbox"/> L5 <input type="checkbox"/>	Travel for opening is too short (<0.5m)
L1 <input type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input checked="" type="checkbox"/>	Origin marker is not detected
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	STOP button is pressed, travel setting is interrupted
L1 <input checked="" type="checkbox"/> L2 <input type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Hall sensor signal is not detected
L1 <input checked="" type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input checked="" type="checkbox"/> L5 <input type="checkbox"/>	Press "PROG" to exit the travel setting
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input checked="" type="checkbox"/> L5 <input checked="" type="checkbox"/>	Travel limit position setting successfully. all on for 1 sec, then off

**Table 1 Travel Setting Tips**

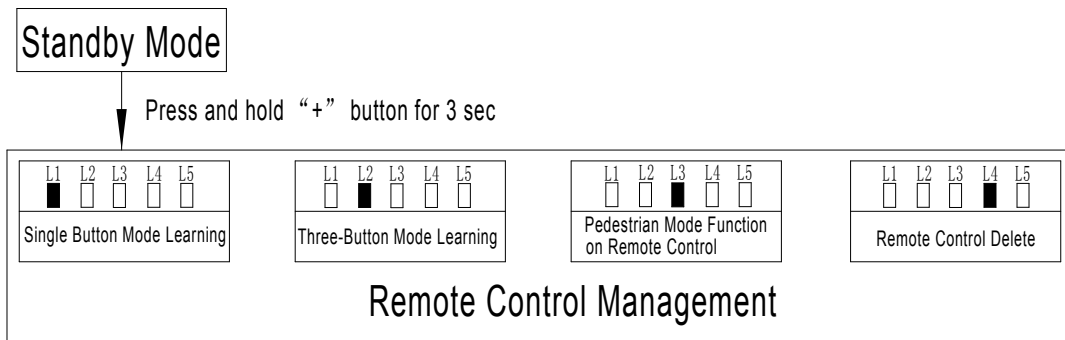
**Note:**

1. If there is no operation under the limit switch position setting for 20 sec., system will automatically exit the setting.
2. If need to exit during setting, press "PROG" once to directly exit.

## Remote Control Management

**Operation Instruction:**

1. Press "+" button for 3 sec. under standby mode to enter into the first function of remote control management.
2. Different functions can be selected through "+" and "-" buttons.
3. Press "SET" button to enter into the corresponding parameter settings.



**Figure 25**

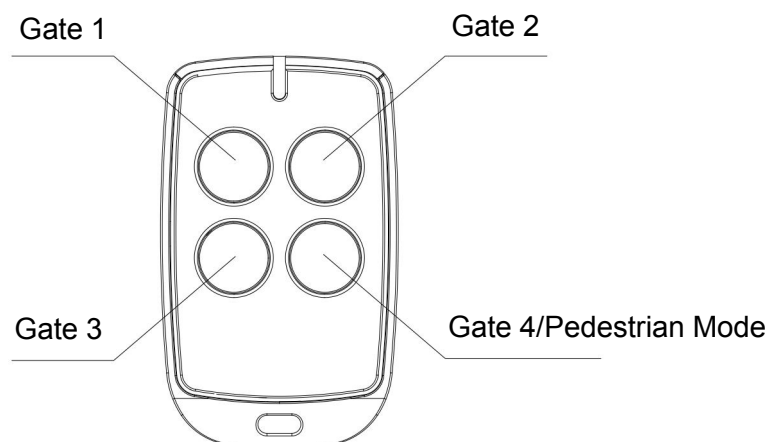
**Remote Control Mode Instruction:**

There are two modes available for remote control under this control board. Users may pair the remote control in their required mode.

1. Single button mode: Open/Stop/Close of the gate opener is controlled by only one button on the remote control.
2. Three button mode: Open/Stop/Close of the gate opener is controlled by three different buttons on the remote control.

**Single Button Mode Learning (L1)**

Under this mode, one of the remote control buttons which is paired to the gate opener can individually control the operation of one opener. The rest buttons on this remote control can be used to pair to other openers. (Please refer to Figure 26 for the usage for the forth button on the remote control)



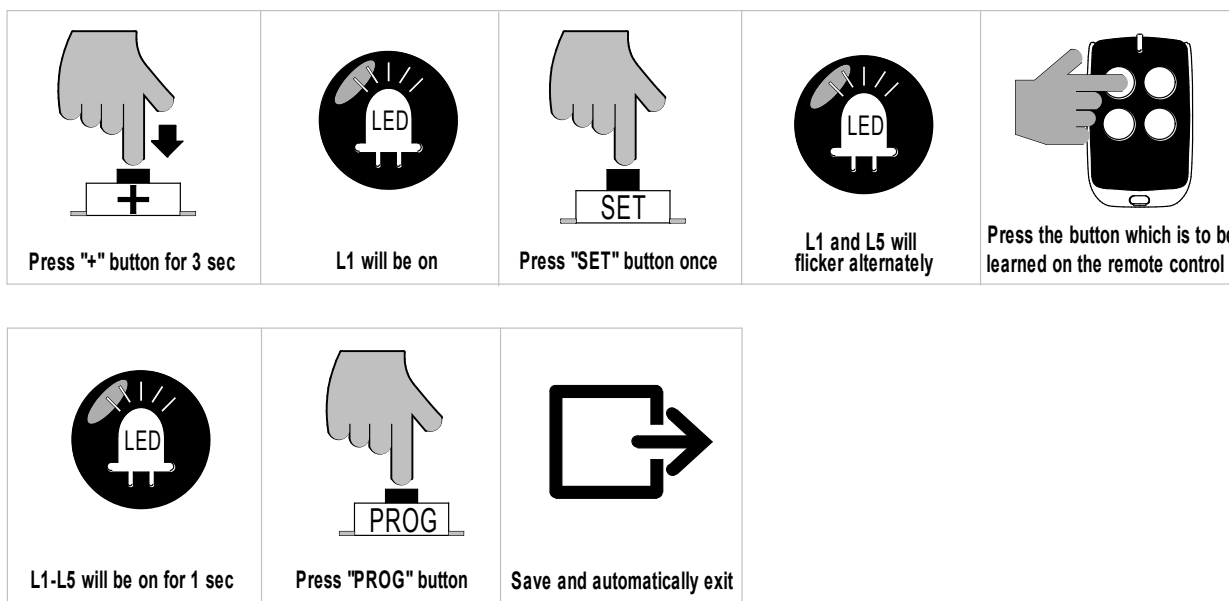
**Figure 26**



### A. Operation Instruction

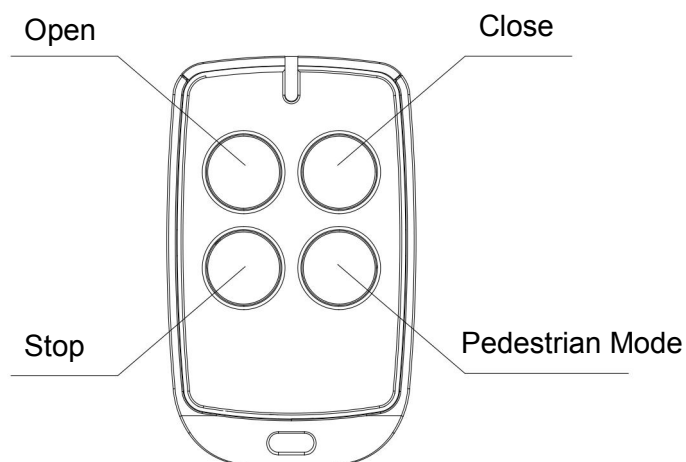
1. Press “+” button for 3 sec. to enter into remote control management mode. → Indicator light L1 will keep being on.
2. Press “SET” button once to enter into single button learning mode. → Indicator lights L1 and L5 will flash alternately. (If an alarm lamp is connected, it'll flash as well).
3. Press the button which is to be learnt on the remote control. → Indicator lights L1-L5 will be on for 1 sec. (If an alarm lamp is connected, it'll be on for one sec.). Learning is complete thereafter.
4. The control board will stay in learning mode after remote control learning successfully, the learning of the remaining remote controls can be done by repeating the 3<sup>rd</sup> step; Press “PROG” button to exit the learning mode.

### B. Operation Graphic Illustration



### Three-button Mode Learning (L2)

Under this mode, all buttons on the remote control which are paired to the gate opener will be separately used for gate opening、closing and stop. (Please refer to Figure 27 for the usage for the forth button on the remote control)

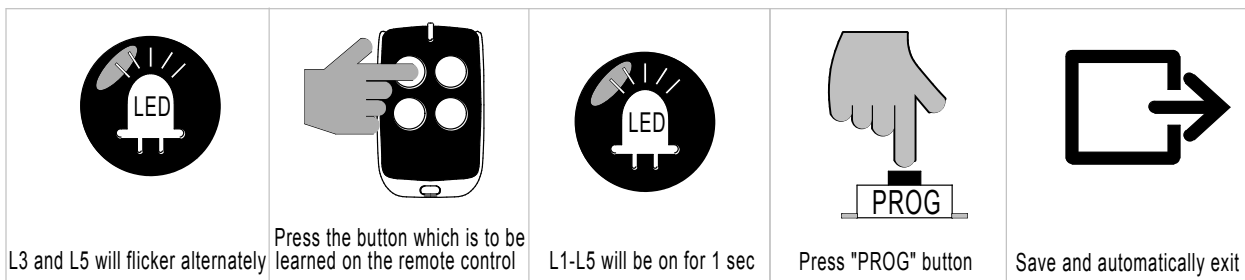
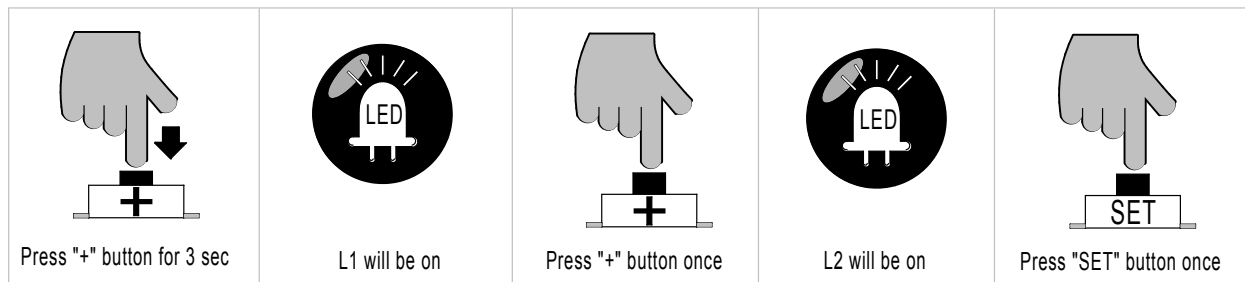


**Figure 27**

### **A. Operation Instruction**

1. Press and hold “+” button for 3 sec. to enter into remote control management mode. → Indicator light L1 will keep being on.
2. Press “+” button once to select three button learning mode option. → Indicator light L2 will keep being on.
3. Press “SET” button once to enter into three button learning mode. → Indicator lights L3 and L5 will flash alternately. (If an alarm lamp is connected, it'll flash as well)
4. Press the button which is to be learnt on the remote control. → Indicator lights L1-L5 will be on for one sec. (If an alarm lamp is connected, it'll be on for one sec.) Learning is complete thereafter.
5. The control board will stay in learning mode after remote control learning successfully, the learning of the remain remote controls can be done by repeating the 4<sup>th</sup> step; Press “PROG” button to exit the learning mode.

### **B. Operation Graphic Illustration**



**Note:** If there is no operation under the remote control learning status for 20 sec., system will automatically exit the setting and save all the paired remote controls.

### Pedestrian Mode on Remote Control (L3)

Pedestrian mode on remote control: when gate is closed, press the Pedestrian button on the remote control, the gate will open 1m wide to allow pedestrian access.

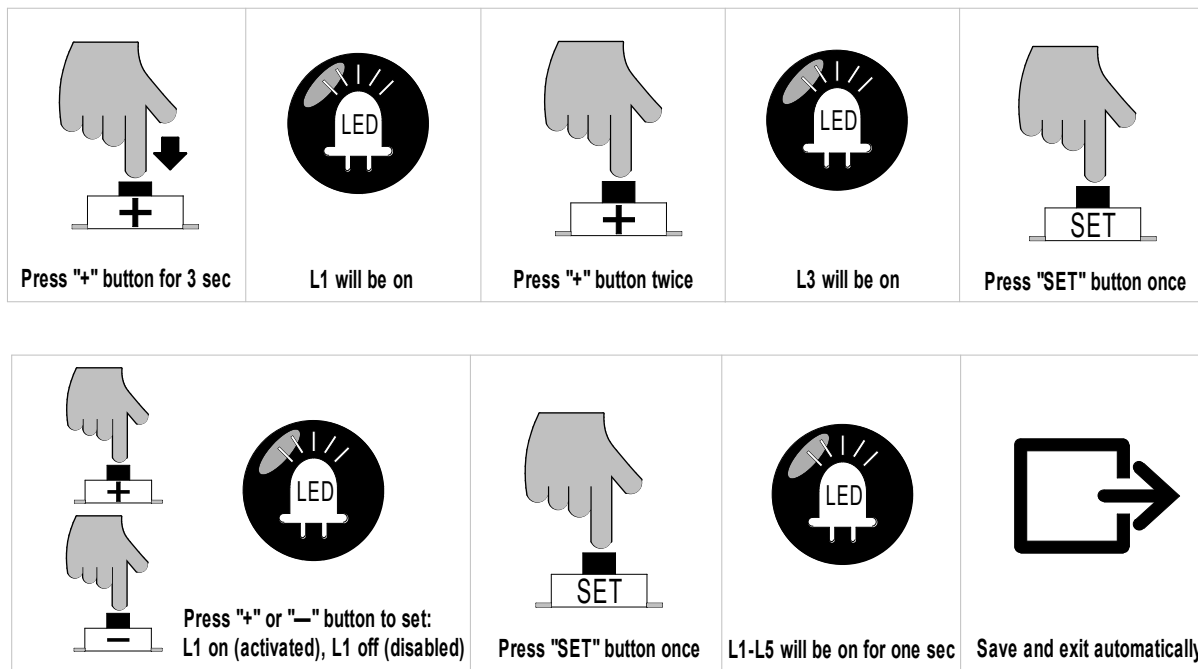
When the pedestrian mode is enabled (by default), the forth button on the remote control will be for this function; When the pedestrian mode is disabled, the forth button on the remote control can be used as a normal button under single button mode.

#### A. Operation Instruction:

1. Press and hold "+" button for 3 sec. to enter into remote control management mode. → Indicator light L1 will stay on.
2. Press "+" button twice to select pedestrian mode function. → Indicator light L3 will stay on.
3. Press "SET" button once to enter into pedestrian mode setting. → Indicator light L1 on (enable), L1 off (disable)
4. Enable or disable of pedestrian mode can be switched through "-" and "+" buttons.

5. Press "SET" button once to save pedestrian mode setting and automatically exit. →  
Indicator lights L1-L5 will be on for one sec.

**B. Operation Graphic Illustration:**



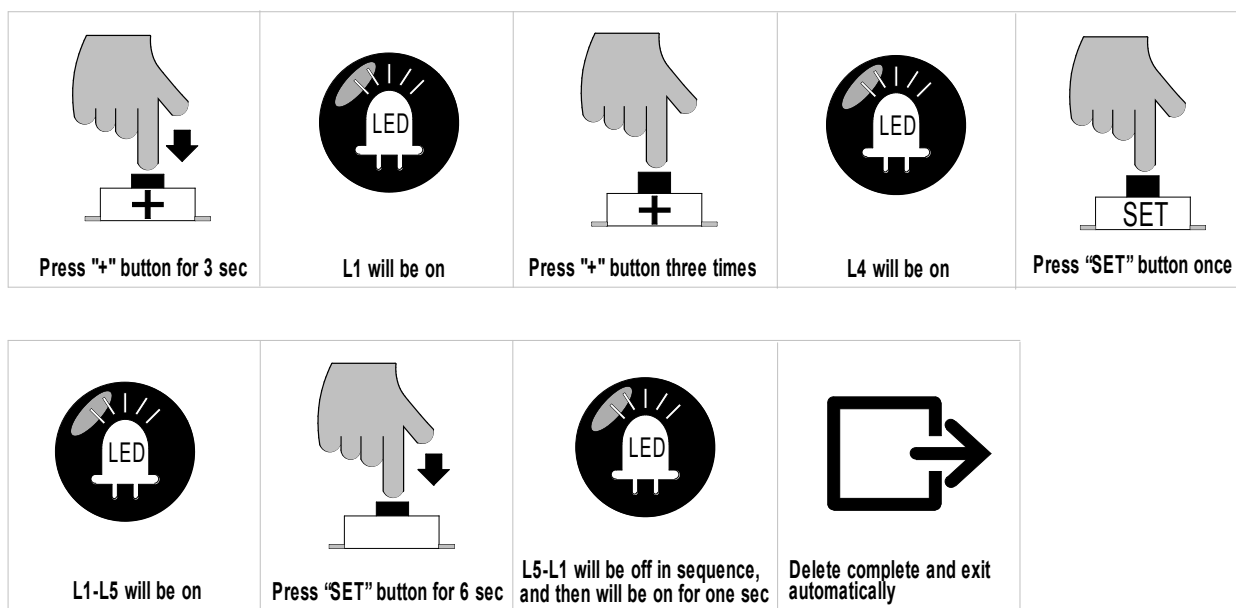
**Remote Control Delete (L4)**

This operation will delete all the remote controls that are paired to this control board.

**A. Operation Instruction:**

1. Press and hold "+" button for 3 sec. to enter into remote control management mode. →  
Indicator light L1 will be on.
2. Press "+" button three times to select remote control delete option. → Indicator light L4 will be on.
3. Press "SET" button once to enter into remote control delete option. → Indicator lights L1-L5 will be on.
4. Press "SET" button for 6 sec. to delete all remotes and it will automatically exit. →  
Indicator lights will be off in sequence from L5 to L1, after which indicator lights L1-L5 will be on for one sec.

## B. Operation Graphic Illustration:



## Remote Control Quick Learning

Remote control quick learning function enables user to pair the remote controls without opening the motor cover.

### Precondition:

1. To have one remote control that has already been paired.
2. To ensure the reliability of learning, please operate the quick learning function within 2 meters from the gate opener.
3. Please make sure that the gate opener is equipped with an alarm lamp, which will help you to check the status of remote control learning.

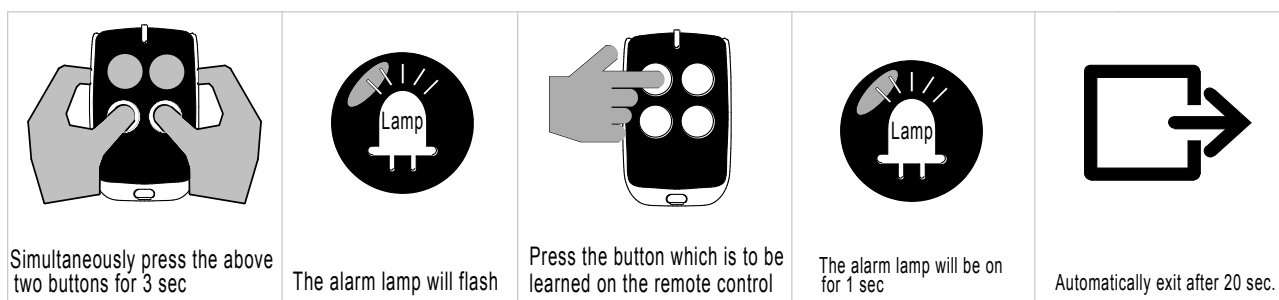
### A. Operation Instruction:

1. Simultaneously press and hold the third and the fourth buttons of the paired remote control for 3 sec. → The alarm lamp will flash, which indicates that the learning function of the control board is on working.

2. Press the button to be learned on the remote control under the above status. → The alarm lamp will be on for one sec. Remote control learning is complete.
3. The system will automatically exit the learning mode after waiting for 20 seconds.

**Note: The remote control working mode of new paired one has to be the same as original one.**

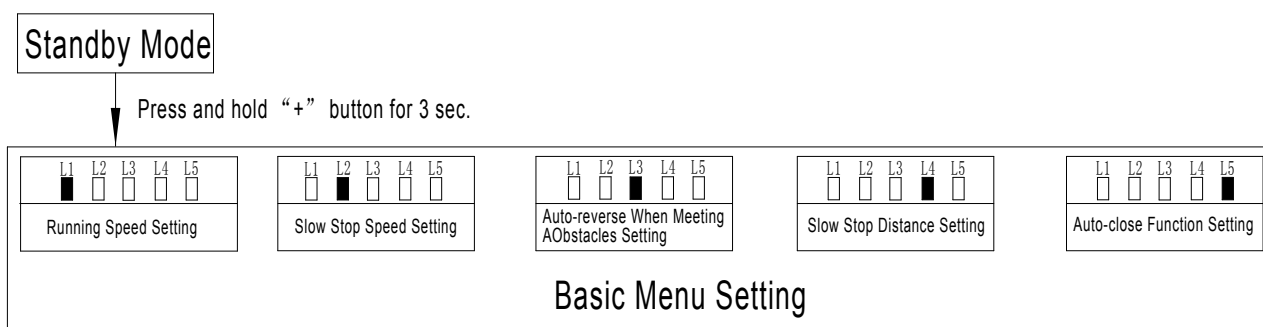
**B. Operation Graphic Illustration:**



**Basic Menu Setting**

**Operation Instruction:**

1. Under standby mode, press and hold “PROG” button for 3 sec., the indicator light L0 will flash once and enter into basic menu setting.
2. Press “+” or “-” button to select the different function settings.
3. Press “SET” button to enter into the selected function setting.



**Figure 28**

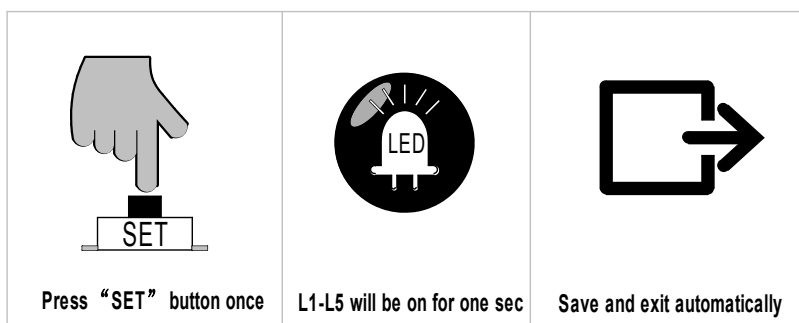
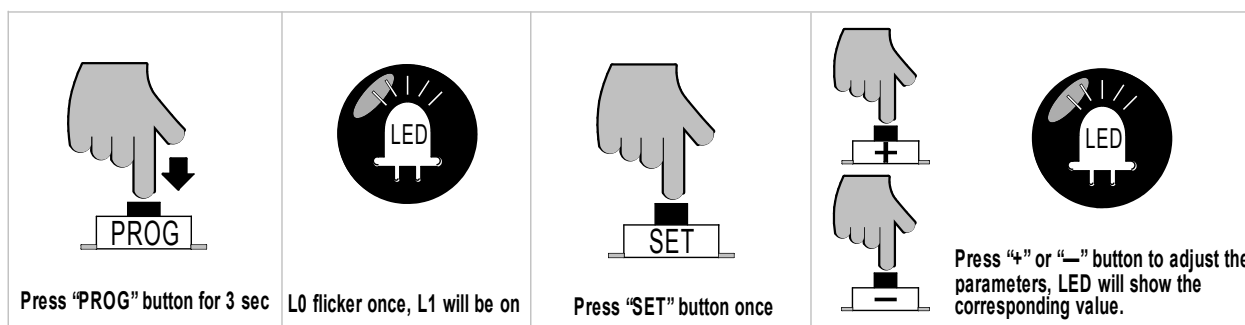
## Running Speed Setting (L1)

Users can adjust the gate opening and closing speed according to the actual installation and using condition.

### A. Operation Instruction:

1. Press and hold “PROG” button for 3 sec. to enter into basic menu. → Indicator light L0 will flash once, then L1 will stay on.
2. Press “SET” button once to enter into running speed setting. → Indicator lights L1-L5 will show the current running speed. (The default is L3)
3. Press “+” or “-” button to adjust the running speed. → Indicator lights L1-L5 will indicate different speed status. The more the indicator lights are on, the faster the running speed will be.
4. Press “SET” button to save and system will automatically exit. → The indicator lights L1-L5 will be on for one sec.

### B. Operation Graphic Illustration



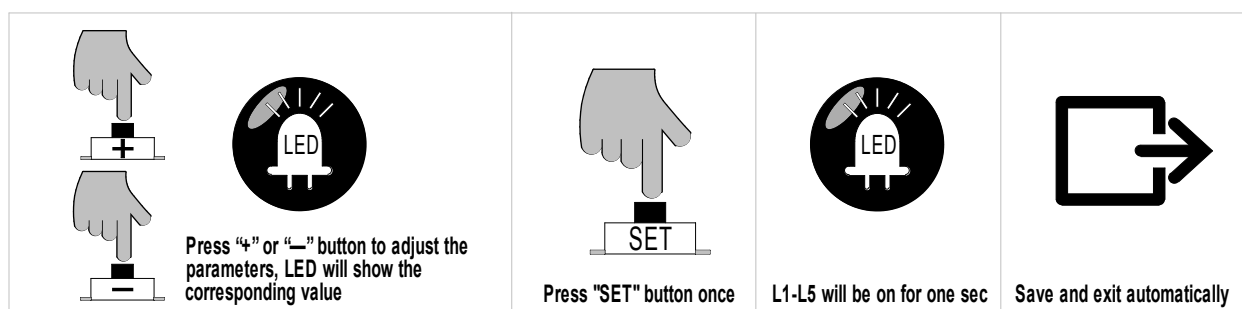
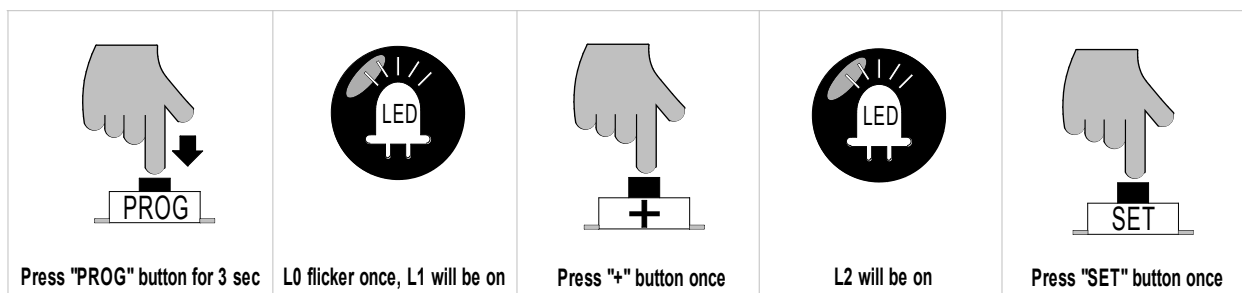
## Slow Stop Speed Setting (L2)

The setting for slow stop speed can effectively reduce the inertial force when the gate is open or closed to its limit position, which will extend the lifetime of both gate and gate opener.

### A. Operation Instruction:

1. Press and hold "PROG" button for 3 sec. to enter into basic menu. → Indicator light L0 will flash once, then L1 will stay on.
2. Press "+" button to select slow stop speed setting. → Indicator light L2 will stay on.
3. Press "SET" button once to enter into setting mode. → Indicator lights L1-L5 will show the current slow stop speed. (The default is L4)
4. Press "+" or "-" button to adjust the slow stop speed. → Indicator lights L1-L5 will show the different speed status. The more the indicator lights are on, the faster the slow stop speed will be.
5. Press "SET" button to save and system will automatically exit. → Indicator lights L1-L5 will be on for one sec.

### B. Operation Graphic Illustration





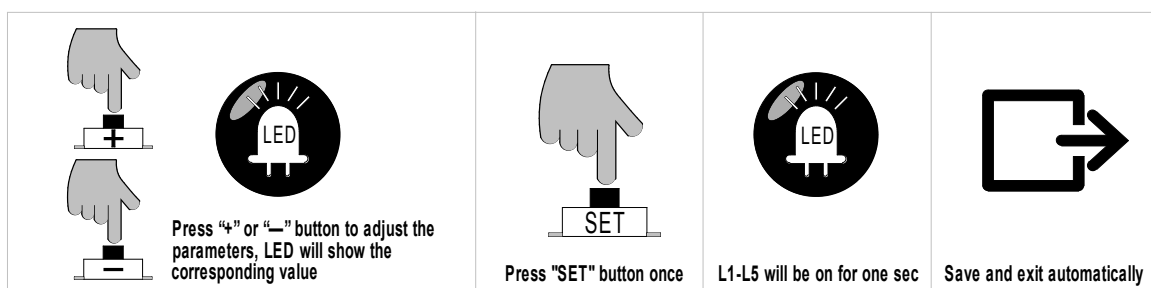
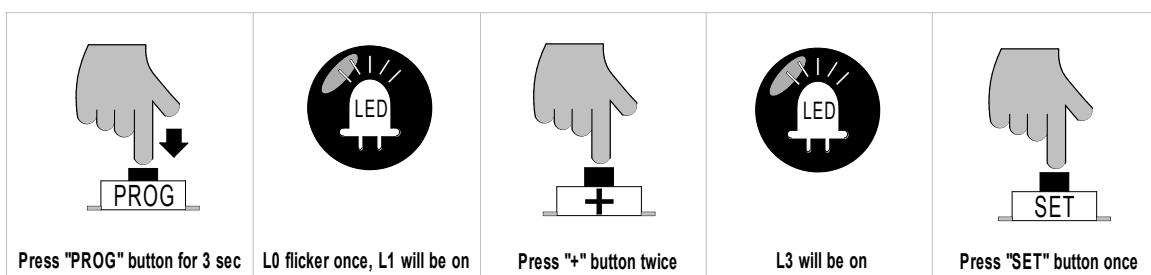
## Reverse When Meeting Obstacles Setting (L3)

During the gate opening or closing, accidental collision with obstacles may pose a threat to people and property. In order to prevent impact of such collision, users may adjust the sensitivity of meeting obstacles to reduce the impact damage.

### A. Operation Instruction:

1. Press “PROG” button for 3 sec. to enter into basic menu. → Indicator light L0 will flash once, then L1 will stay on.
2. Press “+” button twice to select the Reverse option. → Indicator light L3 will stay on.
3. Press “SET” button once to enter into setting mode. → Indicator lights L1-L5 will show the current setting. (The default is L2)
4. Press “+” or “-” button to set the sensitivity of meeting obstacles. → Indicator lights L1-L5 will show the different sensitivity of meeting obstacles. The more the indicator lights are on, the more the sensitivity will be. L1-L5 are all off means to cancel the Auto-reverse function.
5. Press “SET” button once to save the setting and system will automatically exit. → Indicator lights L1-L5 will be on for one sec.

### B. Operation Graphic Illustration



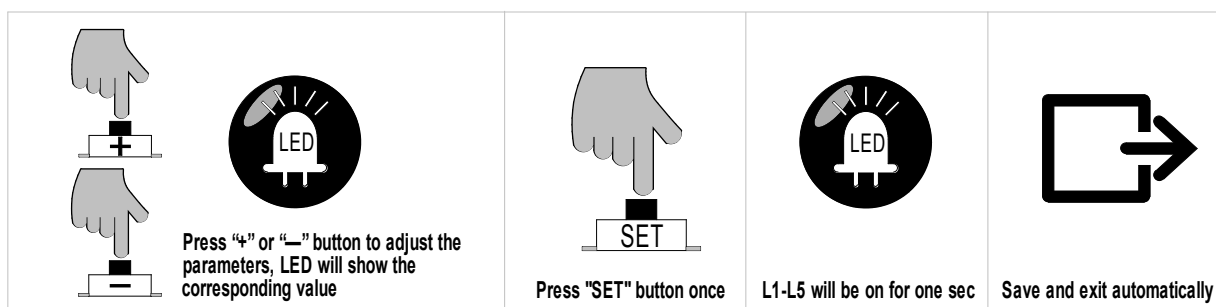
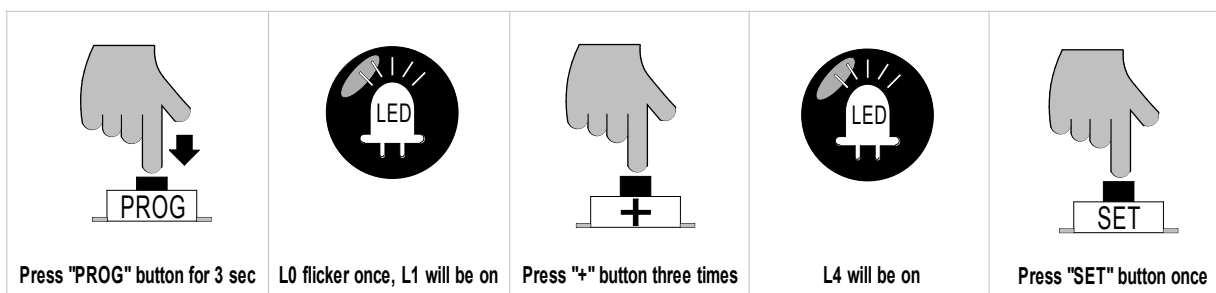
## Slow Stop Distance Setting (L4)

Setting a slow stop distance enables the gate to run more smoothly, which will extend the service life of gate and gate opener.

### A. Operation Instruction:

1. Press and hold "PROG" button for 3 sec. to enter into basic menu. → Indicator light L0 will flash once, then L1 will stay on.
2. Press "+" button three times to select slow stop distance option. → Indicator light L4 will stay on.
3. Press "SET" button once to enter into slow stop distance setting. → Indicator lights L1-L5 will show the current distance of slow stop. (The default is L3)
4. Press "+" or "-" button to set the slow stop distance. → Indicator lights L1-L5 will show the different slow stop distance. The more the indicator lights are on, the longer the distance will be.
5. Press "SET" button once to save and system will automatically exit. → Indicator lights L1-L5 will be on for one sec.

### B. Operation Graphic Illustration



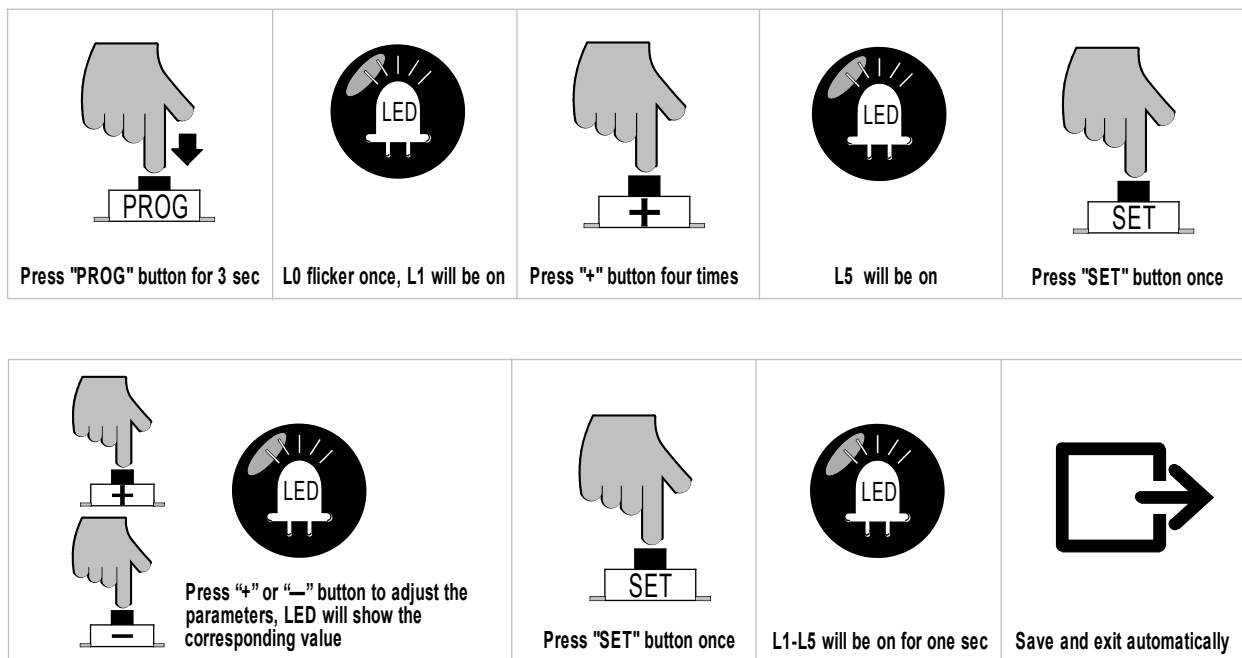
## Auto-close Function Setting (L5)

When the gate is completely open, the control board will send the auto-close signal to enable the gate to close automatically according to the pre-set auto-close time.

### A. Operation Instruction:

1. Press and hold "PROG" button for 3 sec. to enter into basic menu. → Indicator light L0 will flash once, then L1 will stay on.
2. Press "+" button four times to enter into Auto-close option. → Indicator light L5 will stay on.
3. Press "SET" button once to enter into setting. → Indicator lights L1-L5 will show the current auto-close time. (The default is all indicator lights off)
4. Press "+" or "-" button to set the auto-close time. → The number of keeping on indicator lights will indicate the Auto-close time. (Table 2 Auto-Close Time)
5. Press "SET" button once to save and system will automatically exit. → Indicator lights L1-L5 will be on for one sec.

### B. Operation Graphic Illustration

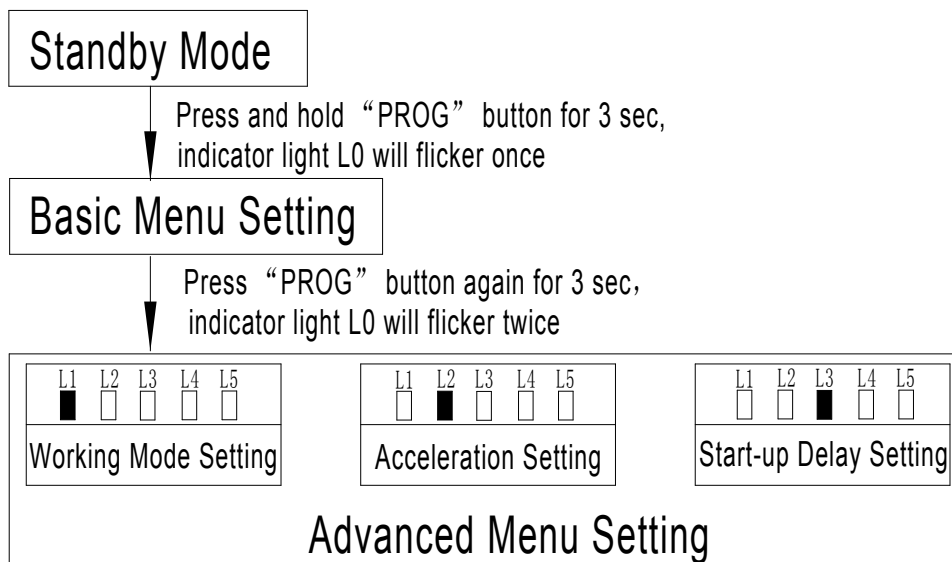


Indicator light status : <input type="checkbox"/> Off <input checked="" type="checkbox"/> On <input type="checkbox"/> Flicker	Status Instruction
L1 <input type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Cancel Auto-close function
L1 <input checked="" type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Auto-close after 10 sec.
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Auto-close after 20 sec.
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Auto-close after 30 sec.
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input checked="" type="checkbox"/> L5 <input type="checkbox"/>	Auto-close after 40 sec.
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input checked="" type="checkbox"/> L5 <input checked="" type="checkbox"/>	Auto-close after 50 sec.

**Table 2 Auto-Close Time**

## Advanced Menu Setting

1. Press “PROG” button for 3 Sec. under the standby mode, indicator light L0 will flash once to enter into basic menu setting. Press “PROG” button again for 3 sec. indicator light L0 will flash twice to enter into the advanced menu setting.
2. Different functions can be selected through “+” and “-” buttons.
3. Press “SET” button to enter into the selected function settings.



**Figure 29**

## Working Mode Setting (L1)

Due to the usage for this product is different for users from different regions, the control board for this product offers 3 different working modes for users to choose.

### 1. Standard Mode (L1):

Terminals for external buttons:

OSC: Single button control      PED: Pedestrian button      STP: Stop button

### 2. Three Button Mode (L2):

Terminals for external buttons:

OSC: Opening button      PED: Closing button      STP: Stop button

### 3. Community Mode (L3):

Terminals for external buttons:

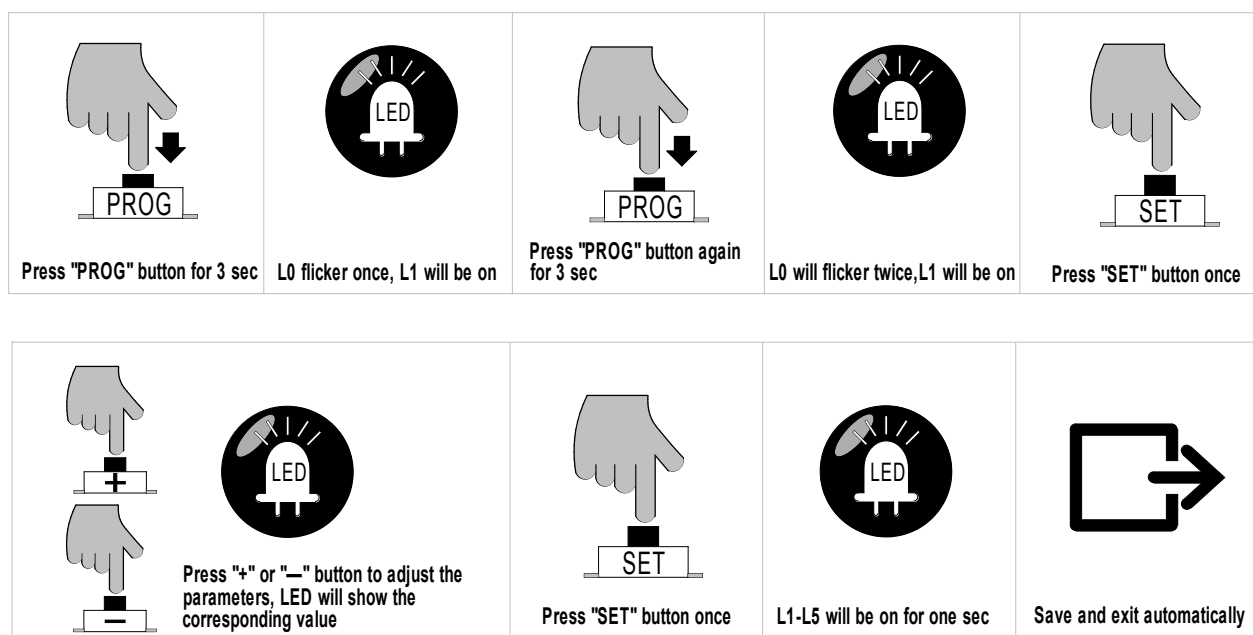
OSC: Single button control      PED: Pedestrian button      STP: Stop button

Special function: Only the gate is completely open, can it be closed thereafter. If the gate is not completely open, then only opening and stop can be operated in order to prevent any interruption which will trigger closing during the opening travel operated by the first user.

## A. Operation Instruction:

1. Press and hold "PROG" button for 3 sec. to enter into basic menu. → Indicator light L0 will flash once, then L1 will stay on.
2. Press "PROG" button again for 3 sec. to enter into advanced menu. → Indicator light L0 will flash twice, then L1 will stay on.
3. Press "SET" button once to enter into working mode setting. → Indicator lights L1-L3 will show the current selection. (The default is L1)
4. Press "+" or "-" button to select the working mode. → Indicator lights L1-L3 will show the current selection.
5. Press "SET" button once to save and system will automatically exit. → Indicator lights L1-L5 will be on for one sec.

## B. Operation Graphic Illustration



## Acceleration Setting (L2)

Due to the different installation environment and gate installation status, users can adjust the acceleration of starting and deceleration of buffering of the gate opener to their necessary.

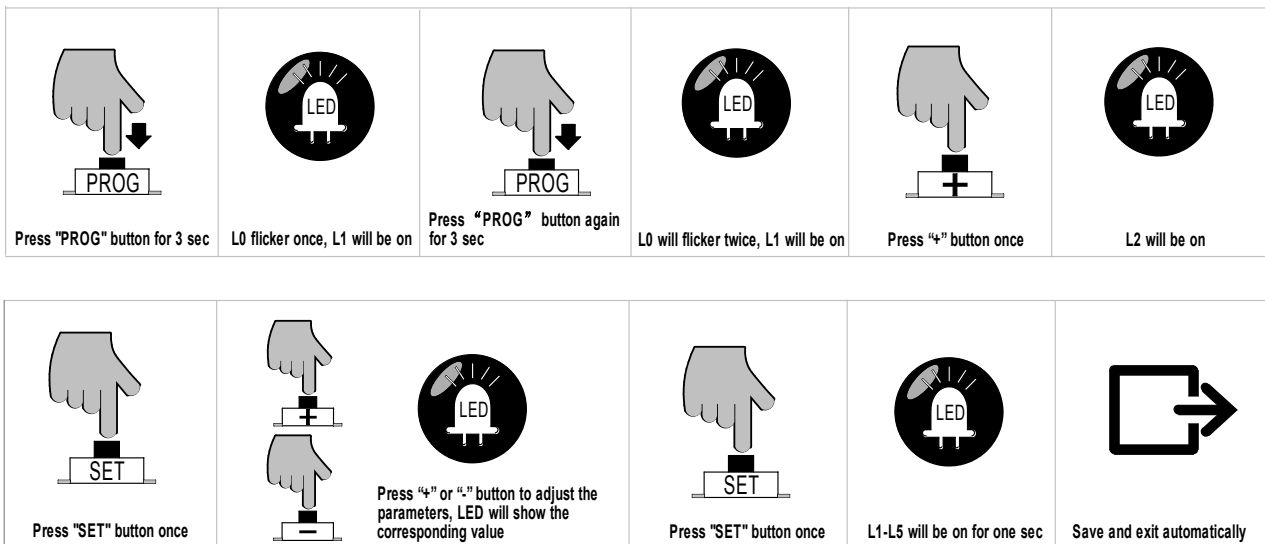
### A. Operation Instruction:

1. Press and hold "PROG" button for 3 sec. to enter into basic menu. → Indicator light L0 will flash once, then L1 will stay on.
2. Press "PROG" button again for 3 sec. to enter into advanced menu. → Indicator light L0 will flash twice, then L1 will stay on.
3. Press "+" button once to select acceleration option. → Indicator light L2 will stay on.
4. Press "SET" button once to enter into acceleration setting. → Indicator lights L1-L5 will show the current acceleration value. (The default is L3)
5. Press "+" or "-" button to set the acceleration value. → Indicator lights L1-L5 will indicate the different acceleration values. The more the indicator lights will be on, the faster the

speed changes.

6. Press "SET" button once to save and system will automatically exit. → Indicator lights L1-L5 will be on for one sec.

### B. Operation Graphic Illustration



### Start-up Delay Setting (L3)

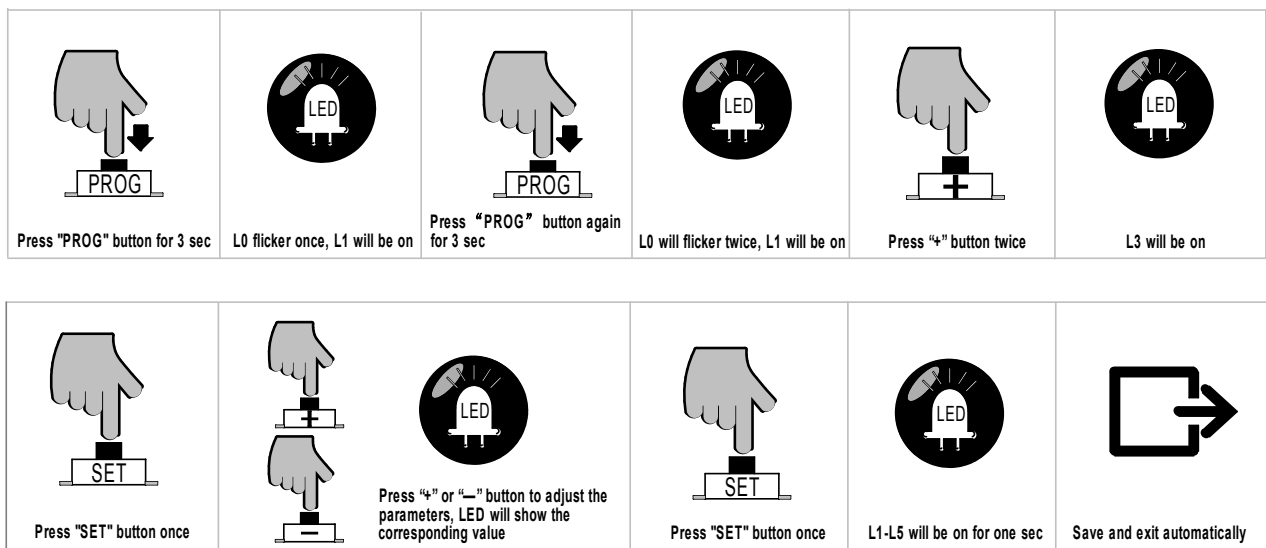
The control board of this product is with low power consumption function under standby mode. When the gate opener stopped working, the control board will automatically enter into low power consumption mode to reduce the power consumption and extend the using time of the battery. Meanwhile, in order to reduce the power consumption of external accessories under standby mode, the control board will turn off the power for infrared sensor after entering into standby mode. When the gate opener is about to operate, it'll supply the power for accessories. In order to ensure the reliability of the infrared sensor, it is requested that the control board performs delay detection to the input signal of infrared sensor. When the gate opener receives the opening/closing signal, it'll start to work after a certain time (the settled delay time)

#### A. Operation Instruction:

1. Press and hold "PROG" button for 3 sec. to enter into basic menu. → Indicator light L0

- will flash once, then L1 will stay on.
2. Press “PROG” button again for 3 sec. to enter into advance menu. → L0 will flash twice, then L1 will stay on.
  3. Press “+” button twice, choose start-up delay setting. → Indicator light L3 will stay on.
  4. Press “SET” button once to enter into start-up delay setting. → Indicator lights L1-L3 will show the current setting. (The default is L1)
  5. Press “+” or “-” button to set the start-up delay time. → Indicator lights L1-L3 will show the current setting. (Table 3 Start-up Delay Time)
  6. Press “SET” button once to save and system will automatically exit. → Indicator lights L1-L5 will be on for 1 sec.

### B. Operation Graphic Illustration



Indicator light status : <input type="checkbox"/> Off <input checked="" type="checkbox"/> On <input type="checkbox"/> Flicker	Status Instruction
L1 <input type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Cancel start-up delay function
L1 <input checked="" type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Delay for 0.5 sec
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Delay for 1 sec
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Delay for 1.5 sec

**Table 3 Start-up Delay Time**



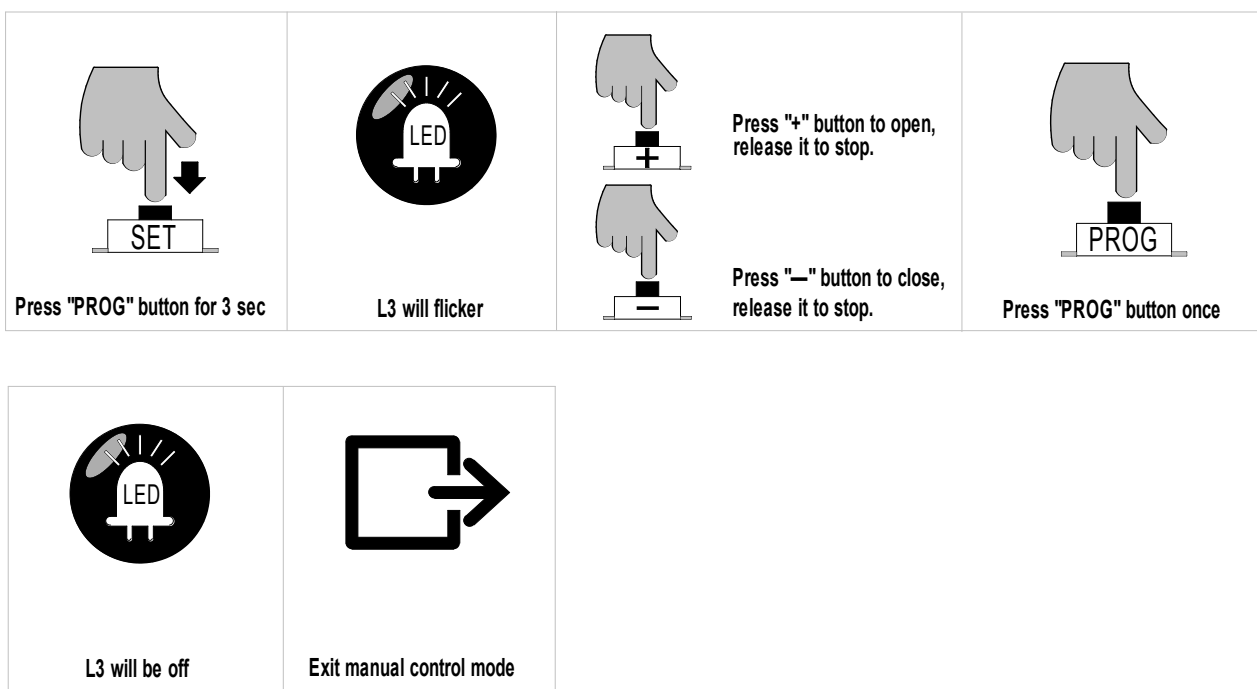
## Manual Control Mode

In order to make sure that the first installation of this product is in good condition, users can test the opening/closing operation under manual control mode. If there is any abnormalities, please exit the manual control mode and re-adjust the gate and the gate opener.

### A. Operation Instruction:

1. Press and hold "SET" button for 3 sec. → Indicator light L3 will flash.
2. Press "+" button to open the gate, then release "+" to stop running; Press "-" to close the gate, then release it to stop running.
3. Press "PROG" button once to exit the manual control mode. → Indicator light L3 will be off.

### B. Operation Graphic Illustration



## Battery Level Checking

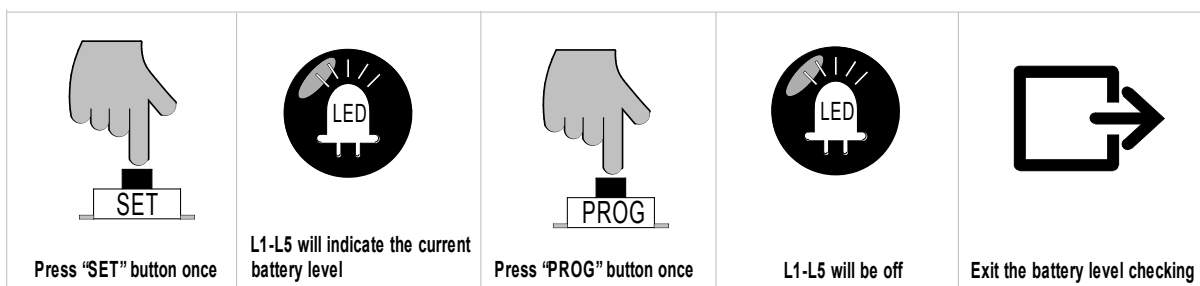
The current battery level can be checked through the indicator lights. When the power is low (battery voltage < 10.5V), the gate opener will stop running to protect the battery being

damaged. Under such circumstance, users may have to unlock the gate opener first, then move the gate by hand.

**A. Operation Instruction:**

1. Press “SET” button once. → Indicator lights L1-L5 will indicate the current battery level (Table 4 Battery Level)
2. Press “PROG” button once to exit the battery level checking. → Indicator lights L1-L5 will be off.

**B. Operation Graphic Illustration**

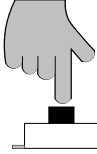

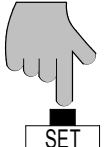




Indicator light status : <input type="checkbox"/> Off <input checked="" type="checkbox"/> On <input type="checkbox"/> Flicker	Status Instruction
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input checked="" type="checkbox"/> L5 <input checked="" type="checkbox"/>	Battery level $\geq 13.2V$
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input checked="" type="checkbox"/> L5 <input type="checkbox"/>	Battery level $\geq 12.6V$
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input checked="" type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Battery level $\geq 12.0V$
L1 <input checked="" type="checkbox"/> L2 <input checked="" type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Battery level $\geq 11.2V$
L1 <input checked="" type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Battery level $\geq 10.5V$
L1 <input type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> L4 <input type="checkbox"/> L5 <input type="checkbox"/>	Battery level $< 10.5V$

**Table 4 Battery Level**

## Restore Factory Setting

1. Simultaneously press the three buttons “PROG”、 “+” and “-” for 3 sec. → All indicator lights L1-L5 will be on.
2. Press “SET” button once to confirm to restore factory setting. → Indicator light L1-L5 will be off in sequence, and then L1-L5 will be on for one sec.

 Simultaneously press “PROG”、 “+” and “-” for 3 sec.	 L1-L5 all will be on	 Press “SET” button once	 L1-L5 will be off in sequence, and then will be on for one sec.	 Save and automatically exit
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## Maintenance

The gate should be checked every month to make sure it operates normally.

For the sake of safety, each gate is suggested to be equipped with infrared protector, and regular inspection is required.

Before installation and operation of the gate opener, please read all instructions carefully.

Our company keep the right to change the instruction without prior notice.

# Troubleshooting

**Any troubleshooting work below done to the motor must be completed by a licensed electrician and only whilst the power is off and the motor is unplugged!**

<b>Problem</b>	<b>Possible Reason</b>	<b>Solution</b>
The gate cannot open or close normally, indicator light doesn't on.	<ol style="list-style-type: none"> <li>1. The power supply is disconnected.</li> <li>2. Fuse is blown.</li> <li>3. Control board P7 terminal wrongly wired.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the power supply.</li> <li>2. Check the fuse (FU) and replace if blown.</li> <li>3. Re-wiring according to this user manual.</li> </ol>
The gate can only open, can't close.	<ol style="list-style-type: none"> <li>1. Photocell wrongly wired.</li> <li>2. Photocell wrongly installed.</li> <li>3. Photocell is blocked by objects.</li> <li>4. Sensitivity of obstacle is too high.</li> <li>5. Origin sensor damaged.</li> <li>6. Distance between origin marker and origin sensor is too far.</li> </ol>	<ol style="list-style-type: none"> <li>1. If not connect photocell, please ensure the infrared terminal and GND terminal has a jumper wire; if connect photocell, please ensure the wiring is correct and the photocell type is N.C.</li> <li>2. Ensure that the photocell mounting position can be mutually aligned.</li> <li>3. Remove the obstacle.</li> <li>4. Reduce the sensitivity of obstacle.</li> <li>5. Replace the origin sensor.</li> <li>6. Adjust the distance between the origin sensor and origin marker.</li> </ol>
Remote control doesn't work.	<ol style="list-style-type: none"> <li>1. Battery level is too low.</li> <li>2. Remote control not paired.</li> </ol>	<ol style="list-style-type: none"> <li>1. Change the battery.</li> <li>2. Pair the remote control to the gate opener.</li> </ol>
Press OPEN, CLOSE button, the gate is not moving, motor has noise.	<ol style="list-style-type: none"> <li>1. Gate moving is not smoothly.</li> <li>2. Origin sensor damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the motor or gate according to the actual situation.</li> <li>2. Replace the origin sensor.</li> </ol>
Not stop when running to open or closed limit switch position.	<ol style="list-style-type: none"> <li>1. Origin sensor damaged.</li> <li>2. Hall line damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the origin sensor.</li> <li>2. Replace the hall line.</li> </ol>
Leakage switch tripped.	Power supply wires short circuit or motor wires short circuit.	Check wiring.

## Drawing and Measurements

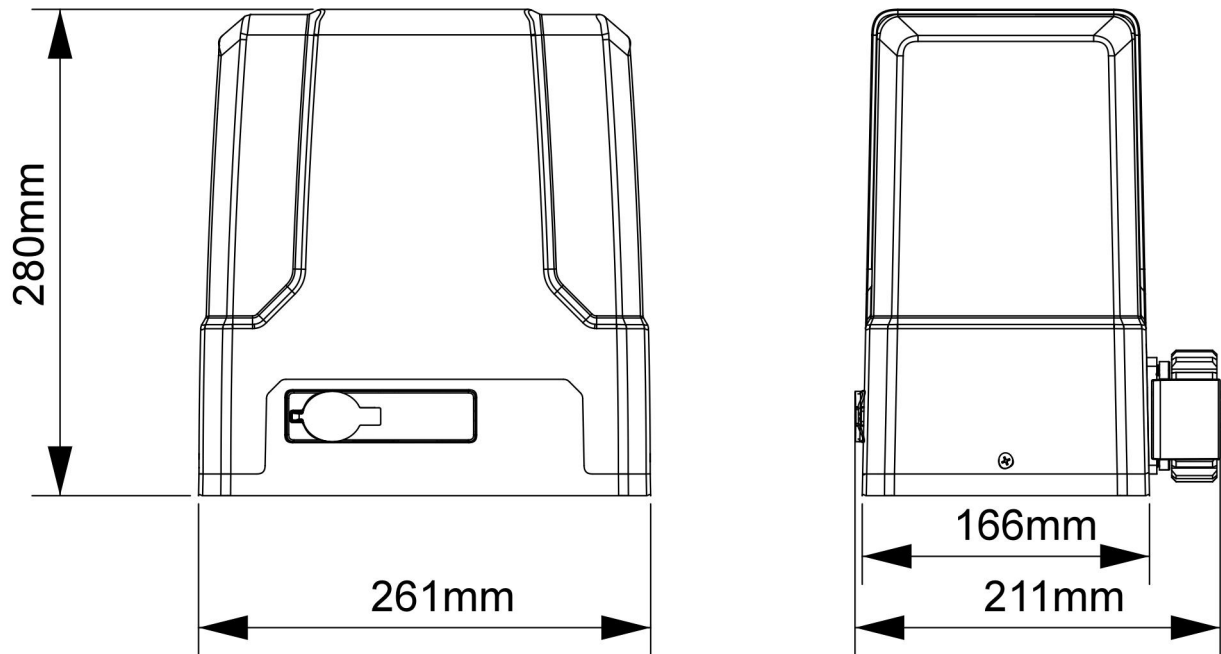


Figure 30