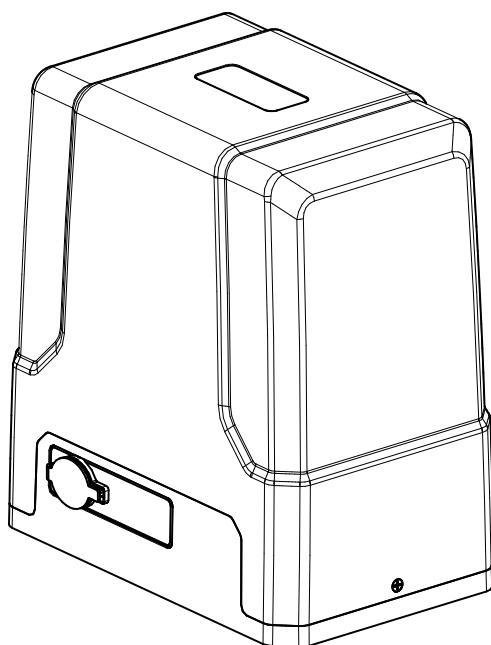


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# **SL500DC/SL800DC**

## **Sliding Gate Opener**

### **User Manual**



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Dear users,

Thank you for choosing this product. Please read this manual carefully before installation and use. Please do not forget to include this manual if you send the product to a third party.

## 1. Safety Instruction


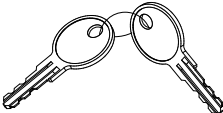
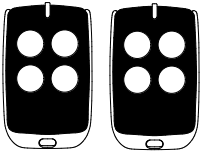
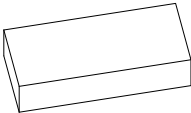
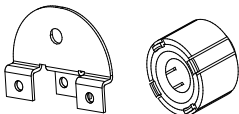

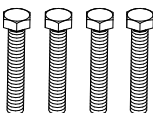

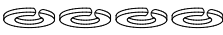
Please read this manual carefully before installation, in which involves with important information about installation、using、maintenance and safety.

Any undefined operations under this manual is not allowed, incorrect using may damage the product even causing the injuries or property losses.

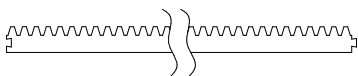
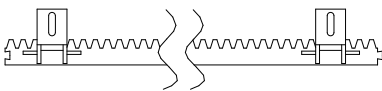
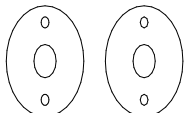
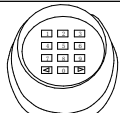

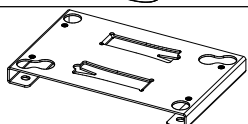
To consider the possible danger during the installation or using of this product, installation must strictly comply with the construction standard and electrical operating procedure, especially the following:

- Before installation, please make sure the power voltage being used matches with the supply voltage of this product.  
Please check if the leakage protection switch is installed and the grounding system is correct.
- Please check if additional equipments or materials are required to meet the specific requirements.
- The disposal of packaging material must comply with the local regulation.
- Please do not change any parts except for those defined under this manual. Any undefined changes may cause the malfunction. Any damages to the product arising therefrom shall be beyond the liability of the company.
- Please do not leak water or any liquid into the controller or any other open devices. Please disconnect the power immediately if any of these mentioned cases happened.
- Please keep this product away from heat and open fire. Or it may damage the components; cause the failure or other hazards.
- Please make sure there is no vehicles、passengers or objects passing through while the sliding gate is moving.
- Anti-clip equipment like infrared protection sensor must be installed to avoid injuries to person and property losses. The company shall not be liable for any damage or accident arising therefrom.
- The installation、using and maintenance of this product must be carried out by professionals.
- Children are not allowed be touch the control devices or play with the remote controls.
- A warning sign must be placed somewhere on the sliding gate according to the national standard.
- Please keep this instruction properly for future reference.

## 2. Packing List (Standard)

No.	Picture	Name	Quantity
1		Main machine	1
2		Manual release key	2
3		Remote control	2
4		Accessories box	1
4-1		Origin marker and bracket	1
4-2		Origin marker mounting screw M6x16	2
4-3		Hexagon head bolt M8x25	4
4-4		Flat washer Ø8	4
4-5		Spring washer Ø8	4

## 2. Packing List (Optional)

No.	Picture	Name	Quantity
1		Galvanized gear rack	1m/pc
2		Nylon gear rack	1m/pc
3		Infrared sensor	1
4		Wireless keypad	1
5		Alarm lamp	1
6		Mounting plate	1

## 3. Technical Parameters

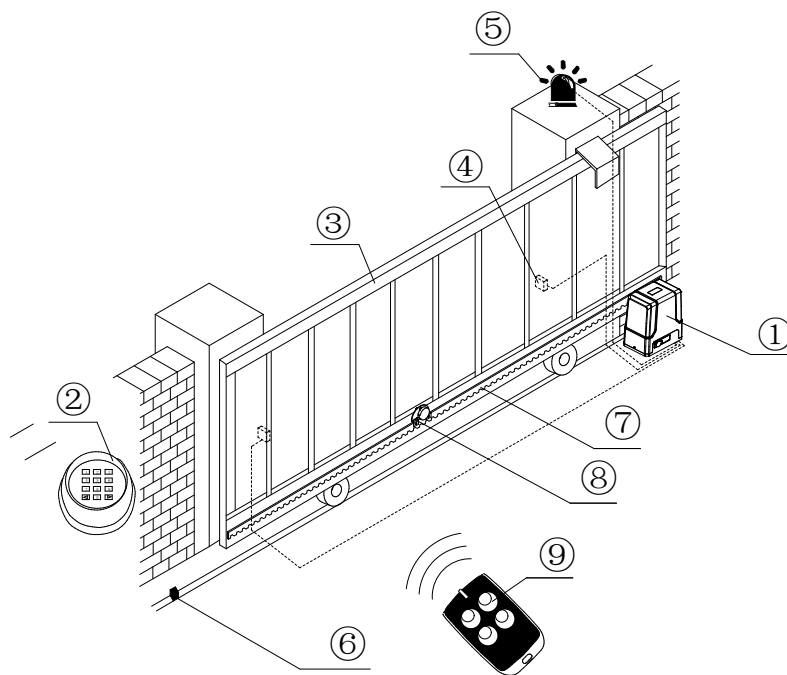
Model	SL500DC	SL800DC
Power supply	220V/50Hz;110V/60Hz	220V/50Hz;110V/60Hz
Motor power	150W	170W
Gate moving speed	16-18m/min	16-18m/min
Maximum loading weight	500Kg	800Kg
Remote control distance	≥30m	≥30m
Remote control mode	Single button mode/Three button mode	Single button mode/Three button mode
Limit switch	Electronic limit switch	Electronic limit switch
Noise	≤60dB	≤60dB
Working duty	S2, 20min	S2, 20min
Recording of up remote controls	100	100
Frequency	433.92 MHz	433.92 MHz
Working temperature	-20°C ~ +70°C	-20°C ~ +70°C

Package weight	10Kg	11Kg
Battery specification	12V/9Ah	12V/9Ah

## 4. Installation

SL500DC/SL800DC sliding gate opener is applicable to the type of sliding gate which weight is less than 500kg/800kg, length is shorter than 12m. The drive mode adopts the rack and gear transmission. This gate opener must be installed inside the enclosure or yard for protection.

### 4.1 Installation Drawing



**Figure 1**

- |                              |                              |                         |                 |
|------------------------------|------------------------------|-------------------------|-----------------|
| ① Gate opener                | ③ Gate                       | ⑤ Alarm lamp (optional) | ⑦ Gear rack     |
| ② Wireless keypad (optional) | ④ Infrared sensor (optional) | ⑥ Safety stopper        | ⑧ Origin marker |
| ⑨ Remote control             |                              |                         |                 |

## 4.2 Size of Main Machine and Accessories

### 4.2.1 Size of Main Machine

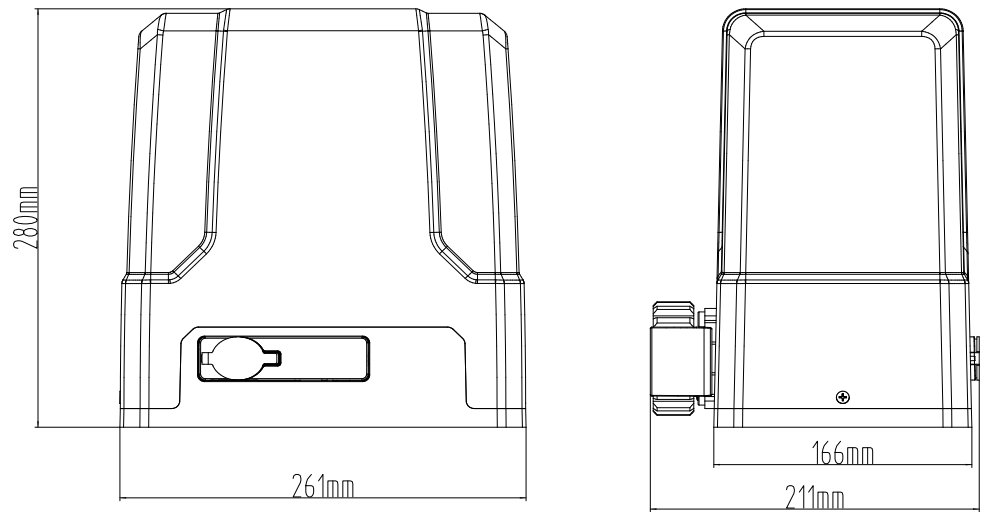


Figure 2

### 4.2.2 Size of Mounting Plate

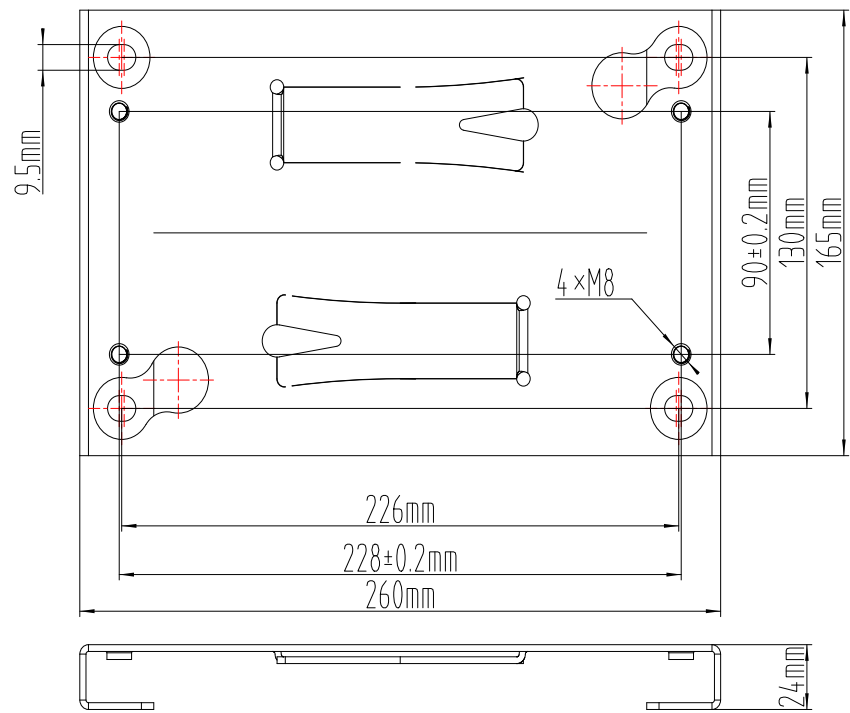


Figure 3

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## 4.3 Installation Procedures

### 4.3.1 Preparation before Installation

Please make sure that the sliding gate is correctly installed, the gate rail is in horizontal, and the gate can be manually pushed smoothly before installing the gate opener.

#### Cable installation

In order to guarantee the normal operation of the gate opener and protect the cables from damage, please bury the motor power cable and controlling cable separately with two PVC tubes.

#### Concrete pedestal

Please precast a concrete pedestal in size 500mm x 300mm, depth 250mm, so as to firmly install SL500DC/SL800DC gate opener. **Please make sure the distance between the gate and gate opener is appropriate before casting the pedestal.**

#### Embedded screws

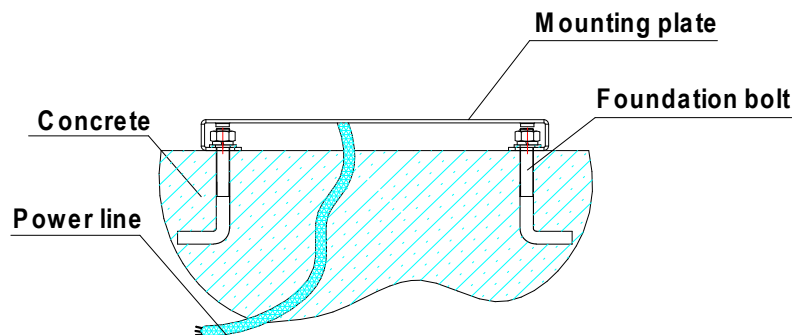


Figure 4

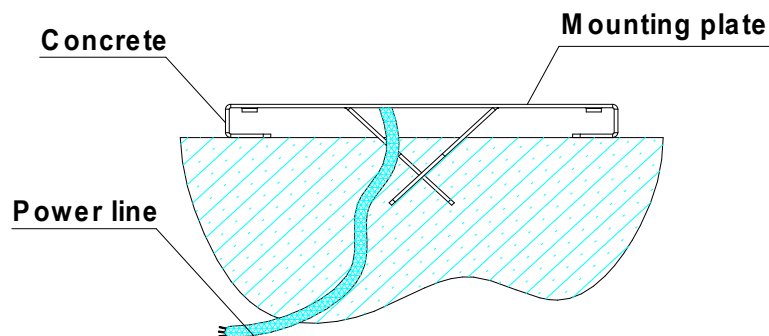


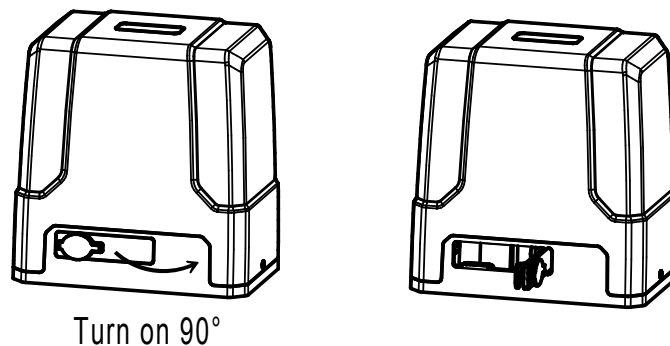
Figure 5



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### 4.3.2 Main Machine Installation

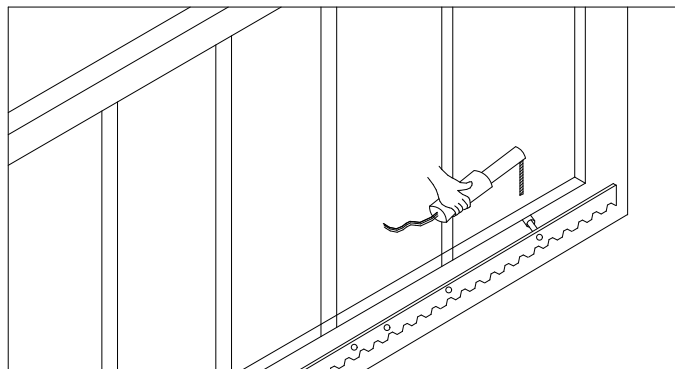
- a) Dismantle the plastic housing of the main machine before installation, keep the relevant fasteners properly;
- b) Please prepare a power cable for connecting the main machine to power supply (the number of power supply cable cores should not be less than 3 PCS, the sectional area of cable core should be over 1.5mm<sup>2</sup> and the length should be determined by users according to the situation of the installation spot.)
- c) Please unlock the main machine before installation, the unlock method is: take out the key cover, insert the key to open the manual release bar till it opens to 90° as shown in Figure 6. Then rotate the output gear and the gear can be rotated easily.



**Figure 6**

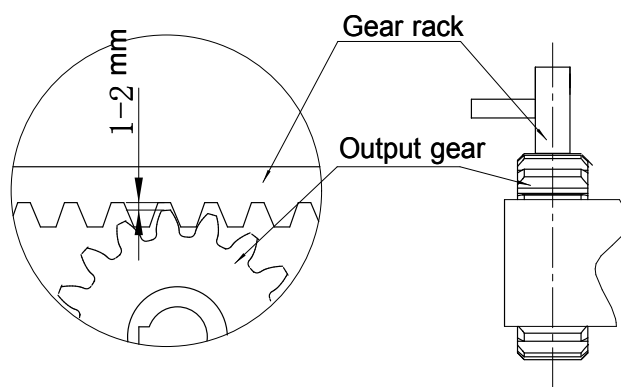
### 4.3.3 Gear Rack Installation

- Fix the mounting screws to the gear rack.
- Put the gear rack on the output gear of the main machine; make the rack engage with the output gear then weld the mounting screws to the gate (each screw marks with a solder joints in advance).
- Manually move the gate (gate should be moved smoothly after machine unlocked) to check whether there is a fit clearance between gear rack and output gear, as shown in Figure 7.
- Weld all the mounting screws to the gate firmly.
- Make sure that all racks are on the same straight line.
- Pull the gate after gear rack installed, make sure the entire trip is flexible without any stuck.



**Figure 7**

The fit clearance of output gear and rack is shown in Figure 8 below:



**Figure 8**



### **Warnings**

- To ensure safety, please install safety stoppers on both ends of the rail to prevent the gate from running out of the rail. Before installing the main machine, make sure that the safety stoppers are installed in place, and check whether it has the function of preventing the gate from running out of the rail or safety range.
- Please make sure that the main machine and its components have good mechanical properties, and the gate can be operated flexibly when manually moved before installing the main machine.
- Please note that for this product, one control can only drive one main machine, otherwise, the control system will be damaged.
- Earth leakage circuit breaker must be installed in where the gate movement can be seen, and the minimum

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mounting height is 1.5m to avoid being touched by children.

- After installation, please check whether the mechanical property is good or not, whether gate movement after manual unlocking is flexible or not, whether the installation for infrared sensor (optional) is correct and effective.

#### 4.3.4 Origin Sensor Kit Instruction

The origin sensor kit is consisted of origin marker and origin sensor. The origin marker should be mounted to the gear rack by the installer when installing the gate opener. The origin sensor was installed inside the machine in the factory.

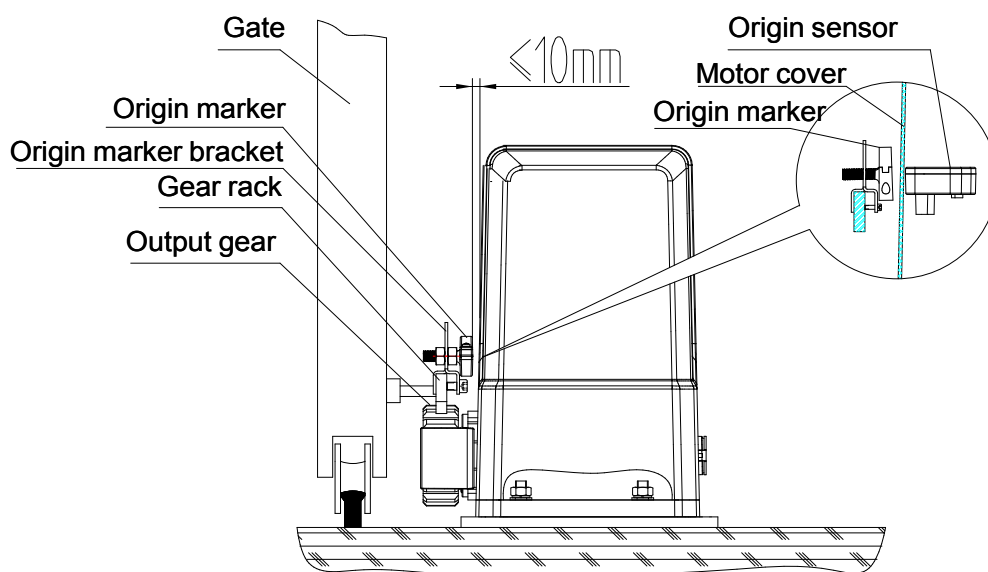
Origin sensor kit function:

During gate opening and closing, the gate opener will calibrate the opening and closing limit position through the origin sensor kit to realize a precise travel positioning.

Please follow 5.3 Travel Limit Position Setting to set and save the opening and closing limit position. When the power supply is accidentally failed, the gate opener will restore to its setting travel through the origin sensor kit.

Installation requirement on the origin marker:

1. Origin marker should be installed to the gear rack, the installation position should be around 1 meter away from the closing limit position.
2. The installation clearance between the origin marker and the gate opener should be less than 10mm, and should mount it near the opener as soon as possible.
3. Do not move or remove the origin marker after the opening and closing limit position are settled.



**Figure 9**

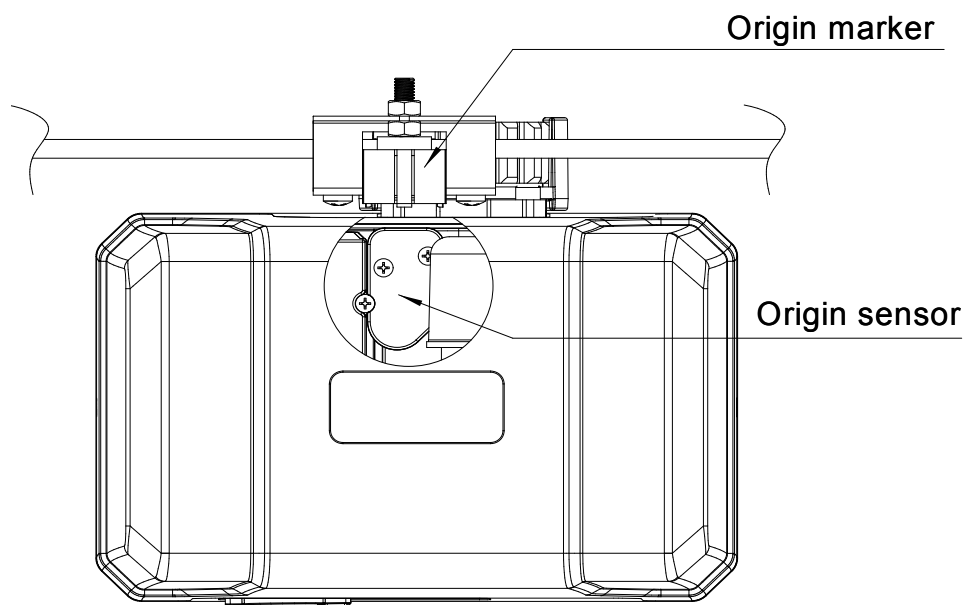


Figure 10

## 5. Control Board Wiring and Adjustment

### 5.1 Terminal Wiring Instruction

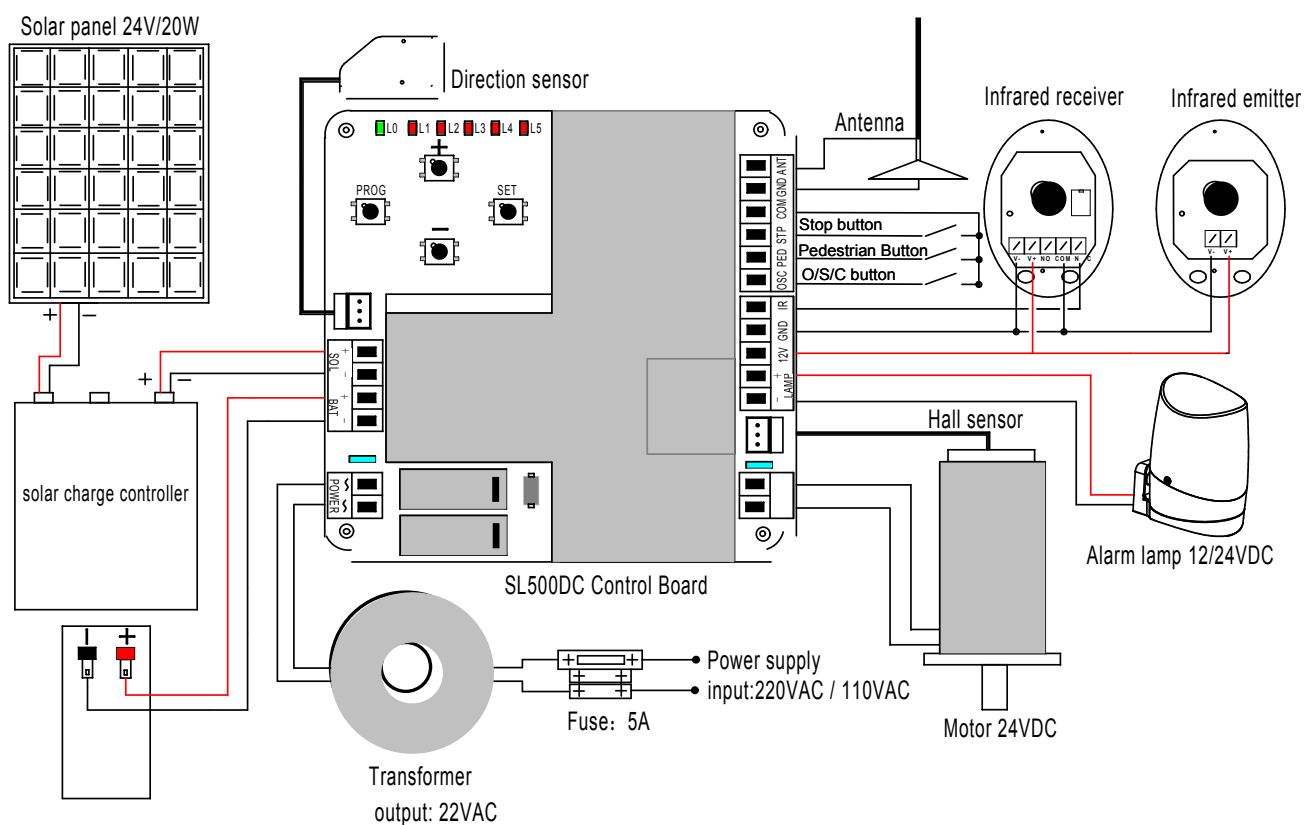


Figure 11

1. Power supply terminal (P7) (Transformer output)

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

Rated power: 120W

2. Battery and solar panel terminal (P5)

Battery specification: 12V/9AH

Solar panel specification: 17V/20W

3. Origin sensor terminal (P3)

4. Motor terminal (P8)

5. Hall sensor terminal (P6)

6. Alarm lamp and infrared sensor terminal (P4)

Alarm lamp type: LED

Voltage: 12/24VDC

Infrared sensor: NC

7. External button and antenna terminal (P1)

External button: NO

## 5.2 Operation Interface Instruction

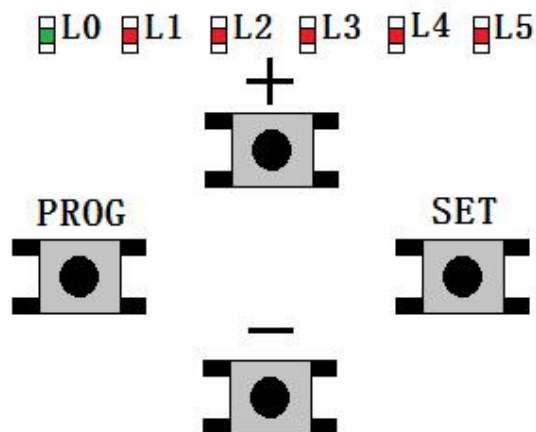


Figure 12

### Indicator Lights:

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

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

### Setup Buttons

PROG: Enter into or exit the setting menu.

- and +: Function select and parameter adjust.

SET: Enter into 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.

## 5.3 Travel Limit Position Setting

**Precondition:**

1. Before setting the limit position, please make sure that the gate is completely opened.
2. Please install the origin magnet on the middle of the gate, which should not be moved or removed thereafter.

**Note:**

The travel limit position must be settled according to the gate travel length after the first installation of the gate opener.

### 5.3.1 Operation Instruction for Travel Limit Position Setting:

**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 flicker simultaneously.
- b. Press “SET” button once to confirm to reset the travel limit position. → The indicator lights will be on in sequence from L5 to L1.

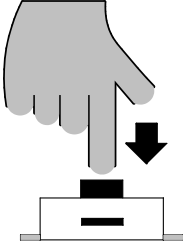

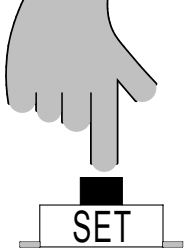
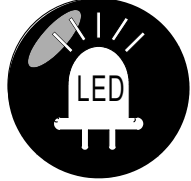
**2. Gate Closing Limit Position Setting:**

- c. Press and hold “-” button to enable the gate to run to its appropriate closing limit position. Then release the “-” button to stop running. Through pressing the “-” or “+” button, the closing limit position can be adjusted 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 and re-start to set the limit position)**
- d. Press “SET” button to confirm the closing limit position. → The indicator lights will be on in sequence from L1 to L5.

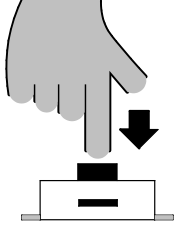
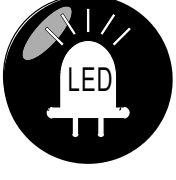
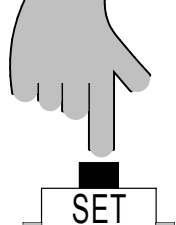
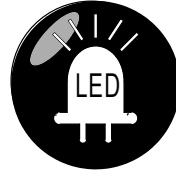
**3. Gate Opening Limit Position Setting:**

- e. Press and hold “+” button to enable the gate to run to its appropriate opening limit position, then release the “+” button to stop running. Through pressing the “-” or “+” button, the opening limit position can be adjusted 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:**

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

## 2. Gate Closing Limit Position Setting:

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

## 3. Gate Opening Limit Position Setting:

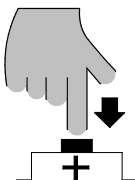
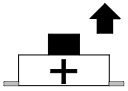
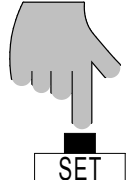

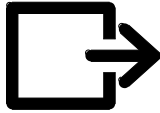
				
Press "+" button to open	Release "+" button after reaching the opening limit position	Press "SET" button once	L1-L5 will be on for 1 sec	Save and exit automatically

Figure 13

### 5.3.2 Travel Setting Tips:

During the travel setting process, users can check the travel limit position settings through 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**

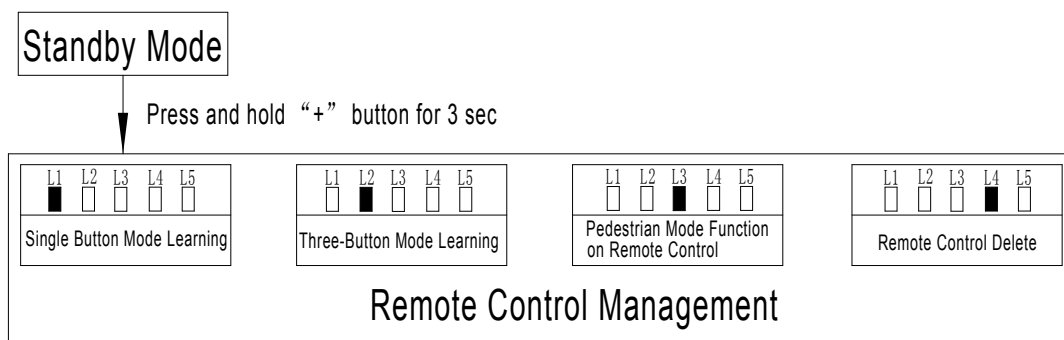
**Note:**

1. If there is no action under the limit switch position setting status, system will automatically exit after 20 sec.
2. If need to exit in the process of travel limit position setting, please press "PROG" once to directly exit.

## 5.4 Remote Control Management

**Operation Instruction:**

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



**Figure 14**

**Remote Control Mode Instruction:**

There are two modes available for remote control under the control board for this product. Users may pair the remote



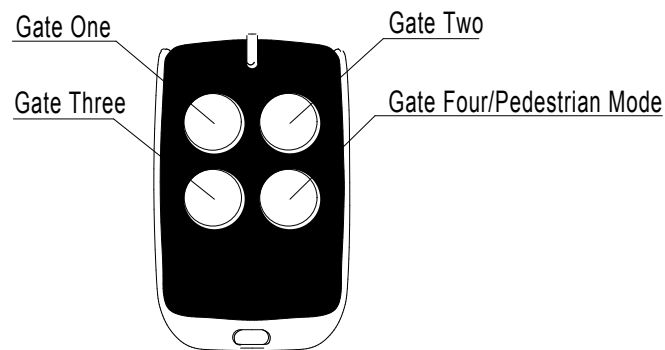
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control to their requirement under the corresponding mode.

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.

### 5.4.1 Single Button Mode Learning (L1)

Under this mode, one of the remote control buttons that is paired to 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 instruction 5.4.3 for the usage for the forth button on the remote control)

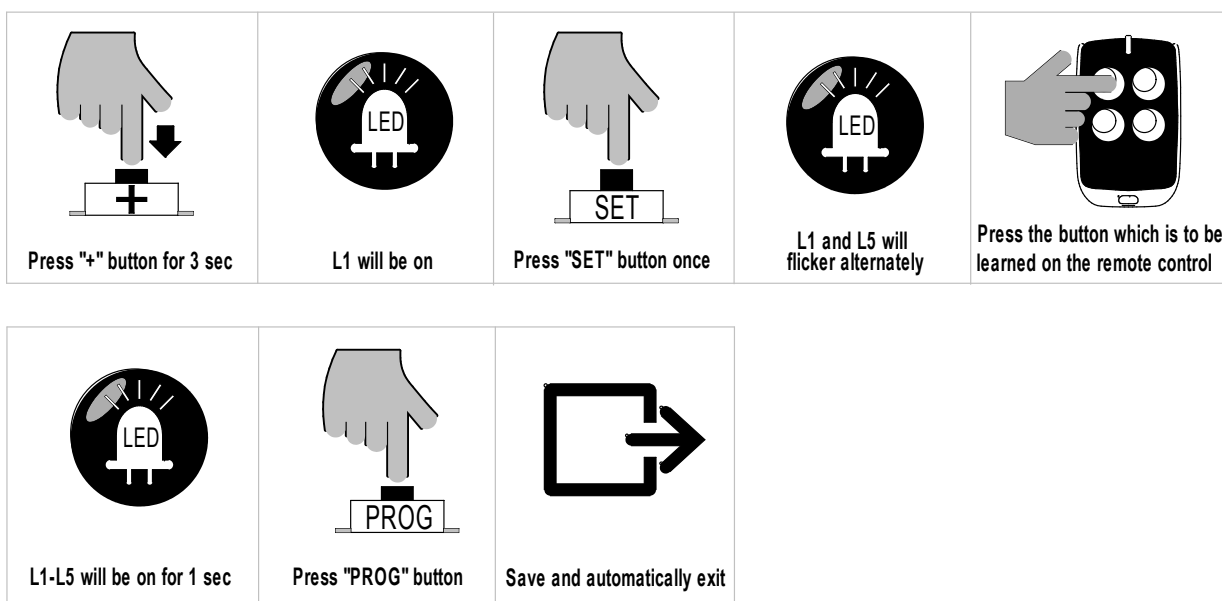


**Figure 15**

#### A. Operation Instruction

1. Press “+” button for 3 sec. to enter into remote control management mode. → Indicator light L1 will be always on.
2. Press “SET” button once to enter into single button learning mode. → Indicator lights L1 and L5 will flicker alternately.  
(If an alarm lamp is connected, it'll flash at the same time)
3. Press the button which is to be learned 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.

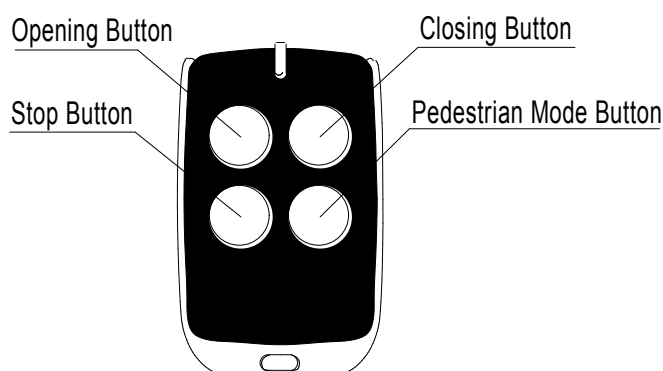
#### B. Operation Graphic Illustration



**Figure 16**

### 5.4.2 Three-Button Mode Learning (L2)

Under this mode, all buttons on the remote control that are paired to gate opener will be separately used for gate opening、closing and stop. (Please refer to instruction 5.4.3 for the usage for the forth button on the remote control)



**Figure 17**

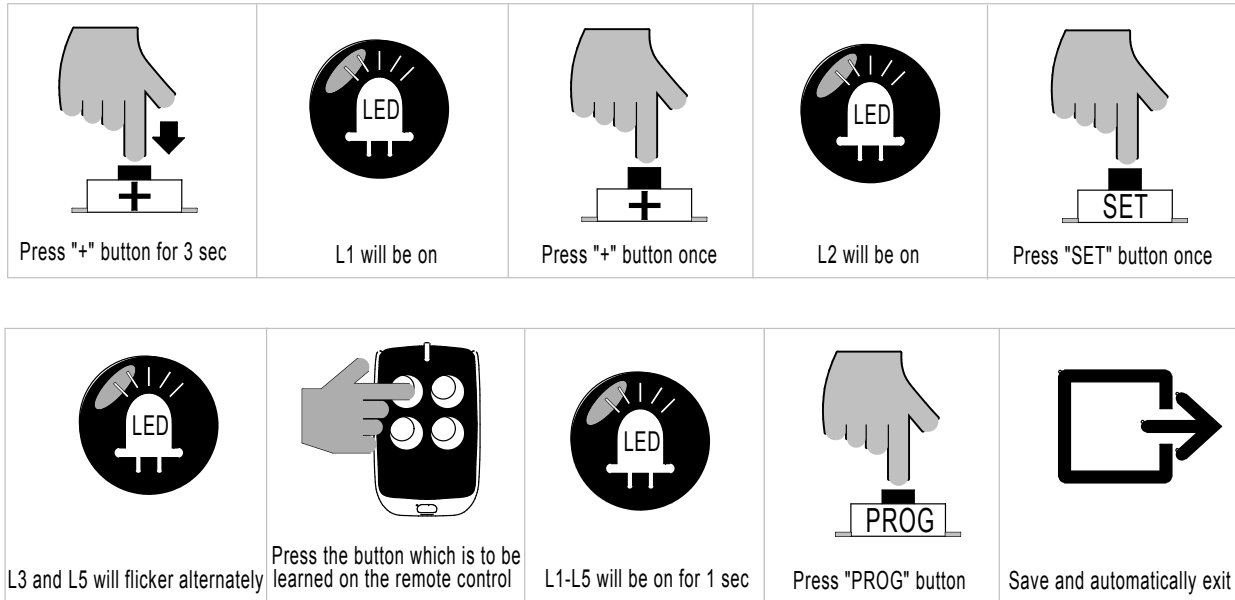
#### A. Operation Instruction

1. Press and hold "+" button for 3 sec. to enter into remote control management mode. → Indicator light L1 will be always on.
2. Press "+" button once to select three button learning mode option. → Indicator light L2 will be always on.
3. Press "SET" button once to enter into three button learning mode. → Indicator lights L3 and L5 will flicker alternately. (If an alarm lamp is connected, it'll flash at the same time)
4. Press the button which is to be learned 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



**Figure 18**

### Note:

If there is no action during the remote control learning process, system will automatically save all the paired remote controls and exit after 20 seconds.

## 5.4.3 Pedestrian Mode Function on Remote Control (L3)

Pedestrian mode function on remote control: When the user presses the pedestrian mode button on the remote control when the gate is closed, it will open for 1 meter then stop which is for pedestrian traffic.

When the pedestrian mode is active (by default), the forth button on the remote control will be used for it; When the pedestrian mode is disabled, the forth button on the remote control can be used as a normal button.

### A. Operation Instruction:

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

- 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:

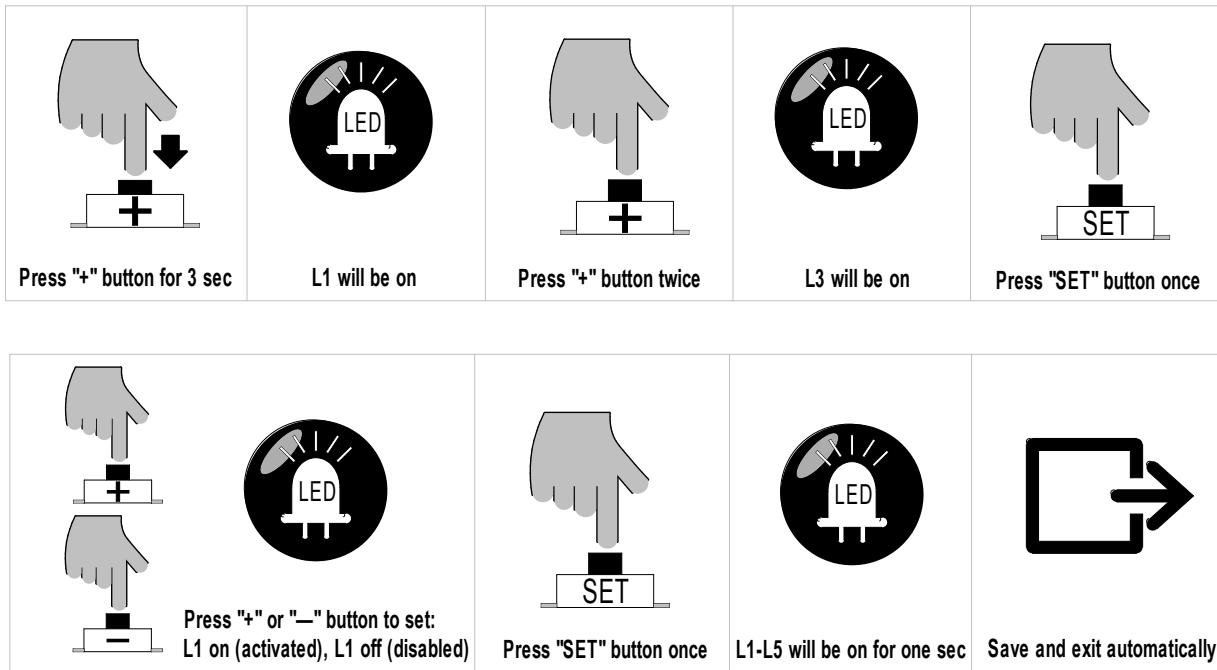


Figure 19

### 5.4.4 Remote Control Delete (L4)

This action will delete all the remote controls that saved on the control board.

#### A. Operation Instruction:

- Press and hold "+" button for 3 sec. to enter into remote control management mode. → Indicator light L1 will be on.
- Press "+" button three times to select remote control delete option. → Indicator light L4 will be on.
- Press "SET" button once to enter into remote control delete option. → Indicator lights L1-L5 will be on.
- Press "SET" button for 6 sec. delete will be complete and 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:

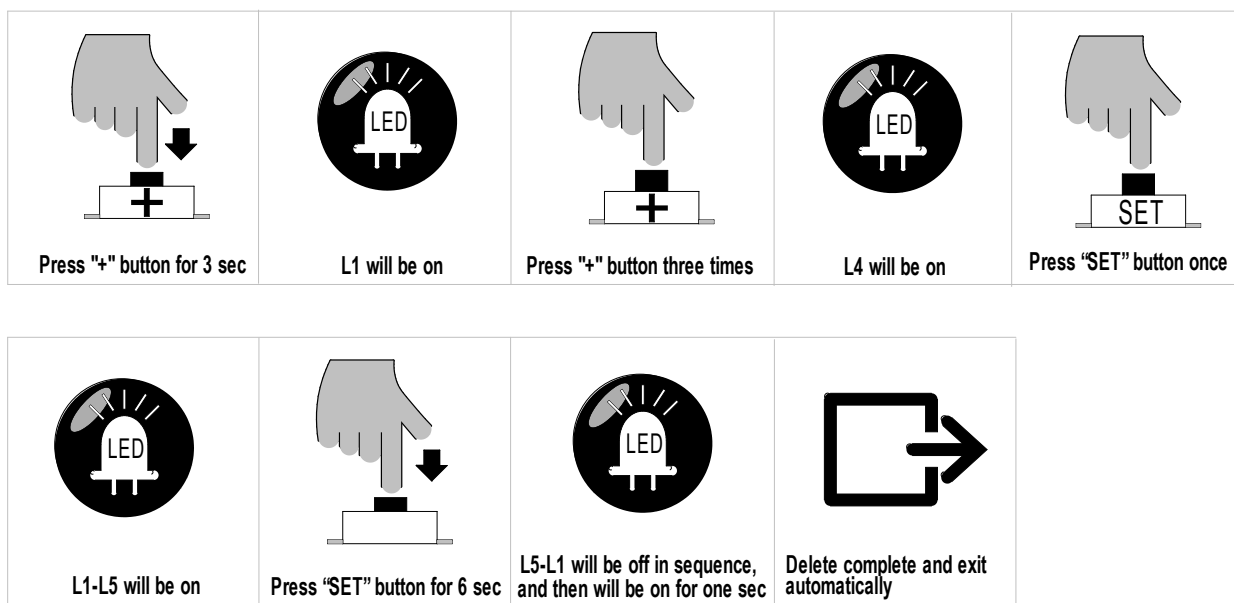


Figure 20

### 5.4.5 Remote Control Intelligent Learning

Remote control intelligent learning function enables user to pair the remote controls to the control board without dismantling the machine.

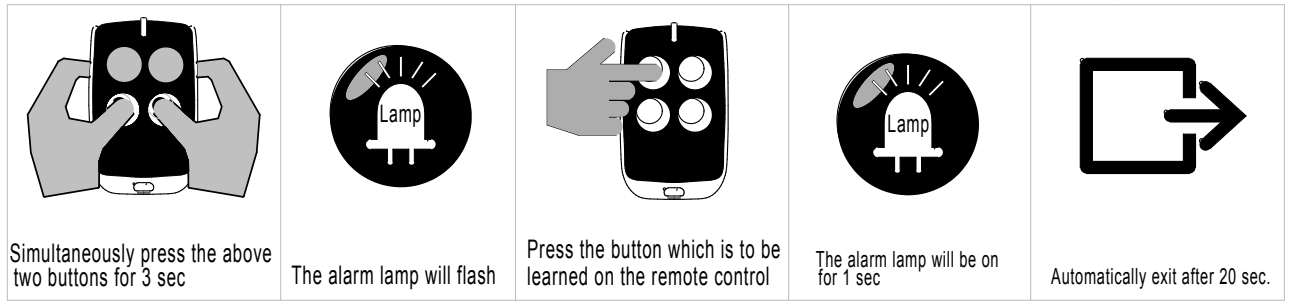
**Precondition:**

1. To have one piece of remote control that has already been paired.
2. To ensure the reliability of learning, please operate the intelligent learning function within 2 meters away from the machine.
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.

**B. Operation Graphic Illustration:**

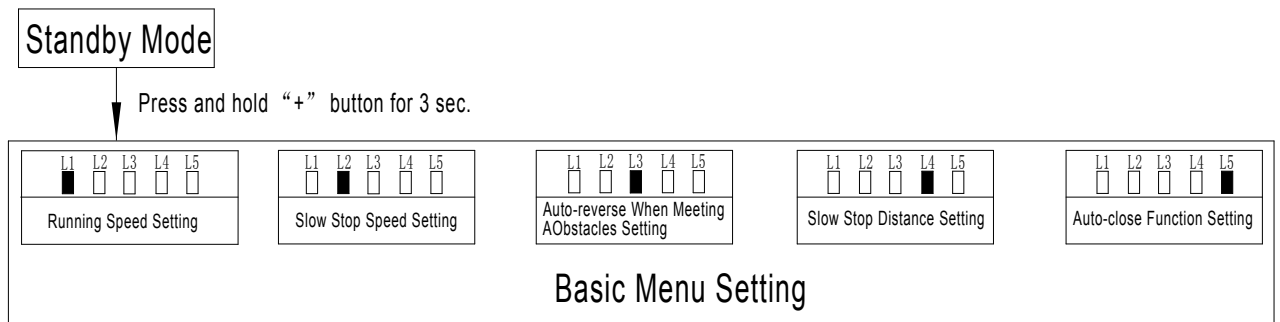


**Figure 21**

## 5.5 Basic Menu Setting

### Operation Instruction:

1. Press and hold “PROG” button for 3 sec. under the control board standby mode, the indicator light L0 will flicker once, and then enter into basic menu setting.
2. Different functions can be selected through “+” and “-” buttons.
3. Press “SET” button to enter into the corresponding selection to set the parameters.



**Figure 22**

### 5.5.1 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 flicker once, then L1 will be always 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 automatically exit. → The indicator lights L1-L5 will be on for one sec.

## B. Operation Graphic Illustration

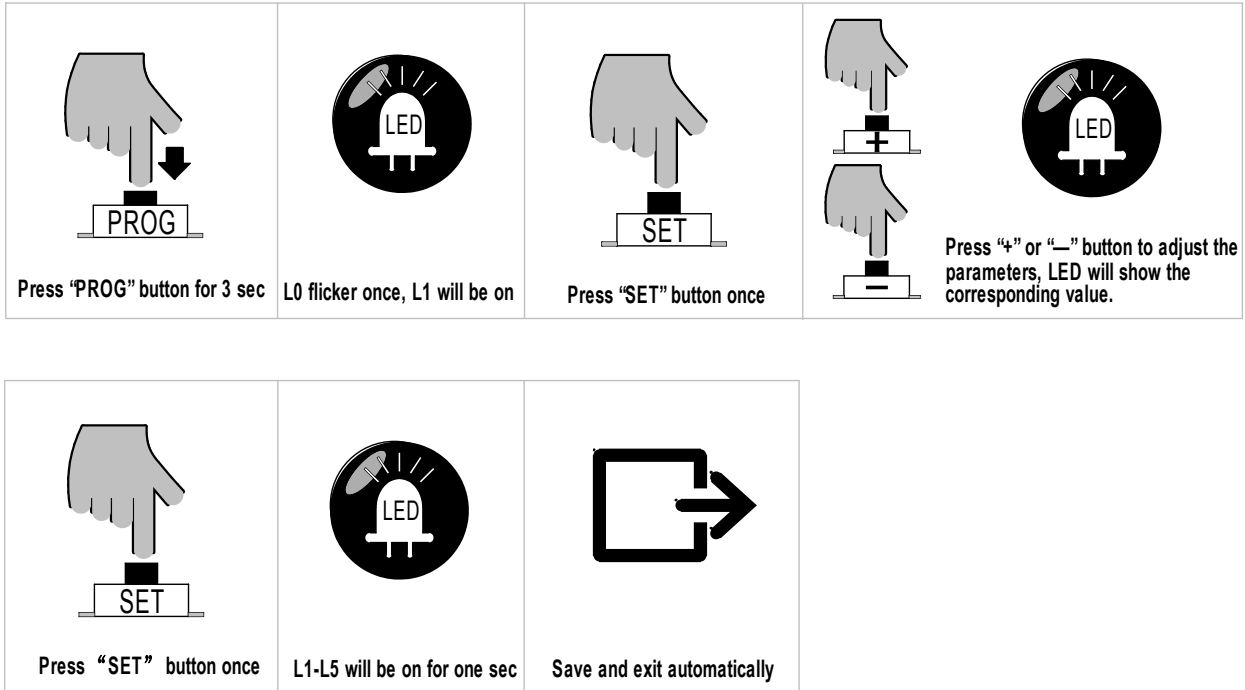


Figure 23

## 5.5.2 Slow Stop Speed Setting (L2)

The setting for slow stop speed can effectively reduce the inertial force when the gate is opened 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 flicker once, then L1 will be always on.
2. Press "+" button to select slow stop speed setting option. → Indicator light L2 will be always 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 automatically exit. → Indicator lights L1-L5 will be on for one sec.

## B. Operation Graphic Illustration

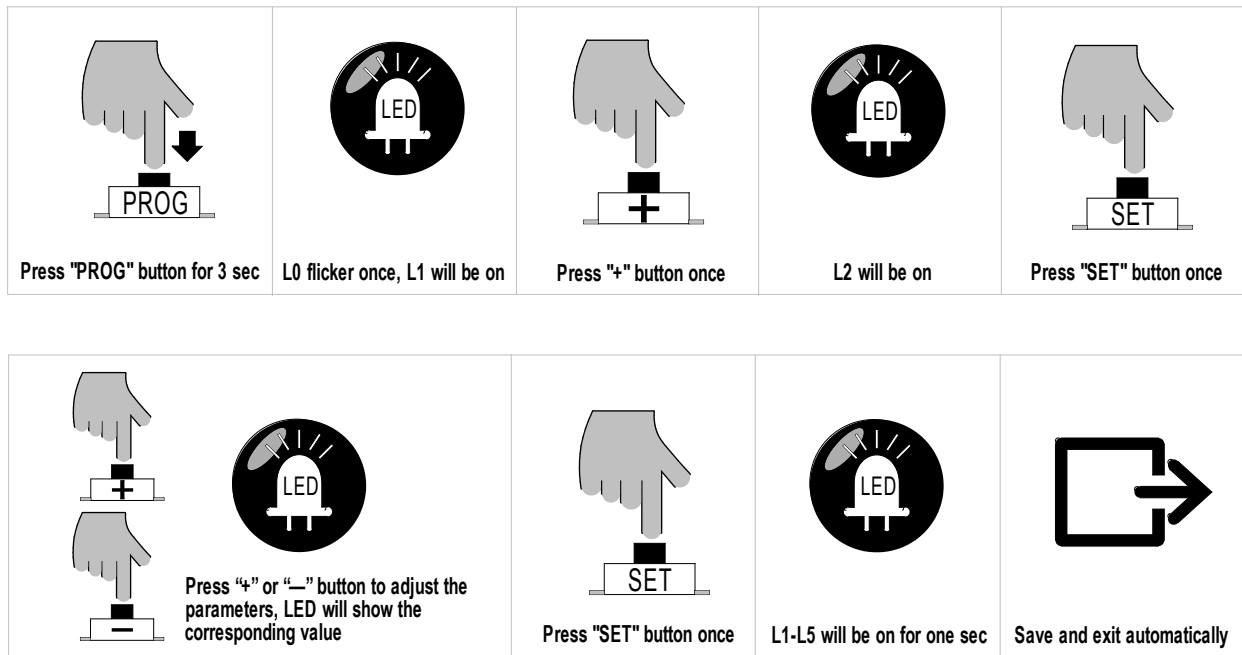


Figure 24

### 5.5.3 Auto-reverse When Meeting Obstacles Setting (L3)

During the gate opening or closing travel, 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 effect of collision.

#### A. Operation Instruction:

1. Press "PROG" button for 3 sec. to enter into basic menu. → Indicator light L0 will flicker once, then L1 will be always on.
2. Press "+" button twice to select Auto-reverse when meeting obstacles setting option. → Indicator light L3 will be always 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 sensitive will be. L1-L5 are all off means to cancel the Auto-reverse function.
5. Press "SET" button once to save the setting and automatically exit. → Indicator lights L1-L5 will be on for one sec.



## B. Operation Graphic Illustration

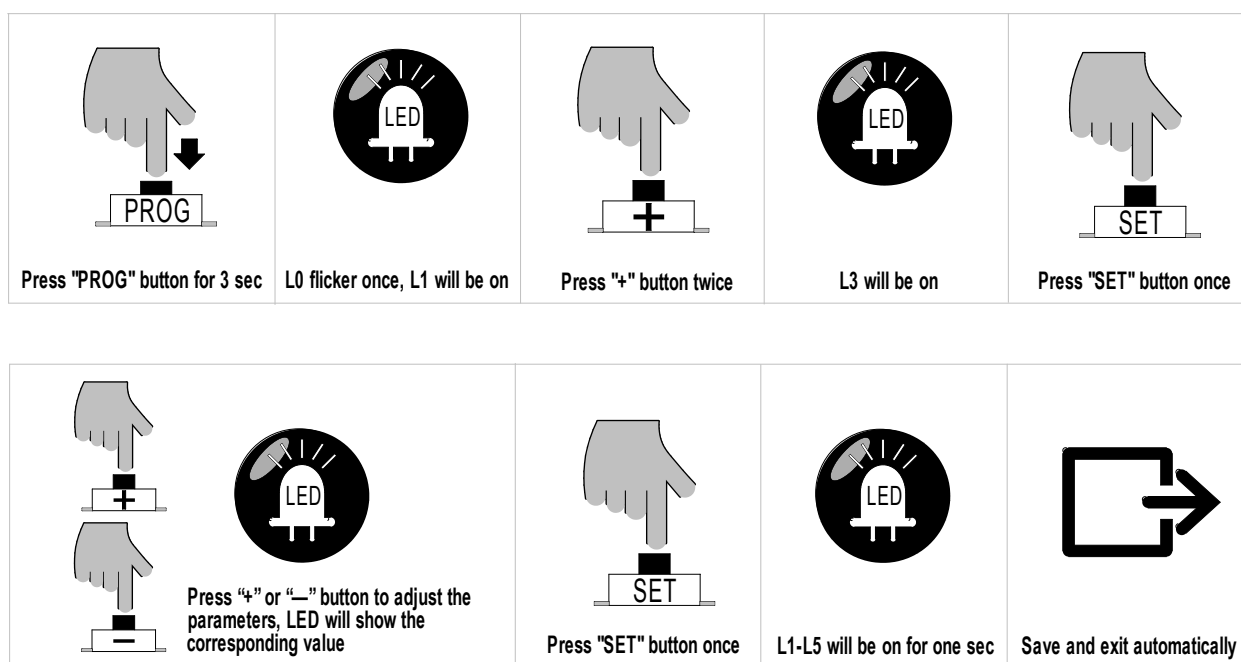


Figure 25

### 5.5.4 Slow Stop Distance Setting (L4)

Setting for slow stop distance makes the gate running more smoothly and extends the service life 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 flicker once, and then L1 will be always on.
2. Press "+" button three times to select slow stop distance setting option. → Indicator light L4 will be always 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 indicate 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 automatically exit. → Indicator lights L1-L5 will be on for one sec.

#### B. Operation Graphic Illustration

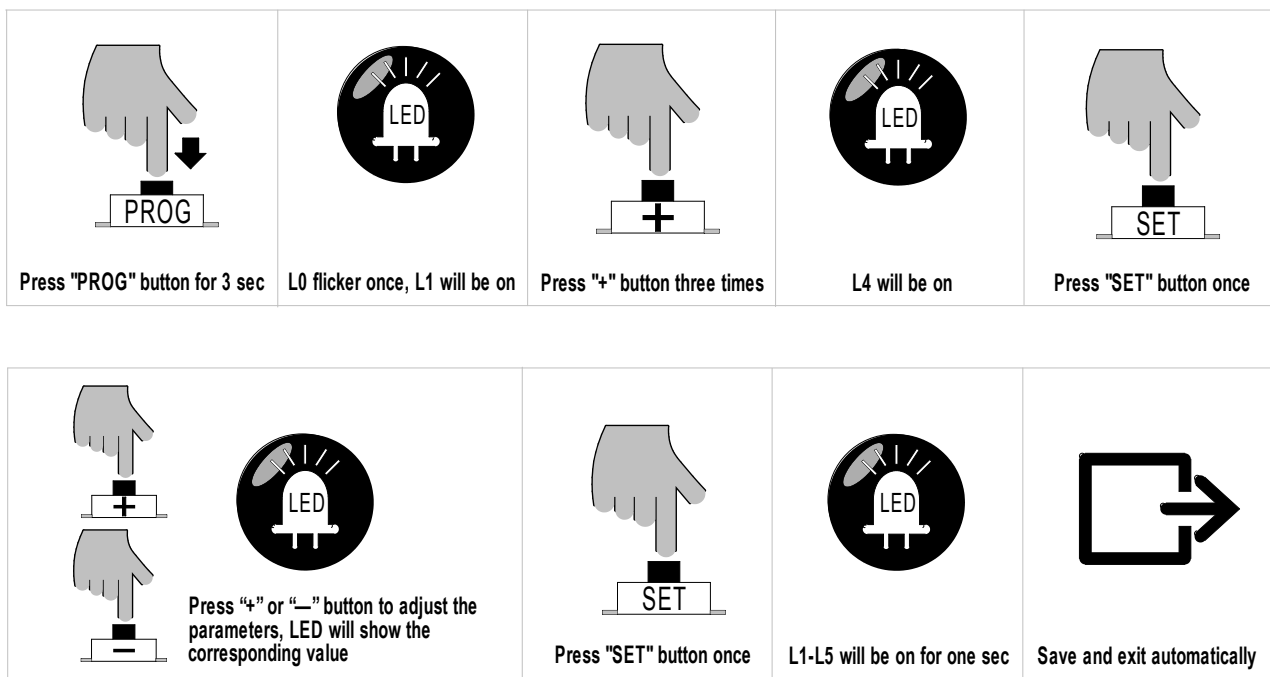


Figure 26

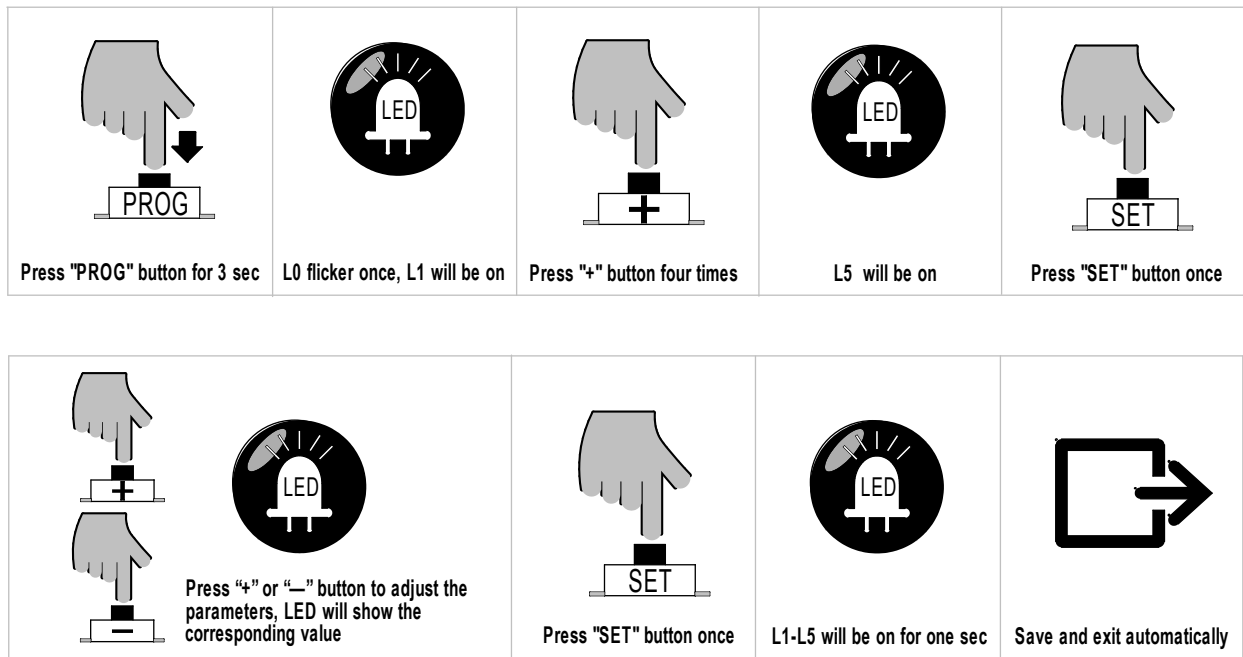
### 5.5.5 Auto-close Function Setting (L5)

When the gate is fully opened, the control board will send the auto-close signal to enable the gate 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 flicker once, and then L1 will be always on.
2. Press "+" button four times to enter into Auto-close setting option. → Indicator light L5 will be always 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 indicator lights that is always on will indicate the Auto-close time. (Table 2 Auto-Close Time)
5. Press "SET" button once to save and automatically exit. → Indicator lights L1-L5 will be on for one sec.

#### B. Operation Graphic Illustration



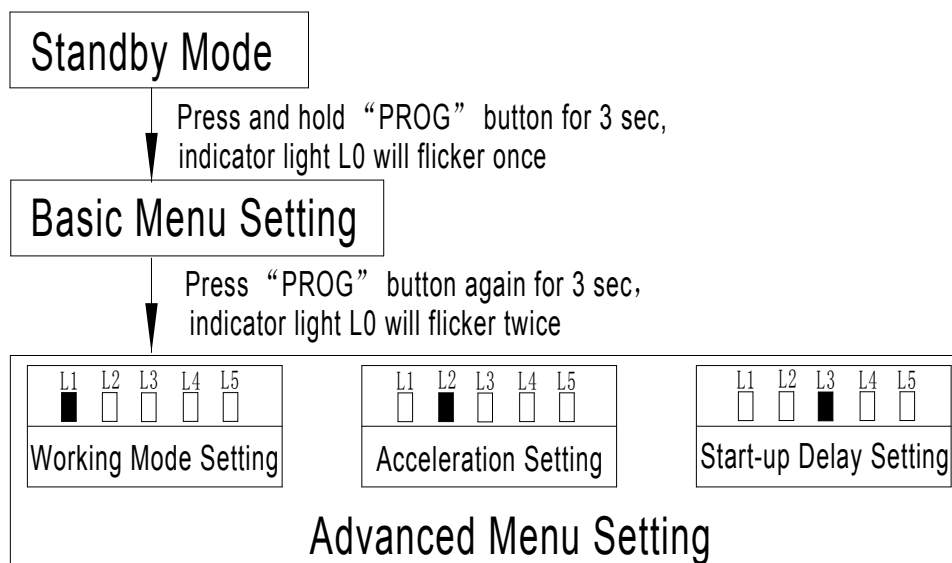
**Figure 27**

Indicator light status : <input type="checkbox"/> Off <input checked="" type="checkbox"/> On <input checked="" 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**

## 5.6 Advanced Menu Setting

1. Press "PROG" button for 3 Sec. under the control board standby mode, indicator light L0 will flicker once, and then enter into basic menu setting. Press "PROG" button again for 3 sec. indicator light L0 will flicker twice, and then enter into the advanced menu setting.
2. Different functions can be selected through "+" and "-" buttons.
3. Press "SET" button to enter into the corresponding selection to set the parameters.



**Figure 28**

### 5.6.1 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. Community Mode (L2):

Terminals for external buttons:

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

Special function: Only the door is fully opened, can it be closed thereafter. If the door is not fully opened, 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.

#### 3. Three Button Mode (L3):

Terminals for external buttons:

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

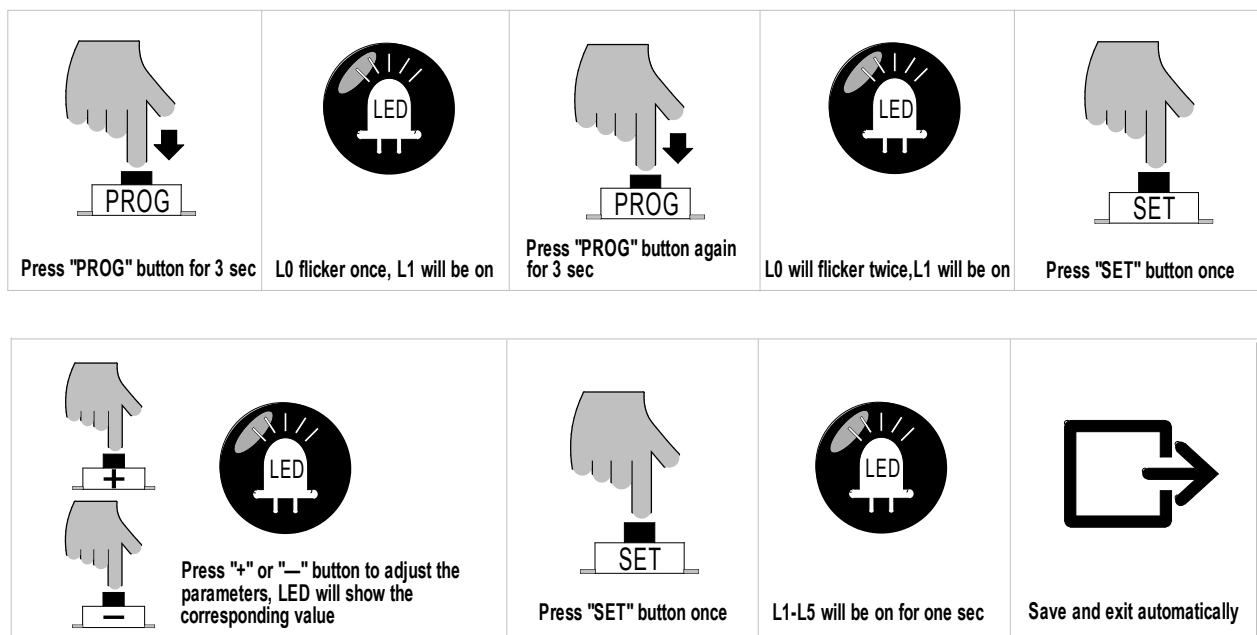
#### A. Operation Instruction:

1. Press and hold "PROG" button for 3 sec. to enter into basic menu. → Indicator light L0 will flicker once, then L1 will

be always on.

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

#### B. Operation Graphic Illustration



**Figure 29**

### 5.6.2 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 flicker once, then L1 will be always on.
2. Press "PROG" button again for 3 sec. to enter into advanced menu. → Indicator light L0 will flicker twice, then L1 will be always on.
3. Press "+" button once to select acceleration setting option. → Indicator light L2 will be always on.

4. Press "SET" button once to enter into acceleration setting. → Indicator lights L1-L5 will show the current acceleration.  
(The default is L3)
5. Press "+" or "-" button to set the acceleration. → Indicator lights L1-L5 will indicate the different accelerations. The more the indicator lights will be on, the faster the speed changes.
6. Press "SET" button once to save and automatically exit. → Indicator lights L1-L5 will be on for one sec.

## B. Operation Graphic Illustration

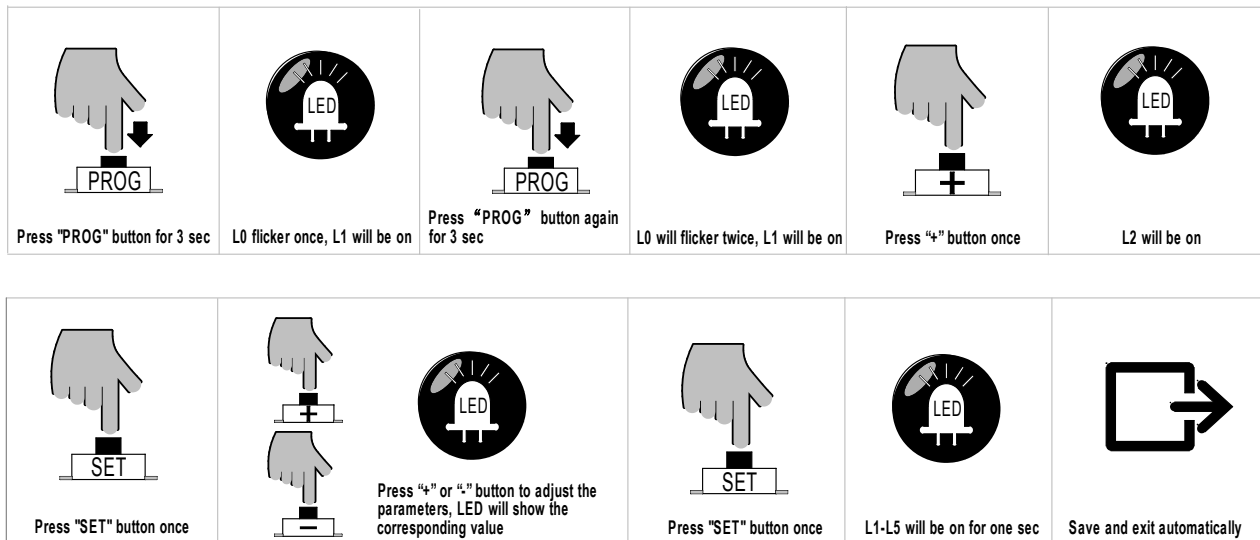


Figure 30

### 5.6.3 Start-up Delay Setting (L3)

The control board for this product is with low power consumption function under standby mode. When the machine is stopped, the control board will automatically enter into low power consumption standby mode. 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 machine 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 flicker once, then L1 will be always on.
2. Press "PROG" button again for 3 sec. to enter into advance menu. → L0 will flicker twice, then L1 will be always on.
3. Press "+" button twice, choose start-up delay setting. → Indicator light L3 will be always on.

4. Press "SET" button once to enter into acceleration 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 automatically exit. → Indicator lights L1-L5 will be on for 1 sec.

## B. Operation Graphic Illustration

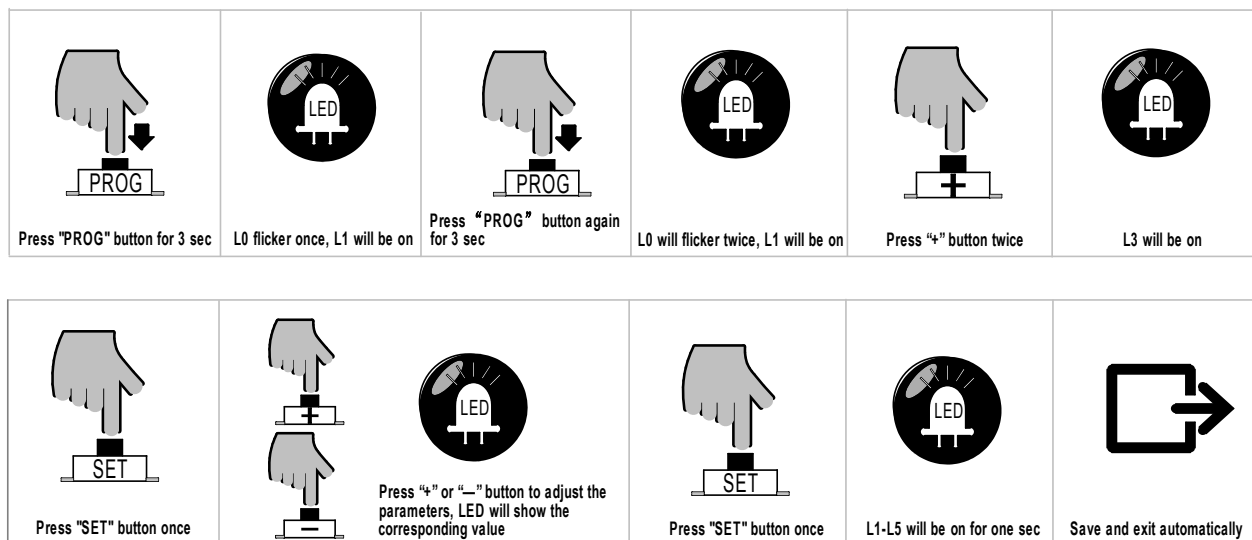


Figure 31

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

## 5.7 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 gate opener.

#### A. Operation Instruction:

1. Press and hold "SET" button for 3 sec. → Indicator light L3 will flicker.
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

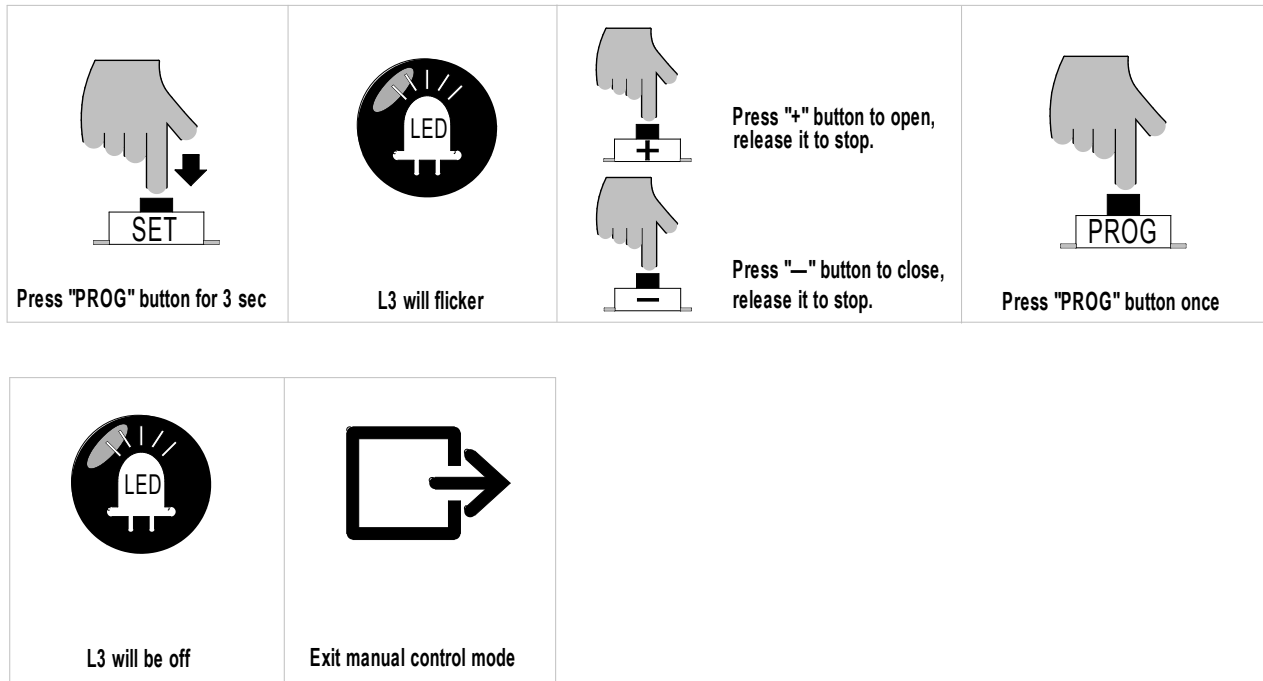


Figure 32

## 5.8 Battery Level Checking

The current battery level can be checked through the indicator lights. When the power is low (battery voltage < 10.5V), the machine will stop running to protect the battery being damaged. Under such circumstance, users may have to unlock the machine first, after which the gate can be manually operated.

#### 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



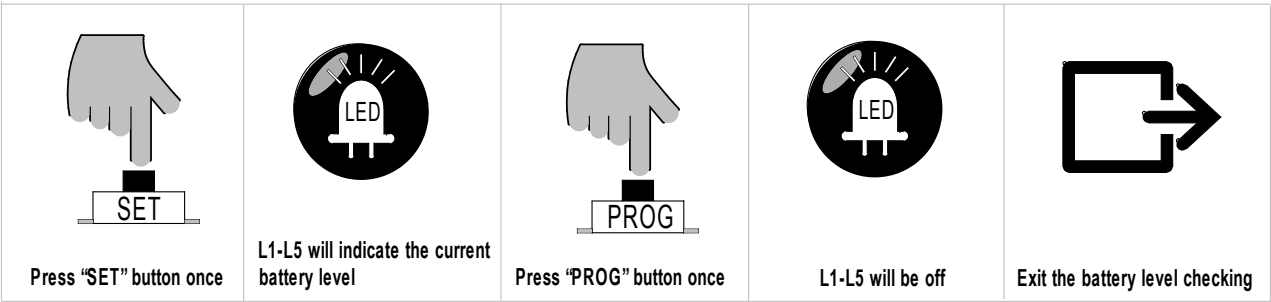


Figure 33

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

### 5.9 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.

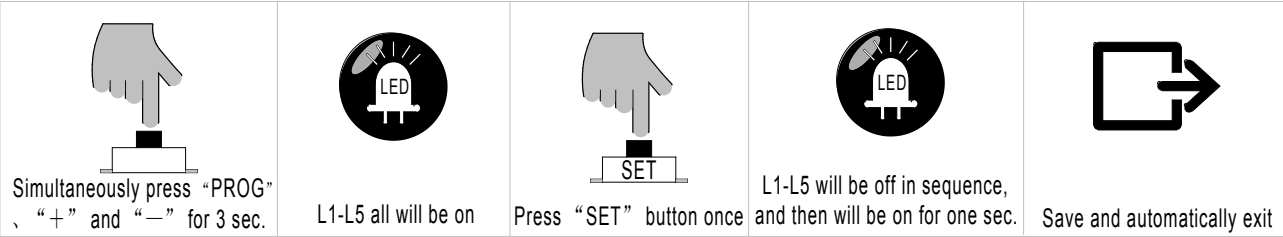


Figure 34

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## 6. Others

### 6.1 Maintenance

Check whether the gate is operates normally every month.

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

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

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

### 6.2 Troubleshooting

Problems	Possible Reasons	Solutions
The gate cannot be properly opened or closed, and indicator light does not light.	<ol style="list-style-type: none"><li>1. The power is off.</li><li>2. Battery power is exhausted.</li><li>3. Fuse is burned.</li></ol>	<ol style="list-style-type: none"><li>1. Turn on the power switch.</li><li>2. Change the battery.</li><li>3. Check the fuse of transformer input port, change it if burned.</li></ol>
The gate can be opened but cannot be closed.	<ol style="list-style-type: none"><li>1. Infrared protection function is activated, but not connected with any infrared protection devices.</li><li>2. Wiring problem of infrared protection devices.</li><li>3. Mounting problem of infrared protection devices.</li><li>4. Infrared protection device is blocked by objects.</li><li>5. Sensitivity of meeting obstacles is too small.</li></ol>	<ol style="list-style-type: none"><li>1. Connect with an infrared protection device or turn off the infrared protection function.</li><li>2. If not connected with any infrared protection devices, please make sure to short the IR and COM ports; If connected with infrared protection devices, please make sure all the wiring is correct and should be NC.</li><li>3. Make sure that the photocell mounting position can be mutually aligned.</li><li>4. Remove the objects.</li><li>5. Increase the sensitivity of meeting</li></ol>

		obstacles.
Remote control doesn't work.	<ol style="list-style-type: none"> <li>1. Low battery power of the remote control.</li> <li>2. Remote control learning is not completed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Change the remote control battery.</li> <li>2. Re-conduct remote control learning.</li> </ol>
Press OPEN, CLOSE button, the gate doesn't run, and the motor has noise.	Gate running is not smoothly.	According to the actual situation to adjust the motor or the gate.
Leakage switch tripped.	Power supply line short circuit.	Check wiring.
Remote control working distance is too short.	Signal is blocked.	Connect external receiver antenna, should be 1.5 meters above ground.
The gate moves to the middle position to stop or reverse.	<ol style="list-style-type: none"> <li>1. Sensitivity of meeting obstacles is too small.</li> <li>2. Gate meets obstacle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase the sensitivity according to this manual.</li> <li>2. Remove the obstacle.</li> </ol>
Gate opens automatically	Automatic close function has been activated but with incorrect opening direction.	Please refer to the relative instructions in this manual to change the opening direction.

---

## Warranty

### Warranty Ordinance

1. To repair against this warranty card and invoice during the warranty period.
  2. Warranty period: 1 year after the date of invoice.
  3. Without unauthorized dismantling, any product defective or damage due to quality problem, we'll offer the repair service for free or replace for free.
  4. The malfunction and damages caused by incorrect use or man fault is not covered by this warranty.
- 

### Maintenance Record

Date	Content	Repairman