

# Sectional and Tilting Door Opener

## Installation Instructions and User Guide



600	<input type="text"/>
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800	<input type="text"/>
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1000	<input type="text"/>
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S/N	<input type="text"/>
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### **WARNING**

Please read the manual carefully before installation and use. The installation of your new door opener must be carried out by a technically qualified or licensed person. Attempting to install or repair the door opener without suitable technical qualification may result in severe personal injury, death and / or property damage.

# CONTENTS

Important Safety Recommendations.....	1
Basic function introduction.....	2
Special function introduction.....	2
Installation (aluminum track).....	3-4
Installation (steel track).....	5-6
Installation recommendations.....	7
Basic function setting and applying.....	8-9
Special function introduction and application.....	10-11
PCB structure.....	12
Aluminum & steel track accessories list.....	13
Manual disengagement.....	14
Maintenance.....	14
Final note.....	15
Important information for the user.....	15

# Important safety recommendations

**FAILURE TO COMPLY WITH THE FOLLOWING SAFETY RECOMMENDATIONS MAY RESULT IN SERIOUS PERSONAL INJURY, DEATH AND / OR PROPERTY DAMAGE.**

- 1. PLEASE READ CAREFULLY AND ADHERE TO ALL SAFETY AND INSTALLATION RECOMMENDATIONS.**
2. The opener is designed and manufactured to meet local regulations. The installer must be familiar with local regulations required in respect of the installation of the opener.
3. Unqualified personnel or those persons who do not know the occupational health and safety standards being applicable to automatic gates and other doors, must in no circumstances carry out installations or implement systems.
4. Persons who install or service the equipment without observing all the applicable safety standards will be responsible for any damage, injury, cost, expense or claim whatsoever any person suffered as a result of failure to install the system correctly and in accordance with the relevant safety standards and installation manual whether directly or indirectly.
5. For additional safety we strongly recommend the inclusion of Photo Beam. Although the opener incorporates a pressure sensitive Safety Obstruction Force system the addition of Photo Beam will greatly enhance the operating safety of an automatic garage door and provide additional peace of mind.
6. Make sure that the garage door is fully open & stationary before driving in or out of the garage.
7. Make sure the garage door is fully closed & stationary before leaving.
8. Keep hands and loose clothing off the opener and garage door all the time.
9. The Safety Obstruction System is designed to work on STATIONARY objects only. Serious personal injury, death and / or property damage may occur if the garage door comes into contact with a moving object
- 10. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.**



- 11. Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.**
- 12. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.**
  - **WARNING: Important safety instructions. It is important for the safety of persons to follow all instructions. Save these instructions.**
  - **Do not allow children to play with door controls. Keep remote controls away from children.**
  - **Watch the moving door and keep people away until the door is completely opened or closed.**
  - **Take care when operating the manual release since an open door may fall rapidly due to weak or broken springs, or being out of balance.**
  - **Frequently examine the installation, in particular check cables, springs and mountings for signs of wear, damage or imbalance. Do not use if repair or adjustment is needed since a fault in the installation or an incorrectly balanced door may cause injury.**

- Each month check that the drive reverses when the door contacts a 50 mm high object placed on the floor. Adjust if necessary and recheck since an incorrect adjustment may present a hazard, for drives incorporating an entrapment protection system depending on contact with the bottom edge of the door.
- Details on how to use the manual release.
- Information concerning the adjustment of the door and drive.
- Disconnect the supply when cleaning or carrying out other maintenance.
- The installation instructions shall include details for the installation of the drive and its associated components.

## **Basic function introduction**

1. Soft start, soft stop  
Minimize start-up load on garage door opener and garage door
2. Opening & closing force self-learning
3. Overloading force detecting, the door will reverse more than 15 cm automatically when it is overloaded when closing.
4. Security resistance adjustable, with a wide range, sensitive and reliable.
5. Wall switch
6. Infra-red security protection, the door will change to open when obstruction is detected while closing.
7. Low-voltage protection, the process will not perform any action of opening and closing when voltage is too low, door panel and controller won't be damaged.
8. We adopt rolling code transmitter, with billions of codes, won't be coincident code or pirated code.
9. Optional battery back up, in case of power failure.
10. Key lock feature.
11. With self-closing feature.

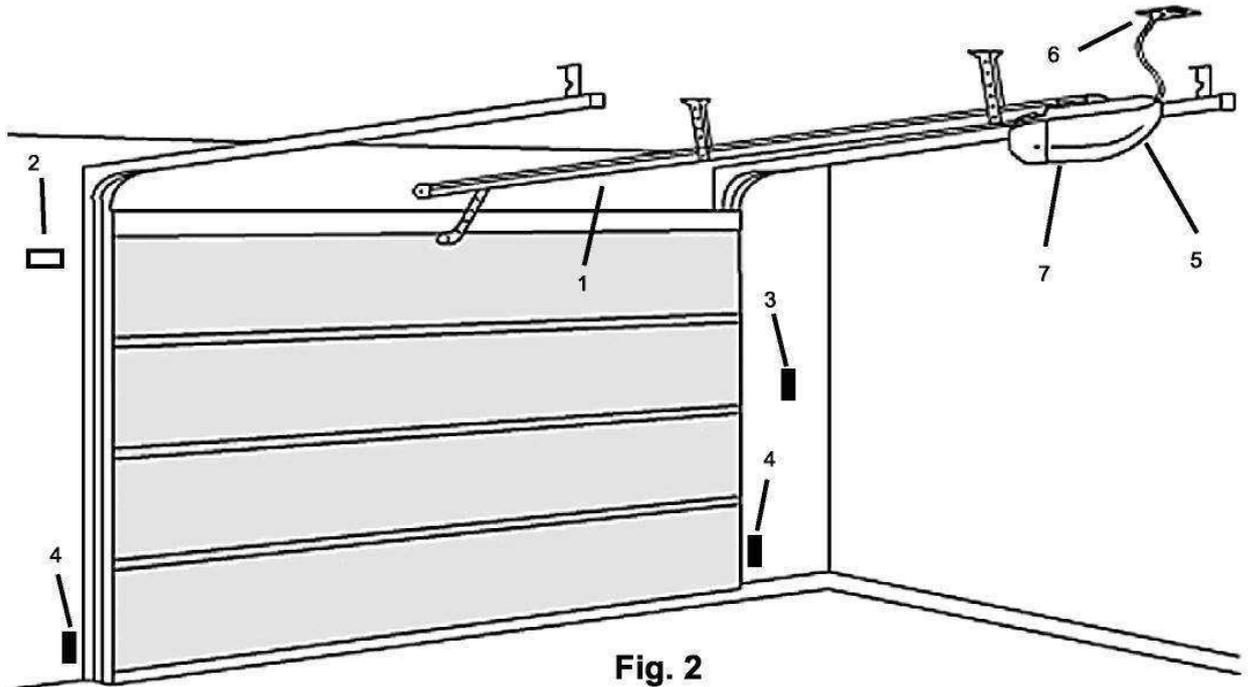
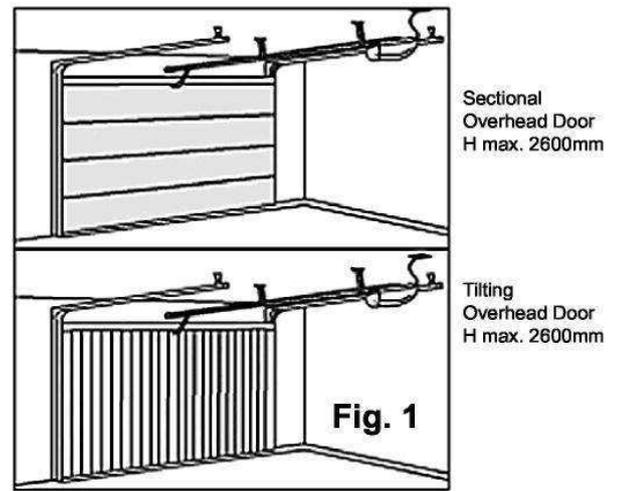
## **Special function introduction**

**The following functions are made to order in accordance with the special needs of customers:**

1. Caution light feature
2. O/S/C button function
3. Pass door protection feature
4. Rapidly automatic safety reverse

## Installation (aluminum track)

- 1) Read the instructions carefully.
- 2) Make sure the door structure is solid and suitable to be motor driven.
- 3) Make sure that when the door is moving there are no friction points.
- 4) The door must be properly balanced and must be easily lowered and raised by hand.
- 5) Install a 220V, adequately protected 3-pin socket near where the S600-2 opener is going to be installed



Referring to Fig. 2 for recommended installation

- |   |                 |
|---|-----------------|
| 1) Sectional door rail                    | 5) Inside panel |
| 2) 24V DC flashing light (optional extra) | 6) Power socket |
| 3) Push button                            | 7) Door opener  |
| 4) Photo beam (RX/TX Type)                |                 |

### CHAIN SHUTTLE ASSEMBLY

As for the ease of the chain, it is delivered with the chain and chain shuttle already assembled in the track. If you need to assemble it yourself, connect the chain shuttle to the chain with screw C tightened firmly. Move shuttle B to half way along the rail section; grease the chain and sprocket (Fig.3) with a lithium type grease or equivalent. Do not use oil type lubricants.

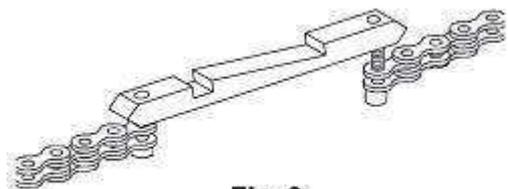


Fig. 3

## Installation

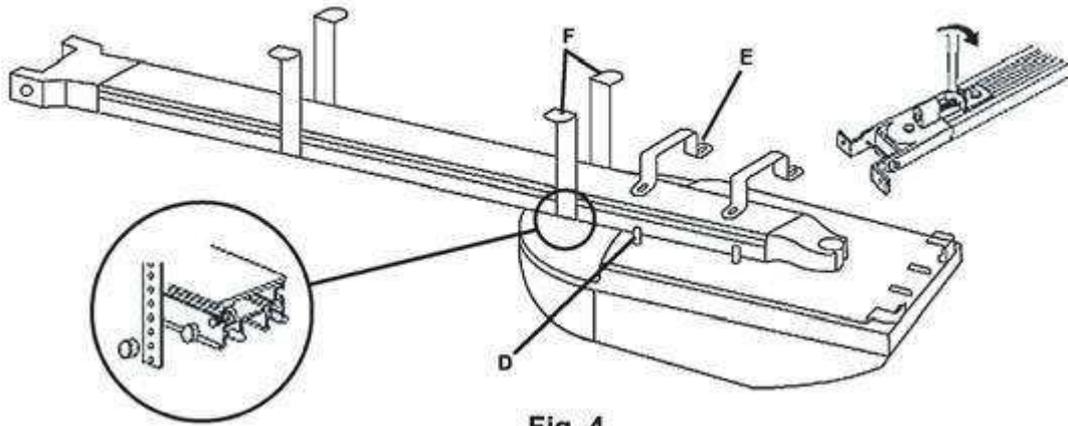


Fig. 4

Before attaching the motor brackets (E) (FIG 4) screw an inverted nut (6mm) (D) on each stud then position the brackets (E) on the studs and secure them in-place using a second 6mm-nut and then lock the brackets to the rail by tightening the inverted lock nuts (D). Fix the opener to the doorframe

Installation

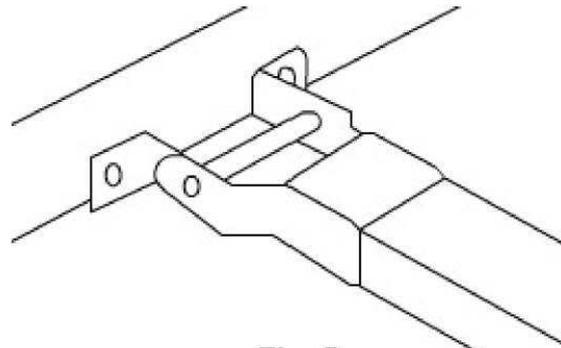


Fig. 5

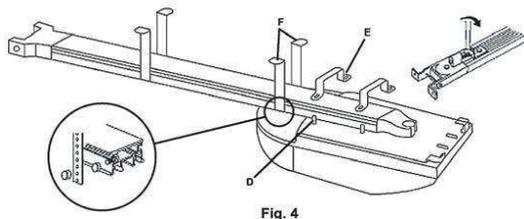


Fig. 4

or to the ceiling with the correct fixing (Fig.5), maintaining a minimum gap of 30mm from the top panel's maximum height (Fig. 6). Check measurements for drilling insert and lock the brackets F and fix the Smart Lifter opener to the ceiling with the correct fixings (Fig.6). Cut off any hanging brackets excess.

**Warning:** Make sure the opener is affixed to noggins in ceiling and not to plasterboard. Failure to have a safe and secure fixing will lead to opener falling, and cause serious persons and /or property damage.

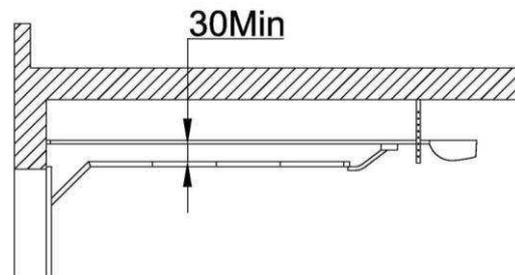


Fig. 6

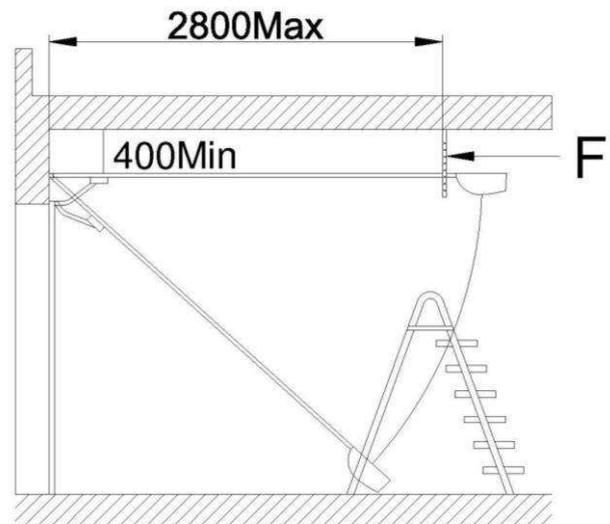


Fig. 7

## Installation (steel track)

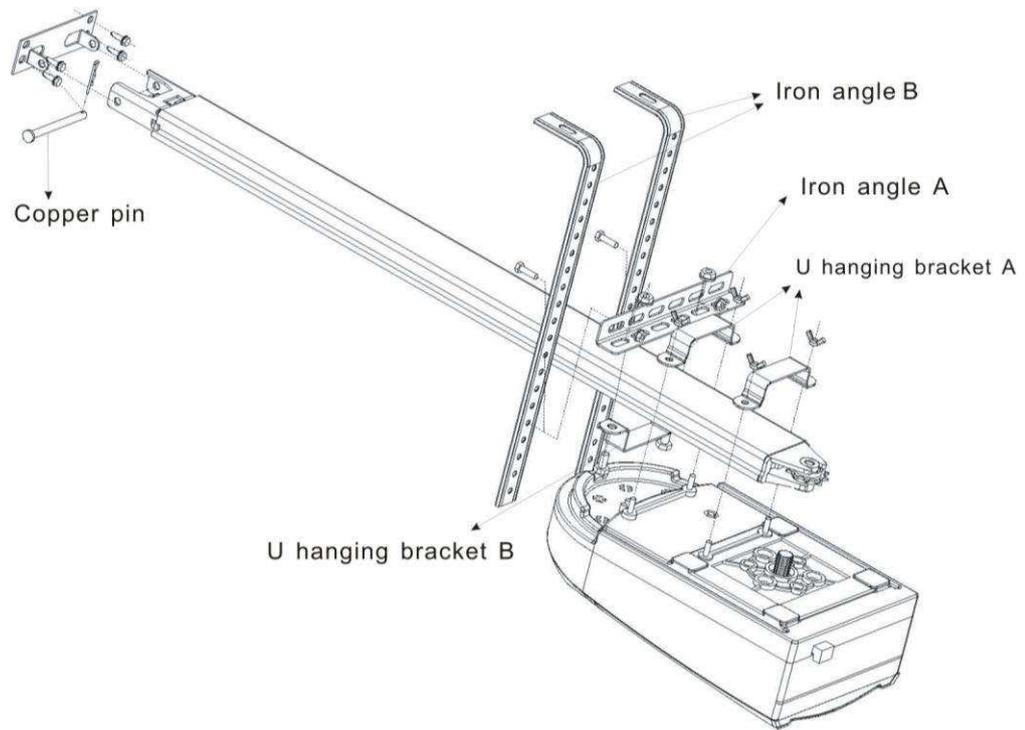


Fig. 1

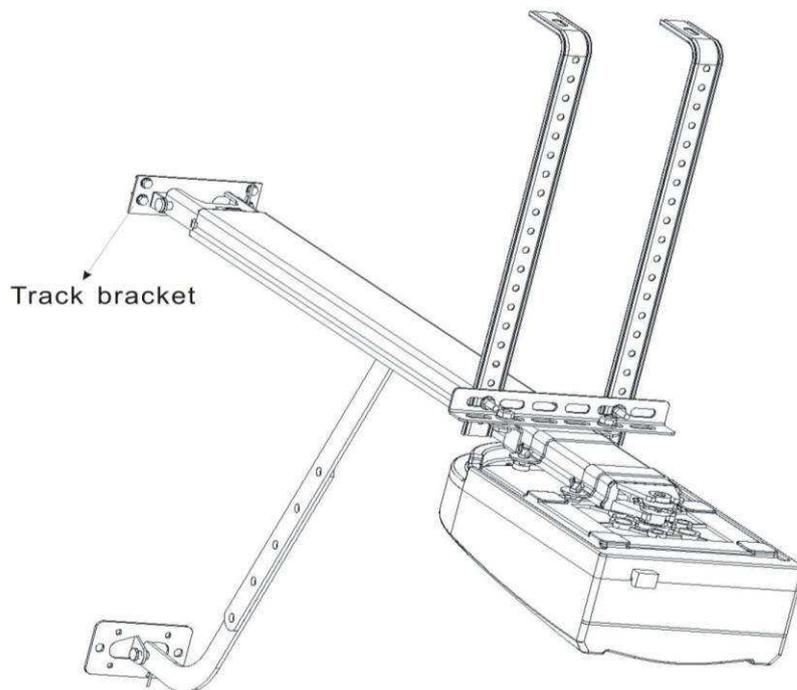


Fig. 2

1. Fixing the track bracket. Fixing the track bracket to the wall 2cm-15cm over the shaft or intermediate bracket (depend on the actual installation space).
2. Fixing the steel track to the bracket with cotter pin A. (Fig. 1)
3. Fixing garage door opener to the track by U hanging bracket A. It's enough for 2 Nm fastening force.
4. Fixing the motor bracket. Fix the motor bracket as closer to the opener as you can, if there is enough space. Notice: Make sure the track is horizontal and vertical to the shaft. Make sure the connection of iron angle B and ceiling is firm enough.
5. Fixing the track by iron angle A and U bracket B.
6. The connection of panel bracket and panel connector refers to the installation of aluminum track. Fix the clutch cord.
7. Release the clutch, try to open and close the door by hand. Make sure there is no resistance between door panel and track.
8. Connecting the opener with power and adjusting the operation.

Notice: Make sure the opener's voltage is in accordance with the local voltage. Connect the opener to a properly earthed power supply.

# Installation recommendations

Remember there are specific standards that have to be strictly followed regarding the safety rules of electrical installations and automatic gates and doors.

As for the legal requirements and standards that must be adhered to, please take notice of the following points to ensure maximum safety and reliability of your installation.

1. Before installing check the surrounding environment. Carefully evaluate any hazards which could be physical damage (transiting vehicles, parts of trees falling etc.), possible contact with persons' bodies (insects, leaves, etc.), flooding hazards, or any others exceptional events.
2. Check the main voltage numbers is the same as the numbers that are given on the rating plate and in this manual.
3. Check and make sure if there is suitable electrical protection against short circuits/power spikes and proper earthing on the main supply.

**Remember** the unit having main voltage running through it (electrocution hazard, fire hazard).

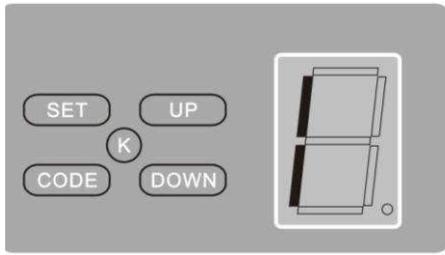
4. Take care with the control unit; the parts may be subject to damage if the control unit is abused.
5. Make sure that you have all the necessary materials, and they are suitable for this kind of use.
6. Read all the instructions thoroughly, and make sure they are understood before attempting to install the opener.
7. Before starting the installation carefully analyze all the risks relating to automating the door. Verify that the door is automated in a sound condition and that the mechanisms are in good working order. Observe the safety margins and minimum distances.
8. Carefully evaluate the safety devices to be installed and the right place to install them; always install an emergency stop device for power interruption to the opener if it is required.
9. Once the risks have been analyzed, install the opener and relative safety devices, emergency stop and/or photoelectric cells.

**Important note:** As for additional safety rules, we strongly recommends the fitting of Photo Electric safety beams on all installations.

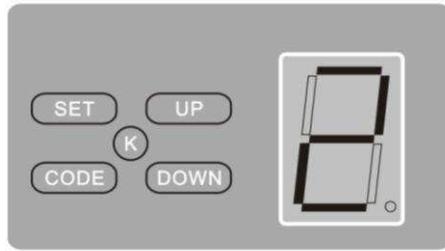
10. While installing the opener, strictly follow all the instructions given in the instruction manual. If some points or procedures in this manual are not very clear do not install the unit until all doubts have been cleared up with our technical department.

# Basic function setting and applying

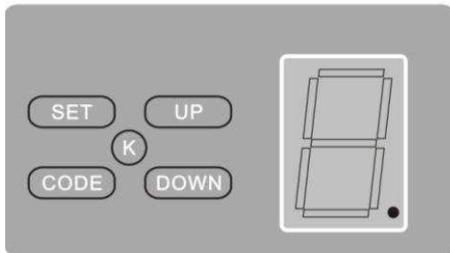
## 1. Itinerary setting Opening & closing force self-learning



Press 'SET' button and hold on until the LED displays figure '1', then adjust the up limit by pressing 'up' button. Fine-tuning 'up' or 'down' button to determine the final up limit position then press 'set' button the display turn into '2' automatically. Adjust the down limit by pressing 'down' button. Fine-tuning 'up' or 'down' button to determine the final down limit position then press 'set' button. The opener will operate a cycle automatically to remember the limit positions and the opening & closing force.



## 2. Matching the receiver and transmitter



Press 'CODE' button and hold on until the LED dot is on. (Fig. A) Then press any button (except the lock button) on the transmitter once, the dot will be off; press the button again the dot will fast flash then LED displays '11' (Fig. B). After that the transmitter will be available. Press 'CODE' button more than 8 seconds until the LED displays 'C', all the stored codes will be deleted.

Fig. A

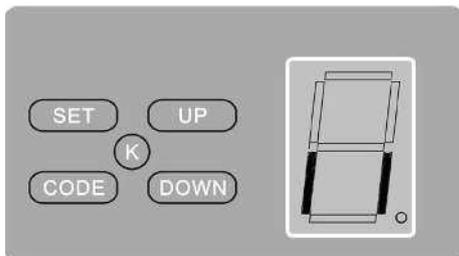
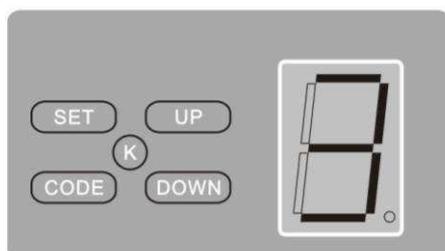


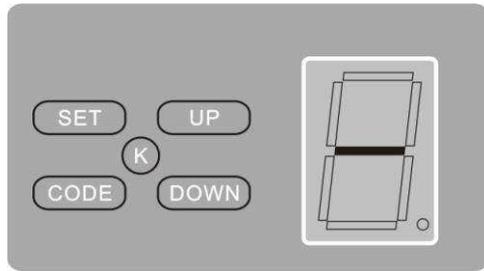
Fig. B

## 3. Safety reverse force adjustment



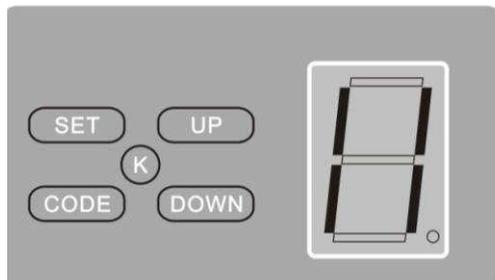
Press 'SET' button and hold on until the LED displays '3'. It's under force adjustment mode. Press 'UP' button to increase the force and 'DOWN' button to decrease the force. The maximum force is 9 and the minimum is 1. Press 'SET' button to confirm.

#### 4. Auto-close setting



Press 'UP' button and hold on until the LED displays '-'. Press 'up' button once, the auto-close time will increase 1 minute, the maximum time is 9 minutes. Press 'down' button the auto-close time decrease 1 minute. The auto-close function will be turned off when LED displays 0. Press 'SET' button to confirm.

#### 5. Photo beam setting



Press 'DOWN' button and hold on until the LED displays '11', press 'UP' button the LED displays 'H', photo beam function is available. Press 'DOWN' button the LED displays '11' to cancel this function. When setting is finished, press 'SET' to confirm. When connecting pulsed quantity control infrared sensor, wiring as Fig. 3. When infrared sensor is controlled by switch value, wiring as Fig.1 **Notice: Close the photo beam function when you don't use photo beam sensor.**

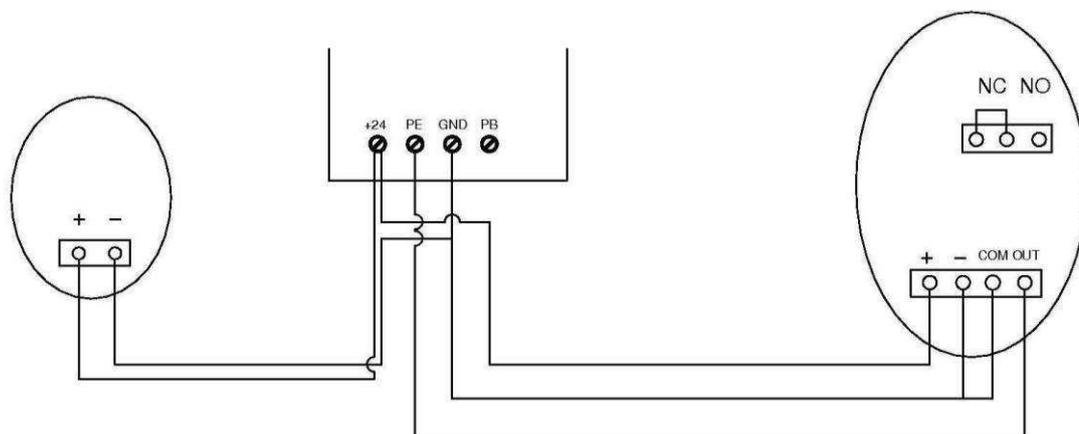
#### 6. O/S/C Terminal

Connecting a touch off switch to this terminal, you can use the switch when maintaining or the transmitter is left in garage.

# Special function introduction and application

The following functions are made to order in accordance with the special needs of customers:

1. The O/S/C button function  
Add an O/S/C button to open or close the door.
2. Auto safety reverse function  
This special function is for safety consideration. Reverse force and time are in accordance with European Union standard.  
( $F \leq 400N$ ; reverse time  $\leq 0.75S$ )
3. Caution light function  
There are corresponding accesses for this function and provide 24v-35v caution light voltage. Suitable for caution light with DC 24v-28v, current  $\leq 100mA$ . For use AC 220V power caution lights, please purchase the adapter, and wiring as required.
4. Pass door (SD) protection  
This function ensure that the door can't be opened until the small passing door is closed.  
The door panel won't be damaged.



Connection of photo beam/switch control

Fig. 1

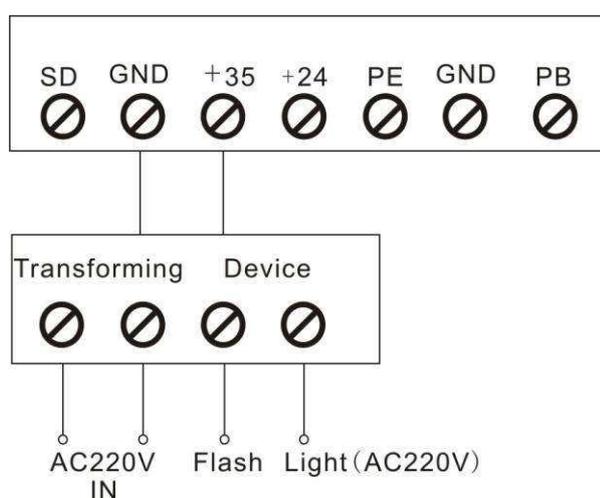
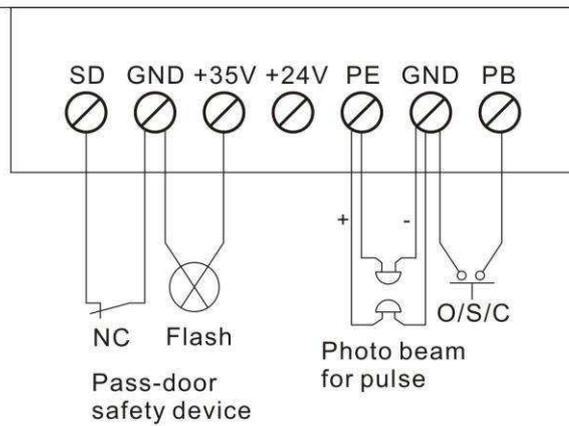


Fig. 2

# Garage Door Opener

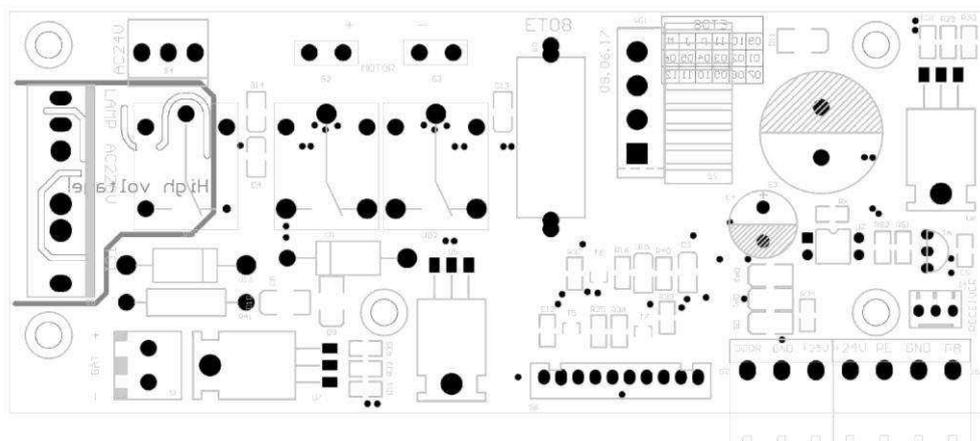
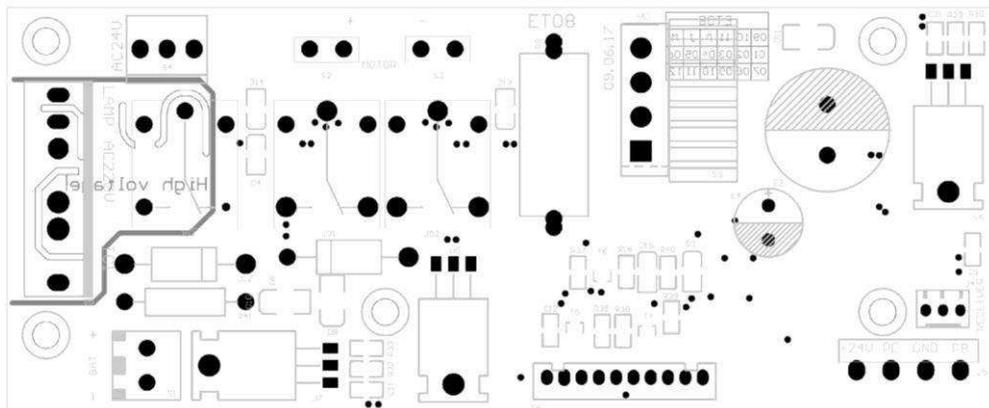
Flash Light



ASS. Terminal connection

Fig. 3

## PCB structure



## Aluminum track accessories list

Name	Amount
Clutch Components	x1
Hanging bracket	x1
Motor bracket	x2
φ6×90 axis pin	x1
φ8×55 carriage bolt	x2
Bracket for door panel	x1
Bracket for track	x1
Clutch cord	x1
Cord pendant	x1
φ1.8×38 Cotter pin	x2
φ6×14 bolt	x8
φ8×16 hexagon head bolt	x2
φ8×25 axis pin	x1
φ6 flange	x10
φ8 flange	x4
28×18 fixing kit	x1
10×15 fixing kit	x1

## Steel track accessories list

Name	amount
Bracket for door panel	x1
Bracket for track	x1
Clutch cord	x1
Cord pendant	x1
φ1.8×38 Cotter pin	x3
6×14 screw	x4
φ8×16 hexagon head bolt	x4
φ8×25 axis pin	x2
φ6 flange	x8
φ8 flange	x4
28×18 fixing kit	x1
10×15 fixing kit	x1
Hanging bracket	x1
Motor bracket	x2
φ8×90 axis pin (need to be punched)	x1

## Manual disengagement

The opener is equipped with a manual release cord to disengage shuttle and move door by hand while holding the handle down (Fig 12). Pull on the handle to disengage the shuttle. To re-engage the door simply run opener in automatic mode or move door by hand until the trolley engages in the chain shuttle.

In some situations that a pedestrian door is not in state, it is recommended that an external disengagement device should be fitted (Fig 13).

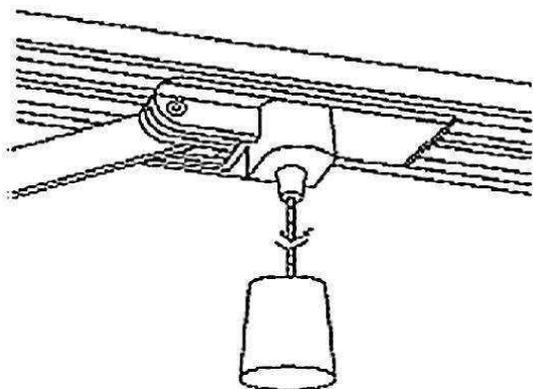


Fig.12

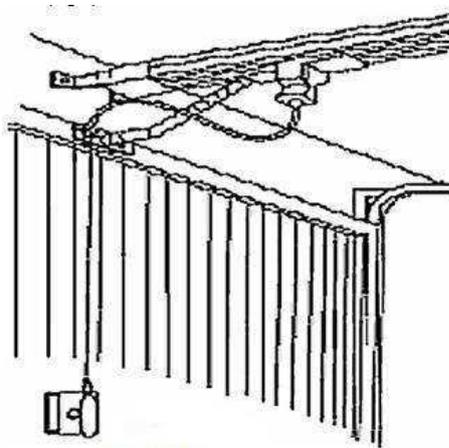


Fig. 13

## Maintenance

1. No particular maintenance is required for the logic circuit board.

Check the door at least twice a year if it is properly balanced and all working parts are in good working condition or not.

Check the reversing sensitivity at least twice a year, and adjust if it is necessary.

Make sure that the safety devices are working effectively (photo beams, etc.)

2. Light bulb replacing:

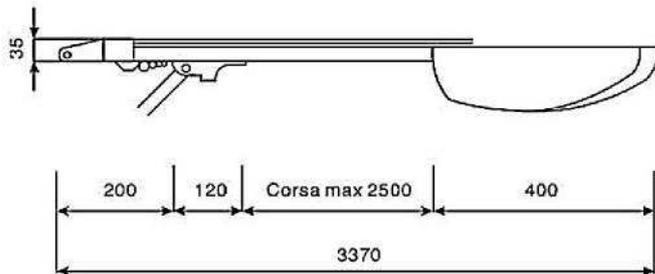
Notice: Make sure the power supply has been cut off before replacing the light bulb. And ensure the voltage of the new light bulb is in accordance with the local voltage and the power is within 25 Watt.

Demount the screws on the lamp cover. Take the lamp cover away then twist off the old light bulbs anti-clockwise. Fix the new lamp bulb and lamp cover.

**Notice: A rude operating door can affect the life of the automatic opener due to incorrect loads, and will void the warranty.**

# Technical specifications

Power Input:	130W (600N), 140W (800N), 150W (1000N); 220 - 240 V AC 50 Hz or 110 -120 V AC 60 Hz (subject to customer's area)
Motor:	600N: 40W; 800N: 50W; 1000N: 50W
Light time:	3 minutes
Working temperature:	-20° ~ 40°C
Relative Humidity:	<90%
Open and close force:	600N or 800N or 1000N
Reception frequency:	433.92 MHz or according to customer's requirement
Sensitivity:	>1 V for correct receiver signal
Decoding:	Rolling code
Transmitter power:	23A 12V Battery
Lamp:	220V 25W or according to customer's requirement



## Final notes

This manual is only used by technical persons who are qualified to carry out the installation.

No given information in this manual can be considered of any interest to the end user.

It is important for the installer to show their clients correct operation using of the opener including the using of manual disengagement cord.

Inform the owner about the need of a regular and accurate maintenance, especially regarding a regular check of the safety and reversing devices.

## Important information for the user

Once the opener has been installed, the user must be informed about how it works and all the risks that can arise if it is used improperly. The user must avoid placing himself/herself in dangerous situations such as standing within the door's operating range when it is moving.

**Do not** let children play near the door, and keep the remote controls out of their reach.

All services, repairs or checks must be carried out by professionally qualified persons, and noted on a maintenance register kept by the user.

**IMPORTANT NOTE:** In the case of a malfunction the user must call an authorized installer and should not attempt to repair it by yourself.