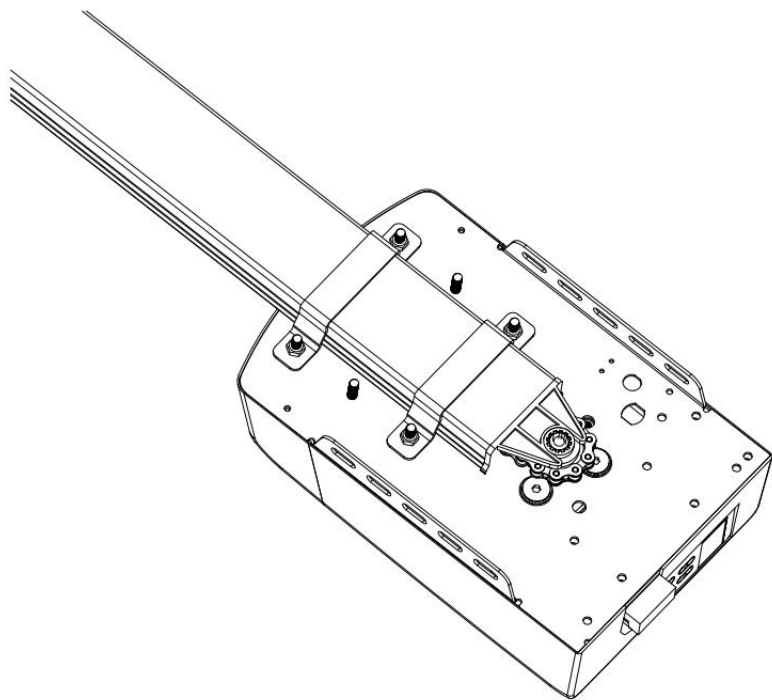


Sectional And Tilting Door Opener
Installation Instructions and User Guide



FS 600

600N

FS 1000

1000N

S/N

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.

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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.

PRODUCT DESCRIPTION & FEATURES

1. Automatic safety reverse

Automatic stop / automatic reverse are controlled by our software of circuit boards. We are circumspect to protect your children, pet or other goods.

2. Soft start / Soft stop

Ramping speed up and down at the start and end of each cycle reduces stress on the door and opener for longer life, and makes for quieter operations.

3. Auto-Close

Auto- Close ensures peace of mind and keeps your house secure by automatically closing the door upon entering or exiting the garage.

4. Self-learning open and close obstruction force

The amount of opener power for different stages of the door's travel is learnt during setup and is constantly re-profiled. Opener force measurement automatically adjustment in a suitable range.

5. Electronic limit, simple adjustment.

You only need control the limit setup from control panels to adjust it exactly, the simple and quick process for any peoples.

6. Available terminal for Photo beams & Extra receivers & Wire or wireless wall switch & Caution light & Pass door protection device.

7. Energy saving - L.E.D courtesy light

3 minutes L.E.D light delay, switching on with each cycle to illuminate your darkened garage.

8. Battery backup available

Openers could be supplied power with our battery backup once the power failure at your home.

9. Self-Lock in gear motors

Force gear motors will self-lock with our disengagement systems.

10. Manual release

Don't worry about the power failure, the manual release system is a solution for operation the door at any time.

11. Transmitter technology

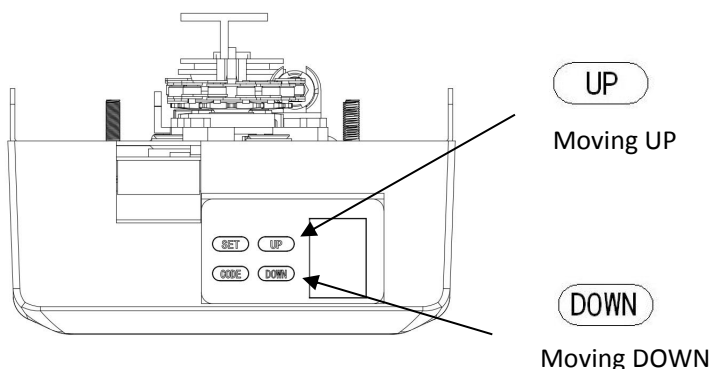
Rolling Code technology (7.38×10^{19} Combinations), 433.92 Mhz frequency, 4 channels design to ensure you can control 4 different doors with one transmitter.

12. Lower headroom

With as little as 30mm required between the ceiling and the highest point of the door travel, the opener can be flush mounted for low headroom applications.

13. Metal bottom plate, stronger and security.

14. Up / Down moving operation buttons (UP / DOWN)



PRE-INSTALLATION RECOMMENDATIONS

1. Garage door must be able to be lifted and closed easily by hand and without much effort. A well balanced & sprung door is critical for proper installation.
2. The garage door opener can't compensate for a badly installed garage door and should not be used as a solution for a "hard to open" door.
3. If the unit is being installed on an existing door, make sure any existing locking devices are removed or warranty will be void.
4. An approved outlet must be installed near where the opener is begin installed.
5. There should be a minimum gap of 30mm between the bottom of the chain drive rail and the top of the garage door at its closest point. (refer to Fig 1.)

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

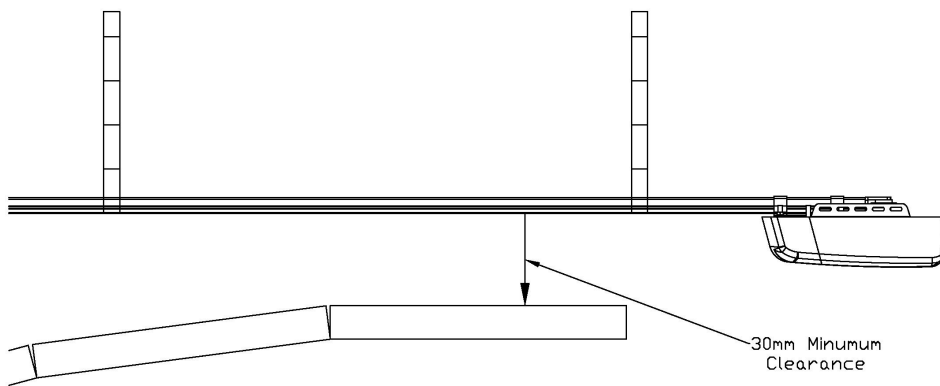


Figure 1

INSTALLATION INSTRUCTIONS

Mount Wall Bracket and Door Bracket (Fig2)

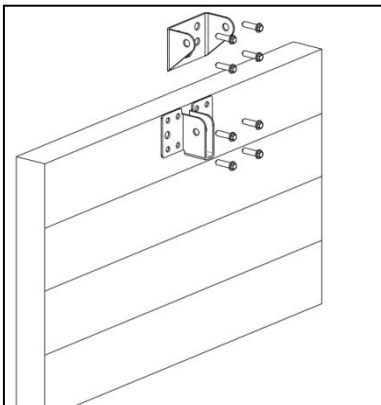


Figure 2

Wall Bracket - Close the garage door and measure the garage door width at the top and mark the centre. Locate and mount the wall bracket 2cm-15cm above the door on the inside wall.

(Depend on the actual installation space).

Door Bracket – Fix the door bracket to a structural part of the door as close to the top edge as possible.

Installation (Steel Track)

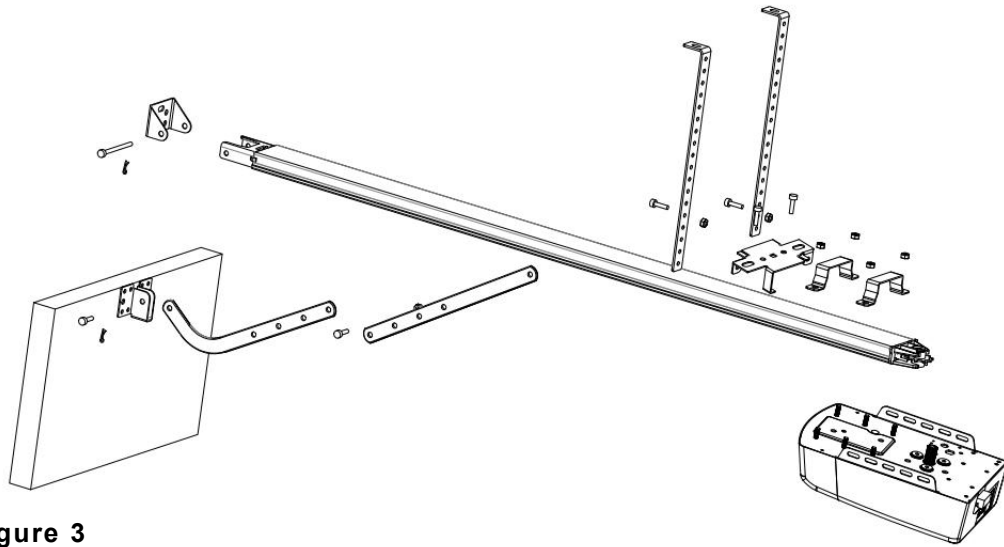


Figure 3

STEP1 (Fig.3)

Attach the opener head to the steel track. Assemble the 2 “U” Hanging brackets with 6mm nuts supplied.

STEP2 (Fig.3)

Place the steel track and opener head assembly centrally on the garage floor, with the open head furthest away from the door. Lift the front of the track up to the door bracket. Insert the pivot pin and secure it with the split pin supplied.

STEP3 (Fig.3, Fig.4)

Lift and support the opener head (with a ladder) so it is positioned centrally and level. Fix the opener and track on ceiling by Iron bracket A & B.

WARNING: Do not allow children around the door, opener or supporting ladder serious injury and/or damage may result from failure to follow this warning.

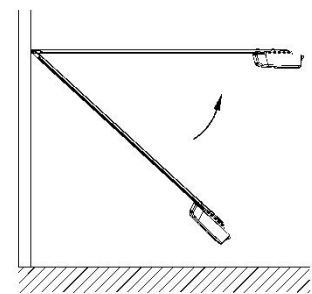


Figure 4

STEP4 (Fig.3, Fig.5)

Connect the straight arm to the bent arm with the bolt. Position and bolt the arms to the top edge of the door using the bolt supplied.

STEP5

Lift the garage door until the shuttle locks into the drive chain/belt.

Now, ready to program the openers.

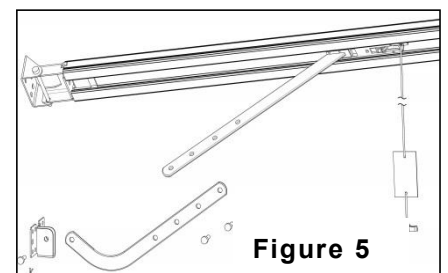


Figure 5

Sectional Steel Track Assembly

2 Parts Steel Track

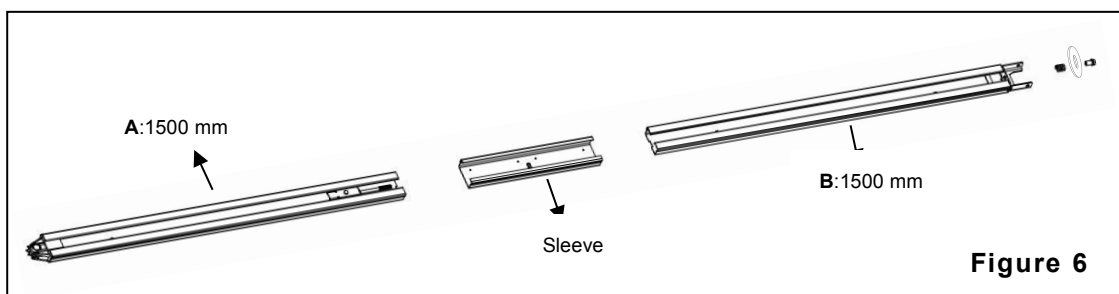


Figure 6

3 Parts Steel Track

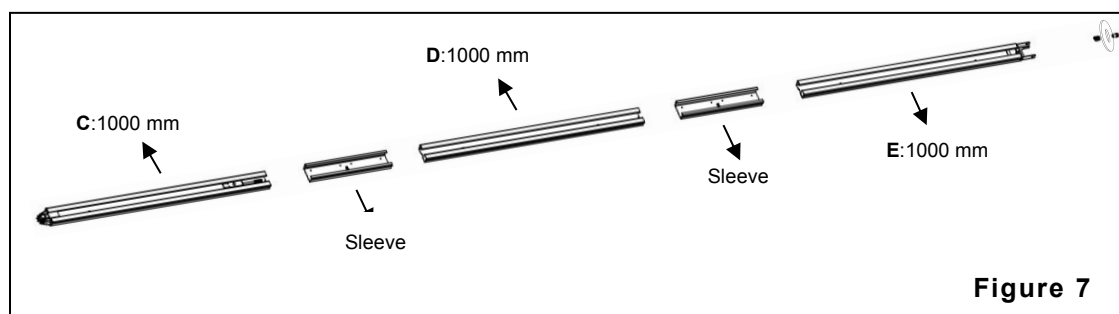


Figure 7

1. 2-Parts Track:

As Fig.6, slide the A rail into the sleeve, slide the B rail into the sleeve.

3-Parts Track:

As Fig.7, slide the C rail into the sleeve, slide the D rail into the sleeve; slide the E rail into the sleeve.

2. Cut the plastic thread; pull the screw rod along with inner chain to the end rail position (Fig.8)

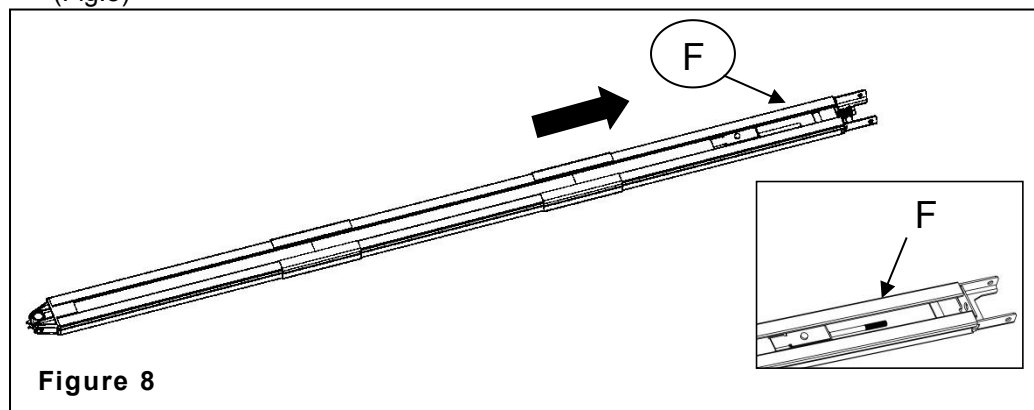


Figure 8

3. As Fig.9, release the nut & spring.

4. Tight the nut to the right position as shown in Fig.10, cut the plastic tape, cut the plastic thread on sprocket, then whole rail assembled finished.

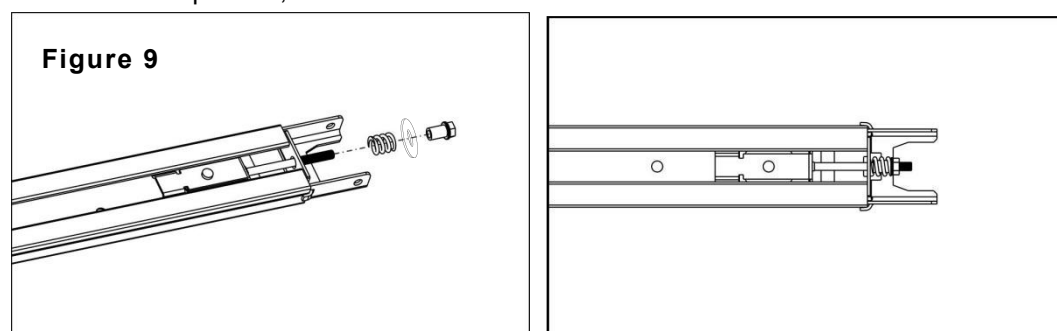


Figure 9

Battery backup Assembly (optional)

Option 1 - Top Fixed(For Lead-acid Battery only)

STEP1 (Fig.11)

Assemble the battery & the bracket like the photo, fix by screws supplied.

STEP2 (Fig.12)

Join the battery to opener, find the Fig.12.

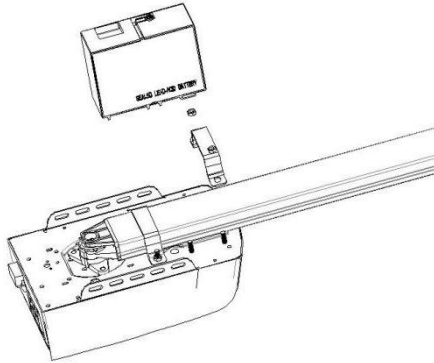


Figure 11

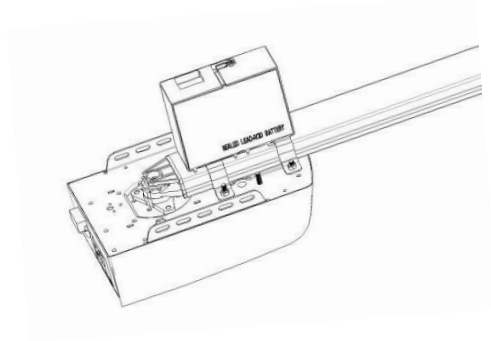


Figure 12

Option 2 - Side Fixed(For Lead-acid&Lithium Battery)

STEP1 (Fig.13)

Assemble the battery to the side of the opener like the photo, fix by screws supplied.

STEP2 (Fig.14)

Join the battery to opener, find the Fig.14.

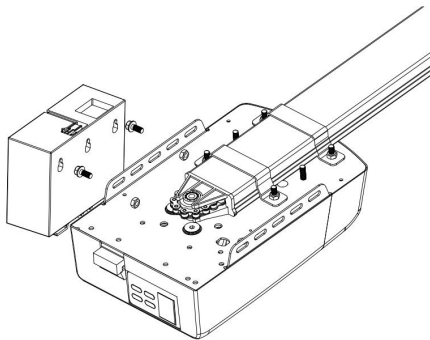


Figure 13

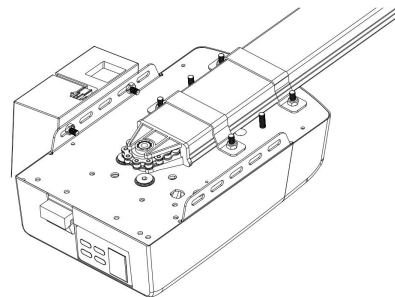
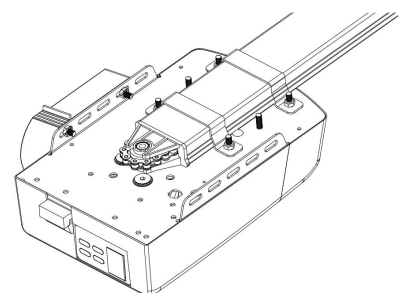
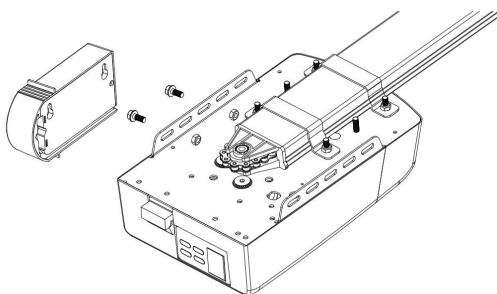
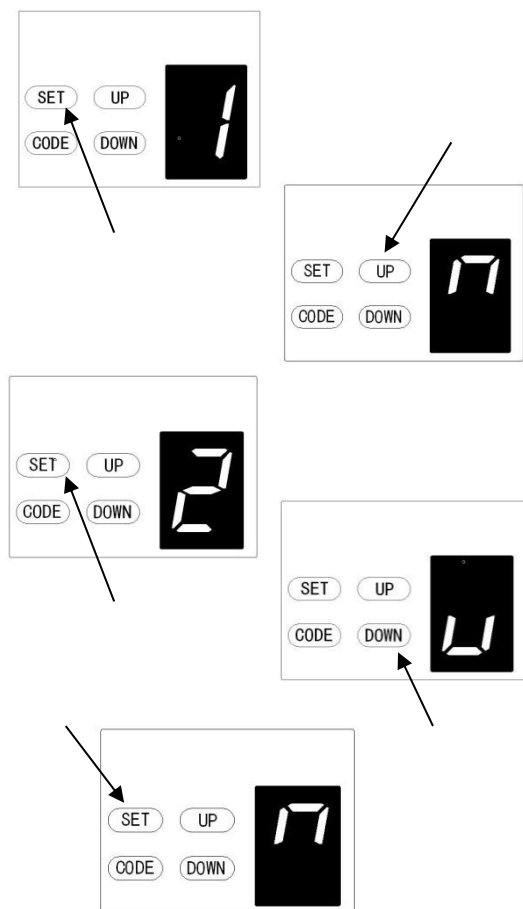


Figure 14



PROGRAMMING INSTRUCTIONS



1. PROGRAMMING OPEN & CLOSE LIMITS

a) Press and hold **SET** Button until 1 appears on the display then release the button.

The door opener is now in Programming Mode.

b) Press and hold the **UP** until the door reaches the desired open position.

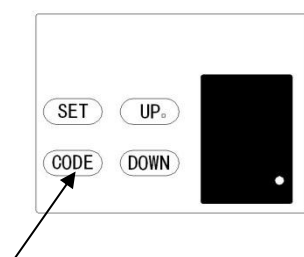
NOTE: Fine adjustments can be made by toggling UP & DOWN buttons

c) Now press the **SET** button to confirm the position. The display will now indicate the number 2.

d) Next press and hold the **DOWN** button until the door reaches the desired close position. For fine adjustments toggle UP & DOWN buttons.

e) Now press the **SET** button to confirm the close position.

CAUTION: The door will now cycle open and close to set the travel limits and force sensitivity adjustments. The door is now set for normal operation.



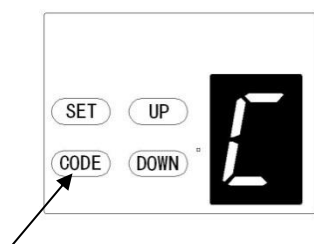
2. PROGRAMMING HAND TRANSMITTERS

NOTE: Hand transmitters that are supplied with the door opener are pre-programmed.

a) Press the **CODE** button. A dot will be indicated in the corner of the display.

b) Now press the button on the hand transmitter you want to use, pause for 2 seconds, then press the same button on the hand transmitter again for 2 seconds.

The dot on the display will flash to confirm the code, then turn off. Repeat the process for additional remotes that need to be stored.

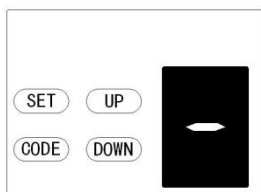


3. DELETING STORED HAND TRANSMITTERS

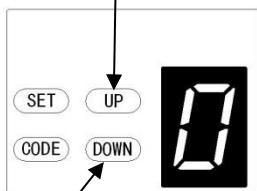
Press and hold **CODE** button until a C is indicated on the display. All stored remotes will be deleted.

Increase Force

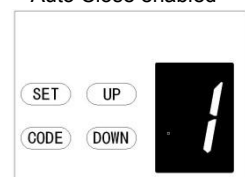
Decrease Force



Increase A/C time



Decrease A/C time



Auto Close disabled

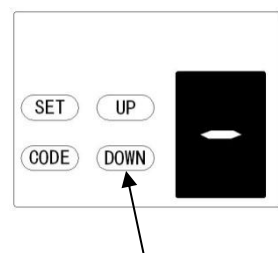


Photo Beam enabled

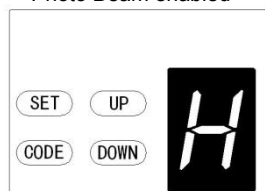


Photo Beam disabled

4. OBSTRUCTION FORCE ADJUSTMENT

CAUTION: the obstruction force adjustment is set automatically during programming. Normally no adjustment is necessary.

- a) Press and hold the **SET** button until 3 appears on the display then release the button.
The unit is now in force adjustment mode.
- b) Press the **UP** button to increase the force setting or the **DOWN** button to decrease the force setting.
The minimum force is 1 and it can be adjusted upward.
- c) Press **SET** to confirm your setting

NOTE: The force is set on 3 as standard in factory.

5. AUTOMATIC CLOSING

NOTE: We recommend that Safety Photo Beams be used in any installation where the Auto Close function is enabled.

- Press and hold **UP** button until a horizontal bar is indicated on the display. Now press **UP** button once to set the auto close time (in minutes).
- Press **UP** button to increase the time, or **DOWN** button to decrease the time.

The Maximum time is 135 seconds. To disable Auto Close, set time to zero (0).

- c) Press **SET** button to confirm the set.

6. PHOTO ELECTRIC SAFETY BEAM

NOTE: Make sure the photo beam has been correctly installed and use Normally Closed contacts to the accessory terminals of the opener (Fig. 15, Fig.16)

Also note that the photo beam function must be disabled if NO photo beams are fitted, otherwise the door cannot be closed, and the LED will blink once time as an indication.

- Press and hold the **DOWN** button until 11 appears on the display. To enable the photo beam option press **UP** again, the display will indicate a H(enabled) or press **DOWN** button to disable (display 11) the option.
- Press **SET** to confirm the set.

7. OPEN / STOP / CLOSE TERMINALS

The O/S/C facility can be used for an external push button switch to operate the opener. The switch must have voltage free normally open contacts (Fig. 18)

Photo beam connection (optional) – Fig.15, Fig.16

Switch control connection (optional) – Fig.15

Remark:

1. Flash (Caution Light) should be less than 25W.
2. PB (External Push Button) should be " NO".

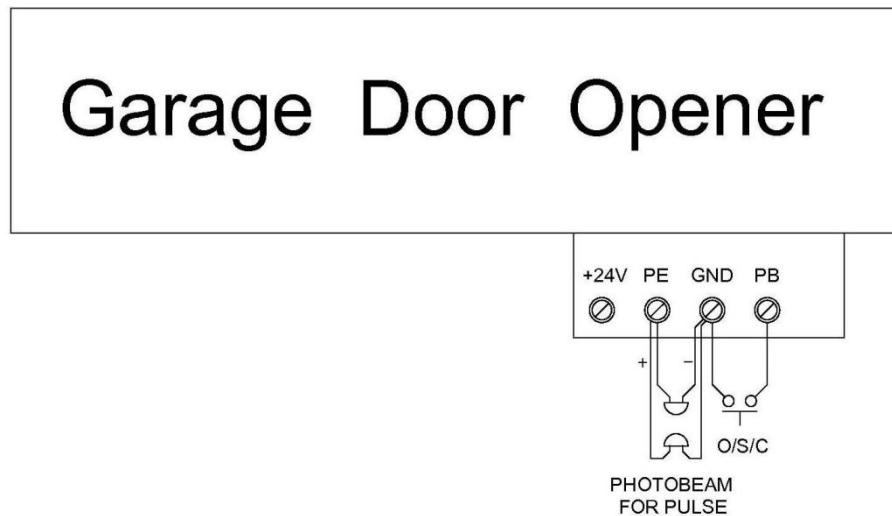
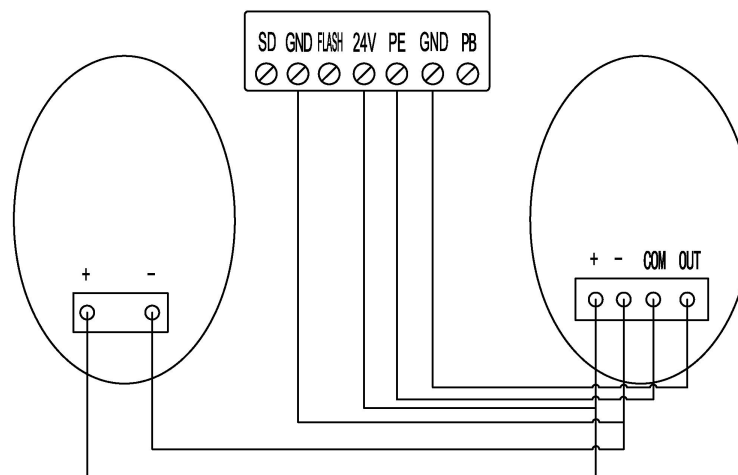


Figure 15



Connection of photo beam/switch control

Figure 16

Other terminal introduction and application

1. The O/S/C interfaces available. (Fig. 17, Fig. 18)

Add a new O/S/C button to open or close the door.

2. Flash light function. (Fig. 17, Fig. 18)

There are corresponding interfaces for this function and provide 24v-35v flash light voltage. Connect the flash light with DC 24v-28v, current \leq 100mA. When use AC 220V power flash lights, please match an adapter, and wiring as required

3. Pass door (SD) protection (Fig. 17, Fig. 18)

This function ensures that the door can't be opened unless the small pass door is closed. The door panel won't be damaged.

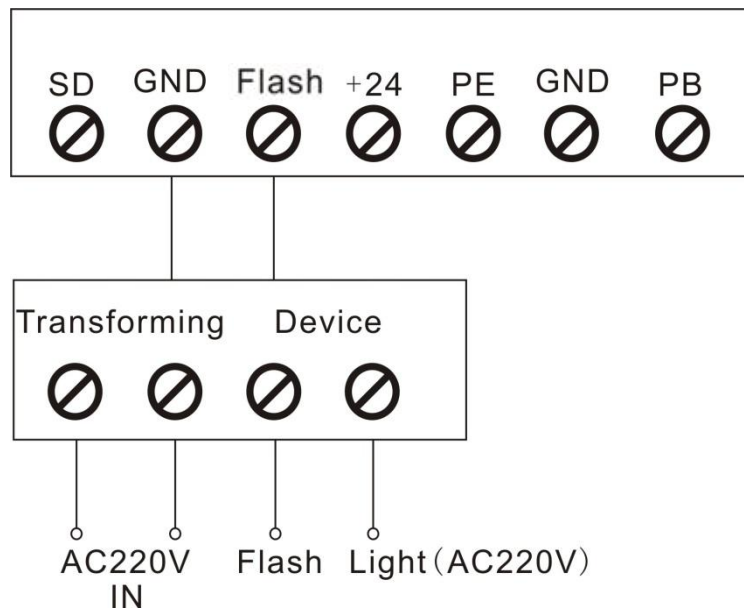
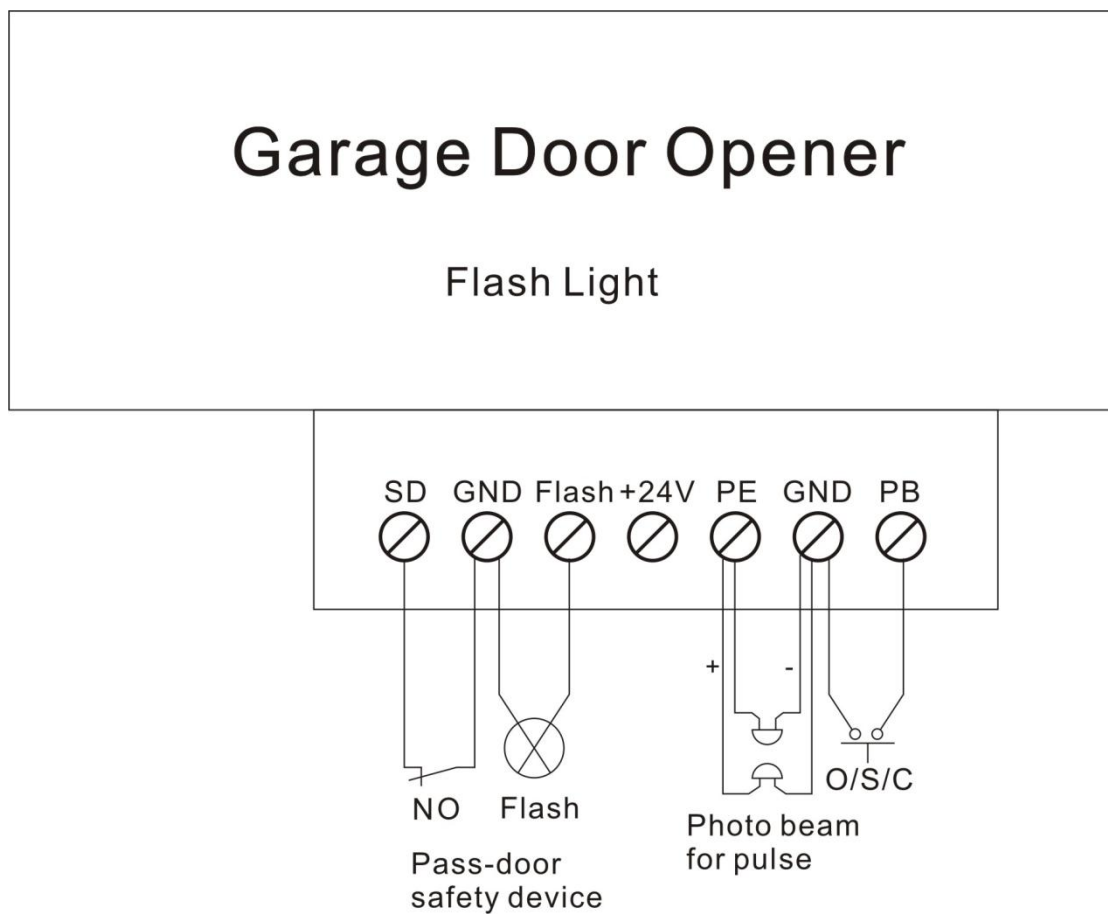


Figure 17



ASS. Terminal connection

Figure 18

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 19). 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 20).

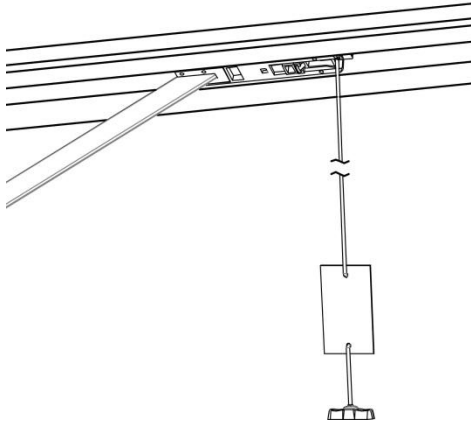


Figure 19

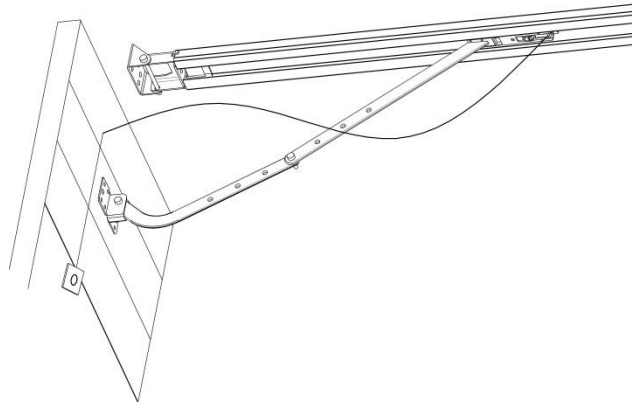


Figure 20

Maintenance

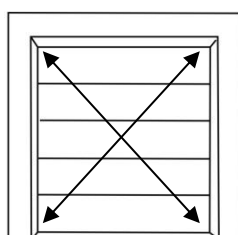
1. No particular maintenance is required for the logic circuit board.
Check the door at least twice a year if it is properly balanced, and all working parts are in good working condition or not.
Check the reversing sensitivity at least twice a year, and adjust if it is necessary.
Make sure that the safety 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 L.E.D light anti-clockwise. Fix the new L.E.D light and lamp cover.

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

Technical specifications

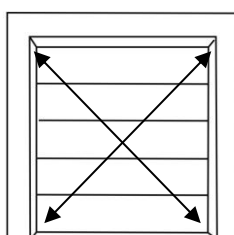
	FS 600	FS 1000
Input voltage	220 - 240V / 110 - 127V, 50-60 Hz	
Max. pull force	600 N	1000 N
Max. door area	10.0 m ²	15.0 m ²
Max. door weight (Balanced)	80 kg	100kg
Max. door height	2400 - 3500mm	2400 - 3500mm
Drive	Chain / Belt	Chain / Belt
Opening / Closing Speed	160mm / Second	160mm / Second
Drive mechanism	Chain / Belt	Chain / Belt
L.E.D	24V / 15pcs LED lamp	
Limit setting	Electronic	Electronic
Transformer	Overload protection technology	
Radio frequency	433.92 MHz	433.92 MHz
Coding Format	Rolling code (7.38×10^{19} Combinations)	
Standard transmitter	2 X	2 X
Code Storage Capacity	25 different codes	
Caution light terminal	Included	Included
Working temperature	-40℃ - +50℃	-40℃ - +50℃
Safety Protection	Soft start & Soft stop, photo cell option, caution light option	
Protection level	IP20	IP20

FS 600

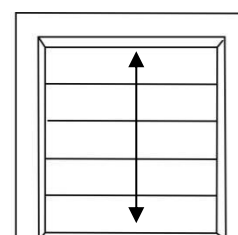


Rated door area: $\leq 10.0\text{m}^2$

FS 1000

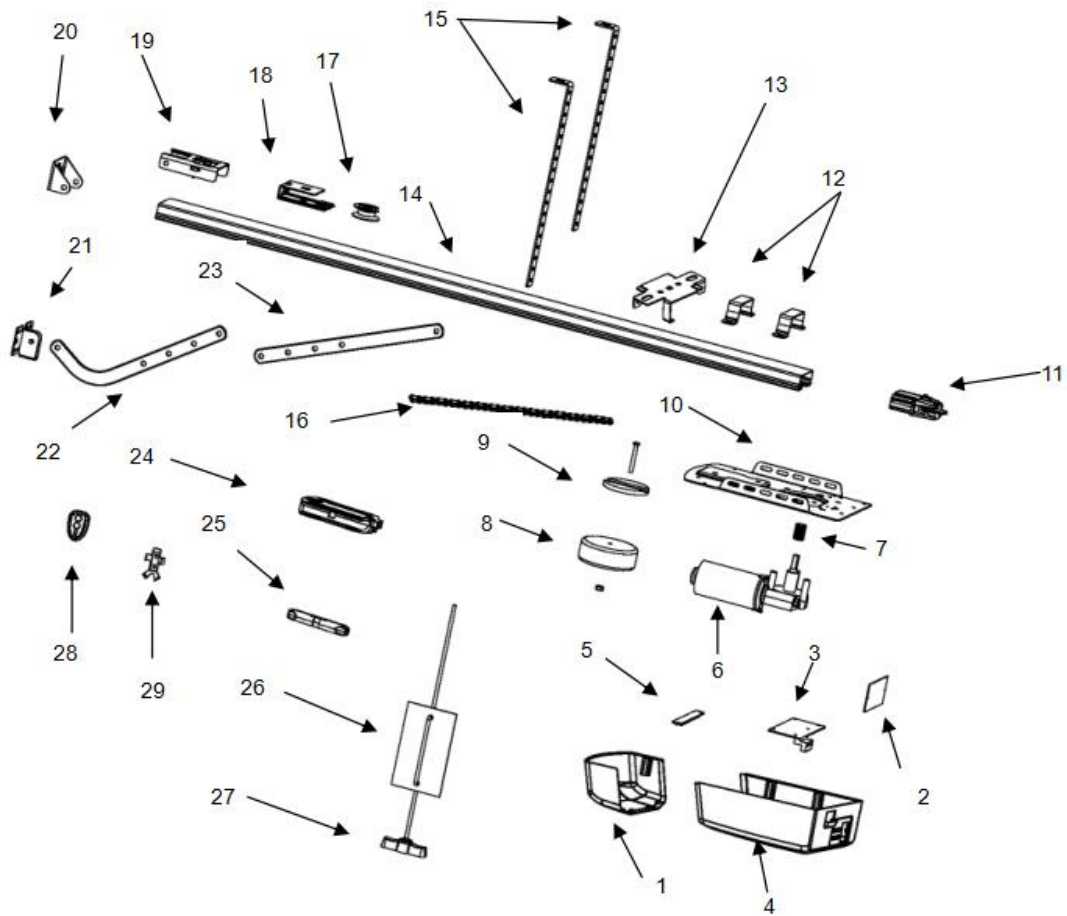


Rated door area: $\leq 15.0\text{m}^2$



Standard door height: 2400mm
Maximum door height: 3500mm

Parts Listing






Item	Qty	Description
1	1	L.E.D cover
2	1	PCB-1
3	1	PCB-2
4	1	Main cover
5	1	L.E.D light
6	1	DC gear motor
7	1	Motor shaft sleeve
8	1	Transformer
9	1	Transformer plate
10	1	Steel bottom base

Item	Qty	Description
11	1	Sprocket assy
12	1	U hanging bracket
13	2	Click bracket
14	1	C rail – steel
15	2	Mounting bracket
16	1	Chain / Belt
17	1	Chain wheel
18	1	Wheel bracket
19	1	Track ending bracket
20	1	Wall bracket
21	1	Door bracket
22	1	Bent arm

Item	Qty	Description
23	1	Straight arm
24	1	Trolley assy
25	1	Chain/Belt connection
26	1	Caution card
27	1	Release handle
28	2	Transmitter
29	1	Transmitter bracket

Common Fault & Solutions

Fault appearance	Fault cause	Solutions
No any working for openers LCD screen is not bright	1. Power supply 2. Plug wire is losing	1. Check whether the motor socket is energized 2. Check whether Fuse tube is broken 3. Check whether the low-voltage wire of transformer is connected to the power board 4. Check whether the ribbon cable is plugged 5. Check whether there is 26v AC at the transformer low-voltage side, if there is 26v AC, replace the PCB. If not, replace the transformer
Position missing	System error	Re-set the limit traveling
While learning, the digital display 	Travel less than 30cm or more than 9m	Re-set the limit traveling
Digital display  Opener does not work or stop working	Unstable voltage or door lost balance	1. Check the power supply 2. Adjust the door balance
Opener is not working Digital display 	Fail to learn the up and down limit setting Improperly learn the up and down limit setting	Learn "UP" and "DOWN" limit traveling again follow the manual
LED is always on	The control panel is broken or the power supply board is broken	Replace the control board or power board.
When remoting the door, opener stops automatically after running 10cm Digital display 	Hall sensor wire is loosed or damaged	Open the cover, check the Hall sensor wire, re-plug or replace.
Opener does not work. Hear the relay 'kaka' sound Digital display 	The wire between gear motor and board is losing	Open the cover and check the wire between gear motor and board.
Opener stops automatically after running 10cm Digital display 	The wire between gear motor and board is plugged inversely	Power off firstly, open the cover and reverse the plug wire between gear motor and board. Re-set limit traveling.
Door is up moving only. Do not work in down moving and the Digital display 	Photo cell function has been effective but without connecting any photo cell device.	Turn off the photo cell function if there is no any photo cell device connected. (Refer the instruction manual) 2. Check if the photo cell is connected correctly, or if there is any obstruction between the photo cell.
The door is fully open, automatically close after some time LED lights flash 4 times	Automatic closing function is turned on	Set the automatic closing time, or turn off the automatic closing function. (Refer the instruction manual)
When the door stops, the caution light is always on	The power board is broken	Replace the power board

LED lights do not work	1. The LED wire is not plugged 2. The LED is broken 3. The circuit board is broken	1. Check the LED wire 2. Replace the LED 3. Replace the circuit board
Door is automatically reversed to the upper limit before the door closed completely	In operation with automatic reverse function The door is not installed correctly There is some block on its moving	1. Check the block position of the door and re-set the limit traveling 2. Increased force number for automatic reverse
Door automatically stops while opening	In operation with automatic protect function when obstruction is detected The door is not installed correctly There is some block on its moving	1. Check the block position of the door and re-set the limit traveling 2. Increased force number for automatic reverse
The remote control cannot be used or the operation distance is short	1. Flat battery 2. Antenna is loosed or not well extended 3. Interference around nearby	1. Replace new battery 2. Extended the antenna on the opener 3. Get rid of interference
Cannot code in the new remotes	New remote control is not compatible with opener	Choose our remote control only
Digital display 	Stored remote code is full	Delete all stored codes (Refer the instruction manual)
Standby, Digital display 	Door in door function effects	Check the door in door switch
The opener is working while the door is not moving	Motor shaft sleeve worn	Replace the motor shaft sleeve
The battery do not supply power	1. Flat battery 2. The battery wire is plugged inversely 3. The battery wire is broken	1. Charge the battery 2. Open the cover, check "+" "-" of the battery 3. Replace the battery wire
Other abnormal issues	External devices is not compatible with the opener	Remove all the external devices. If the abnormal issues still exist, replace the circuit board
Digital display 	The Garage door system needs maintenance	The garage door and motor need total maintenance

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