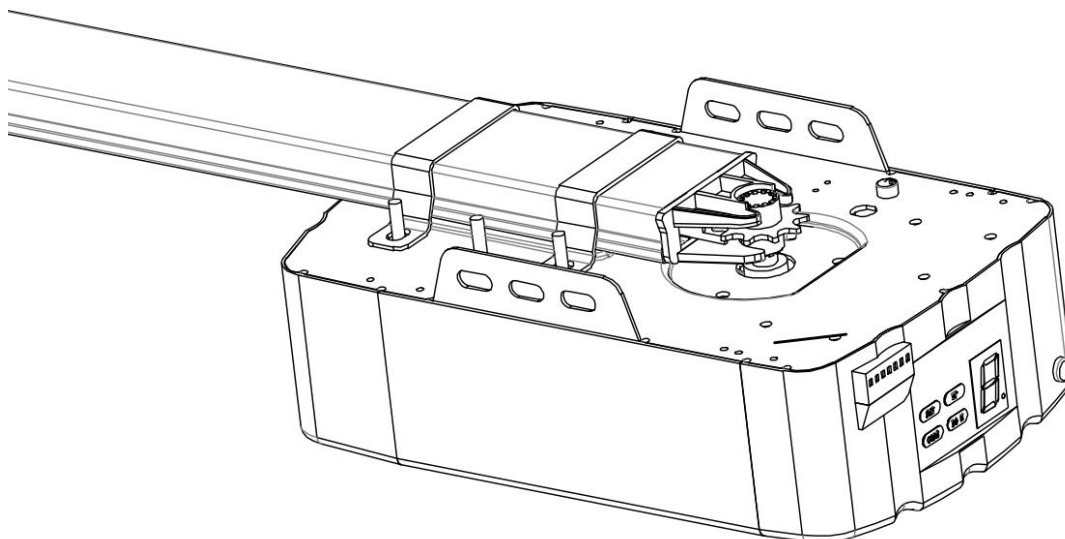


Sectional And Tilting Door Opener Installation Instructions and User Guide



FS-600 / FS-800 / FS-1000

S/N	
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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.

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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 reprofiled. 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 x 1019Combinations), 433.92Mhz frequency, 4 channels design to ensure you can control 4 different doors with one transmitter.

12. Lower headroom

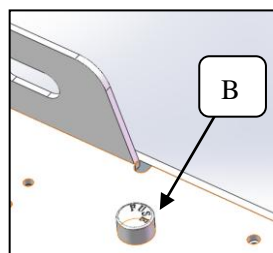
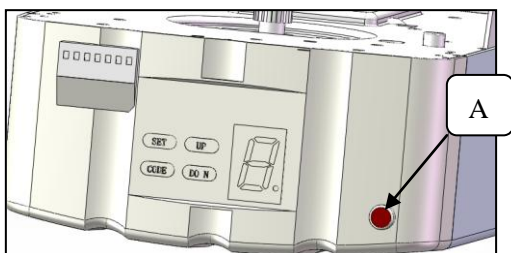
With as little as 30mm required between the ceiling and the highest point of the door travel, the opener can be flush mounted for low headroom applications.

13. Metal bottom plate, stronger and security.

14. O/S/C button (A)

Front panel open / stop / close buttons for operation. (picture below)

15. External mains power fuse (B) (picture blew)



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 not 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 it's 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.

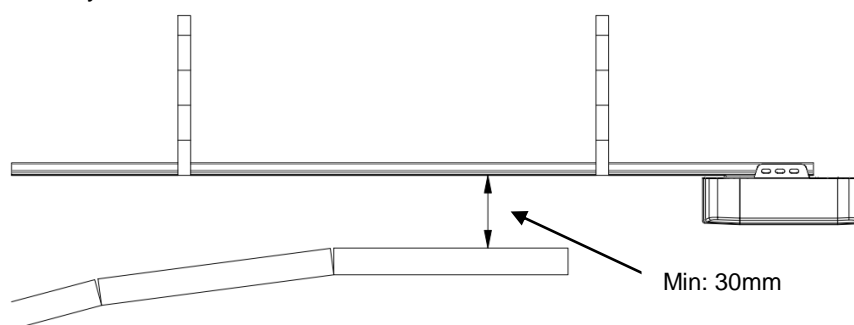


Figure 1

INSTALLATION INSTRUCTIONS

Mount Wall Bracket and Door Bracket (Fig2)

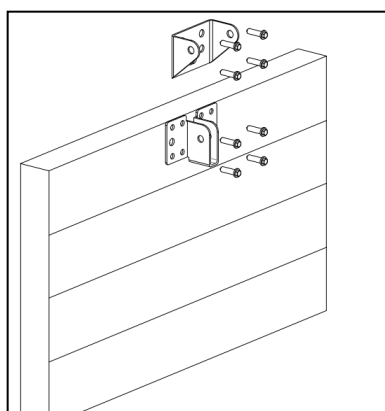


Figure 2

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)

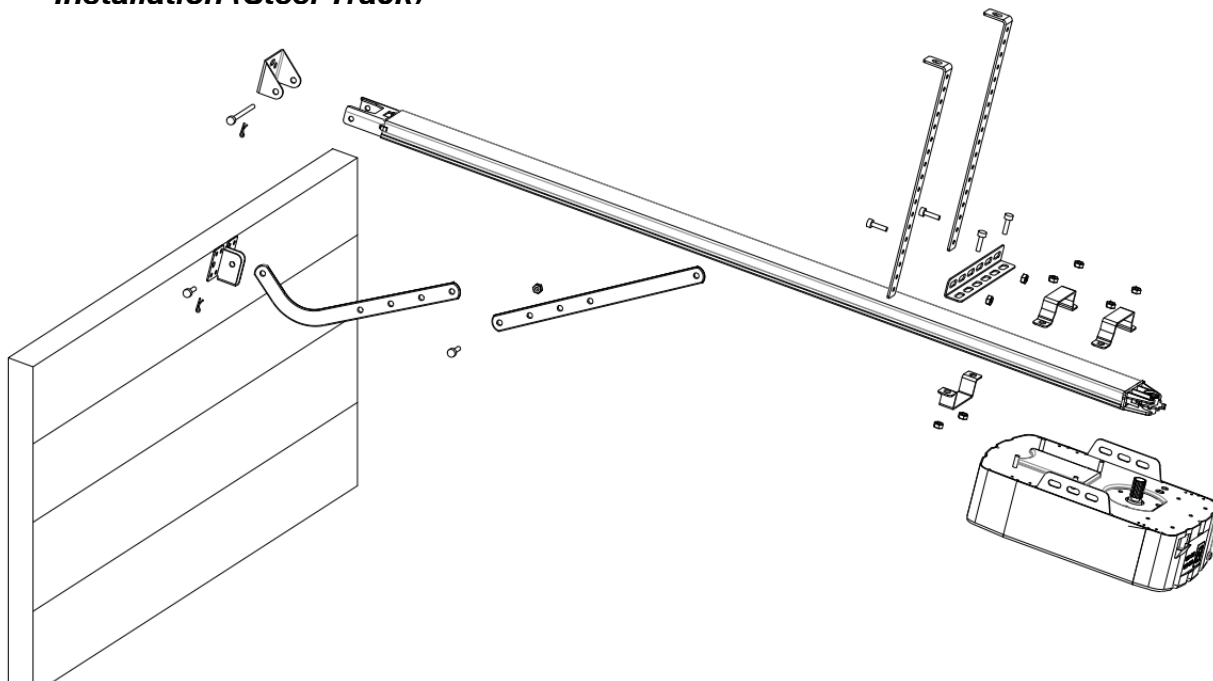


Figure 3

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.

STEP4(Fig.3, Fig.5)

Fix the shuttle to assembled by 4pcs 6x23 screws, and then slide the shuttle towards the closed garage door. Select and attach the straight arm and bend arm. Position and bolt the arms to the top edge of the door using the bolts supplied.

STEP5

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

Now, ready to program the openers.

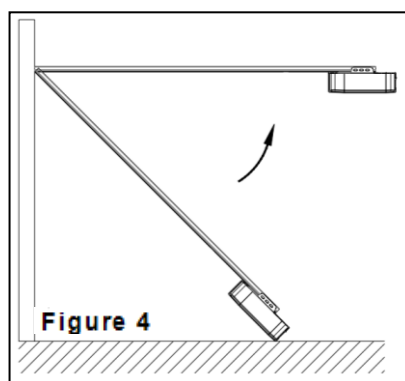


Figure 4

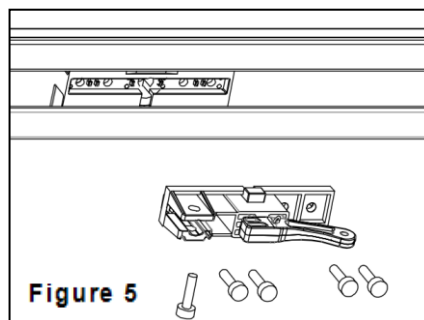
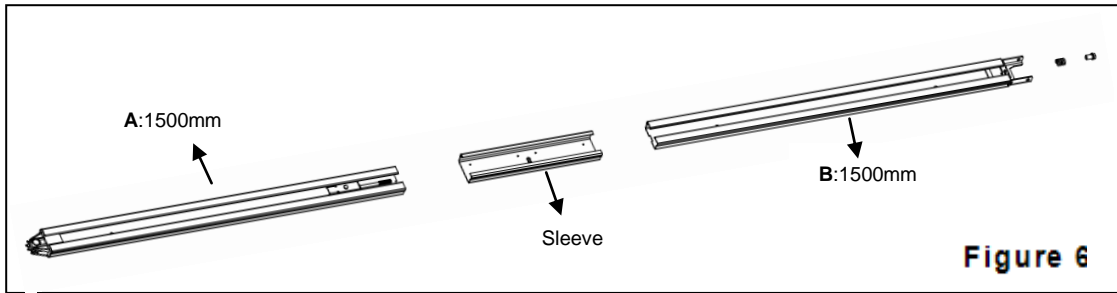


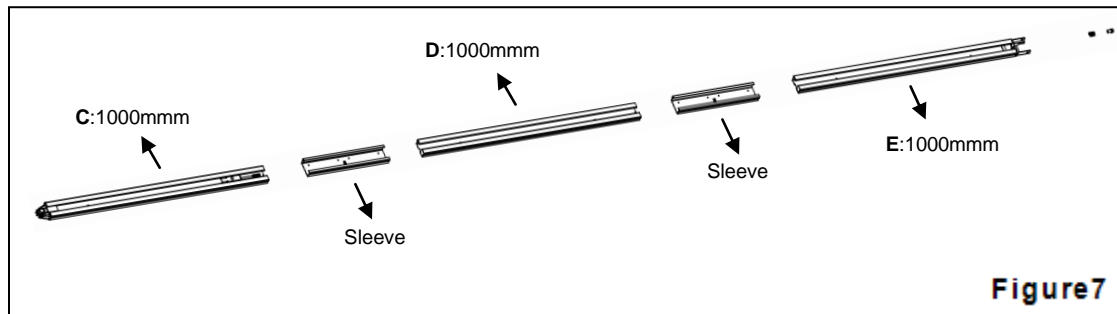
Figure 5

Sectional Steel Track Assembly

2 Parts Steel Track



3 Parts Steel Track



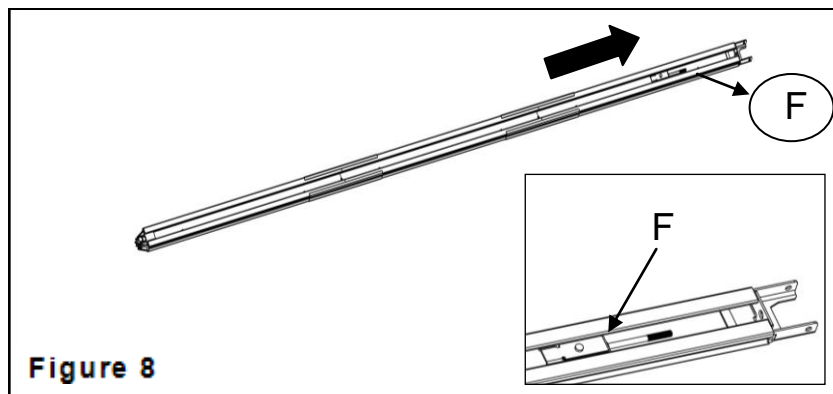
1. 2-Parts Track:

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

3-Parts Track:

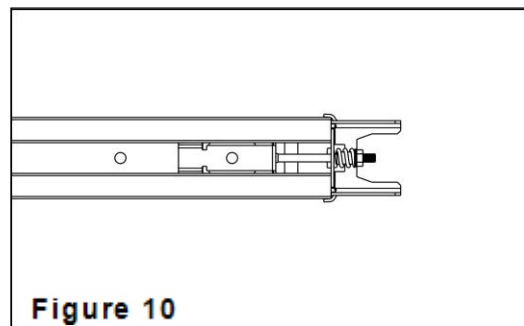
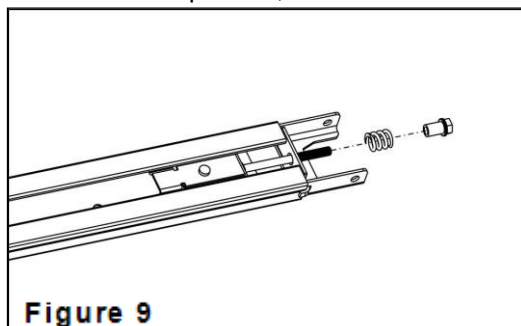
As Fig.7, slide the C rail into the sleeve, slide the D rail into the sleeve; slide the E rail into the sleeve.

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



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.



Installation (Alumunium Track)

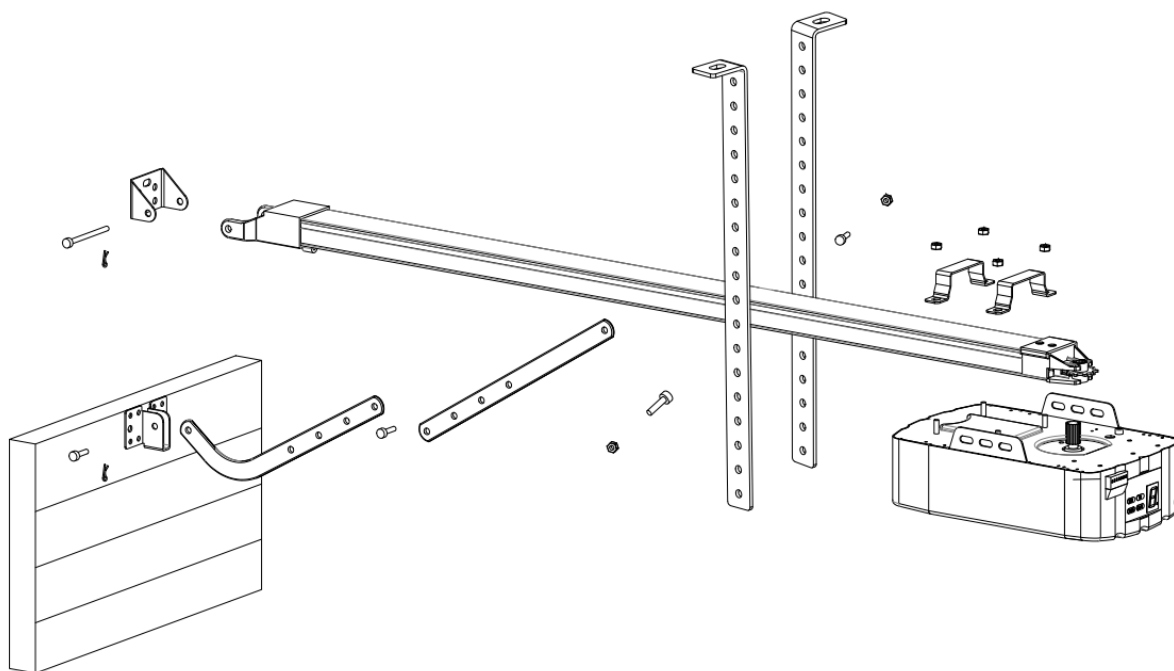


Figure 11

STEP1 (Fig.12, Fig.13)

Insert the shuttle into the cut-out at the end of the Aluminium track. Be sure it faces the right direction (the disconnection arm on the shuttle faces towards the opener head). Slide the shuttle along the rail until it locks into place with the brass chain coupler. Move the whole shuttle assembly to the centre of the drive rail.

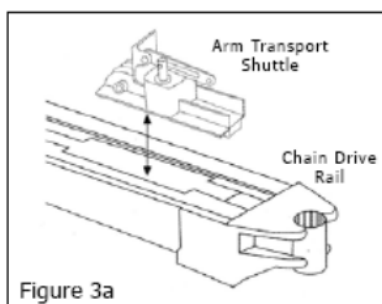


Figure 12

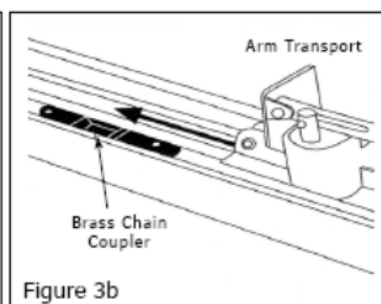


Figure 13

STEP2 (Fig.14)

Using the 6mm hexagon head rail mounting bolt supplied, slide 2 bolts in each side of the rail through the cutouts provided.

STEP3 (Fig.11)

Attach the opener head to the steel track. Assembly the 2 "U" Hanging brackets with 6mm nuts supplied.

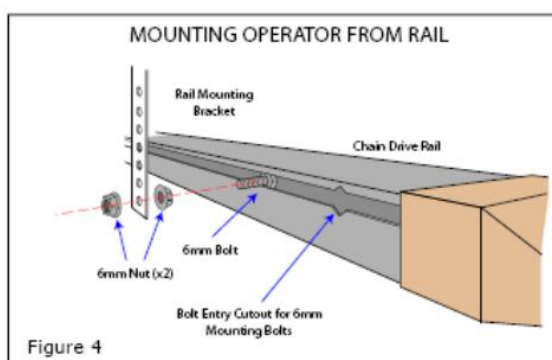


Figure 14

STEP4 (Fig.11)

Place the Aluminium 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.

STEP5 (Fig.11)

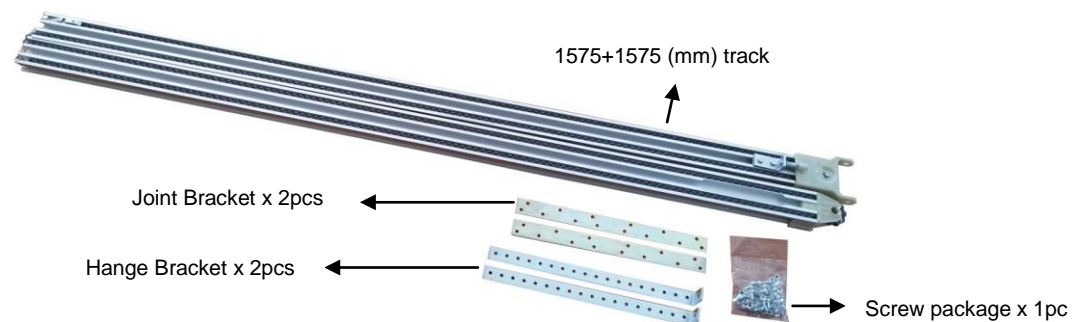
Lift and support the opener head (with a ladder) so it is positioned centrally and level. Fix the opener and track on ceiling by Iron bracket A & B.

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.

STEP6 (Fig.11)

Select and attach the straight arm and bend arm. Position and bolt the arms to the top edge of the door using the bolts supplied. lift the garage door until the shuttle locks into the drive chain.

Now, ready to program the openers.

Sectional Aluminium Track Assembly (2 parts)**STEP1**(Fig.15)

Cut the nylon ties from "Head part" & "End part" & "Chain".

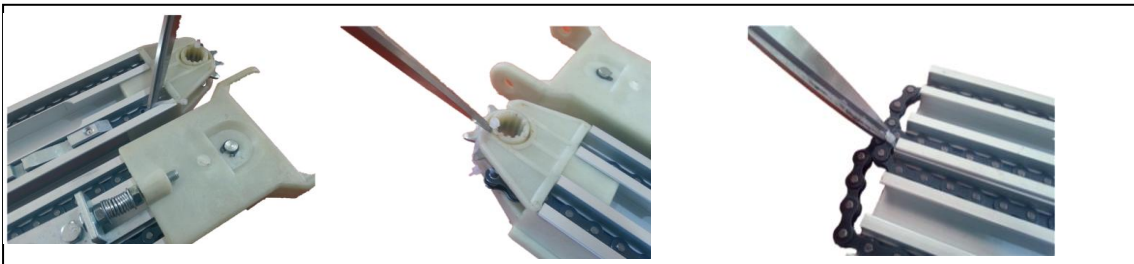


Figure 15

STEP2(Fig.16)

Slide & Put 6pcs or 8pcs M6X14 hexagon head bolt & Fix the Joint Bracket, tighten all the screws on Joint brackets

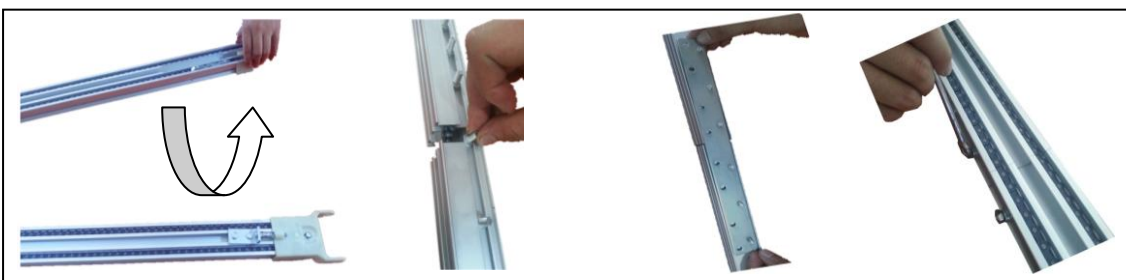
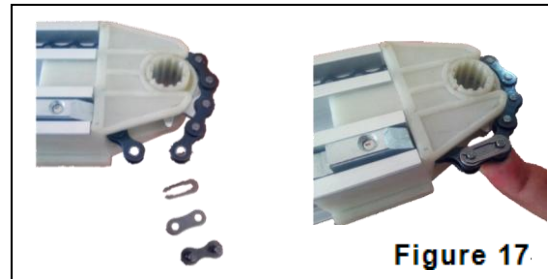


Figure 16

STEP3(Fig.17)

Join the Chain with Chain joint



STEP4 (Fig.18)

Left slide the chain coupler,
and tighten the screws & Adjust the
Chain tightness, then all assembly finished.

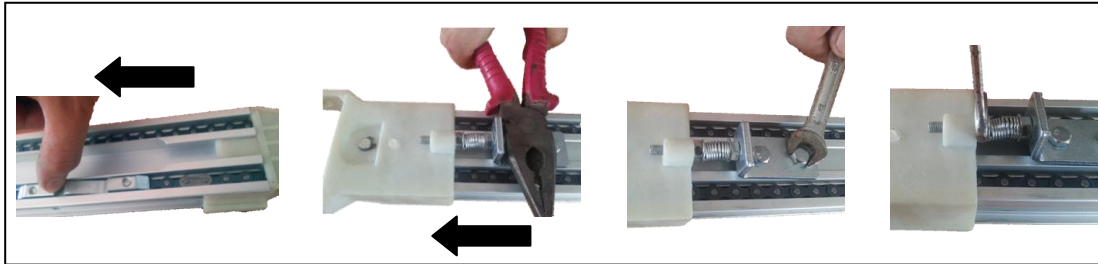


Figure 18

Battery backup Assembly (optional)

STEP1(Fig.19)

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

STEP2(Fig.20)

Join the battery to opener, find the Fig.20.

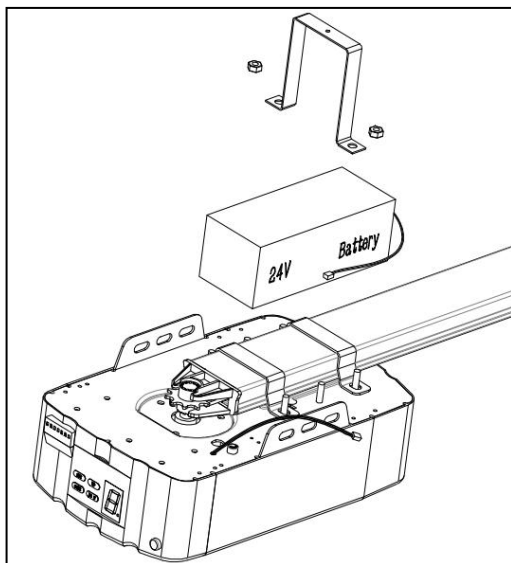


Figure 19

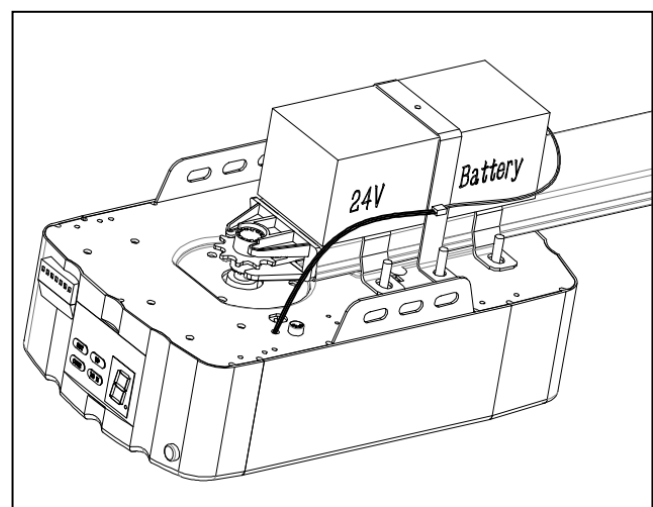


Figure 20

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.

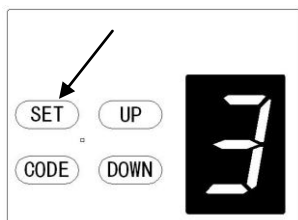
a) Press the **CODE** button. A dot will be indicated in the corner of the display.

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.

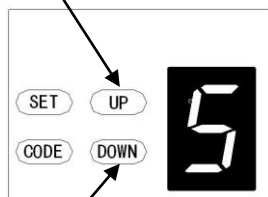
The dot on the display will flash to confirm the code, then turn off. Repeat the process for additional remotes that need to be stored.

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

Decrease Force

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 Maximum force is 9 and the minimum is 1.

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.

a) 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).

b) Press **UP** button to increase the time, or **DOWN** button to decrease the time.

The Maximum time is 9 minutes. 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. 21, Fig.22)

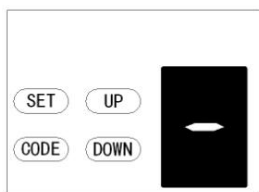
Also note that the photo beam function must be disabled if NO photo beams are fitted, otherwise the door cannot be closed.

a) 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.

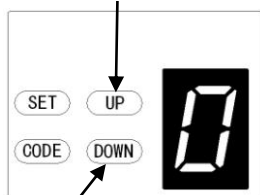
b) Press **SET** to confirm the set.

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. 21)



Increase A/C time



Decrease A/C time

Auto Close enabled



Auto Close disabled

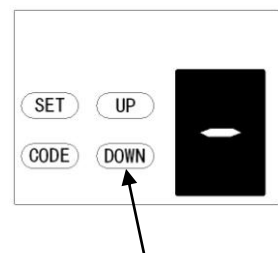
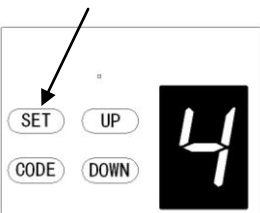


Photo Beam enabled

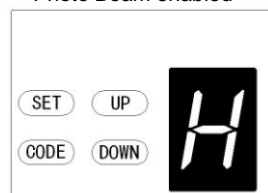


Photo Beam disabled

Photo beam connection (optional) – Fig.21, Fig.22

Switch control connection (optional) – Fig.21

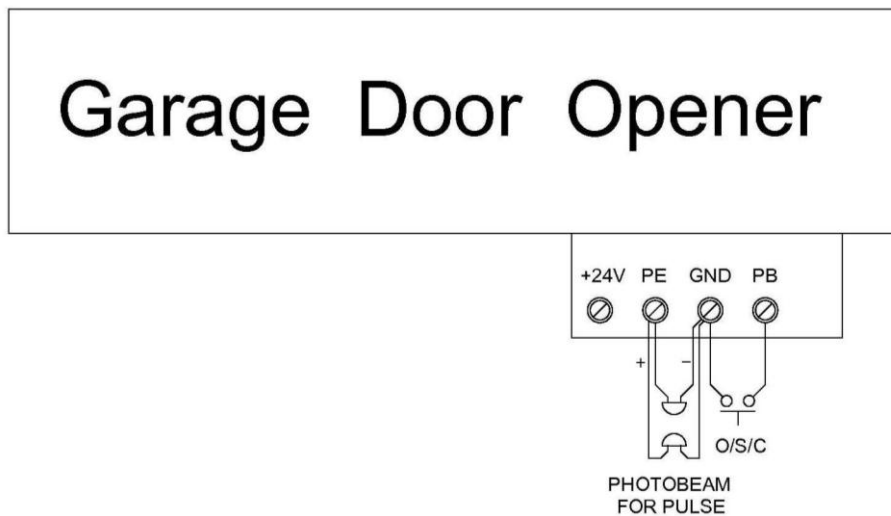
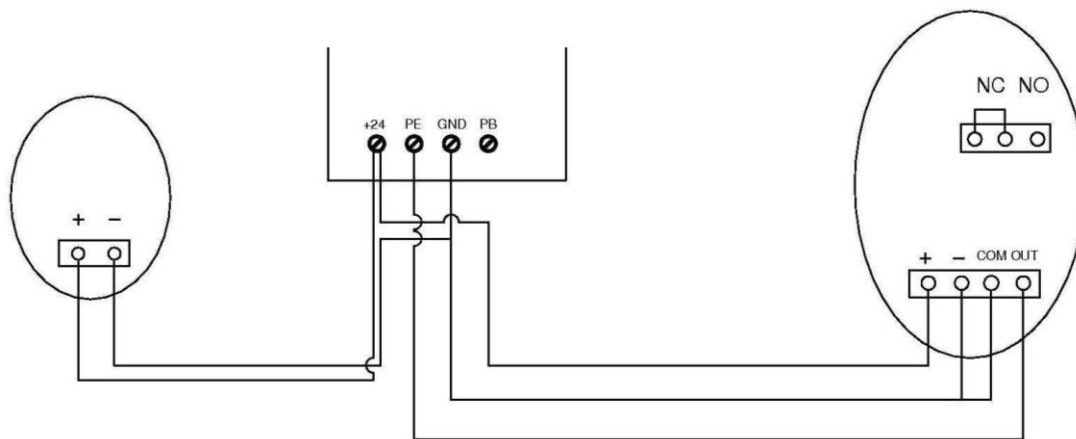


Figure 21



Connection of photo beam/switch control

Figure 22

Other terminal introduction and application

1. The O/S/C interfaces available (Fig. 23, Fig24)

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

2. Flash light function (Fig. 23, Fig24)

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

3. Pass door (SD) protection (Fig. 23, Fig24)

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

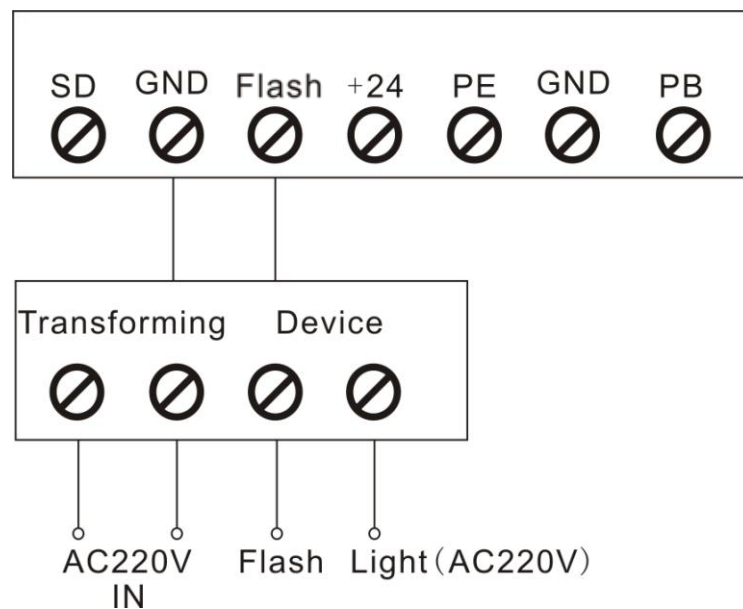
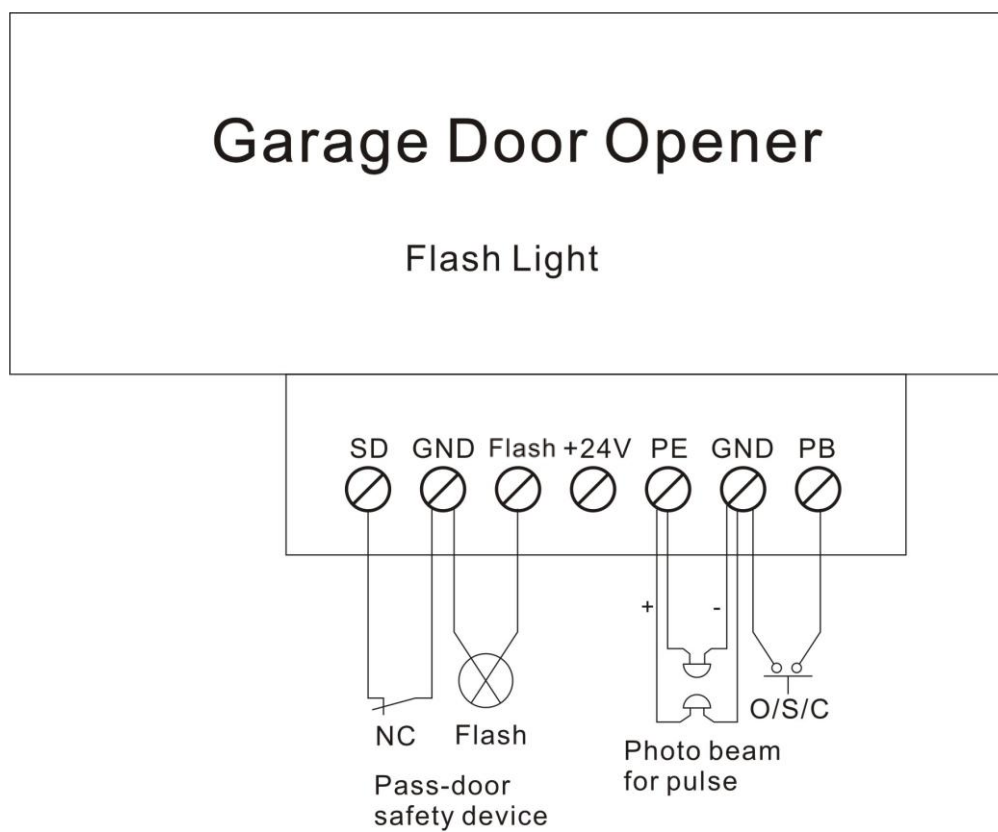


Figure 23



ASS. Terminal connection

Figure 24

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 25). 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 26).

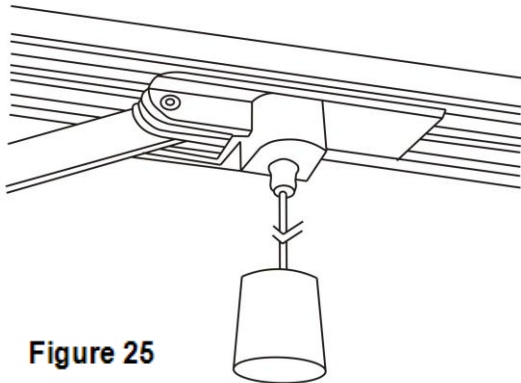


Figure 25

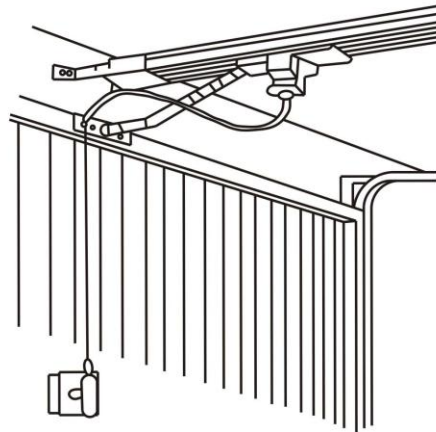


Figure 26

Maintenance

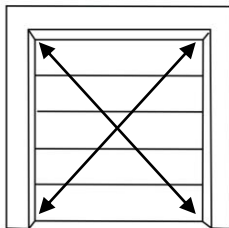
1. No particular maintenance is required for the logic circuit board.
Check the door at least twice a year if it is properly balanced, and all working parts are in good working condition or not.
Check the reversing sensitivity at least twice a year, and adjust if it is necessary.
Make sure that the safety 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 void the warranty.

Technical specifications

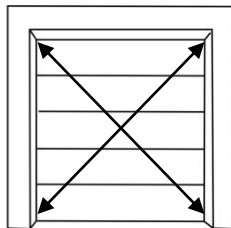
	600N	800N	1000N
Rated door area	≤ 9.0 sq/m	≤ 12.0 sq/m	≤ 15.0 sq/m
Rated lift force	≤ 60kg	≤ 80kg	≤ 100kg
Rail	Steel / Aluminium	Steel / Aluminium	Steel / Aluminium
Drive	Chain / Belt	Chain / Belt	Chain / Belt
Motor	24V / 100W	24V / 120W	24V / 140W
Input voltage	110V - 270V	110V - 270V	110V - 270V
L.E.D	24V / 15pcs LED bulbs		
Fuse	Included	Included	Included
Transformer	105°C Temperature detect switch		
Radio frequency	433.92 Mhz	433.92 Mhz	433.92 Mhz
Coding Format	Rolling code (7.38×10^{19} Combinations)		
Standard transmitter	2X	2X	2X
Code Storage Capacity	20 different codes		
Caution light terminal	Included	Included	Included
Working temperature	-40°C - +50°C	-40°C - +50°C	-40°C - +50°C
Safety Protection	Soft start & Soft stop on board, photo cell option, caution light option		
Protection level	IP20	IP20	IP20

FS600N



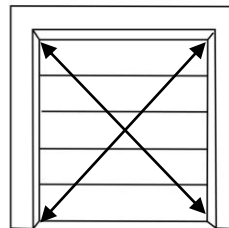
Rated door area: ≤ 9.0m²

FS800N

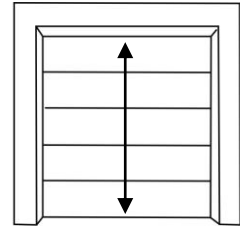


Rated door area: ≤ 12.0m²

FS1000N

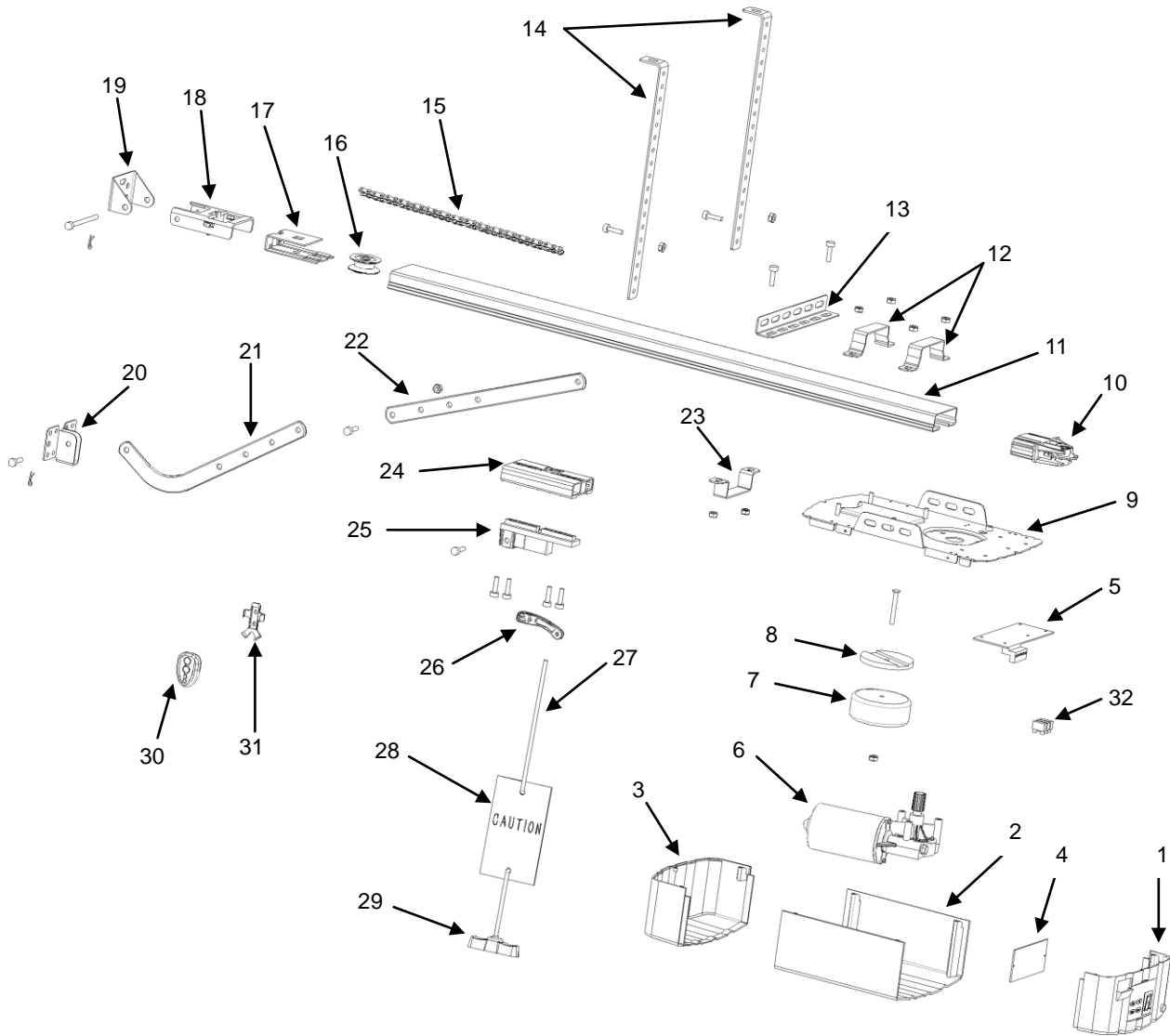


Rated door area: ≤ 15.0m²



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

Parts Listing



Item	Qty	Description
1	1	Control Panel Cover
2	1	Opener Middle Cover
3	1	LED light Cover
4	1	PCB
5	1	PCB
6	1	DC Gear Motor
7	1	Transformer
8	1	Transformer Support
9	1	Steel Bottom Base
10	1	Sprocket Support
11	1	C Rail - Steel

Item	Qty	Description
12	2	U Hanging Bracket
13	1	Track Bracket -1
14	2	Mounting Bracket
15	1	Chain & Belt
16	1	Chain Wheel
17	1	Wheel Bracket
18	1	Track Ending Bracket
19	1	Wall Bracket
20	1	Door Bracket
21	1	Bent Arm
22	1	Straight Arm

Item	Qty	Description
23	1	Track Bracket - 2
24	1	Shuttle Assy - Bottom
25	1	Shuttle Assy - Top
26	1	Shuttle Arm
27	1	Release Cord
28	1	Caution Paper
29	1	Release Handle
30	2	Transmitter
31	1	Transmitter Bracket
32	1	Wire Connection

Common Fault & Solutions

Fault appearance	Fault cause	Solutions
No any working for openers	1. Power supply 2. Plug wire are loosing	1. Check the power supply from electronic plug on openers. 2. Carefully open the opener cover, check all plug wire on control boards.
Not working for opener, LED shows"—"	Faulty learning on "Up" Or "Down" limit travelling	Lean "Up"and "Down" limit travelling again follow the manual
Door is up moving only. Do not work in down moving	In operation with safety photo cell. Or photo cell function has been effected but without connecting any photo cell device.	Check photo cell, remove the obstruction. Turn off the photo cell function if there is no any photo cell device connected. (Refer the instruction manual)
Up and Down moving is reversed	Reversed plug wire between gear motor and board	※ Power off firstly, open the cover and reverse the plug wire between gear motor and board. Re-set limit travelling.
Door was Automatic reversed 15-40cm before the door closed completely	In operation with automatic reversed function. Because of some old doors with not good balanced spring or some block on it's moving.	1. Check the door springs or any block position. 2. Re-set the limit travelling 3. Increase the force number for automatic reverse.
Transmitter is not working	1. Flat battery 2. Antenna is loosed or not well extended. 3. Interference around nearby	1. Replace new battery. 2. Extend the antenna on the opener 3. Get rid of interference
Can not code in the new remotes	1. Stored remote code has been full 2. New remote is not compatible with opener	1. Press "code" button over 8 Sec until LED displays "C", deleted all stored codes, code in new remotes again. 2. Choose our remotes only.
LED displays"—"or"—", Opener does not work.	1. loosing for gear motor plug wire 2. Damage for gear motor 3. Damage for control board	1. Re-insert plug wire on gear motor ※2. Replace new gear motor ※3. Replace new control board
LED displays"—"or"—" After Opener moving several centimeters only	1. Hall sensor wire plug was loosing between hall sensor and board. 2. Hall sensor or board is damage	1. Check the wire plug ※2. Check the hall sensor ※3. Replace control board

Remark: Only the professional person who are qualified to carry out the installation with ※ marked.