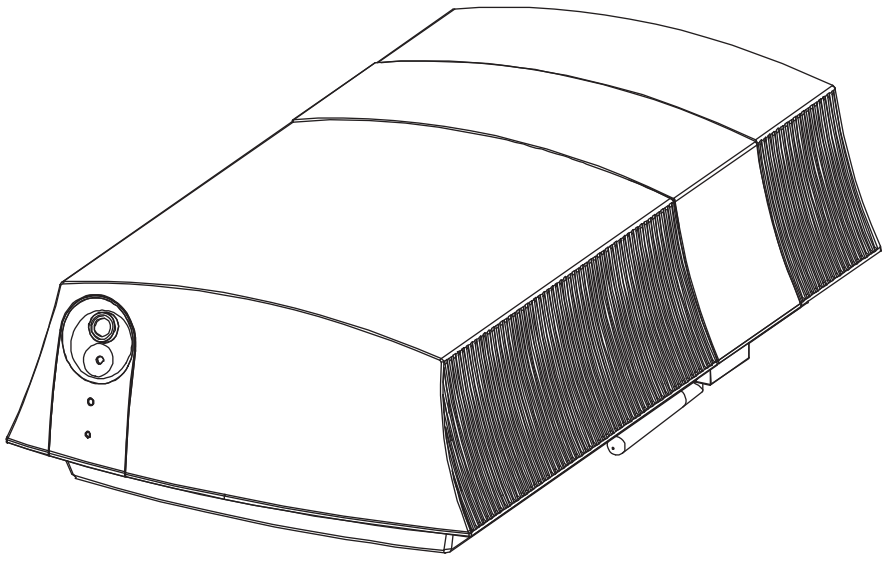
AMOS SERIES
Garage Door Openers

USER MANUAL



Reuse
Reduce
Recycle

INDEX

1. WARNINGS

WARNING :

Please read this instruction manual carefully before the installation.

This manual is exclusively for qualified install ation personnel. TMT Automation Inc. is not responsible for improper installation and failure to comply with local electrical and building regulations.

Keep all the components of garage opener system and this manual for further consultation.

- In this manual, please pay extra attention to the contents marked by the symbol: ⚠
- Be aware of the hazards that may exist in the procedures of installation and operation of the garage opener system. Besides, the installation must be carried out inconformity with local standards and regulations.
- If the system is correctly installed and used following all the standards and regulations, it will ensure a high degree of safety.
- Make sure that the door works properly before installing the garage opener system and confirm the doors are appropriate for the application.
- Do not let children operate or play with the garage opener system.
- Do not cross the path of the garage opener system when operating.
- Please keep all the control devices and any other pulse generator away from children to avoid the system being activated accidentally.
- Do not make any modifications to any components except that it is mentioned in this manual.
- Do not try to manually open or close the doors before you release the opener.
- If there is a failure that cannot be solved and is not mentioned in this manual, please contact qualified installation personnel.
- Do not use the garage opener system before all the procedures and instructions have been carried out and thoroughly read.
- Install warning signs (if necessary) on the both sides of the door to warn the people in the area of potential hazards.

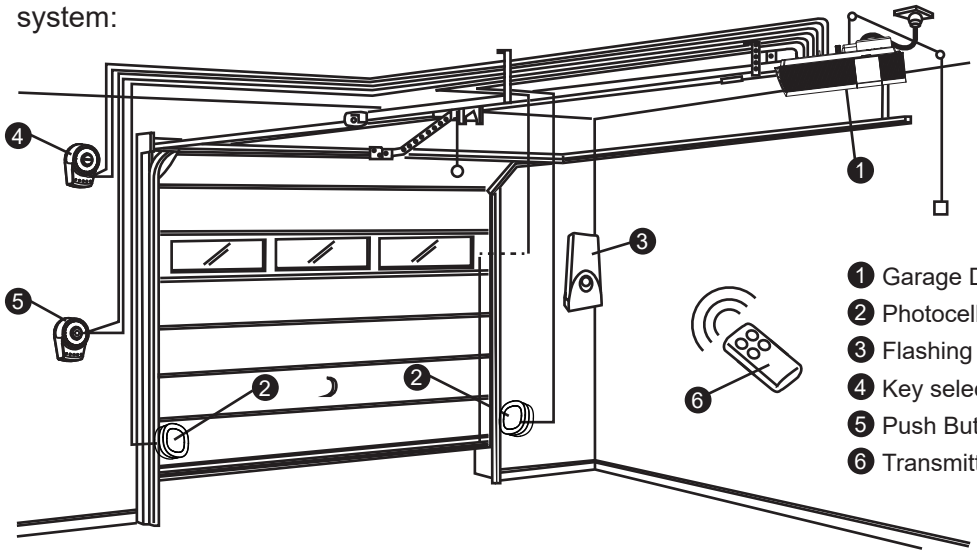
2. PRODUCT DESCRIPTION

2.1 APPLICATIONS

Garage door opener is applied for residential automation of up and over doors and sectional doors and has to be operated with electricity and it's forbidden to be operated by back-up batteries for normal use.Back-up batteries are only allowed for emergent operation when there is a power failure, and the carriage can be released by pulling the cord to move the door manually.

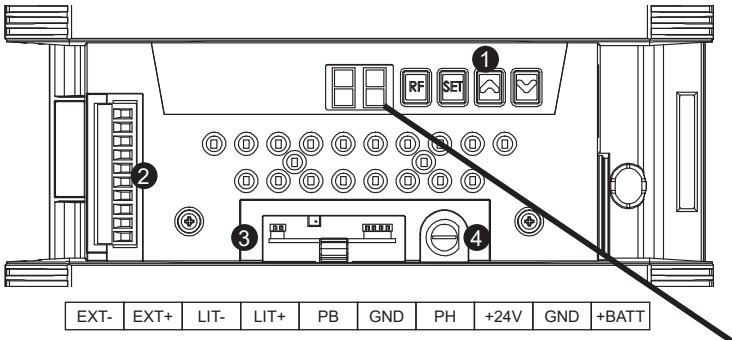
2.2 DESCRIPTION OF THE AUTOMATION

1). The following diagram of typical installation describes some terms and accessories of the door automation system:



1. Garage Door Opener
2. Photocells (Optional accessories)
3. Flashing Light (Optional accessories)
4. Key selector (Optional accessories)
5. Push Button (Optional accessories)
6. Transmitter

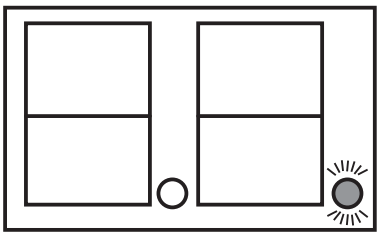
2). The indication of control panel



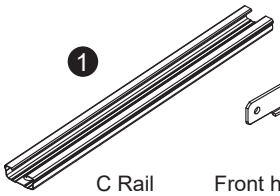
1. Operation buttons: Remote Function key (RF), Setting key (Set), UP key (Up), DOWN key (Down).
2. Connection terminal of Optional accessories
3. Radio receiver board
4. Fuse

3). The LED indication

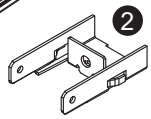
1. The power indicator is on the bottom right of the display. When the power is connected, the LED dot indicator is alight.
2. When entering to the power-saving mode, the LED power indicator is flashing (light for 0.5 second and then no light for 5 seconds)



3.1 Inventory of a garage door opener

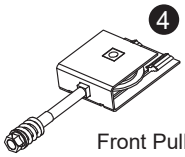


1 C Rail

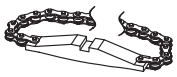


2 Front hold bracket

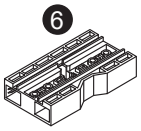
3 Rear Pulley Support



4 Front Pulley Tensioner

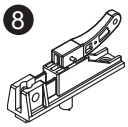


5 Chain & Index

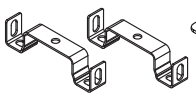


6 Inner Trolley Assy

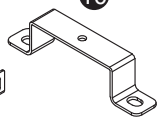
7 Release Rope



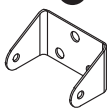
8 Outer Trolley Assy



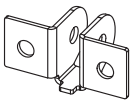
9 Motor Hold Bracket



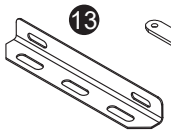
10 Ceiling Hold Bracket



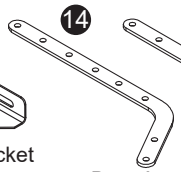
11 Header bracket



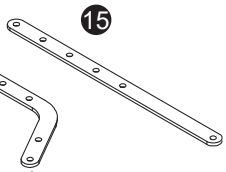
12 Door Bracket



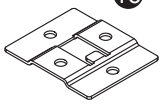
13 Ceiling Bracket



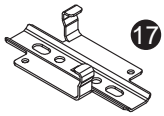
14 Bent Arm



15 Straight Arm

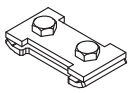


16 Door Bracket Locator



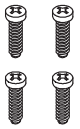
17 Ceiling Support Bracket

Hardware Inventory

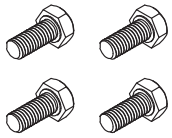


18 Blocker x1

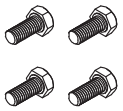
19 Locking Plate x2



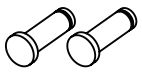
20 Screws x4



21 M8*20 HEX bolt x4



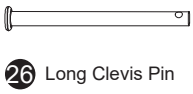
22 M6*14 HEX bolt x4



23 Clevis Pin x2

24 M8*8 Nut x4

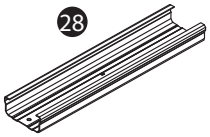
25 M6*6 Nut x8



26 Long Clevis Pin

27 Cotter Pin

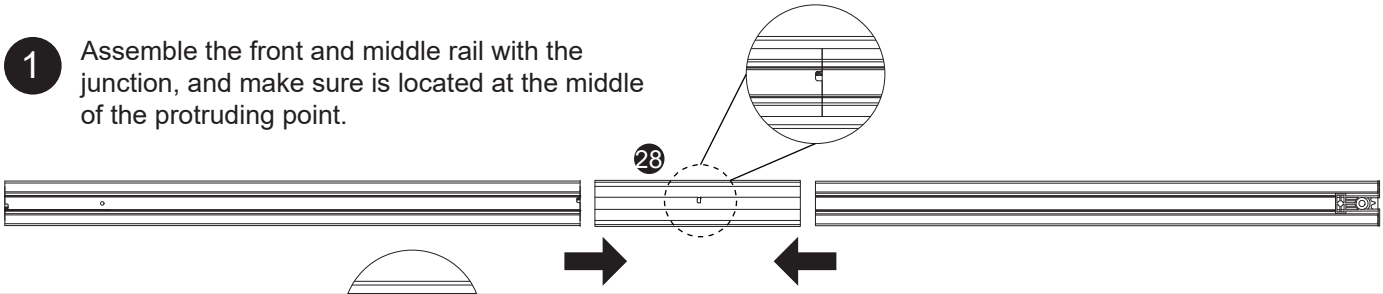
Optional for 1pcs x 1M Rail



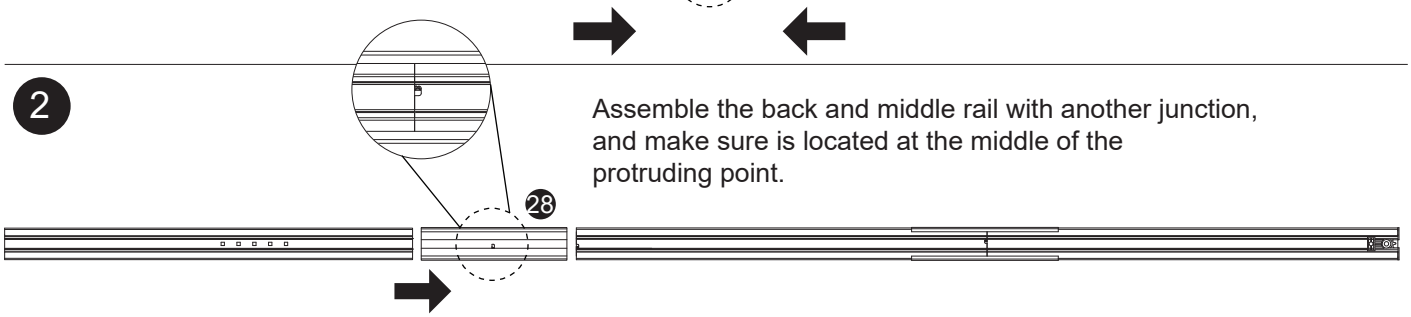
28 Junction x2

3.2 Rail assembly

1 Assemble the front and middle rail with the junction, and make sure is located at the middle of the protruding point.



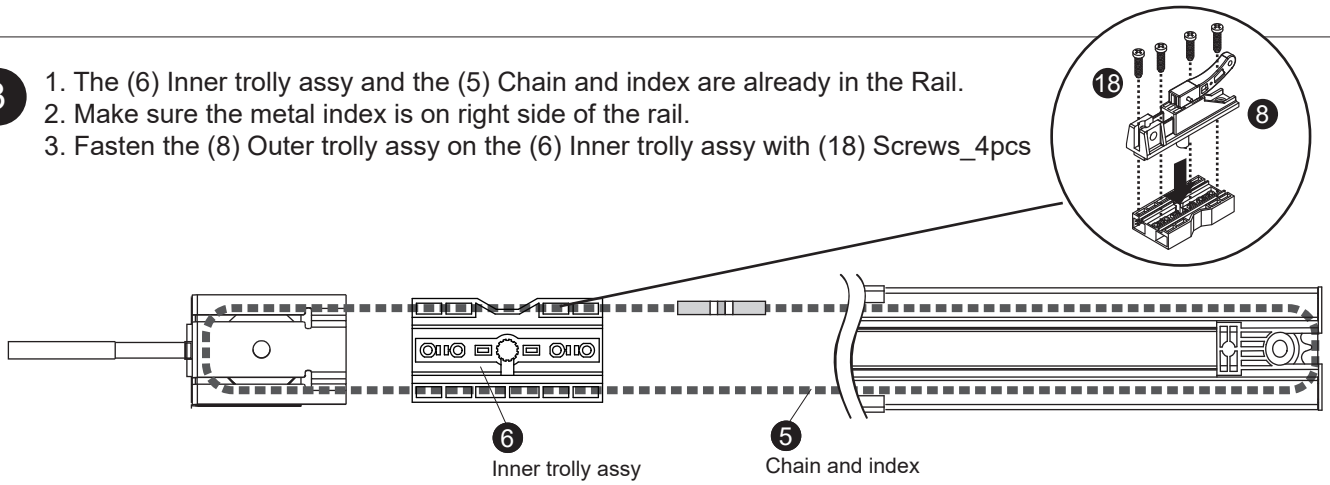
2



Assemble the back and middle rail with another junction, and make sure is located at the middle of the protruding point.

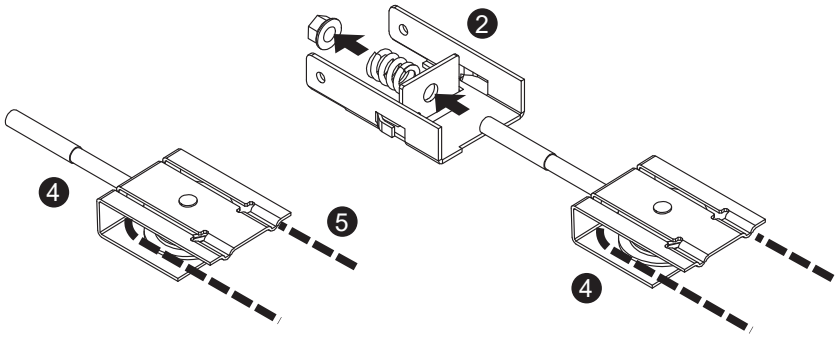
3

1. The (6) Inner trolly assy and the (5) Chain and index are already in the Rail.
2. Make sure the metal index is on right side of the rail.
3. Fasten the (8) Outer trolly assy on the (6) Inner trolly assy with (18) Screws_4pcs

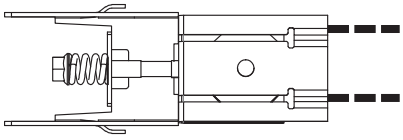


4

Remove the nut and the spring in the (4) Front pulley tensioner. Make sure the metal chain is placed in the gap of the pulley on the two sides. Insert the (2) Front hold bracket against the rail. Use the spring and the nut to adjust the tightness of the (5) Chain.



Complete



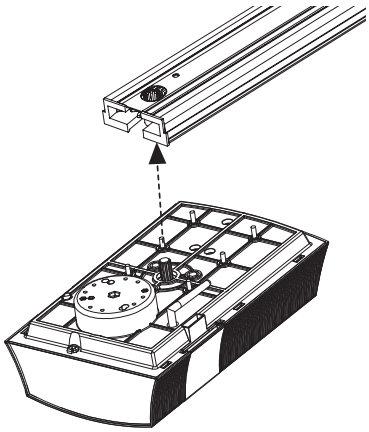
4

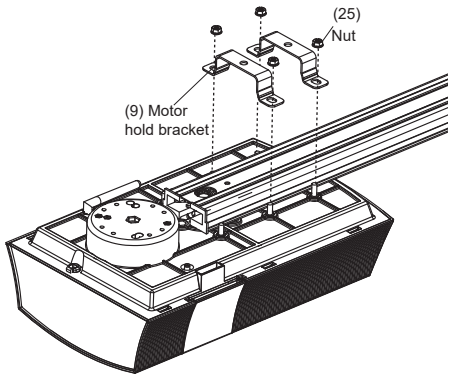
Note: Remember to lubricate the front and rear pulley before use.

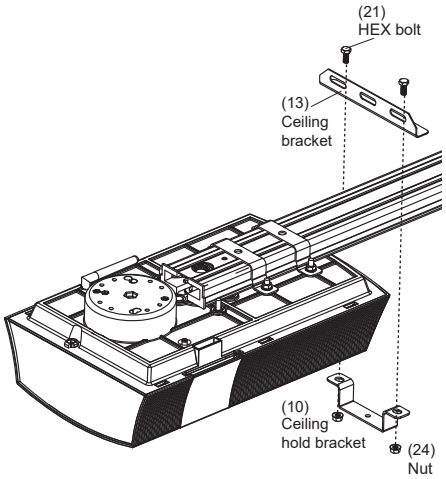
3.3 Attach the rail to the motor

1. Connect the (3) Rear pulley support to the output shaft of the motor.
2. Fasten the rail on the motor with (9) Motor hold bracket and the (25) Hex nuts.
3. Fasten the (10) Ceiling hold bracket and (13) Ceiling bracket at the rear side between the motor and the rear blocker with Hex bolt (21) and Hex nuts (24).

Remark: Optional choice is to use L-bracket to hold the brackets to the ceiling, and fasten to both the ceiling and ceiling bracket(13) using Hex bolt(22) and Hex nuts(25).



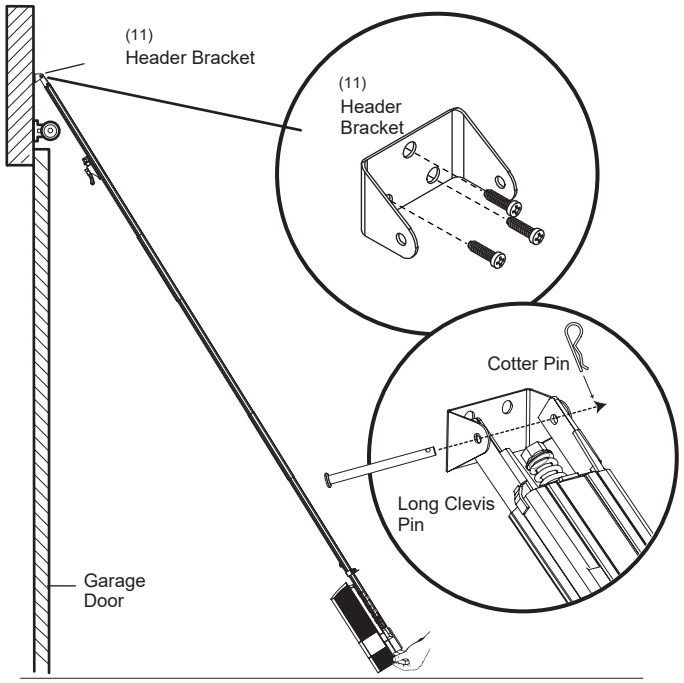




3.4 Attach the rail on the header wall and ceiling

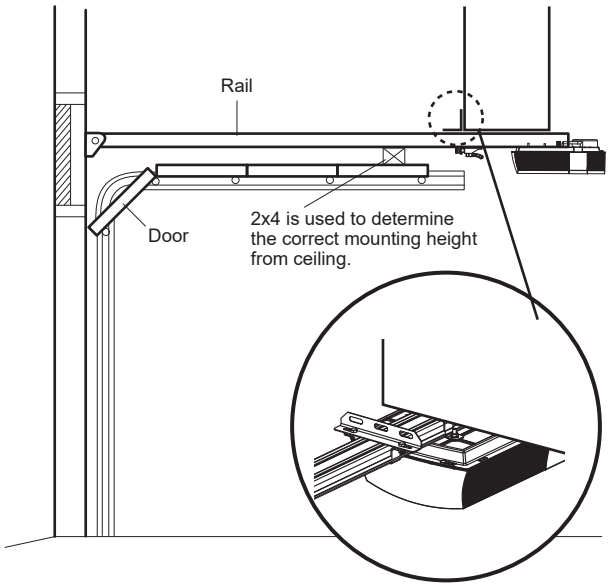
1. Position (11) Header bracket on the header wall.
   *It is recommended that positioned at the center of the garage door.
   *The installation height of the (11) Header bracket varies from 30-50cm from the top of the garage door.
2. Install the (11) Header bracket with screws.
3. Attach the front rail to header bracket with bolts.
4. Attach the (13) Ceiling bracket on the crossbeam of ceiling with crews.

Attach Rail to the Header Bracket



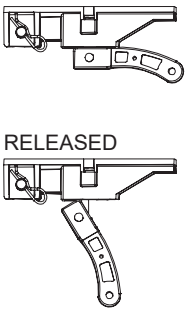
CAUTION

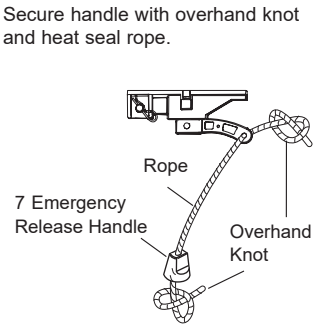
To prevent damage, place the garage door on the top section to create a temporary support.



3.5 Connect release section to the garage door

1 Connect the (7) Release rope on the (8) Outer trolley assy





⚠ WARNING

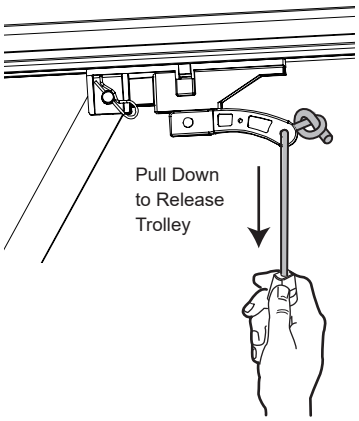
To prevent possible SERIOUS INJURY or DEATH from a falling garage door:

- If possible, use emergency release handle to disengage trolley ONLY when garage door is CLOSED. Weak or broken springs or unbalanced door could result in an open door falling rapidly and/or unexpectedly.
- NEVER use emergency release handle unless garage doorway is clear of persons and obstructions.
- NEVER use handle to pull door open or closed. If rope knot becomes untied, you could fall.

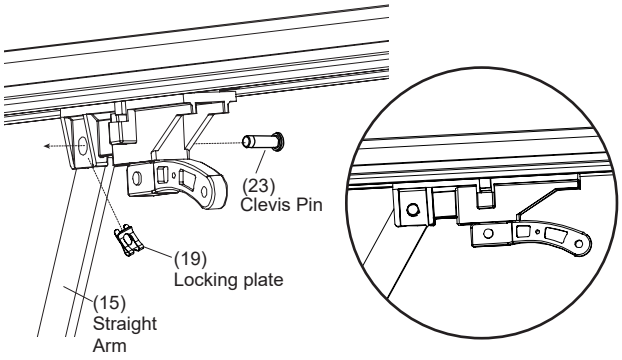
NOTE: Handle should hang 6 feet (1.5 m) above floor. Ensure that the rope and handle clear the tops of all vehicles to avoid entanglement.

CONNECT DOOR ARM TO TROLLEY

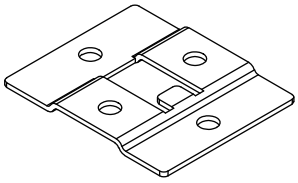
2 Pull the (7) Release rope to disengage the (6)(8) trolley

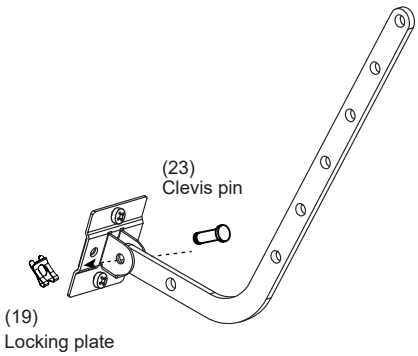


3 Connect (15) Straight door arm to Release trolley

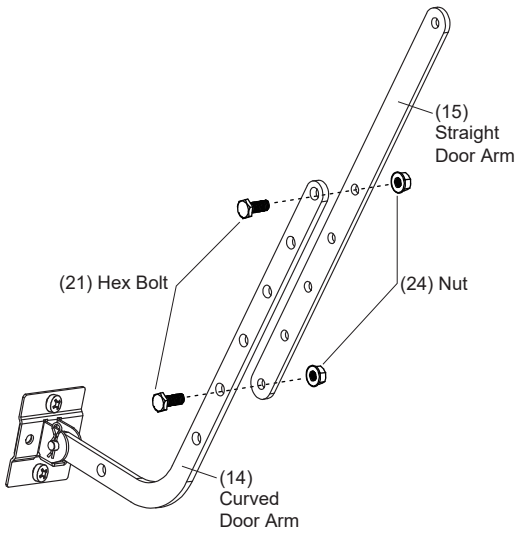


4 Fasten the (12) Door bracket and (16) Door bracket locator on the center of the garage door. Connect (14) Curved arm to (12) Door bracket.





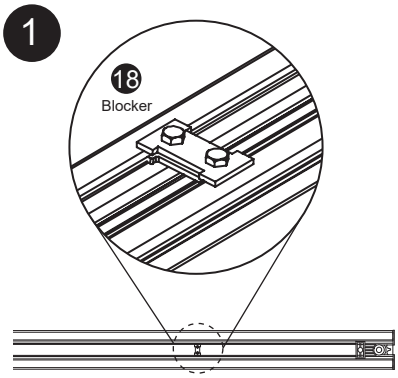
5 Connect (14) Curved door arm and a (15) straight door arm with bolts and nuts.



3.6 Final steps before system learning

1. Install the (18) Blocker on the door open position.
2. Attached the warning sign to the (7) release rope.
3. Connect the power to the motor. Make sure the electric plug and socket are well connected.

1



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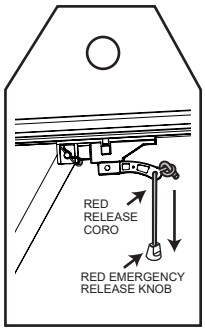


3

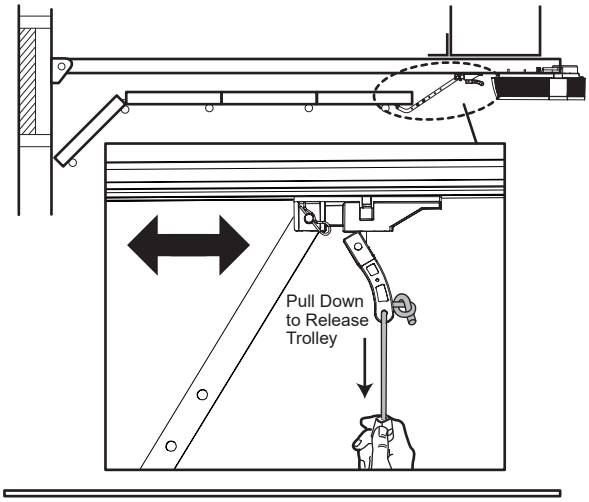
⚠ WARNING

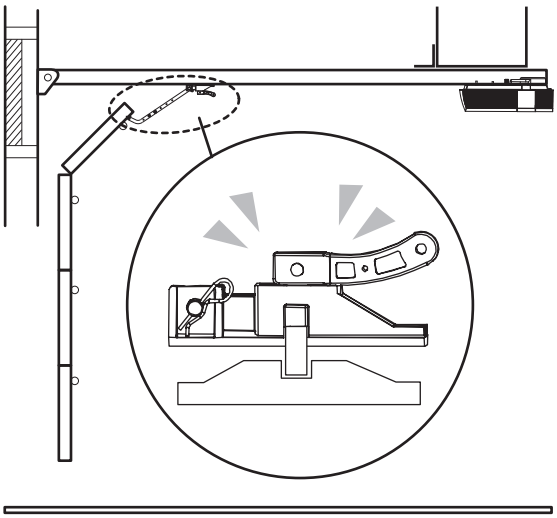
To prevent possible SERIOUS INJURY or DEATH from electrocution or fire:

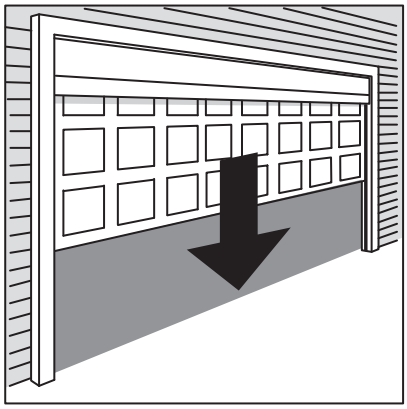
- Be sure power is not connected to the opener, and disconnect power to circuit BEFORE removing cover to establish permanent wiring connection.
- Garage door installation and wiring MUST be in compliance with all local electrical and building codes.
- NEVER use an extension cord, 2-wire adapter, or change plug in ANY way to make it fit outlet. Be sure the opener is grounded.

3.7 Introduction of the emergency release

1. Pull the (7) Emergency release rope to release the trolley. Make sure the trolley is disengaged. The garage door can be operated manually.
2. Before restarting the motor, manually move the garage door until the trolley is engaged.





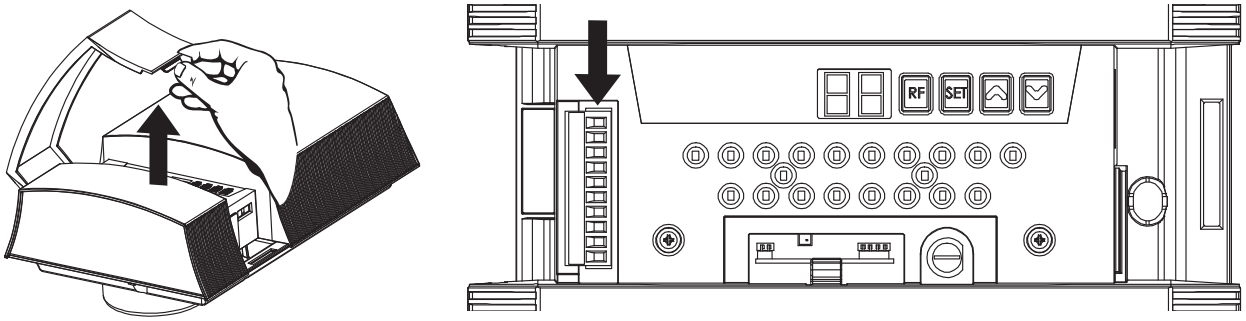


4.1 Accessories connection

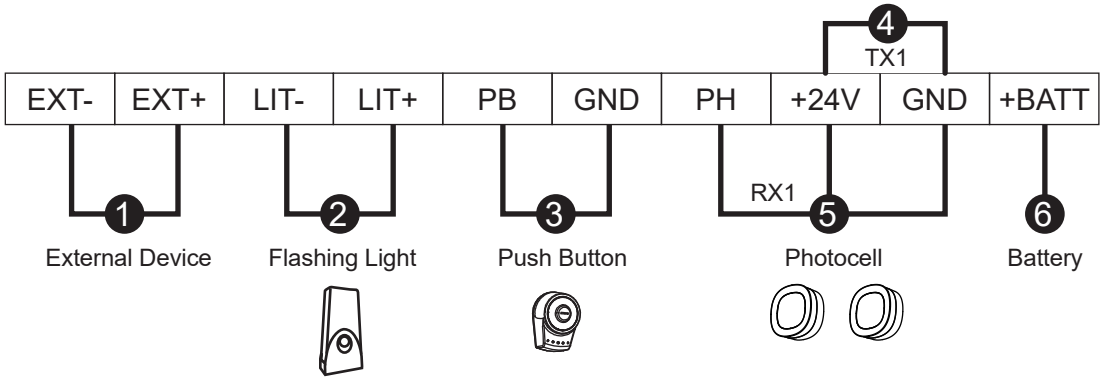
Only carry out electrical connections once the electricity supply to the system has been switched off.

Disconnect any

A. Open the cover in order to access the electronic connection terminal of the garage gate opener.



B. Connect the wires of each accessory on the terminal. (If necessary)



C. Function of external push button:

Operation logic of door when press the push button: open-stop-close-stop

EXT-	EXT+	LIT-	LIT+	PB	GND	PH	+24V	GND	+BATT

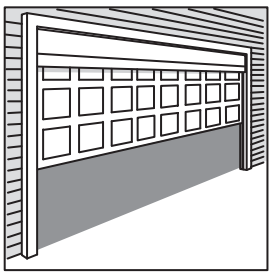
4.2 Door position for start-up phase

1. Connect the plug.If necessary, use a commercial adaptor if the plug on the AMOS Series unit does not correspond to the socket available.As soon as the system is powered, you should check the LED in the display. Make sure the LED display is ON.

2. Never cut or remove the cable supplied with AMOS Series garage opener. If not already available, the power socket of AMOS Series garage opener connection must be fitted by skilled and qualified personnel in strict observance of current legislation, standards and regulations.

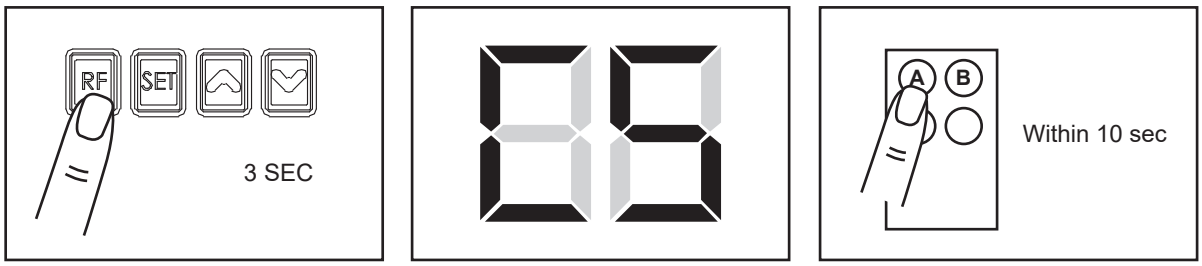
3. The power supply line must be protected from short circuits and ground leakage.

4. The garage door is recommeded to be set at half travel.
   This will ensure the leaf is free to move both during opening and closure.

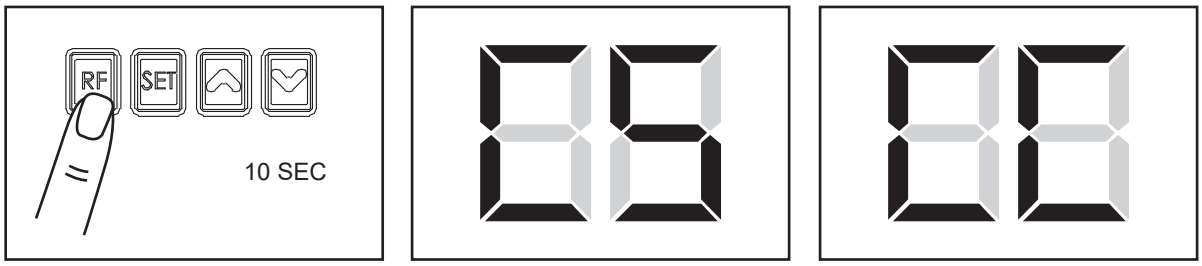


4.3 Transmitter memorizing and erasing process

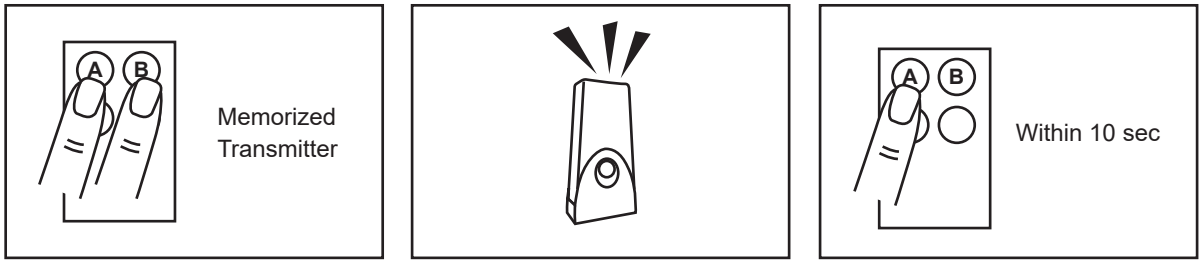
A. Transmitter Memorizing:
Press “RF Learn” button for 3 seconds, and the Display will show “CS”; then press the transmitter A button within 10 seconds; the“CS” will blink three times and show “CS”. After 10 seconds without any movement, “CS” will be off. The transmitter learning is completed.



B. Erasing Transmitter Memory:
Press and hold "RF Learn" button for 10 seconds, the display will show “CS”. When “CC” shows up, the memory is cleared.



C. Memorizing by memorized transmitter:
Press and hold A and B button for 5 seconds, LED light and external flash light will start to blink in the same time. Within 10 seconds, press any button of the un-memorized transmitter 2 seconds, the transmitter will be memorized after LED light and external flash light are off. To program by memorized transmitter, just can do the transmitter learning one by one.



4.4 System learning, reset process, and LED display

A. System Learning:
Step1: Press and hold “RF” and “SET” buttons 3 seconds, the LED display shows “OL” and the motor enters system learning program.

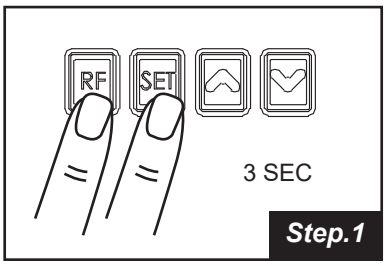
Step2: Set up open limit and LED display shows “OL”. Press and hold “UP” or “DOWN” button to raise or descend the door. When the door moves to the proper open position, press “SET” button.

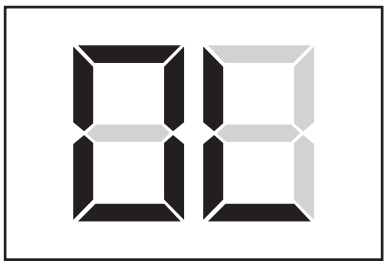
Step3: Set up close limit and LED display shows “CL”. Press and hold “UP” or “DOWN” button to raise or descend the door. When the door moves to the proper close position, press “SET” button.

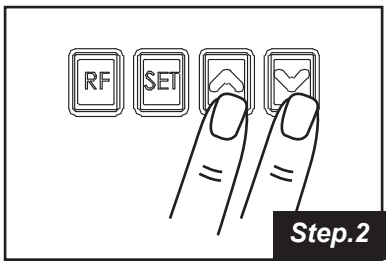
Step4: The LED display blinks “GE” continuously. Press “SET” or “A” button of the transmitter to proceed operation testing. The LED display shows the operation current value in the process and memorizes overcurrent value.

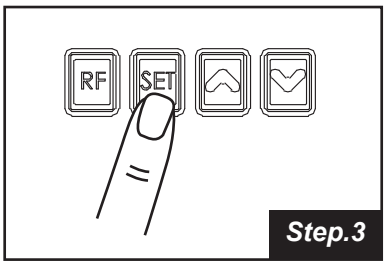
Step5: The motor opens and closes automatically with full speed. The LED display shows “SO” while the system learning completes. The LED display shows “SF" while the system learning fails. The LED display will be off after 10 seconds.

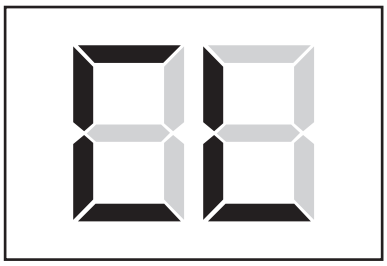
Note: The overcurrent function and flashing light function will be activated automatically after learning process complete.

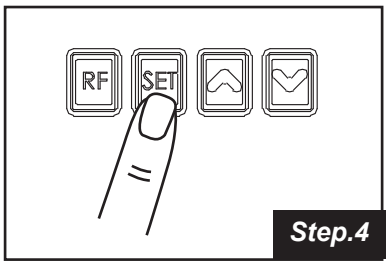


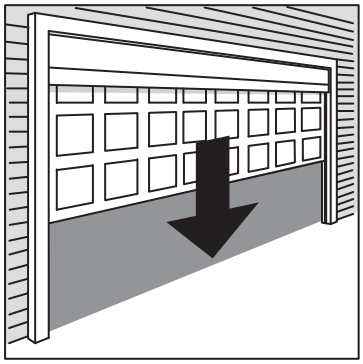


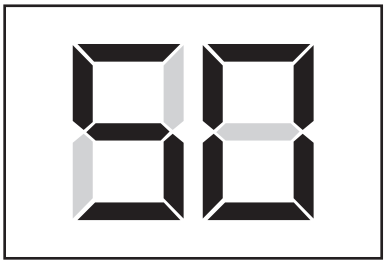




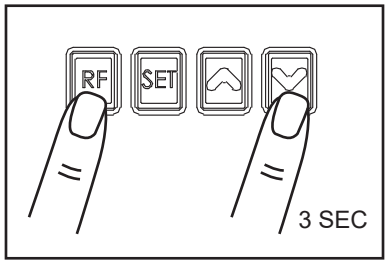


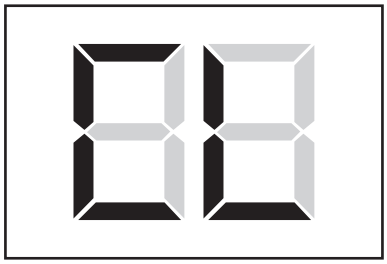


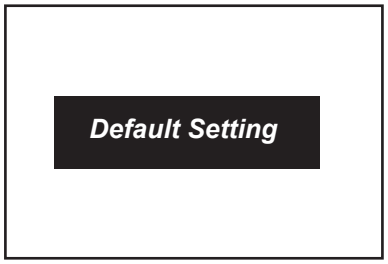




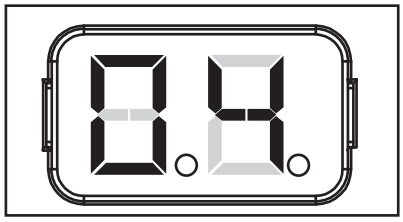
B. Restore Default Setting:
Press “RF” and “DOWN” buttons for 3 seconds, and the LED display shows “CL” to recover the default settings.







C. Motor current auto-detection
The LED display shows the current consumption of the motor



During the system learning procedure, the control panel will automatically detect the current consumption from each motor, indicate the resistance level of the gate whiling the motor operation. If this reading increase instantly or stay in high reading, please check if any object in between of the gate moving area, and contact your installer for inspection.

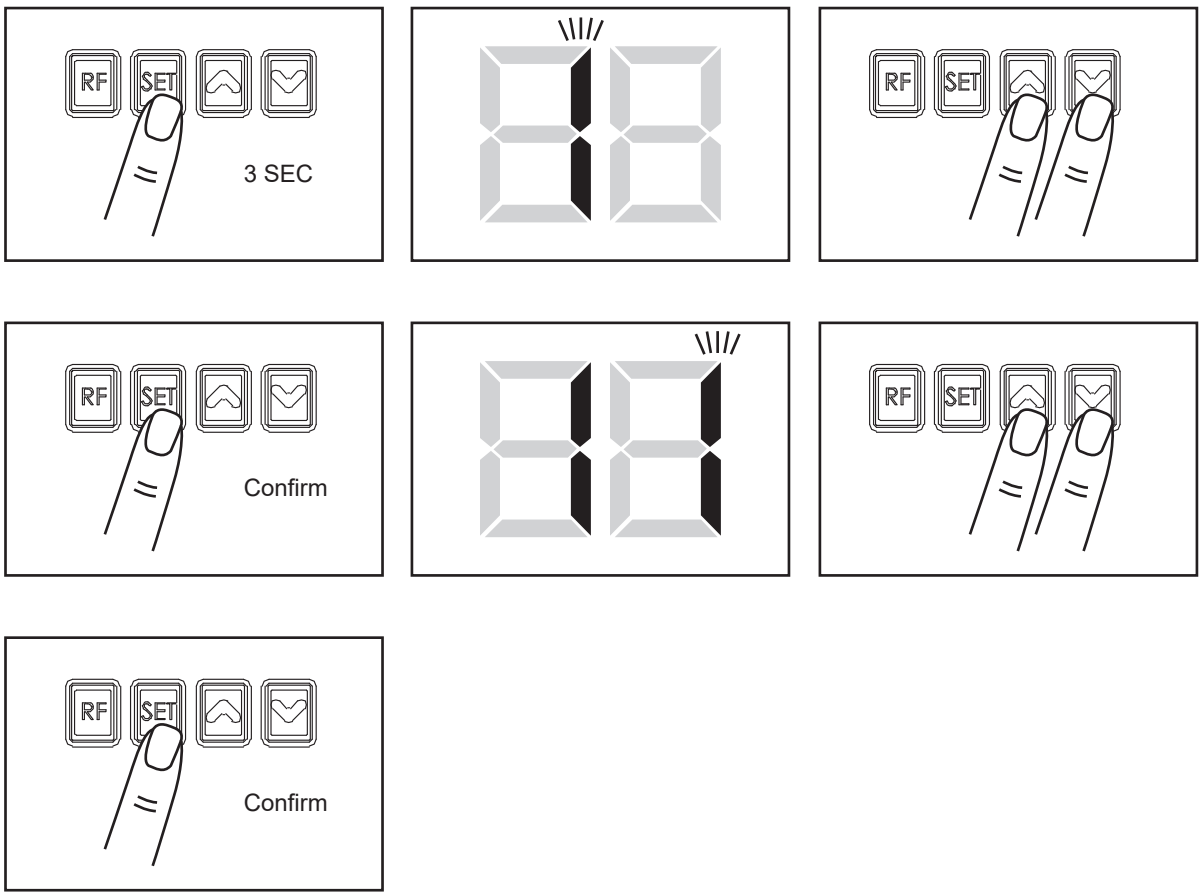
4.5 Programmable function indication led

LED Display	Programmable Functions	LED Display	Programmable Functions
	Start transmitter learning mode.		Operation testing
	Cleaned all studied transmitter.		System Learning Fail.
	Set up Open Limit.		System Learning Completely.
	Set up Close Limit.		System setting clear

4.6 How to set the parameter:

Step 1: Press the“Set” key for 3 seconds, the display will show the function code.

Step 2: Choosing the setting by Up and Down keys, after having chosen the indicated item, press the Set key and enter the setting of this function. The second digit will be shown on the right of the display, indicating the related function(please refer below chart for details). Using the Up and the Down Keys to choose the setting function and press the Set key to save.



4.7 Programmable function setting

LED Display	Definition	Function	Value	Description
1	Deceleration Point (% full operation)	1-1	75%	1.The default setting is "1-3"
		1-2	80%	
		1-3	85%	
		1-4	90%	
		1-5	95%	
2	Main Operation Key	2-0	Function off	1.The default setting is "2-1"
		2-1	A Key	
		2-2	B Key	
		2-3	C Key	
		2-4	D Key	
3	Lighting Key	3-0	Function off	1.The default setting is "3-2"
		3-1	A Key	
		3-2	B Key	
		3-3	C Key	
		3-4	D Key	
4	External Device Key	4-0	Function off	1.The default setting is "4-3"
		4-1	A Key	
		4-2	B Key	
		4-3	C Key	
		4-4	D Key	
5	Photocell Function Mode PH Terminal	5-0	Function off	1.The default setting is "5-0 "
		5-1	Mode 1	2. Please refer to page 14_Function of photocells
		5-2	Mode 2	
6	Alarm Buzzer	6-1	Function off	1.The default setting is "6-1"
		6-2	Function on	2. IF the door left opened for longer than 10mins then buzzer start beeping and turn off until the door been closed.
7	Auto-closing	7-1	Function off	1.The default setting is "7-1"
		7-2	30 sec	
		7-3	60 sec	
		7-4	90 sec	
		7-5	120 sec	
		7-6	150 sec	
		7-7	180 sec	
		7-8	210 sec	
		7-9	240 sec	
8	Lighting	8-1	Function off	1.The default setting is "8-4"
		8-2	LED light starts running 1 minute	
		8-3	LED light starts running 2 minutes	
		8-4	LED light starts running 3 minutes	
9	Overcurrent reaction	9-1	Stop when over-current	1.The default setting is "9-2"
		9-2	Reverse 2 seconds when over-current	
		9-3	Reverse to the end when over-current	
A	Overcurrent setting	1-0	Learning current add 0.2A as overcurrent	1. The default setting is "3-0"
		2-0	Learning current add 0.4A as overcurrent	
		3-0	Learning current add 0.5A as overcurrent	
		4-0	Learning current add 0.6A as overcurrent	
		5-0	Learning current add 0.8A as overcurrent	
		6-0	Learning current add 1.0A as overcurrent	
		7-0	Learning current add 1.2A as overcurrent	
		8-0	Learning current add 1.4A as overcurrent	
		9-0	Learning current add 1.6A as overcurrent	
		9-9	Learning current add 1.8A as overcurrent	

LED Display	Definition	Function	Value	Description
C	Overcurrent setting of open limit	C1	2A as overcurrent value of open limit	1. The default setting is "C-3"
		C2	3A as overcurrent value of open limit	
		C3	4A as overcurrent value of open limit	
		C4	5A as overcurrent value of open limit	
		C5	6A as overcurrent value of open limit	
		C6	7A as overcurrent value of open limit	
		C7	8A as overcurrent value of open limit	
E	Overcurrent setting of close limit	E1	2A as overcurrent value of close limit	1. The default setting is "E-3"
		E2	3A as overcurrent value of close limit	
		E3	4A as overcurrent value of close limit	
		E4	5A as overcurrent value of close limit	
		E5	6A as overcurrent value of close limit	
		E6	7A as overcurrent value of close limit	
		E7	8A as overcurrent value of close limit	
F	Power supply for +24V terminal	F1	Continuously power supply	1. The default setting is "F-1"
		F2	Sleep mode	2. Sleep mode: Power supply only when motor is operating

5. Function of external accessories

5.1 Function of photocells

F5-1 Mode 1

Gate Status	The reactions of the photocells when detecting obstacles
Closed	No affect
Opened	1. Stop till next command 2. Stop and reload auto-closing time if the auto-closing is on
Stop during moving	1. Stop till next command 2. Stop and reload auto-closing time if the auto-closing is on
Closing	Stop till next command
Opening	Stop till next command

F5-2 Mode 2

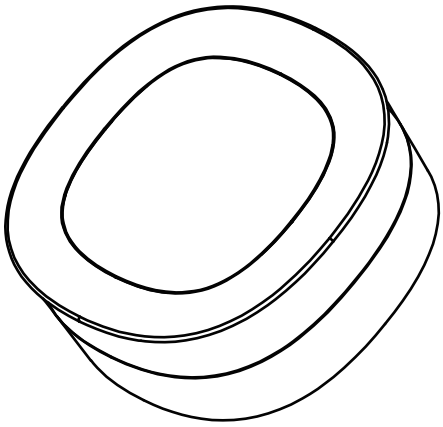
Gate Status	The reactions of the photocells when detecting obstacles
Closed	No affect
Opened	1. Stop till next command 2. Stop and reload auto-closing time if the auto-closing is on
Stop during moving	1. Not allow to close till next command 2. Not allow to close and reload auto-closing time if the auto-closing is on
Closing	Stop till next command
Opening	No affect

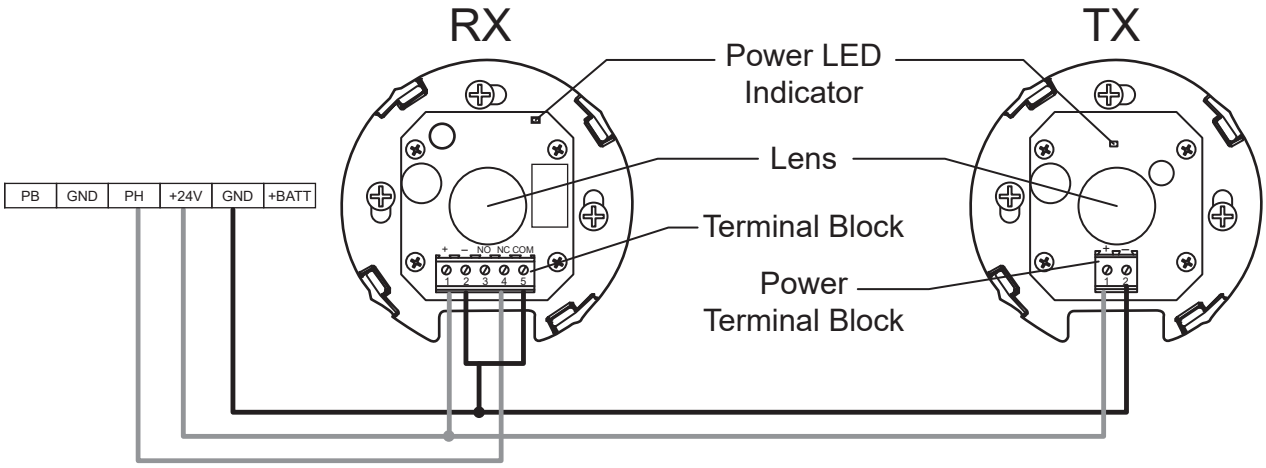
5.2 Installation of Photocell

The safety photocells are security devices for control automatic gates. Consist of one transmitter and one receiver based in waterproof covers; it is triggered while breaking the path of the beams.

SPECIFICATION:

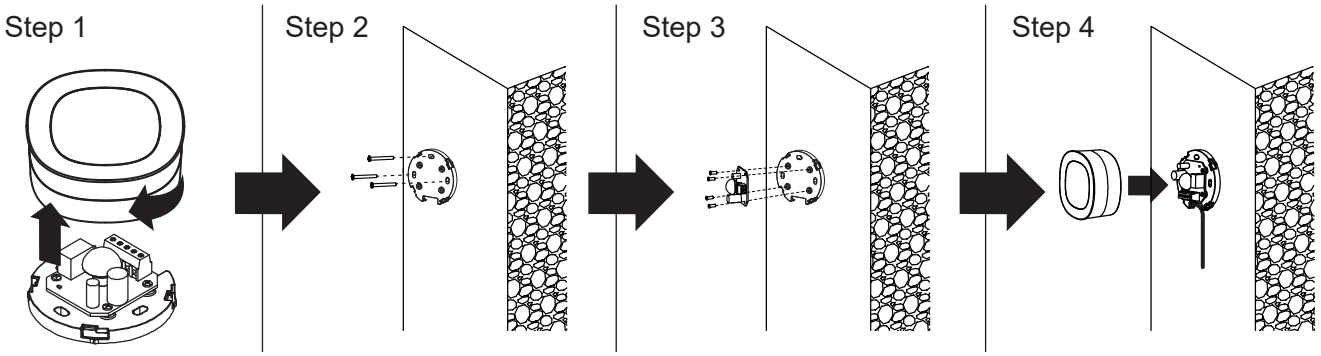
Detection Method	Through Beam
Sensing Range	MAX~15m
Input Voltage	AC/DC 12~24V
Contact Current	TX: 30mA Max , RX: 25 mA Max
Response Time	<100mS
Emitting Element	Infrared LED/ Wave Length ：940nm
Operation Indicator	RX：Red LED On (beam broken) / Off (beam aligned) TX：Red LED On
Dimensions	63*63*30 mm
Output Method	Relay Output
Current Consumption	Beam aligned ：RX<25ma\TX<30ma Beam broken ：RX <10ma\TX <30ma
Connection Method	Terminal Block
Housing Material	ABS / PC
Water Proof	IP54
Safety Standard	CE





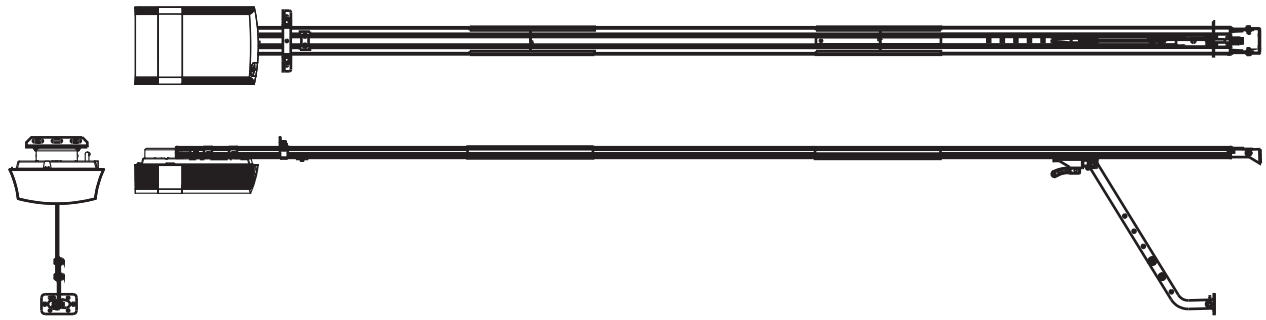
INSTALLATION:

1. Open the cover and connect wires.
2. Mounted the receiver and transmitter on the proper position.
3. Ensure there are no obstacles between receiver and transmitter.
   For optimal efficiency, the receiver and transmitter should be properly aligned.
4. Power-up the photocells and make sure the LED light on receiver and transmitter are ON.



6. Specification

Garage Door Opener	AMOS80	AMOS120
Volt	AC 220V / 110V ; 50Hz~60Hz	AC 220V / 110V ; 50Hz~60Hz
Motor volt	DC24V	DC24V
Power	80W	120W
Force	800N	1200N
Remote frequency	433.92MHZ	433.92MHZ
Max door area	10-12m²	14-16m²
Temperature range	-20°C ~ +50°C	-20°C ~ +50°C
Rail length	3.0m/3.3m	3.0m/3.3m
Running speed	140mm/sec	140mm/sec



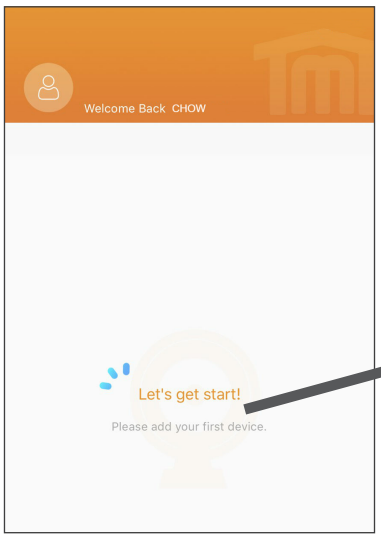
7. Wi-Fi Box User Manual

APP Installation and Operation

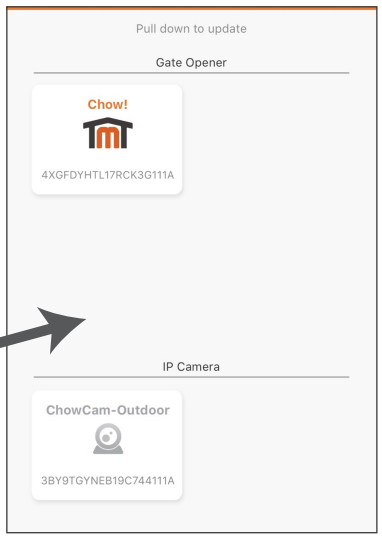
1. Search “TMT Chow” in APP store to download.
2. Open TMT Chow and Sign up.
3. Connect your phone to your home Wi-Fi.
(Connecting to your home Wi-Fi is required because 4G/3G are not allowed to conduct the installation)
4. Plug in your gate opener. You will see LED continuously blinking with blue light.

Available on the App Store

Get it on Google play



Enter your account name and password to log in TMT Chow.

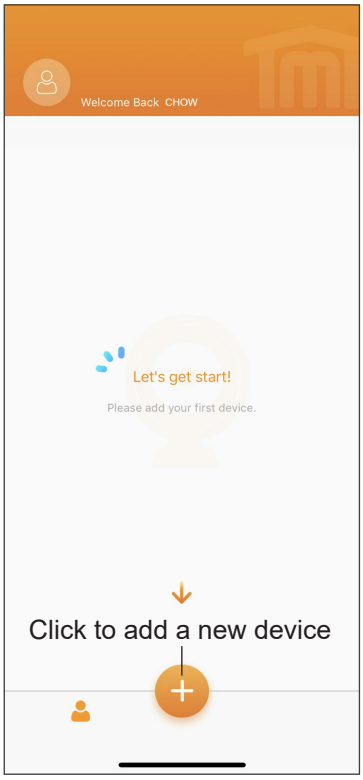


Sign up TMT Chow for the first time. Your account name would be rejected if it is taken.

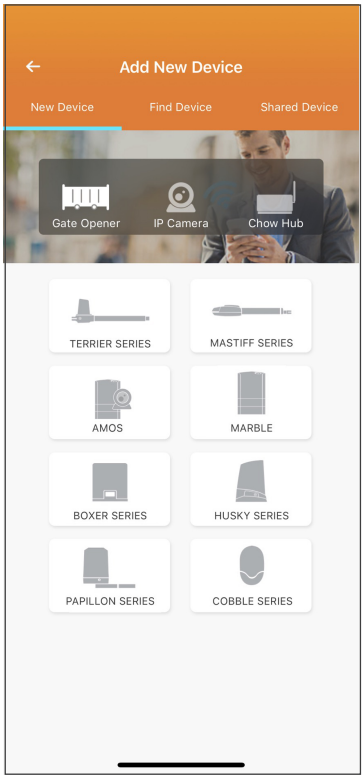
What you need when installing:

- Wi-Fi: The home Wi-Fi reception has to be stable, and the login username and password of your home Wi-Fi are required.
- Smart Devices: One of the devices is required, an IPhone 5 or later, a device using iOS8.0 or later, or Android 4.2 or later.
- Mobile Data: To operate Wi-Fi Box, you will need a mobile device which is able to connect to internet or an available Wi-Fi connection.

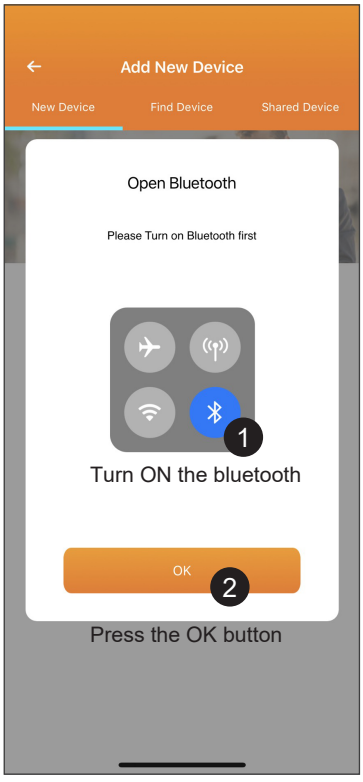
STEP 1：Chow APP, Starting connecting the garage door opener by pressing the 「+」 icon



STEP 2：Press the AMOS icon

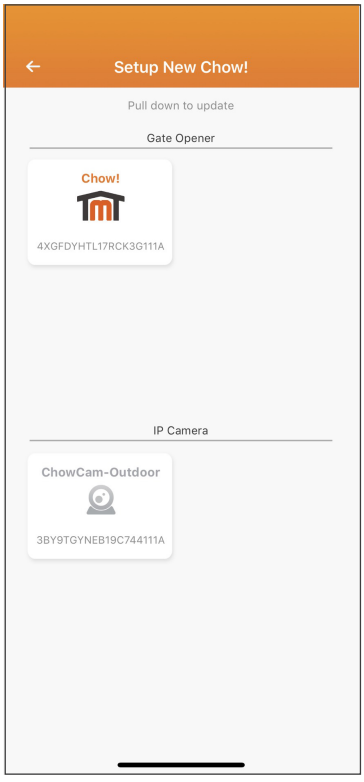


STEP 3：Turn on the Bluetooth of your smart phone



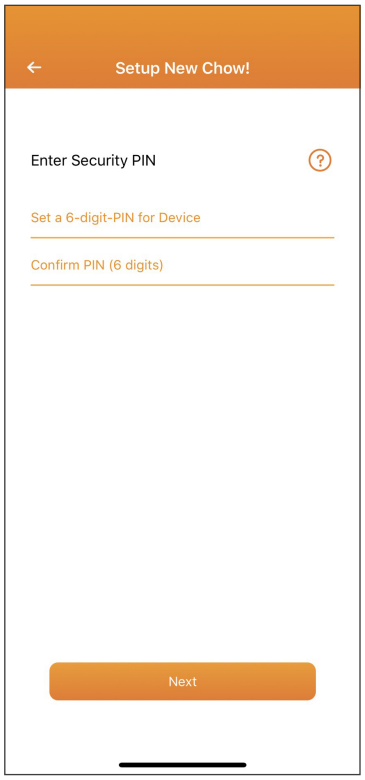
LED Status: Red LED ON

STEP 4：The App will show available garage door opener



LED Status: The Red LED will blink when pressing the icon

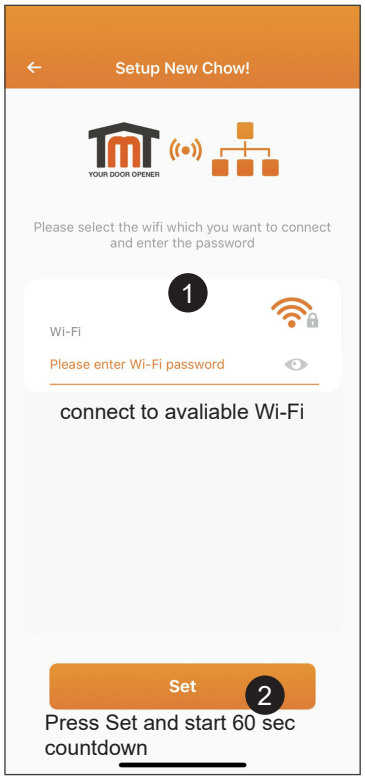
STEP 5：Set Pin code for the first connection. Pin code will be needed for authorization and advanced setting.



LED Status: The Red LED will blink when pressing the icon

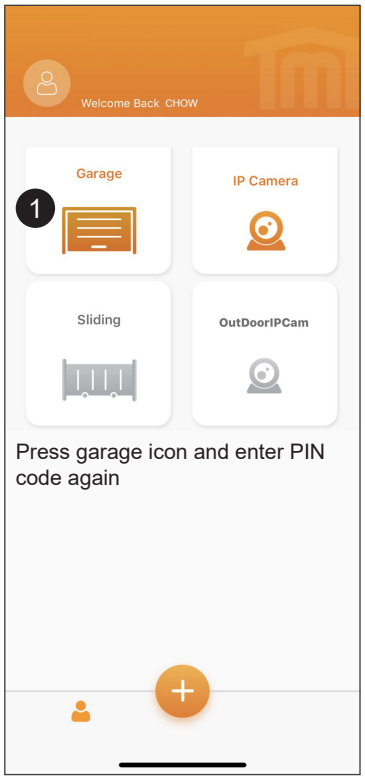
STEP 6：Connect to an accessible wireless network

None English SSID can not be shown on this page



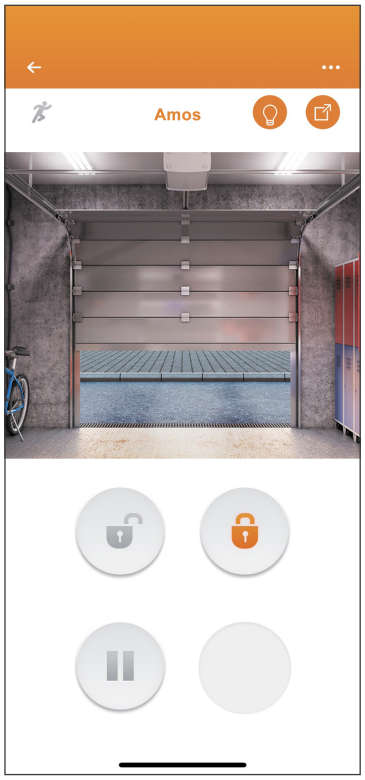
LED Status: The LED turn Green when the system is connceted to the Wi-Fi

STEP 7： The connected garage door opener will be shown on the device management page



LED Status: The Green LED ON

STEP 8：Smart phone operation is available now



TM3 Transmitter

Frequency	433.92Mhz
Coding	Rolling code
Buttons	4 buttons
Power Supply	3V with one CR2032 button type lithium battery
Operating Temperature	-20°C~+50°C
Dimension	37*67.5*12 (mm)

FL2 Flashing Light

Voltage	24V DC
Operating Temperature	-20°C~+50°C
Installation	Horizontally or vertically installed
Dimension	74*167*58.4 (mm)

H2 Photocells

Detection type	Through beam
Operating distance	MAX~15 meters
Response time	<100mS
Input voltage	AC/DC 12-24V
Operating Temperature	-20°C~+50°C
Protection level	IP54
Dimension	63*63*30 (mm)

K1 Key Selector

Operating Temperature	-20°C~+50°C
Dimension	73.2*73.2*42.3 (mm)

P1 Keypad

Frequency	433.92Mhz
Coding	Rolling code
Power Supply	12 ~ 24V DC/AC
Operating Temperature	-20°C~+50°C
Dimension	106*53*20 (mm)

RB1 Receiver Box

Frequency	433.92Mhz
Coding	Rolling code
Power Supply	12 ~ 24V DC/AC
Operating Temperature	-20°C~+50°C
Dimension	106*53*20 (mm)