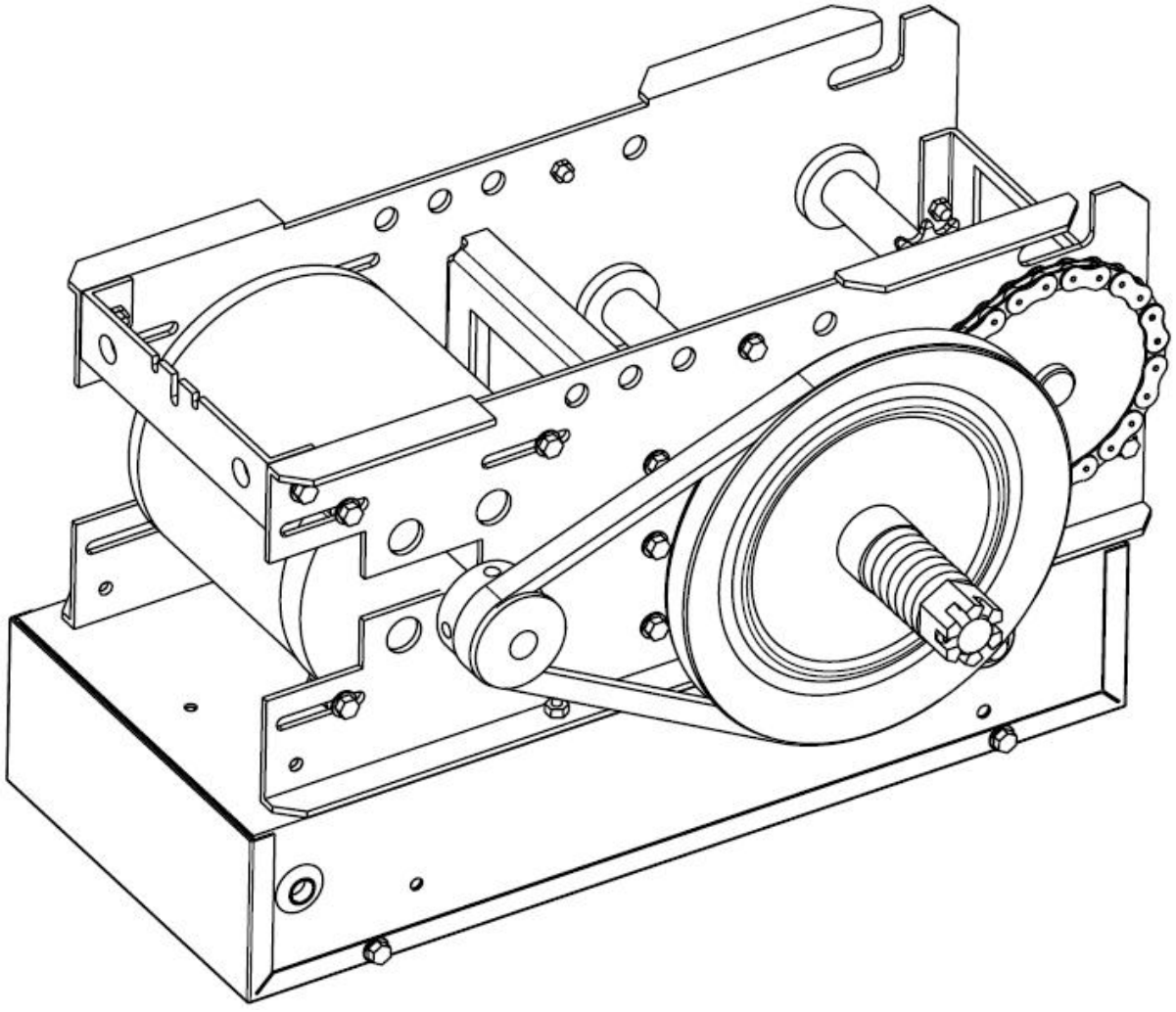
OWNER'S MANUAL

MODEL MT

MEDIUM DUTY DOOR OPERATOR



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SPECIFICATIONS

VOLTAGE: 115VAC, 1Phase
Rated Power:280W
TEMPERATURE: -40℃~+45℃
SPEED: 100mm/S~140mm/S
LIFT HEIGHT: 5m (Approximately 16.4′)
INSTALLATION: CHAIN
OPEN FREQUENCY: ≤25 /HOUR
DRIVE: BELT
MOTOR PROTECTION
LIMIT: MECHANICAL
BRAKE: NO BRAKING

SAFETY INFORMATION

- **BEFORE** attempting to install, operate or maintain the operator, you must read and fully understand this manual and follow all instructions.
- **DO NOT** attempt installation ,repair or service of your commercial door and gate operator unless you are an Authorized Service Technician
- When the door is running, no people and object can across, or stay below the door .
- It is forbidden to use the remote control when you can not see the door running, avoid accidents and misuse of the garage doo opening.
- Suggestion you install the photo sensor and wire rope fault prevention device

Caution : If there was no other entrance in the workshop, the door must be installed the emergency door, in case of power failure. Emergency door interlock function, guarantee the emergency door open the door machine can't run in the open condition. (connection mode are shown in table 1 - the interface and function description table)

INSTALLATION

3.1 Rail Assembly

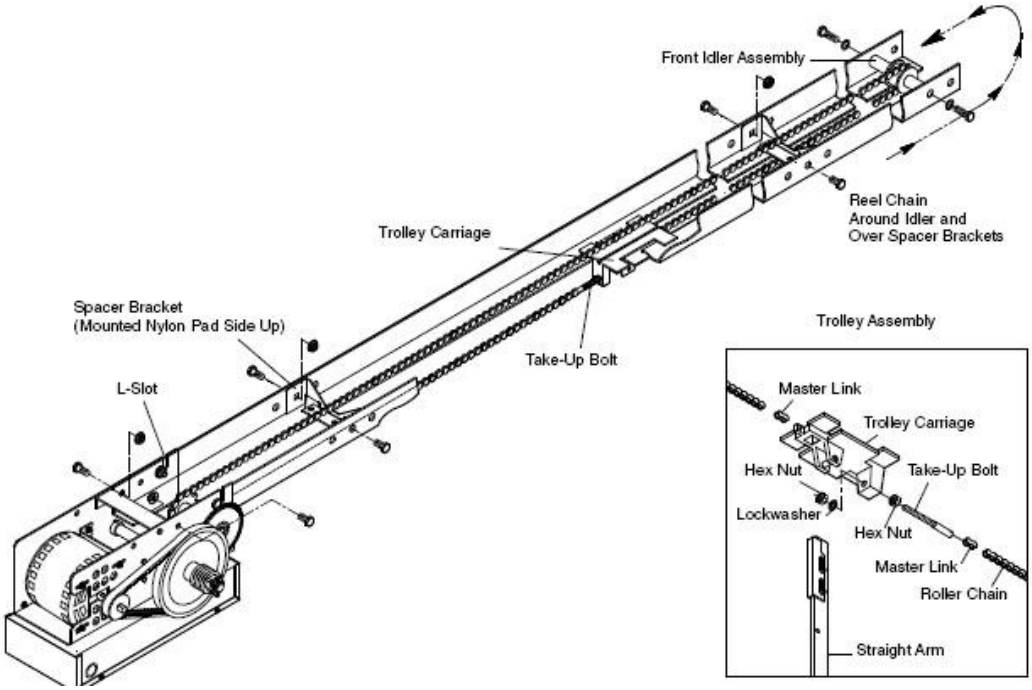
1. Position the spacers evenly over the length of the rail. Using the M8 bolts and flange hex nuts provided, assemble the operator rail by installing and tightening the rail spacer brackets.
2. Using M10 bolts and lock washers ,install the front idler assembly to the second set of holes of one end of the rail.
3. Slide the trolley carriage onto the rail so that the take-up bolt will be toward the operator.

NOTE: front end close to the door , the rear end far away the door .

3.2 Mount the operator

1. Position rail assembly on the frame of the powerhead so that the motor side of operator is in back. Insure the first hole in the rail back-end on the frame with the third hole.
2. Using M10 bolts to secure the rail to the powerhead.

3.3 Chain Assembly



PIC 1

1. Using one of the master links, attach the chain to the other end of the trolley carriage.
2. Reel the chain around the front idler shaft, over the spacer brackets, back to the drive shaft sprocket, and then to the take-up bolt on the carriage.
3 With trolley positioned at either end of the rail, a properly adjusted chain will sag about (**7 cm/ 0.30 ′**) at the mid-point. Tighten with the bolts.(PIC 1)

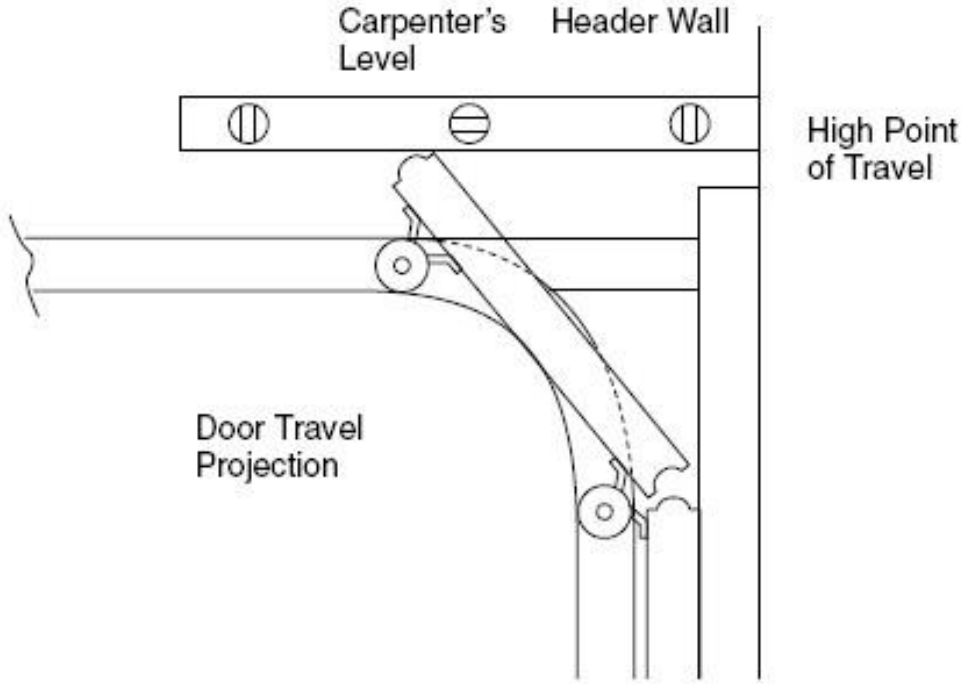
3.4 Mount Header Bracket

The trolley operator is generally mounted over the center of the door. However, off center mounting may be required due to interfering structures or location of stile/ stop section support. In such cases, the operator may be mounted up t o(**60 cm /1.97 ′)** off center on torsion spring doors. Extension springs require center mounting.

1. Locate the center of the door and mark a line on the wall directly above the door.

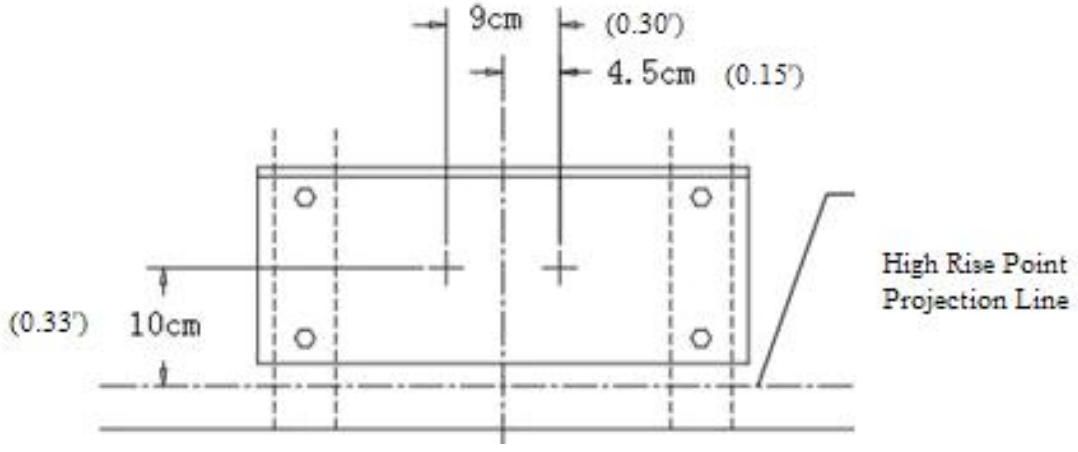
Extend this line up the wall.

2. Determine the highest point of the door travel. Slowly raise the door and observe the action of the top section. When the top section reaches its highest point, use a level and project a line from this point to the center line the of the door . (PIC 2)



PIC 2

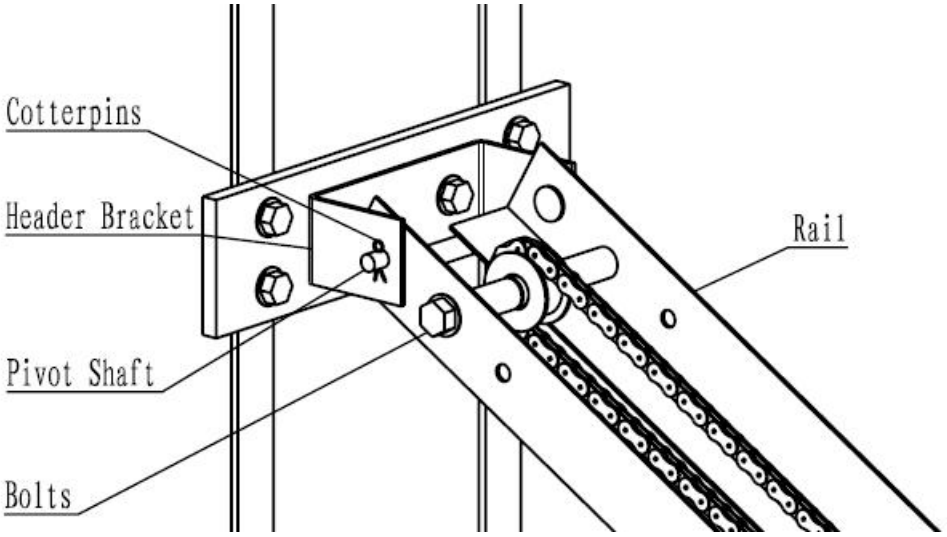
3. Using the project lines for location mount a suitable wood block or length of angle iron to the wall above the door opening. Refer to the illustration below. This will provide a mounting pad for the front header bracket of the operator. If necessary reinforce the wall with suitable mounting brackets to ensure adequate support to mounting pad. Using suitable hardware ,mount the front header bracket to the pad. (PIC 3)



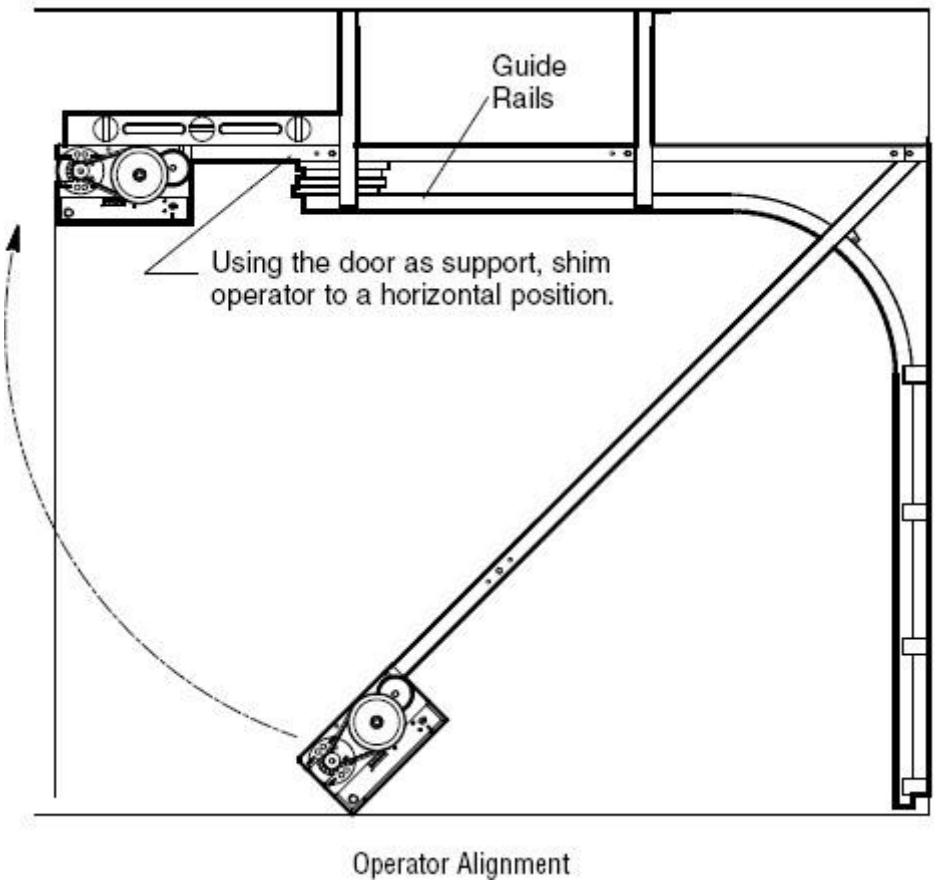
PIC 3

3.5 Hang the operator

1. Allowing the motor to rest on the floor, raise the front end of rail assembly to the front header bracket and fasten using two M10 bolts.(PIC 4)



PIC 4



PIC 5

2. Swing the operator to a horizontal position above the guide rails and temporarily secure with a suitable rope, chain, or support from the floor. Now open garage door slowly, being careful not to dislodge the temporary support. Using the door as a

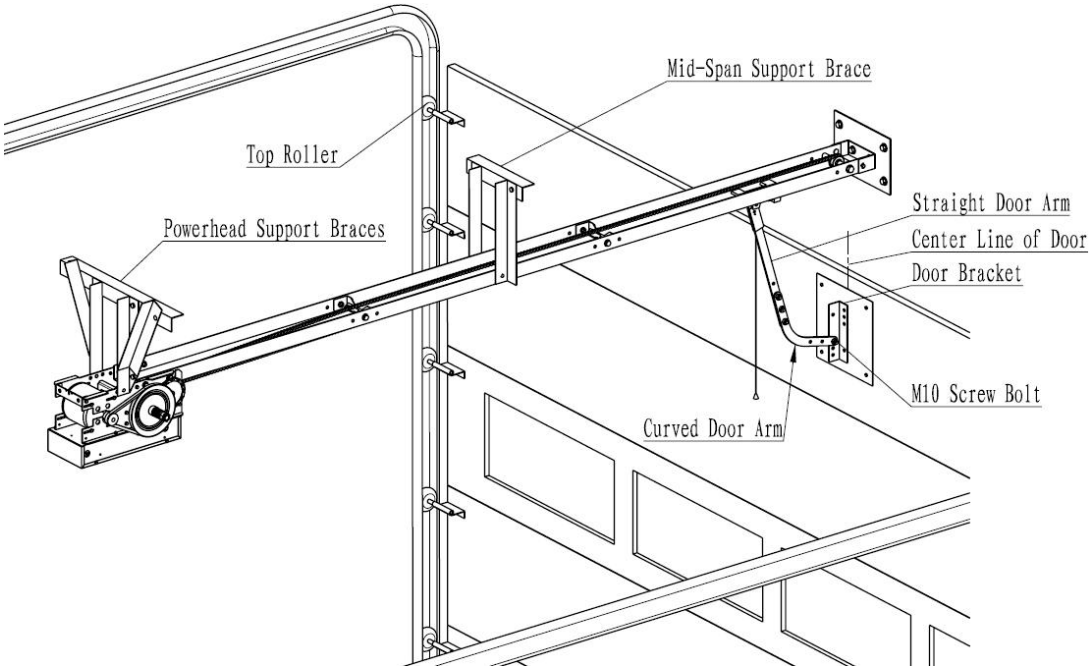
support, place a level against the rail and shim the operator until it is horizontal. Make sure that the operator is aligned with the center line of the door.(PIC 5)

3.6 Hanger Installation

Three holes are located on each side of frame.

NOTE: if the operator is longer than 4.5m (14.76′) use of a mid-span support is recommended.

WARNING: To avoid possible **SERIOUS INJURY** from a falling operator, fasten it **SECURELY** to structural supports of the garage.



PIC 6

3.7 Straight Arm Attachment

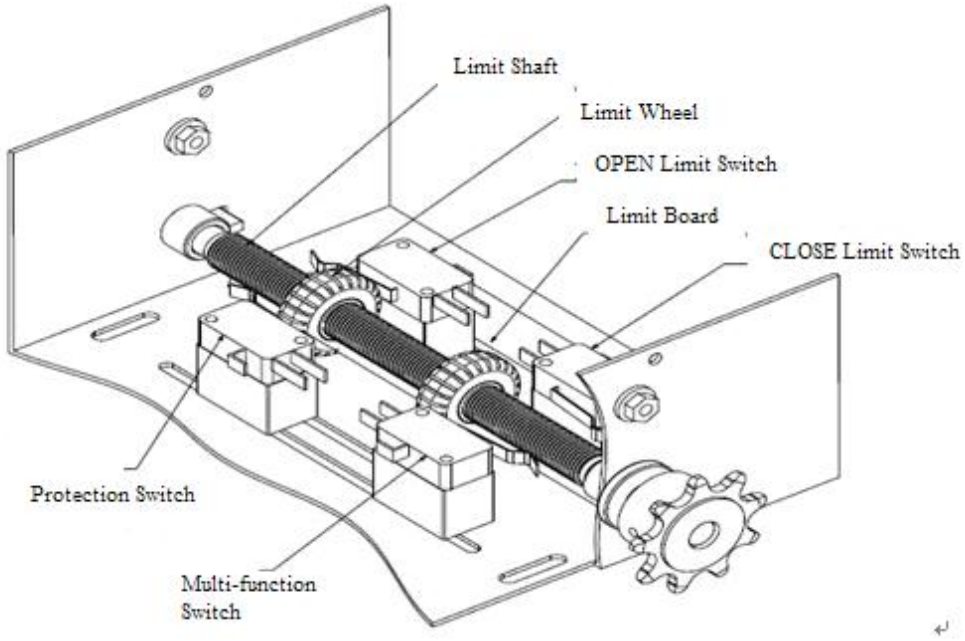
1. Fully close the door and move the trolley slider to within 5 cm of the front idler.
2. Latch the straight door arm to the fixed roll pin in the trolley carriage. Make sure the open side of notch on the arm faces the doorway.
3. Attach the door bracket to the door arm using the bolts and nylon locking nut provided. Leave the nut and bolt loose enough to allow the two pieces to pivot freely.
4. Using hardware provided, bolt the curved door arm to the straight arm, aligning the mounting holes in such a way that the door bracket pivot bolt will be in line with the top rollers on the door.

ADJUSTMENT

4.1 Limit Switch Adjustment

NOTE: Make sure the limit nuts are positioned between the limit switches before proceeding with adjustments.

1. Depress retaining plate to allow nut to spin freely. (PIC 7)



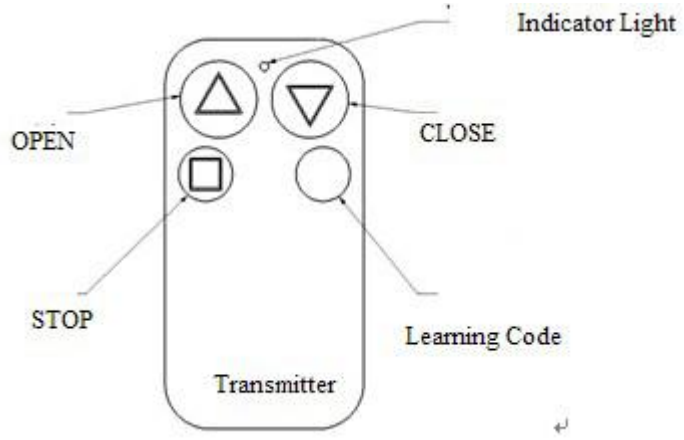
PIC 7

2. To **increase** door travel, spin nut away from limit switch. To **decrease** door travel, spin limit nut toward limit switch. Adjust OPEN limit nut so that door will stop in open position with the bottom of the door even with top of door opening.
3. To adjust CLOSE limit nut, the limit switch is engaged as door fully seats at floor.

4.2 Learning remote control

1. Open the cover, and then find the electric board.
2. Ensure the garage with the power.
3. Coding

a. Press coding button until the indicator light flash then release. (PIC 8)
NOTE: the operation within 8 second, if the indicator light off, repeat a.
b. Press the coding button until the indicator light off, then release.
c. Press coding button until the indicator light flash, then release.



PIC 8

4. Cancel the code: press the coding button, the indicator light will flash then off, release the button.

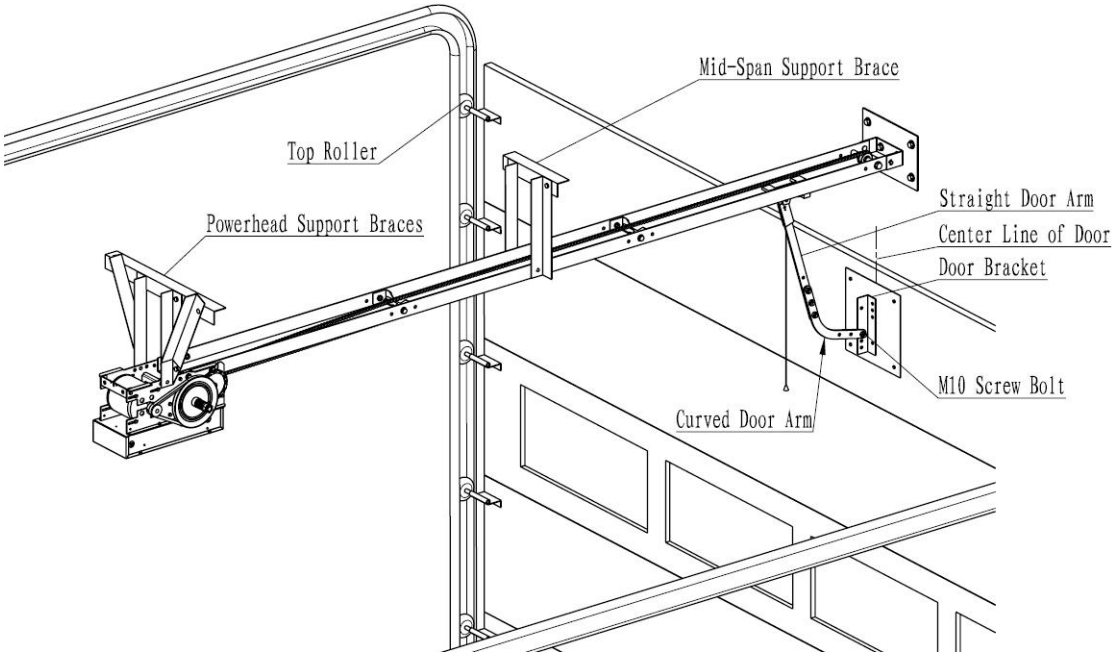
NOTE: the remote control has learned coding.

If need learning more remote controllers, please repeat step 3, the opener can study 20 remote controls at most.

If loosing the remote controller, please cancel the coding, ensure safety learn again.

EMERGENCY

Pulling the emergency release, straight door arm will loose. To Prevent possible SERIOUS INJURY or DEATH from a falling door or arm. Do not stand under curved door arm when pulling the emergency release.

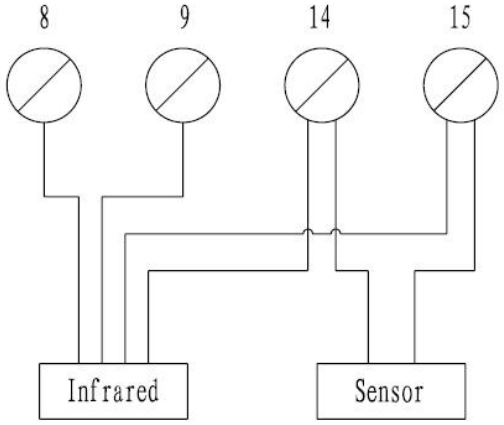


PIC 9

WIRING DIAGRAM

6.1 Control Station Wiring

Terminal block #14 and #15 connect with safety edge, Infrared sensor, and etc.



PIC 10

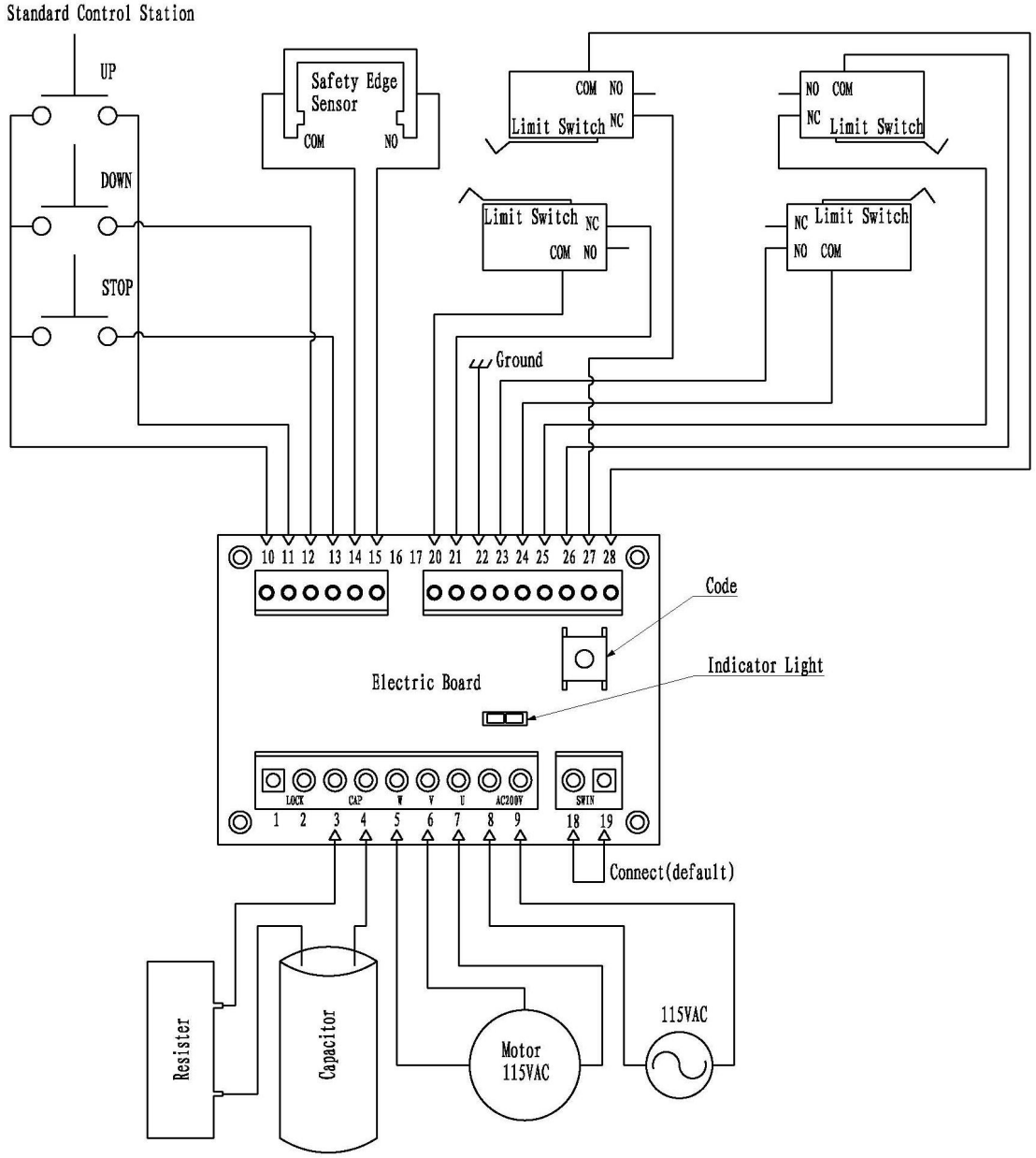
6.2 PCB Wiring Diagram

There are 28 terminal blocks. Functions listed in the following chart:

No.	FUNCTION	No.	FUNCTION	No.	FUNCTION
1	N	11	OPEN	21	OPEN PROTECT
2		12	CLOSE	22	GROUND
3	RESISTER CAPACITOR	13	STOP	23	SENSOR RELIEF
4		14	SENSOR BLOCK TERMINAL	24	BLOCK TERMINAL
5	MOTOR ROTATE/REVERSE	15	SENSOR	25	CLOSE LIMIT
6		16	N	26	BLOCK TERMINAL
7	MOTOR BLOCK TERMINAL	17	N	27	OPEN LIMIT
8	115VAC N	18	EMERGENCY DOOR	28	BLOCK TERMINAL
9	115VAC L	19			
10	Control station–block terminal	20	BLOCK TERMINAL		

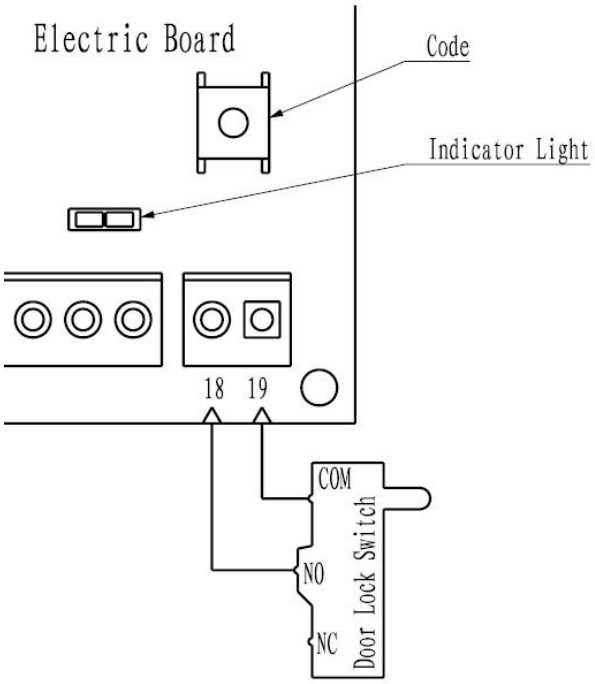
Once SENSOR RELIEF(block #23) is on, the sensor connected with block #14 and #15 is temporarily disabled.

Wiring Board shown as follow: (PIC 11)



PIC 11

Connect the emergency door lock. (PIC 12)



PIC 12

MAINTENANCE

7.1 MOTOR MAINTENANCE

Check at the intervals listed in the following chart:

ITEM	PROCEDURE	EVERY 3 MONTHS	EVERY 6 MONTH
Chain	Check for excessive slack Check and adjust as required Lubricate	√	
Sprockets	Check set screw tightness	√	
Belt	Check condition and tension		√
Fasteners	Check and tighten as required		√
Bearings and Shaft	Check for wear and lubricate	√	

NOTE: Do not lubricate motor , clutch and belt.

To avoid **SERIOUS PERSONAL INJURY or DEATH** from electrocution, disconnect all electric power **BEFORE** performing ANY maintenance

Inspect and service whenever a malfunction is observed or suspected.

7.2 Trouble Shooting

Failure	PROCEDURE
No response	Check power Check motor Check remote controller or limit box
Travel as single	Check limit switch Check relay
Can not moving	Check Relay ,motor Check door weight Check torsion spring loose or not Check Capacitor resistance.

OPERATOR NOTES