

Articulated Arm Swing Gate Opener

PKM-B01 USER MANUAL

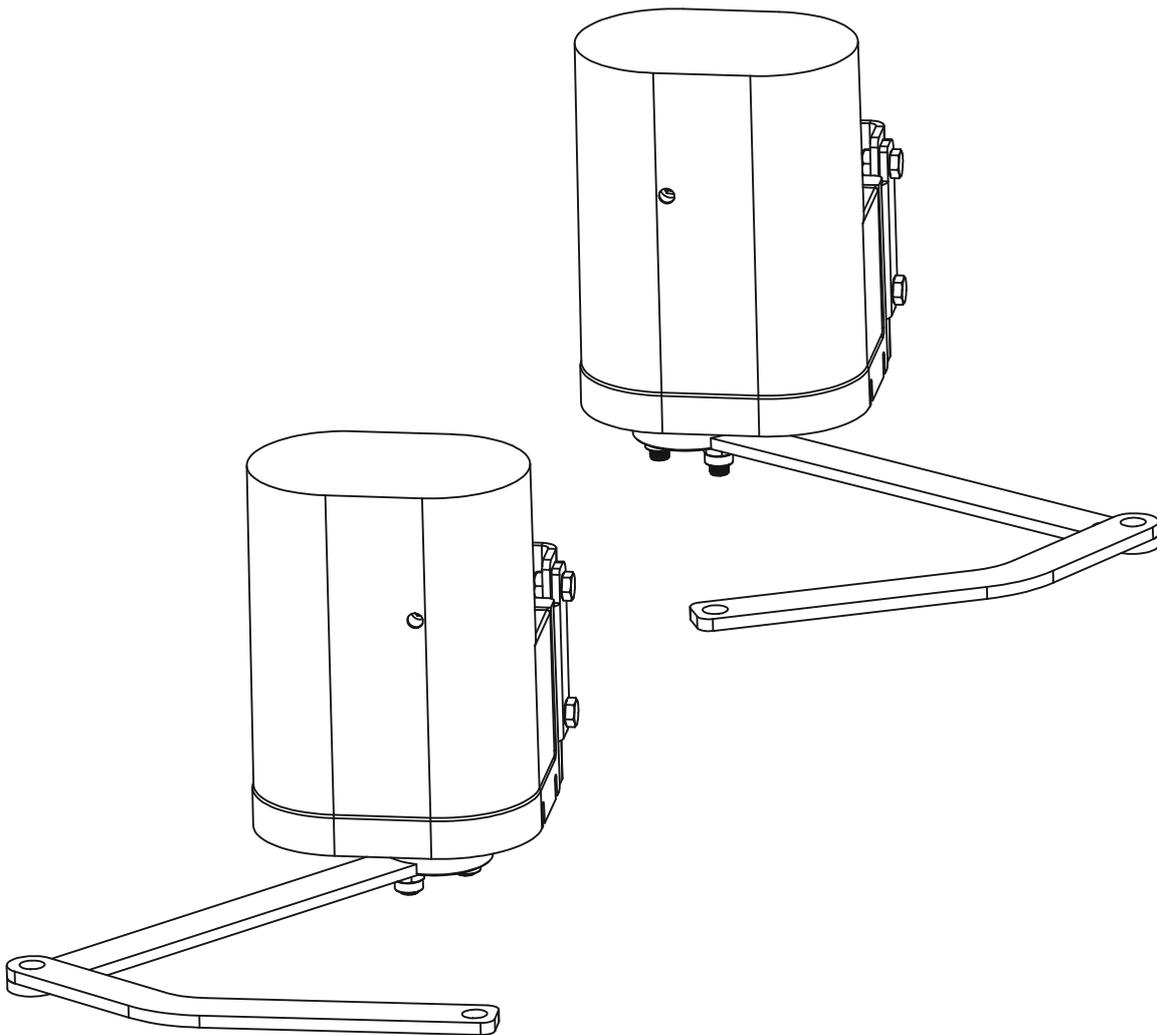


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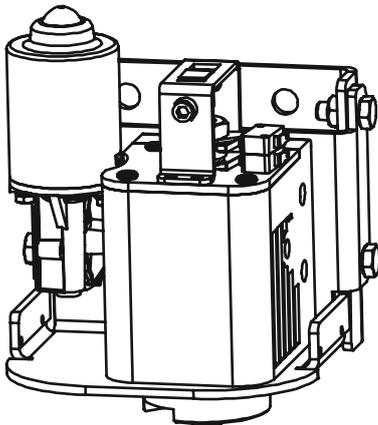
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Parameter

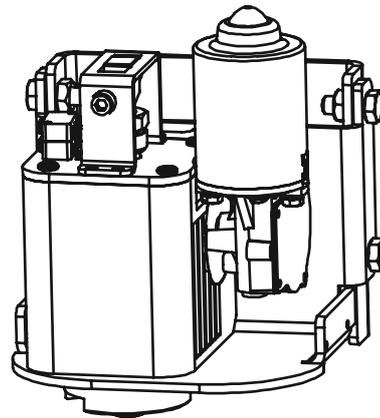
Working Voltage:	DC 24V
Rated Frequency:	50Hz or 60Hz
Rated Power:	80W*2
Max. Single Gate Weight:	250KGS
Max. Single Gate Width:	2.5M
Working Cycle Time:	11 Second (90° opening)
Working Current:	0.9A
Max. Opening Angle:	110°

The machine has left installation and right installation motor, so please choose the correct installation that you need.

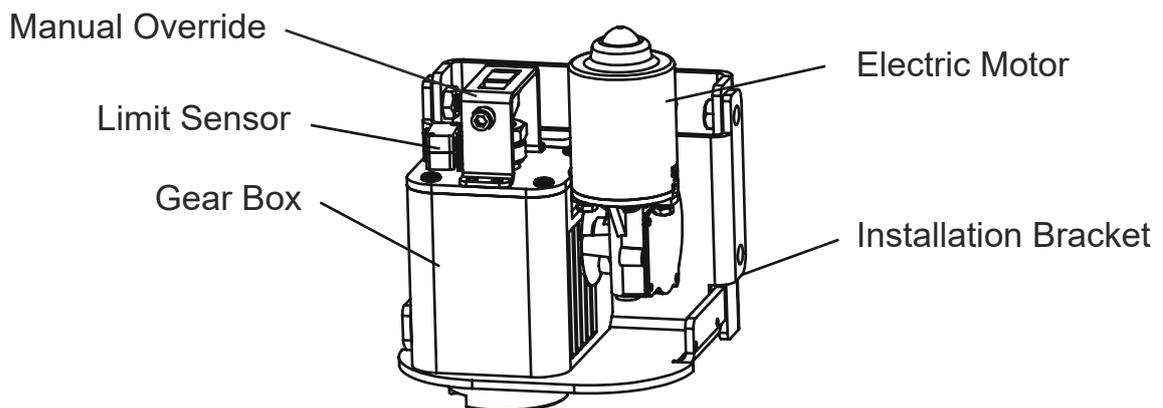
Taking the right installation machine as example in following instruction:

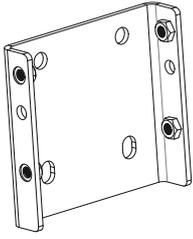


Left installation motor



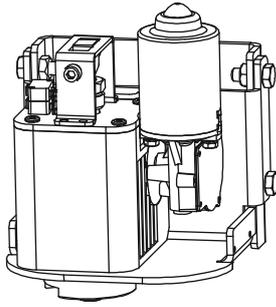
Right installation motor





Wall Mounting Plate

1



Gate Opener

2



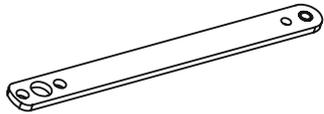
M10*80 Wall mounting Expansion Bolt

3



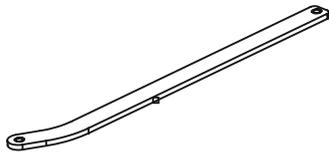
M10 Screw Bolt With Spring Washer For Fixing Motor

4



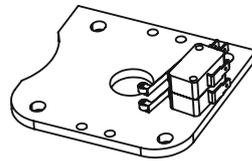
Straight Arm

5



Curve Arm

6



Limit parts

7



M12 Lock Nuts For Straight Arm

8



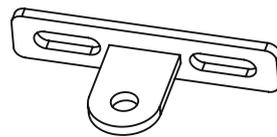
Fixing Bolts For Articulated Arm Assembly

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Lock Nut For Fixing Bolt Of Articulated Arm Assembly

10



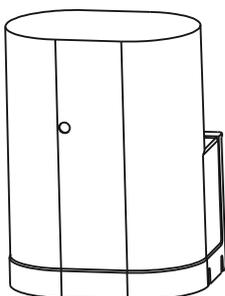
Gate Bracket

11



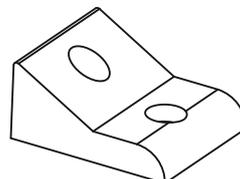
M5*10 Flange Bolts

12



Plastic Cover

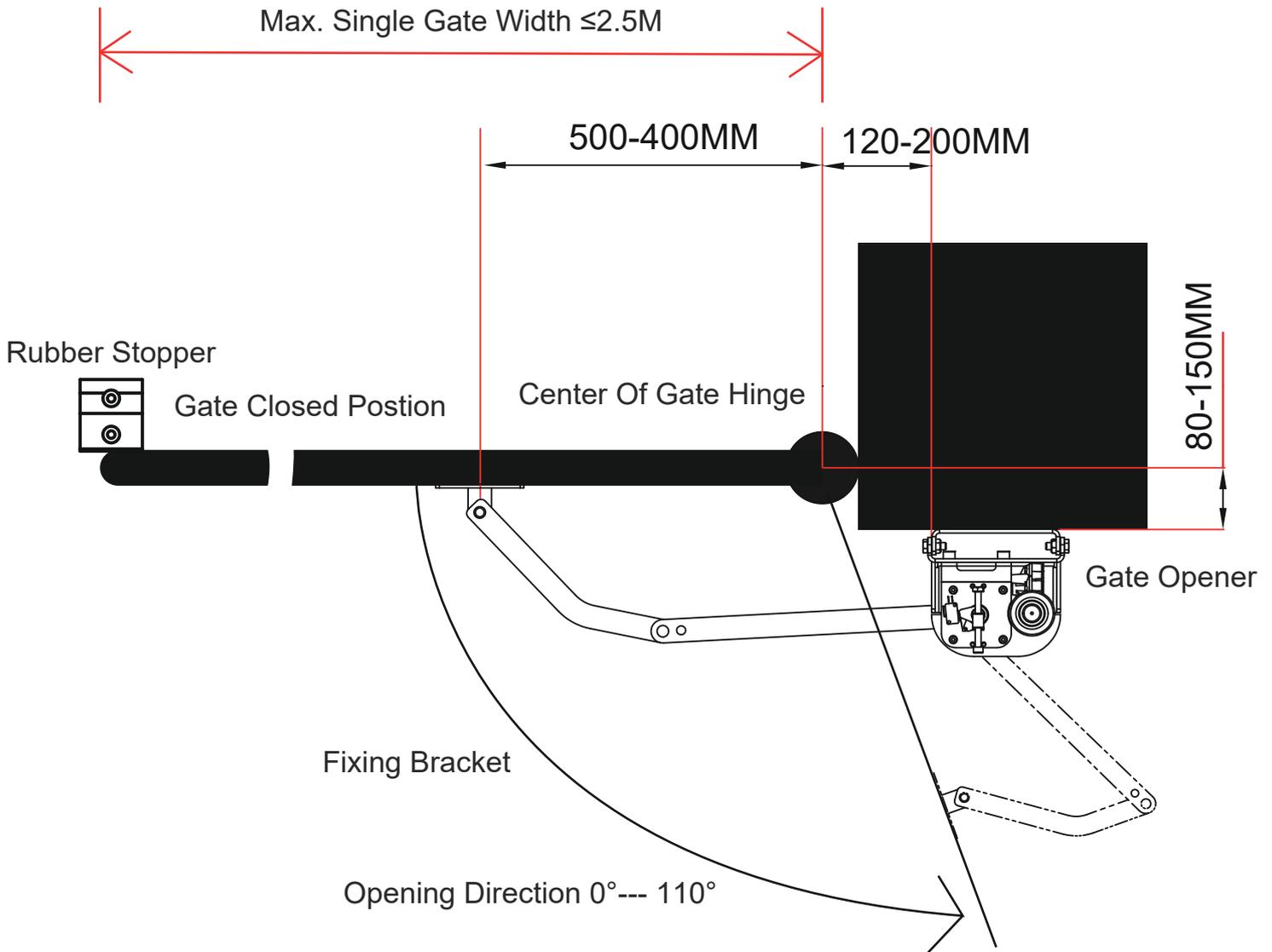
13



Rubber Stopper

14

Installation of Swing Gate Opener

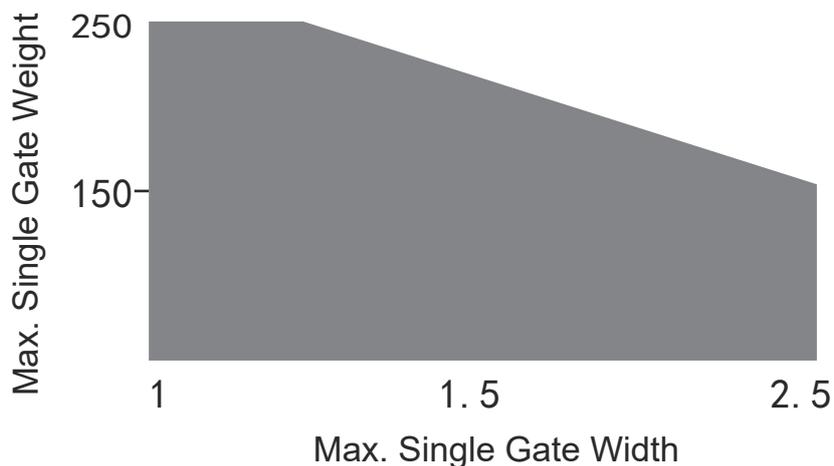


PULL TO OPEN -

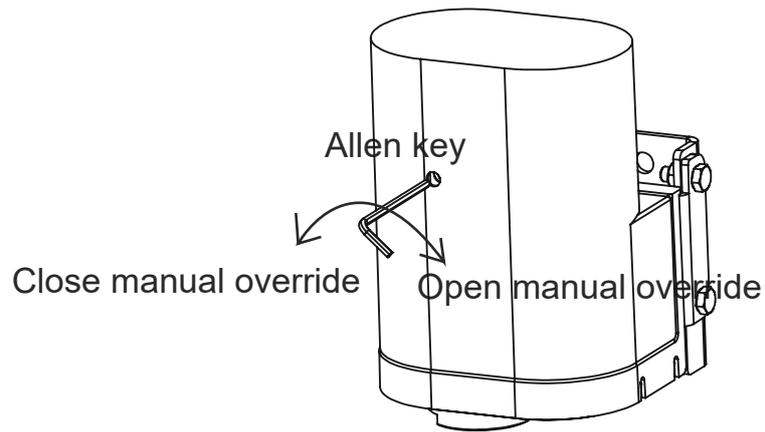
operation only. This means the gate opener is mounted on the inside of the property and pulls your gate in towards the property. Please make sure installation is done by referring the above measurement, otherwise it will cause the inaccurate limit stop.

Clockwise Direction is for opening of left motor.

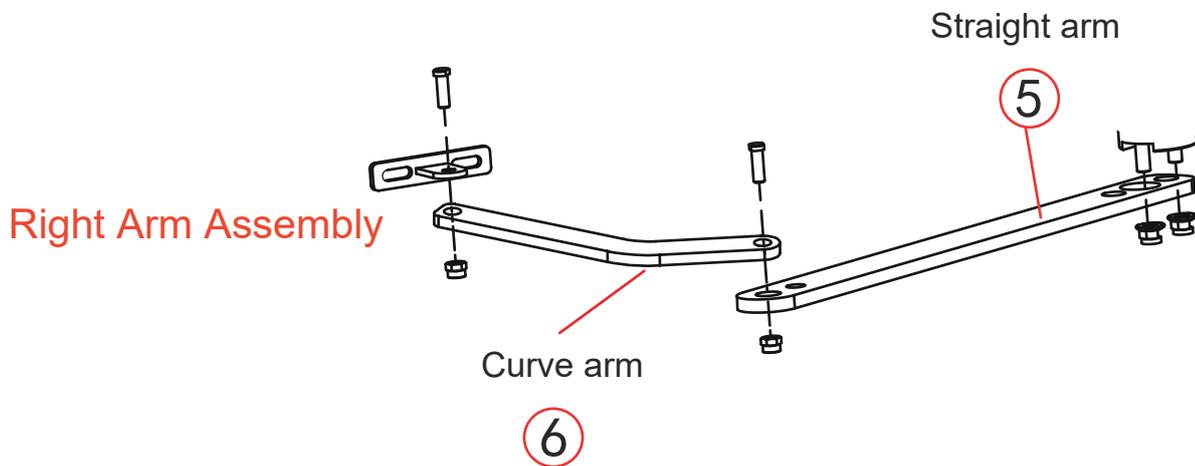
Counter Clockwise Direction is for opening of right motor.



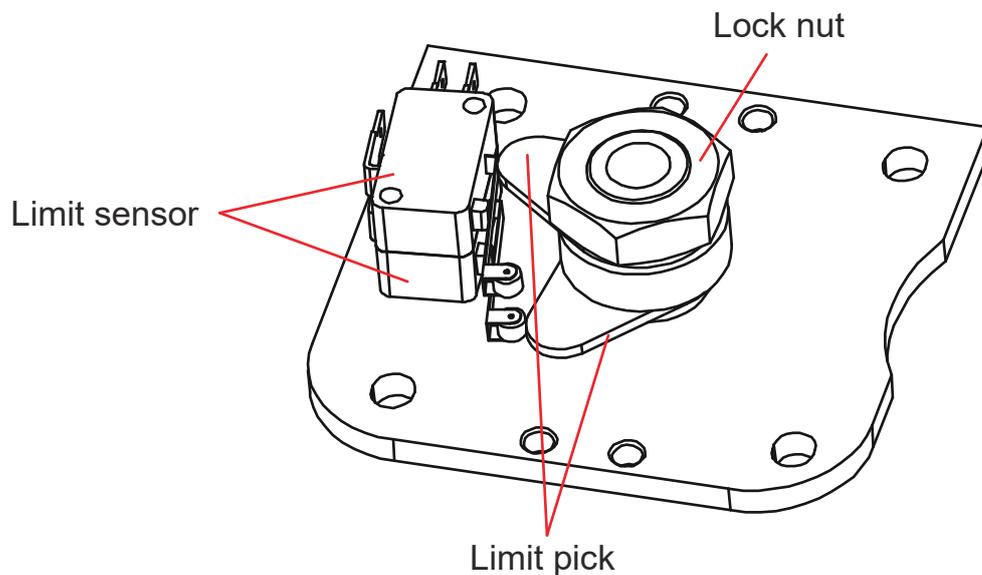
How to use manual override



Be Aware!!! Only open the manual override when the power is cut-off.
Rotate the 4-5 cycles with Allen key open the manual override.



How to adjust the limit position



When opening (closing) the door in final correct position, touch the corresponding limit sensor with each limit pick. Then tighten the lock nut.

How to install (right installation machine as example):

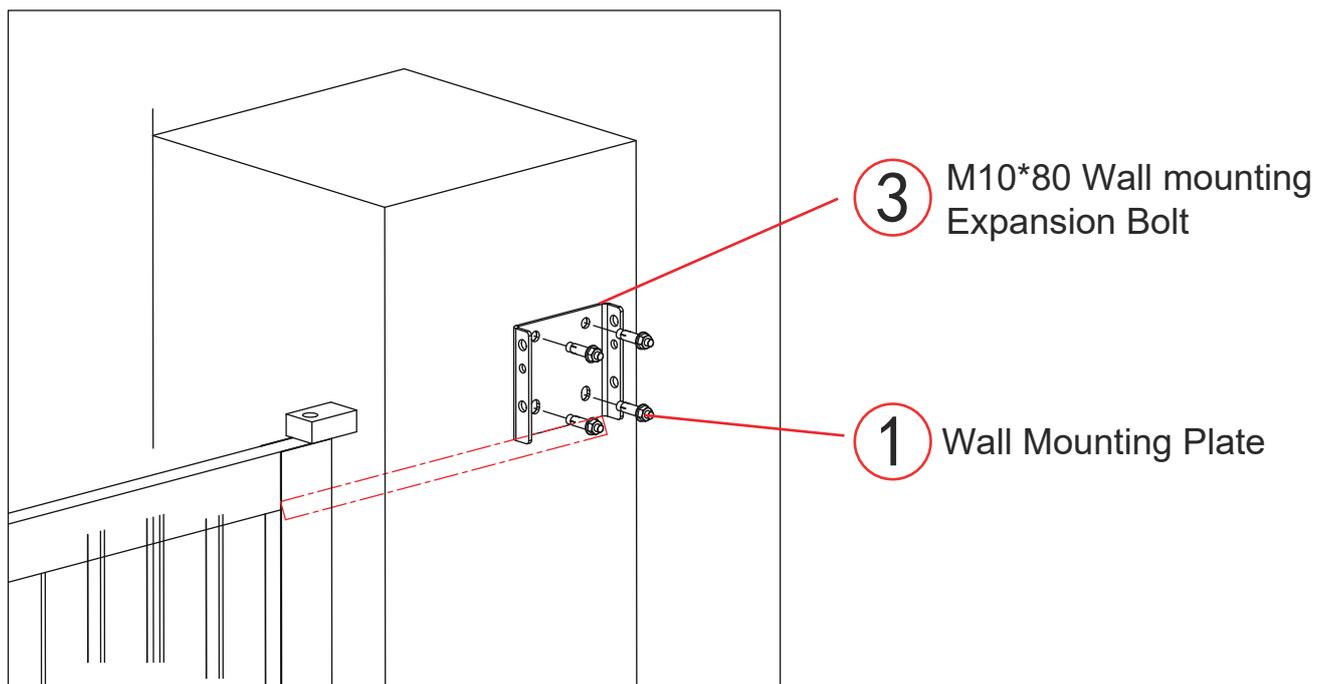


Figure 1

1. Install ① wall mounting plate with ③ M10*80 wall mounting expansion bolt. Refer to the Figure 1.

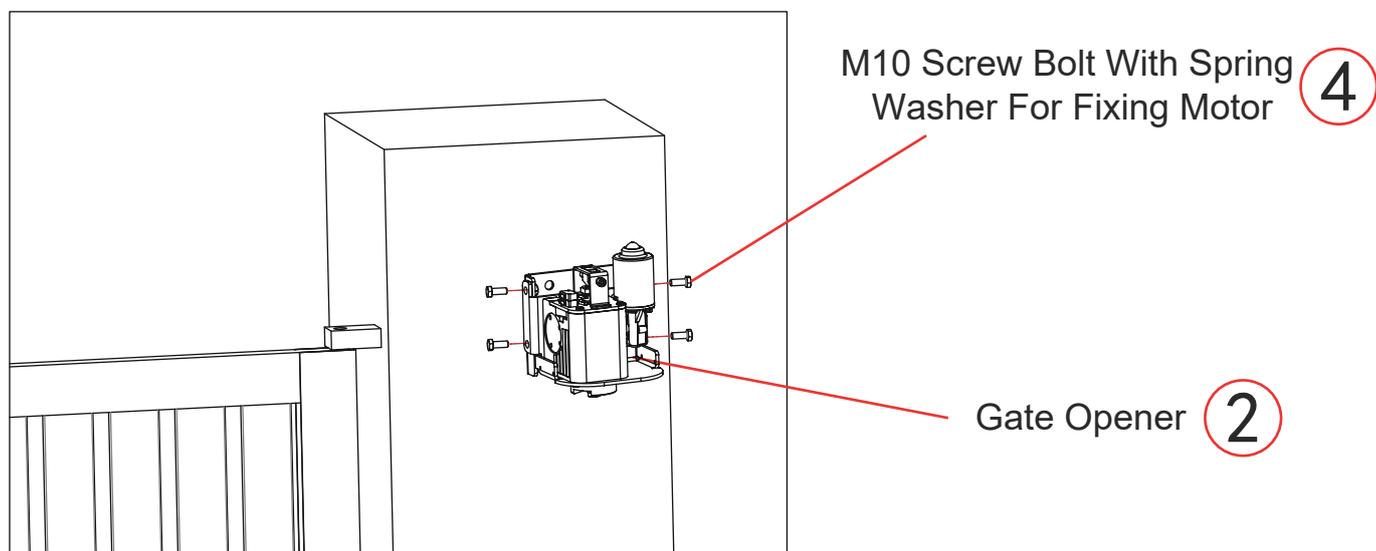


Figure 2

2. Fixing the ② gate opener with ④ M10 screw bolt with spring 4 washer. Refer to the Figure 2.

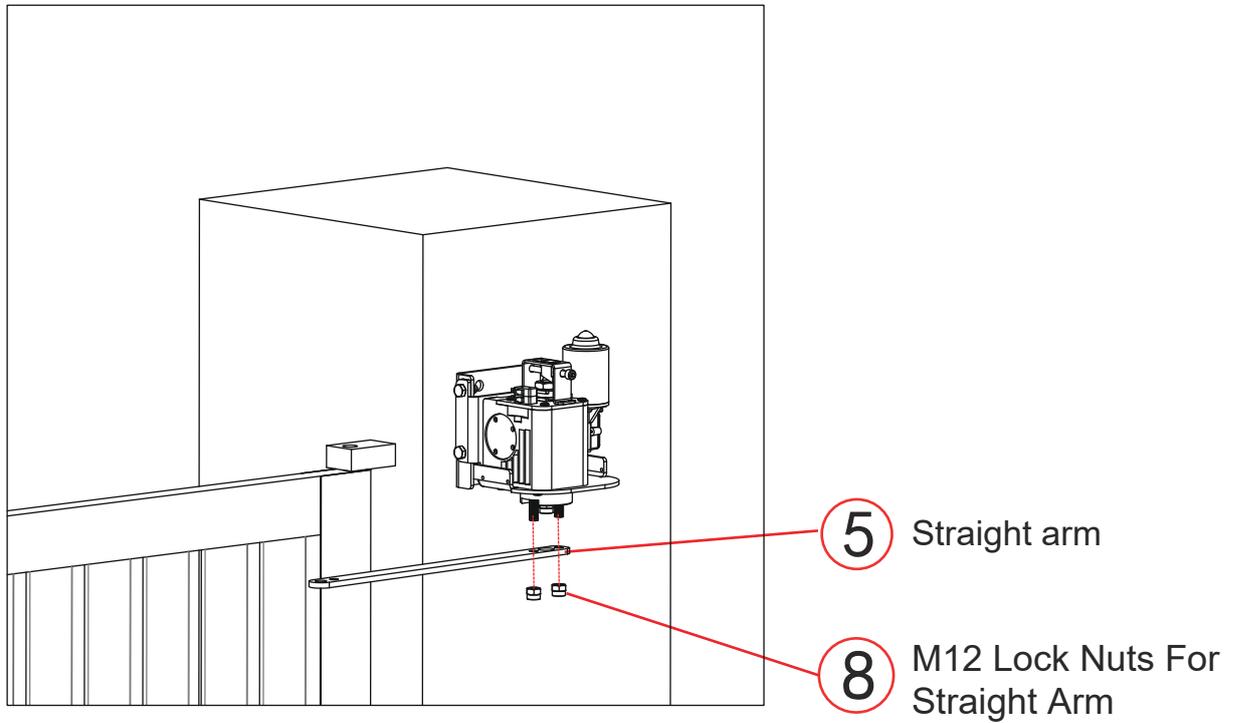


Figure 3

3. Fixing the ⑤ straight arm with ⑧ M12 lock nuts. Refer to the Figure 3.

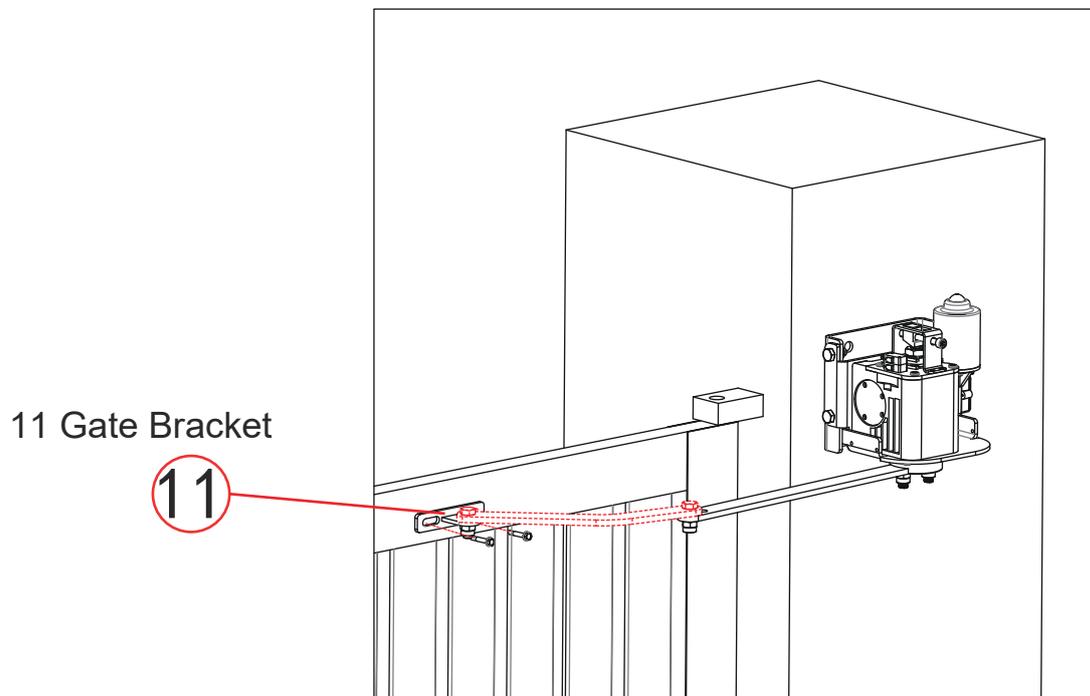
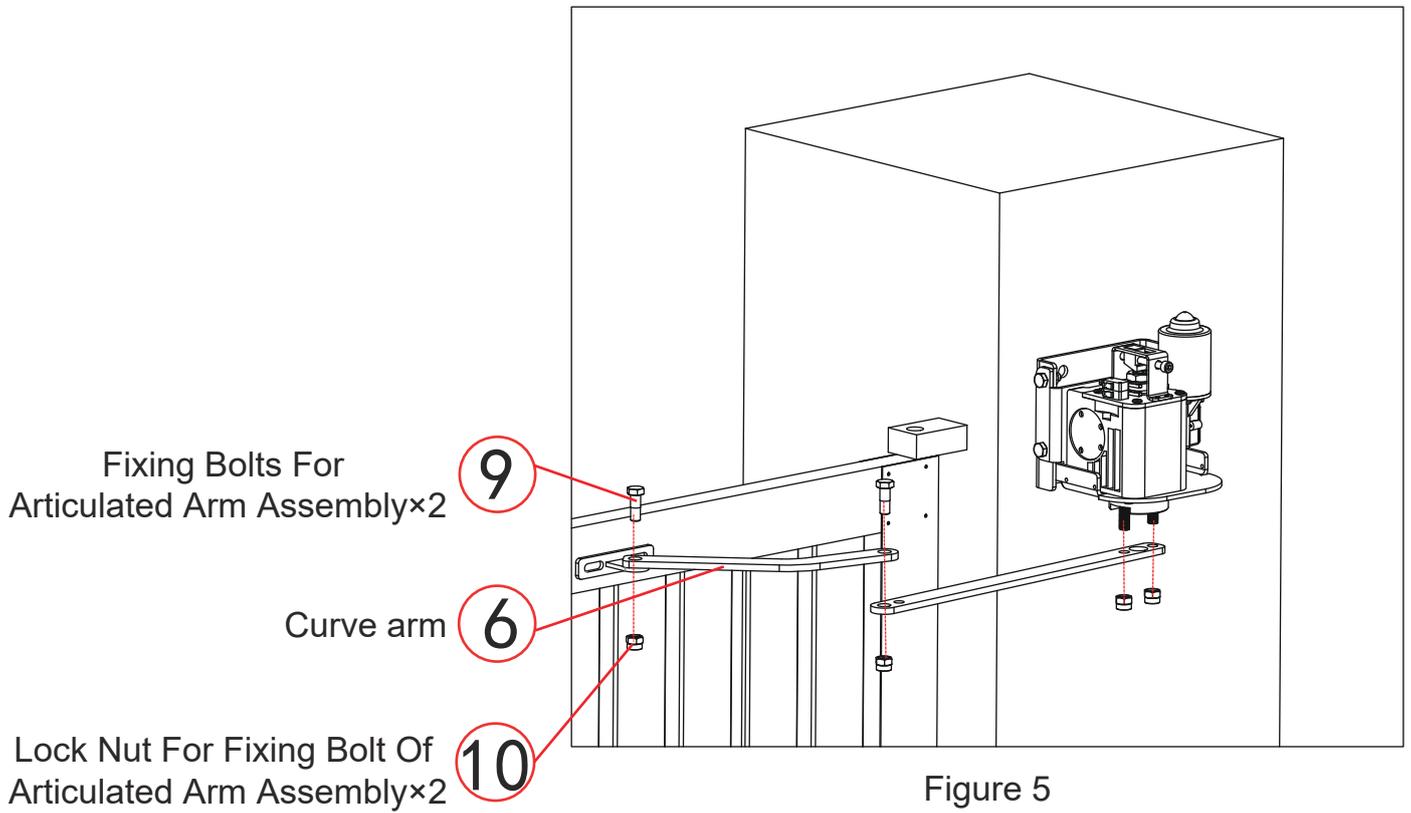


Figure 4

4. Install the ⑪ gate bracket. (the underside of curve arm must be levelled with the upside of the gate bracket). Refer to the Figure 4.



5. Install ⑥ the curve arm with ⑨ fixing bolts and ⑩ lock nuts. Refer to the Figure 5.

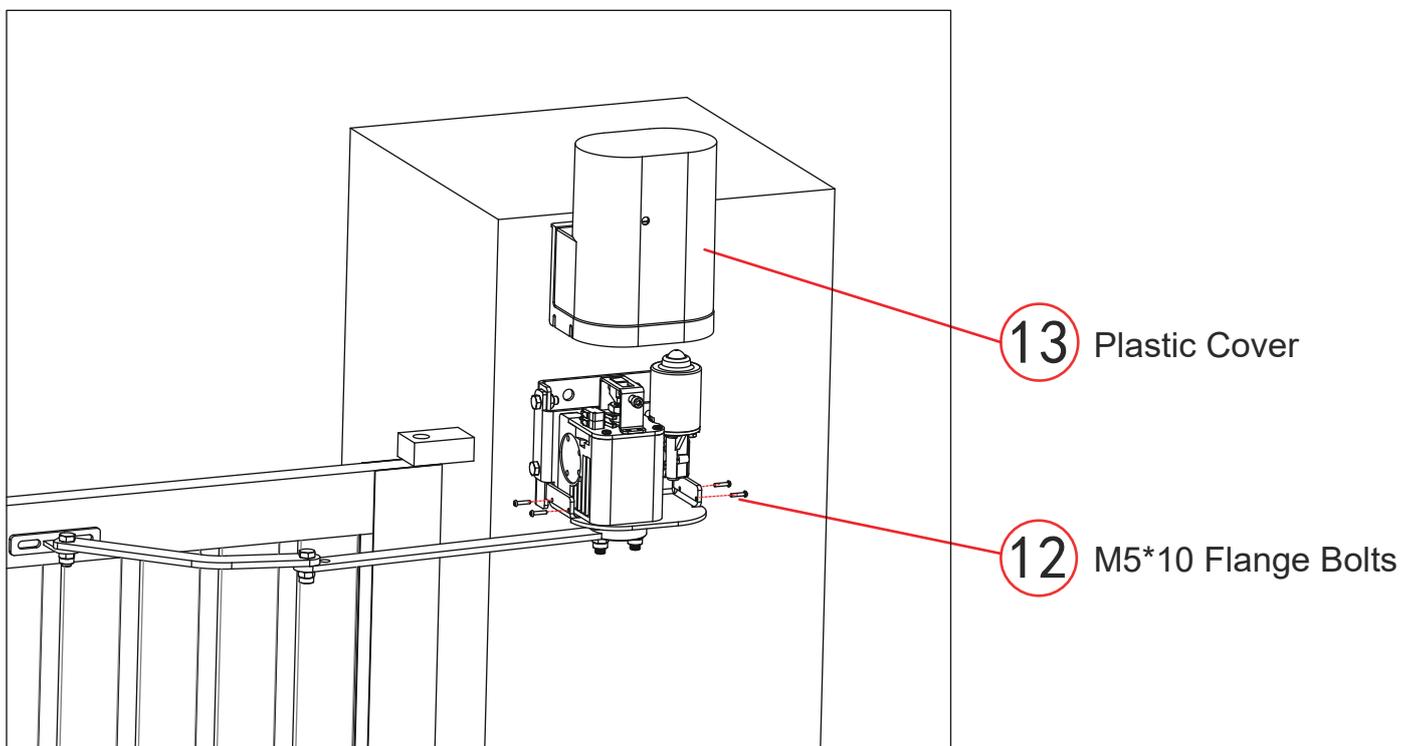


Figure 6

6. Put ⑬ the plastic cover on the machine and fix the ⑫ M5*10 flange bolts well for cover. Refer to Figure 6.

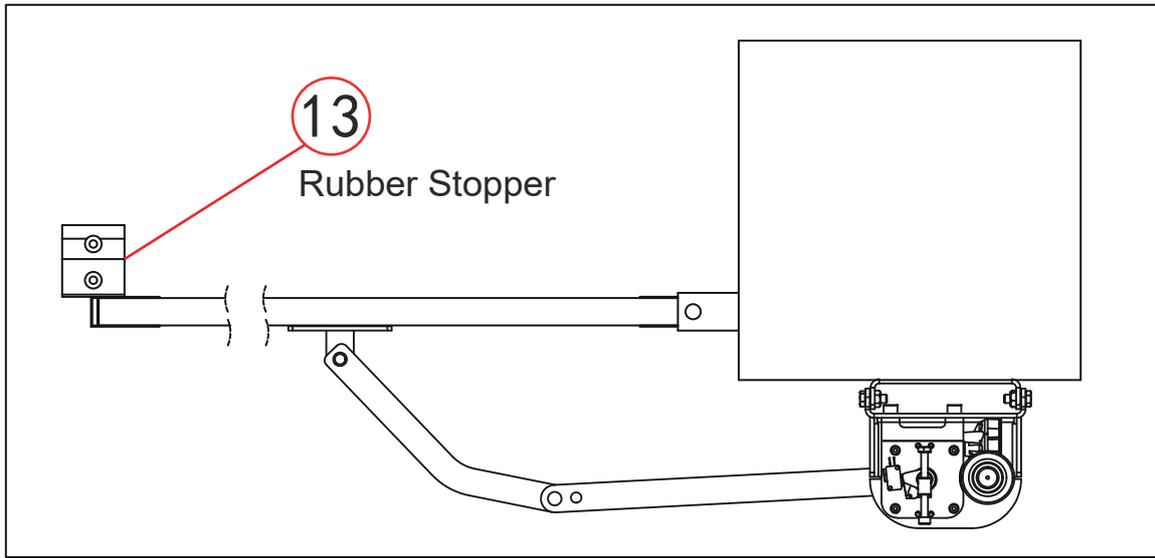


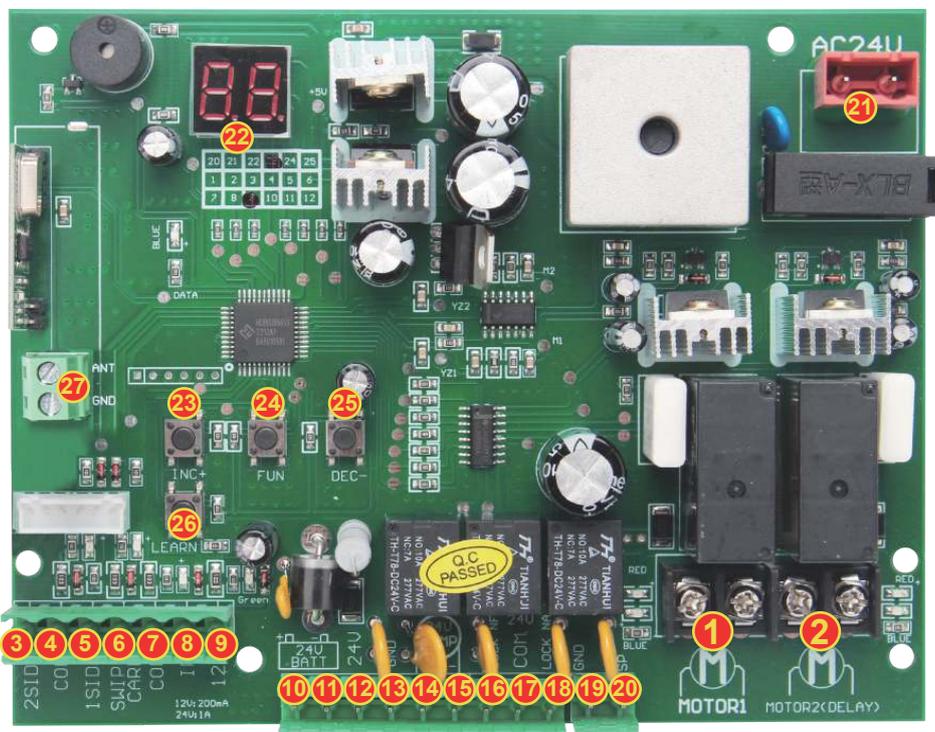
Figure 7

7. ⑭ Rubber stopper must be installed to make sure the closed gate tight. Refer to Figure 7 Rubber.

Control Board Instruction

Technical Parameters:

1. Power Supply: AC 24V , available for adding 24V backup battery.
2. Application: Used for double or single DC 24V swing gate opener.
3. Encoder For transmitter: Factory owns rolling code.
4. Allowed Transmitters Quantity: Up to 120PCS.



1. MOTOR 1: Master gate, close first & open last. This terminal connect 1st red wire (counted from your left hand side to right hand side)
2. MOTOR 2 (DELAY) : Slave gate, open first & close last. This terminal connect 1st blue wire (counted from your left hand side to right hand side).

NOTE! If you only have a single gate, the motor only can connect to the Motor 2 Delay terminal.

- 3.2 SIDE: It is for connecting to any external device that operates a double gate.
- 4.COM: It is for connecting to the “ ground ”.
- 5.1 SIDE: It is for connecting to any external device that operates the single gate.
- 6.Swipe Card: It is for connecting to any external devices to open the gate.
- 7.COM: It is for connecting to the “ ground ” external device.
- 8.IR: Infrared terminal is for connecting to the safety beam.
- 9.12V: The output is for connecting to the photocell sensor, continuous output current $\leq 200\text{mA}$.
(24V DC output, current is 1A)
- 10.24V battery +: It is for connecting the backup battery +.
- 11.24V battery -: It is for connecting the backup battery -.
- 12.24V: 24V DC output is for connecting to an external device. (such as photocell sensor, max current output 1A)
- 13.GND: It is for connecting to the “ ground ” of an external device.
- 14.24V LAMP +: It is for connecting to the flash light +.
- 15.24V LAMP -: It is for connecting to the flash light -.
- 16.LOCK(NF): The NF terminal which used for connecting to the electric lock.
- 17.COM(24V): COMMON used for connecting to the “ground” of the lock.
- 18.LOCK(NA): The NA terminal which used for connecting to the magnetic lock.
- 19.GND: It is for connecting to the “ ground ” of the alarm system.
- 20.SP: It is 24V DC output connecting with the alarm system.
- 21.AC 24V: It is for connecting with the transformer.
- 22.Digital display: It is for showing you the setting data.
- 23.INC+: It is for figure increasing of setting the data.
- 24.FUN: Used for enter the menu setting and confirm the data.
- 25.DEC-: It is for figure decreasing of setting the data.
- 26.Learning button: It is for programming/erasing the remote control.

Remote control

Button “1” is used to operate a single gate Motor 2; button “2” is used to operate a double gate for Motor 1 and Motor 2; button “3” is used to operate the alarm output.

Program new remote control

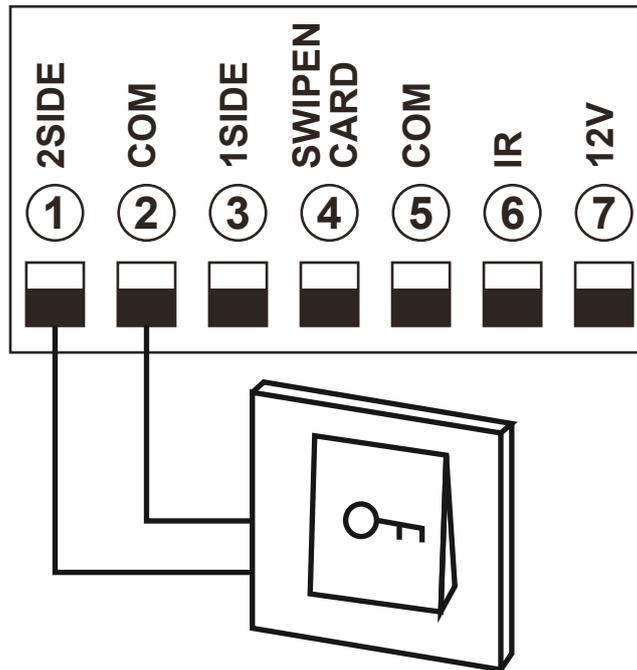
- Press the LEARN button on the control board for about 1 second, and the indicator LED will turn off, then means entering the programming.
- Press any button on the new remote control for about 2 seconds. The digital display will show the remote's number while the board's indicator LED flashes four times with buzzer sound, which means the programming is successful.
- Note! After you press the LEARN button, if the board does not receive the new remote signal within 5s, the indicator LED will turn on and exit programming.

Erase remote control

- Press and hold the LEARN button for about 5 seconds. If there has one buzzer sound and indicator LED light on, then now means erase the remote successfully.

Wire Diagram of The Control Board

- Connect with control double gates device

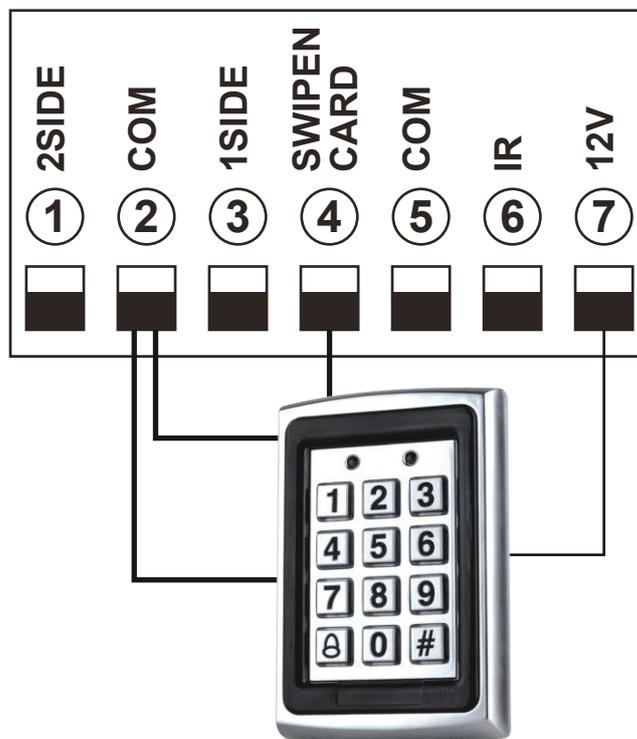


Terminal ① 2SIDE and ② COM are use to connect with push button for controlling dual gates.

Note! If you connect the wired keypad, etc devices, please also connect with ⑦ Vcc and ⑤ Com to get the power supply.

And if you only need to control the single gate motor 2, please swap the wire from ① 2SIDE to ③ 1SIDE.

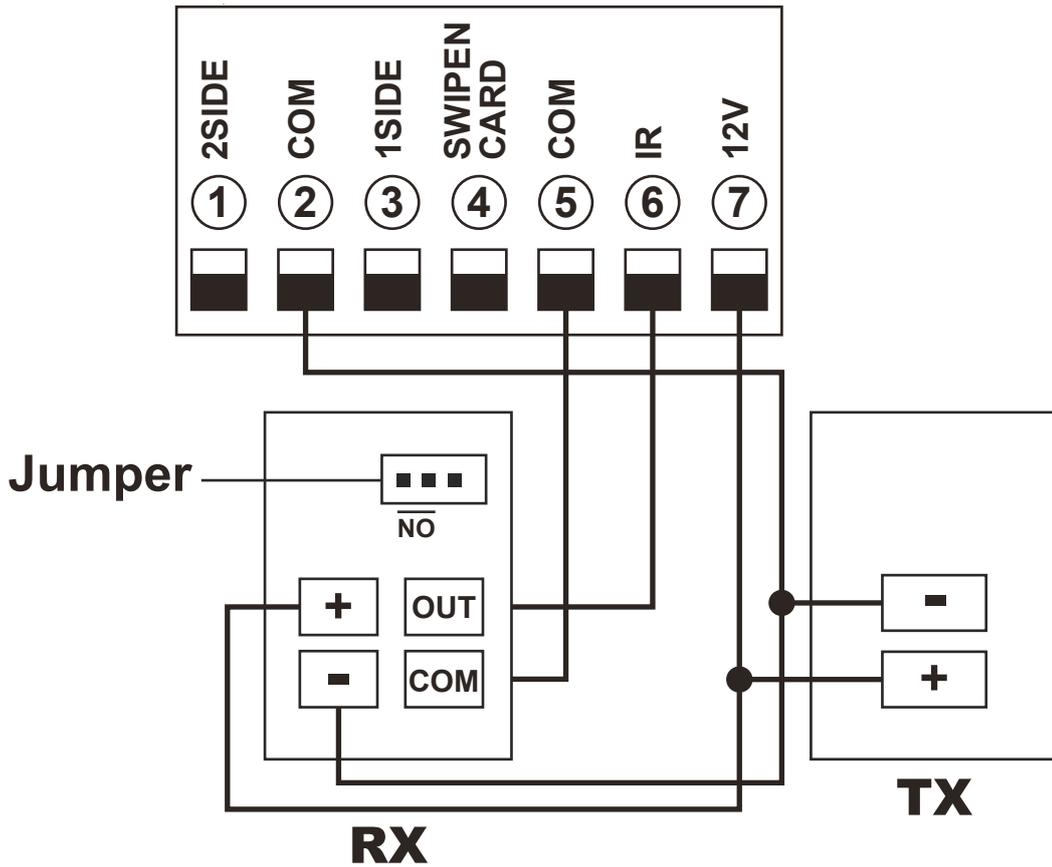
- Connection of swipe card device



Terminal ⑦ 12V and ② COM are used to supply power to swipe card device.

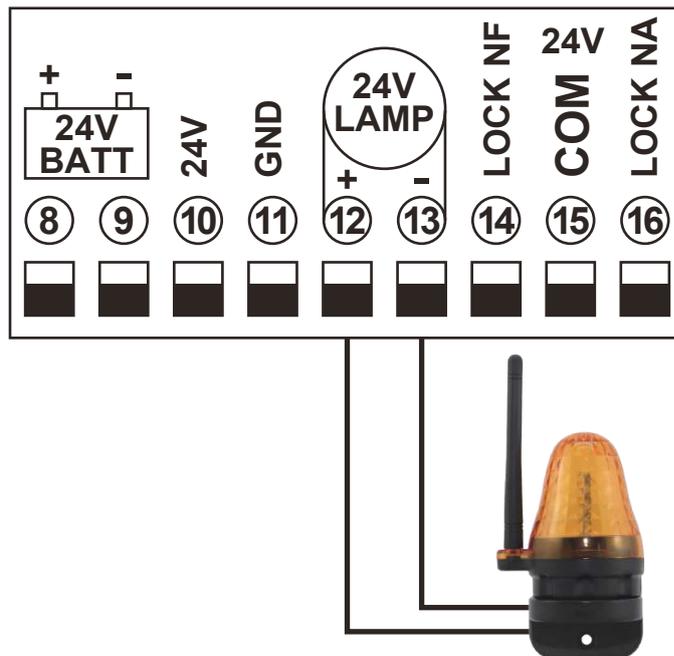
Terminal ④ SWIPEN CARD and ② COM are use to connect with swipe card for controlling dual gates.

• Connection of safety beam



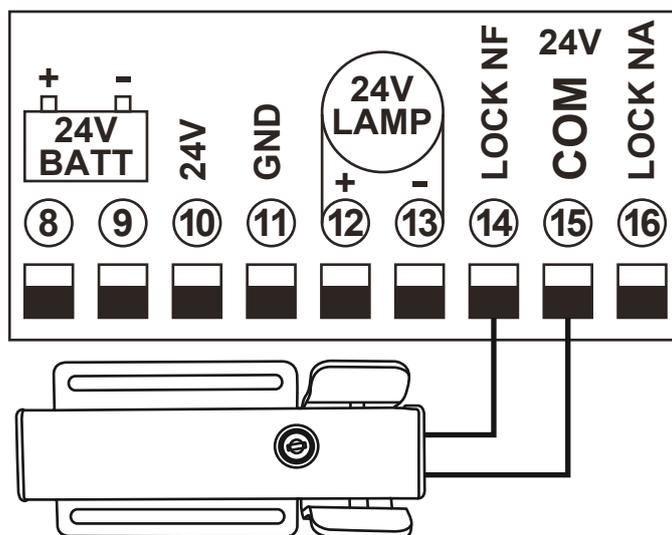
Terminal ⑦12V and ②COM are used to supply power to safety beam.
 So, connect terminal ⑦12V with the “+” of the photocell sensor RX and TX device.
 Connect terminal ②COM with the “-” of the photocell sensor RX and TX device.
 Connect terminal ⑥IR with photocell sensor “OUT”
 Connect terminal ⑤COM with photocell sensor “COM”

• Connection of flash lamp



Terminal ⑫,⑬ 24V Lamp + / - are used to connect with flash lamp.

• Connection of electric lock device



Terminal ⑭ LOCK NF is used to connect with electric lock red wire.

Terminal ⑮ COM is used to connect with electric lock blue wire.

Function Description of The Control Board

Function	State
Power On	A long buzzer sound. The digital display will show EGA-10-22. If the indicator LED light on, and the buzzer stop sound, means the system is working well.
Auto-closing timer for swipe card terminal triggering to open the gate	Connect the external swipe card reader, trigger the swipe card terminal to open double gates automatically. If the gate system is setting the single gate mode, the user swipes the card and only operates the single gate. The indicator LED will flash every second. Setting from 0-99 seconds, factory defaults 10 seconds, set 0 means No auto-closing for swipe card terminal triggering.
Auto closing timer (Non-swipe card terminal triggering)	While the gate is opening and detecting the overcurrent, it will trigger the auto closing timer and the indicator will flash at 1s interval. Auto closing timer is setting from 0-99 seconds, 0 means No auto-closing. The last manual door opening is a single door (or double door), then the automatic door closing is a single door (or double door).
Setting motor 1 and motor 2 in the soft start, slow stop, slow speed and high speed running time	The motor 1 and motor 2 running time can be set through the digital display menu. Used for setting the high speed running time of Motor 1 and Motor 2, gate will run in high speed within this setting, then change to slow speed with its rest travel. High speed running time is setting from 0-33 seconds, the factory defaults 5 seconds, 0 is No high speed running. Soft start running time is setting from 0-6s, the factory default is 2s, 0 is No soft start running. The Motor's overcurrent value can be set from 0- 20 levers. NOTE: While the motor is running, if manually control it stopping or trigger the safety beam terminal, after the motor runs again, can not trigger the high-speed running.

Function	State
Limit switch mode	Realize automatic stop when the motor is fully opened or closed, and meet the limit switch.
Overcurrent	The motor will auto stopping when it is opening or closing, meeting a obstacle and detecting the overcurrent. The motor's overcurrent value in slow and high speed can be set through the digital display menu.
Safety beam	While the gate is closing, if trigger the IR terminal, the gate will rebound to fully open. If you set the auto-closing timer after fully opened, the gate will trigger the auto-closing when the safety beam signal disappear. If not, it would not trigger auto-closing until the safety beam signal disappear.
Time delay with 2 gates for opening and closing	This setting is only enabled for double gates mode. When user control double gates to close, Motor 1 will close in advance, then Motor 2 will close later depends on how much delay time set. The setting is 0-10 seconds. Setting 0 is no time delaying with 2 gates for opening and closing.
Control single gate	Remote control button 1 and 1SIDE terminal used for opening and closing the single gate (Motor 2).
Motor overload protection	As soon as the motor runs continuously more than the 60s, the motor will automatically stop working to protect the motor.
Flash lamp mode	Setting flash lamp mode by the digital display menu PA, factory default is mode 0. Mode 0 and 2: Flashing light will turn off 30 seconds after the motor stop. Mode 1 and 3: Flashing light and motor will operate and stop at the same time.
Alarm output	Setting alarm output mode by the digital display menu PA, factory default is 0 mode. Mode 0 and 1: Alarm output is Momentary Output situation(press the remote button 3, alarm will work. Release the button 3, alarm stop working) Mode 2 and 3: Alarm output is Continuous Output situation(press the remote button 3, alarm will work. Press the button 3 again, alarm stop working) Remote control button 3 is used for controlling alarm output. Connect with the door sensor alarm device also can activate the alarm output, press the remote control button 3 to achieve it.
Electric lock output	Digital Display can set Pb for controlling lock output mode, factory default is 2 mode. 0 mode: non-output. 1 mode: lock output 1s. 3 mode: lock output 3s. Note: The gate open time will delay 0.5s to help the electric lock to unlock first.
Gate mode	Setting gate mode by the digital display PE for controlling single gate or double gates. If the system set single gate motor work mode, all operations only apply in Motor 2. If the gate system is active in the single gate work mode, the double gate open mode of the remote control and control board will be adjusted to only for a single gate.
Factory Reset	The factory reset needs to be performed at the factory to restore parameters to the default state; see the table below.

Digital Display Setting

- Press and hold the [FUN] button for 5 seconds, and the Digital display will indicate “P0”, then release the button, now the menu can be set to [INC+] and [DEC-] for increasing and decreasing numbers or values.
- After adjusting the value, press the [FUN] button to store the data, and the buzzer will beep one time to show the store successfully.
- After the menu setting is finished, press the [LEARN] button to exit the menu setting and close the display.

Item		Range	Default
P0	Setting soft start time	1~3s	2s
P1	Motor 1 overcurrent setting in low speed	0~20 Class	6 Class
P2	Motor 1 overcurrent setting in high speed	0~20 Class	10 Class
P3	Motor 2 overcurrent setting in low speed	0~20 Class	6 Class
P4	Motor 2 overcurrent setting in high speed	0~20 Class	10 Class
P5	Setting motor high speed running time	0~33 s	5s
P6	Auto-closing timer for swipe card	0~99 s	10s
P7	Time delay with 2 gates for opening	0~10 s	2s
P8	Time delay with 2 gates for closing	0~10 s	2s
P9	Auto-closing timer	0~99 s	0 (Close)
PA	Flash lamp mode / Alarm output control	0~3	0
Pb	Electric lock time setting	0~3s	2s
PC	Setting remote control button	0~3	3
Pd	Infrared terminal optional	0(NC)~1(NO)	1(NO)
PE	Gate system control mode optional	0(double motors)~1 (single motor)	0 (double motors)
Po	Factory Reset		

Factory reset:

When the digital display indicates Po, the gate opener is on rest setting. After entering the Po setting, press the [FUN] to store, and then now the reset successfully.

PA Value of Lamp / Alarm Output

Value	Alarms output	Lamp output
0	Momentary Output	Mode 0
1	Momentary Output	Mode 1
2	Continuous Output	Mode 0
3	Continuous Output	Mode 1

PC Value of Remote Control Button Optional

Value	Button	Description
0	All buttons are disable	Forbidden to use remote
1	Button 1/3 is valid	Only control single gate(motor 2)
2	Button 2/3 is valid	Only control double gates
3	Button 1/2/3 is valid	Control single gate or double gates

Motor Direction Identification

When the motor is running, if the motor direction LED indicator is blue, now the motor should be in “opening” operation. When the motor direction LED indicator is RED, the motor should be in the “closing” operation.