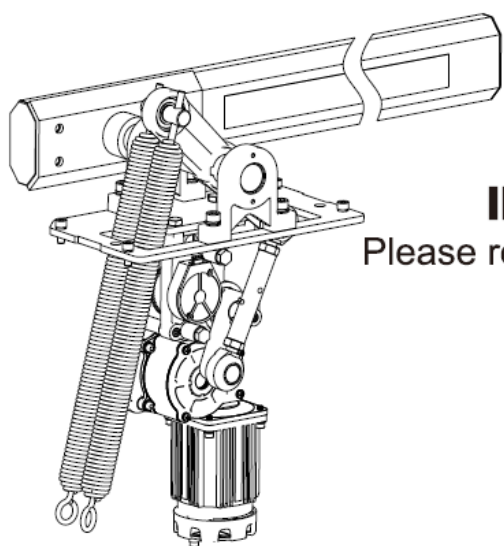
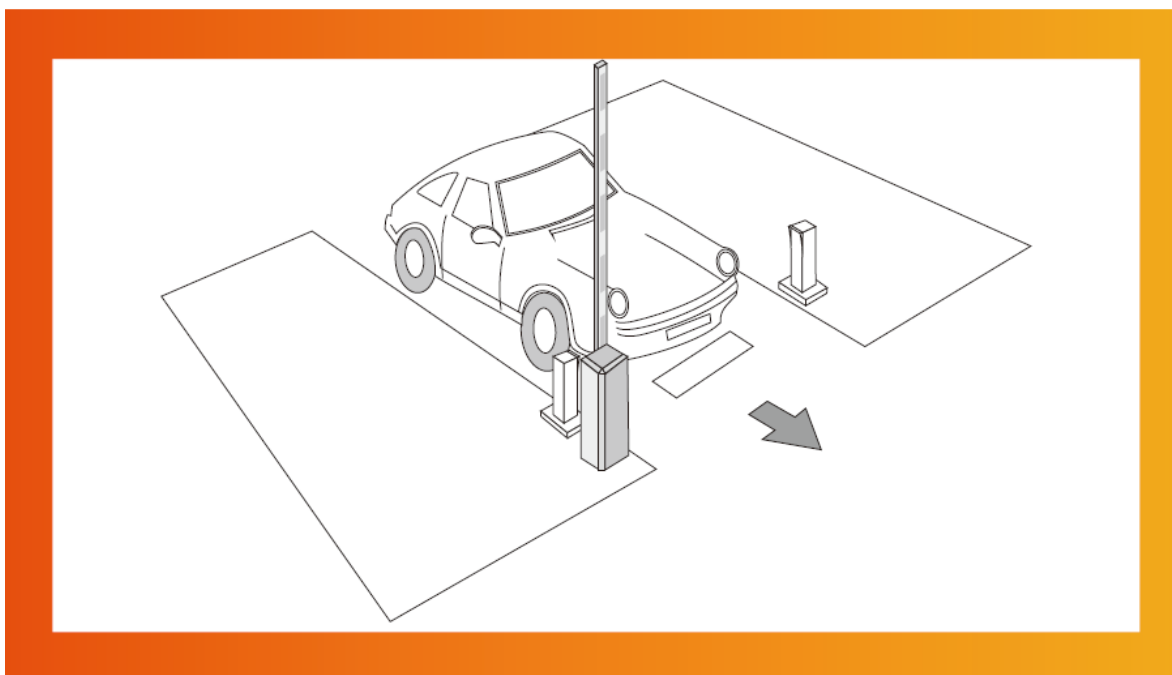


≡ AUTOMATIC BOOM BARRIER ≡



INSTALLATION MANUAL & USER GUIDE
Please read carefully before installing and use

WARNING

⚠ AUTOMATIC BARRIERS ARE NOT FOR PEDESTRIAN!

To reduce the risk of INJURY or DEATH, read and follow all instructions.

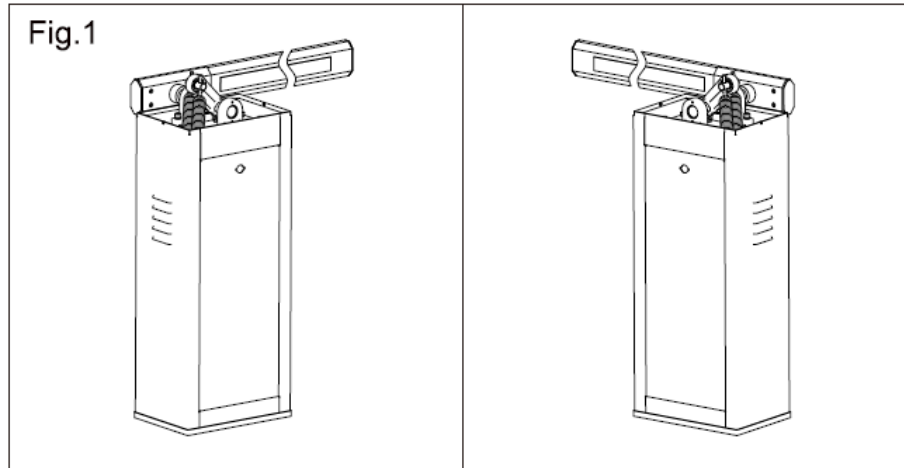
- Automatic boom barrier is designed for vehicles ONLY. Pedestrians MUST use separate entrance.
- Installation and maintenance MUST be executed by qualified service person. Keep boom barriers properly maintained.
- Ground wire and current breaker MUST be connected.
- Power MUST be cut off when performing installation or maintenance.
- When power outage, power MUST be cut off before using the manual release under the motor to open the barrier.
- ONLY operate when the boom barrier is in sight.
- NEVER perform operating or setting without the boom installed. This WILL result in severe injury.
- NEVER dismount the boom when barrier is at close status with spring attached. This WILL result in severe injury, even death.
- DO NOT replace the original wire.
- NEVER let children operate or play with barrier control. Controller MUST be installed at least 1.5m above the ground.

● **SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

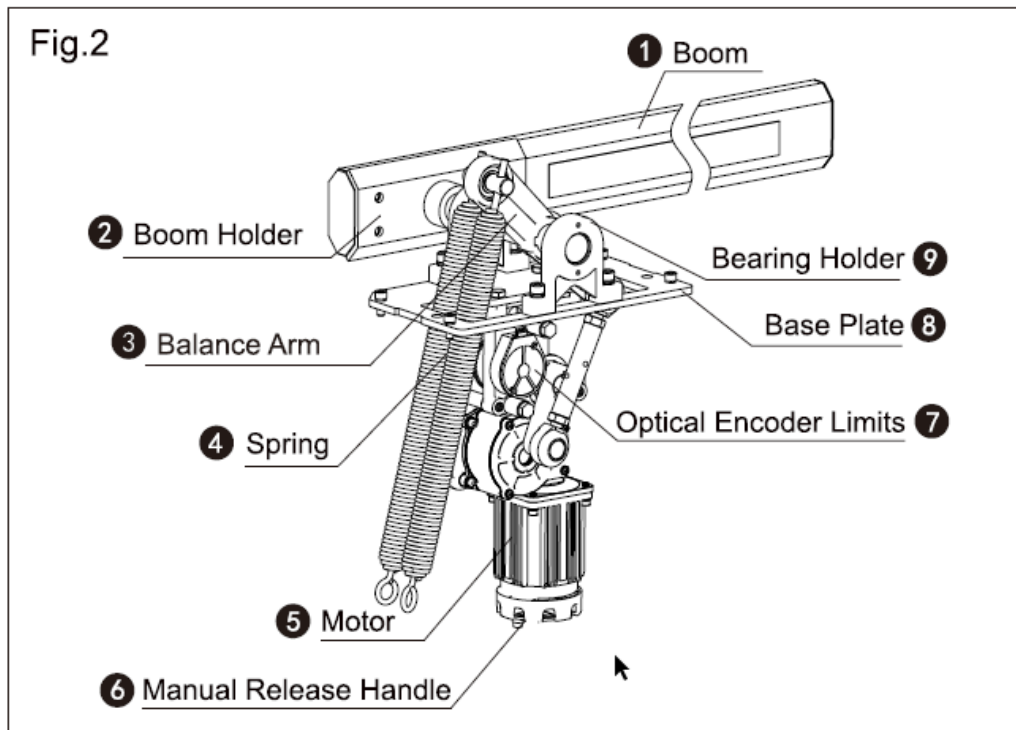
1. Direction Definition and Main Components of the Machine

A. Close to Right

B. Close to Left



C. Main Components of the Motor



2. Features

- A. Remote control is allowed.
- B. During power outage, product can be manual operated.
- C. Control board contains various ports for parking lot management system, infrared sensor, radar, etc.
- D. Product contains multiple limit protection functions to keep a long life time.

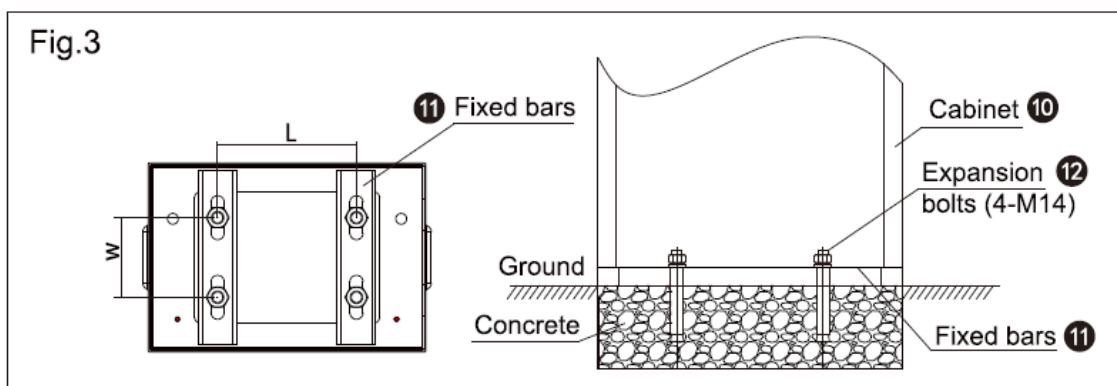
3. Specification

Rated Power	90W
Power Supply	220V±10% 50/60Hz
	110V±10% 50/60Hz
Working Temperature	-35℃~+50℃
Max. Boom Length with Operating Speed	6m (6s)
	4m (3s)
	3m (1.5s)

4. Installation

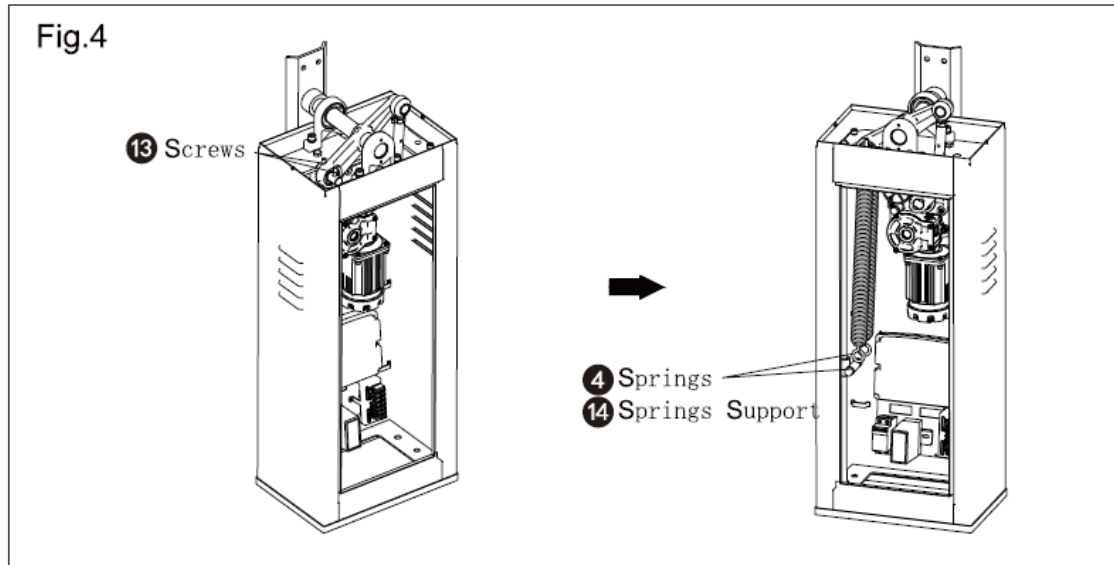
4.1 Cabinet Installation

- Open the Cabinet door and take out the attachment pack.
- Place ⑩ the Cabinet at desired position.
- Place ⑪ the Fixed Bars on the bottom of the Cabinet inside.
- Mark out the boreholes for ⑫ the Expansion Bolts (Fig. 3: L and W) according to the Fixed Bars.
- Move away the cabinet.
- Use an electric drill with 21mm to drill the boreholes. The depth of the boreholes should be 110 ~ 120mm. Place the Expansion Bolts.
- Move the cabinet back to the desired position and place the Fixed Bars on the bottom of the cabinet inside.
- Tighten the Expansion Bolts.

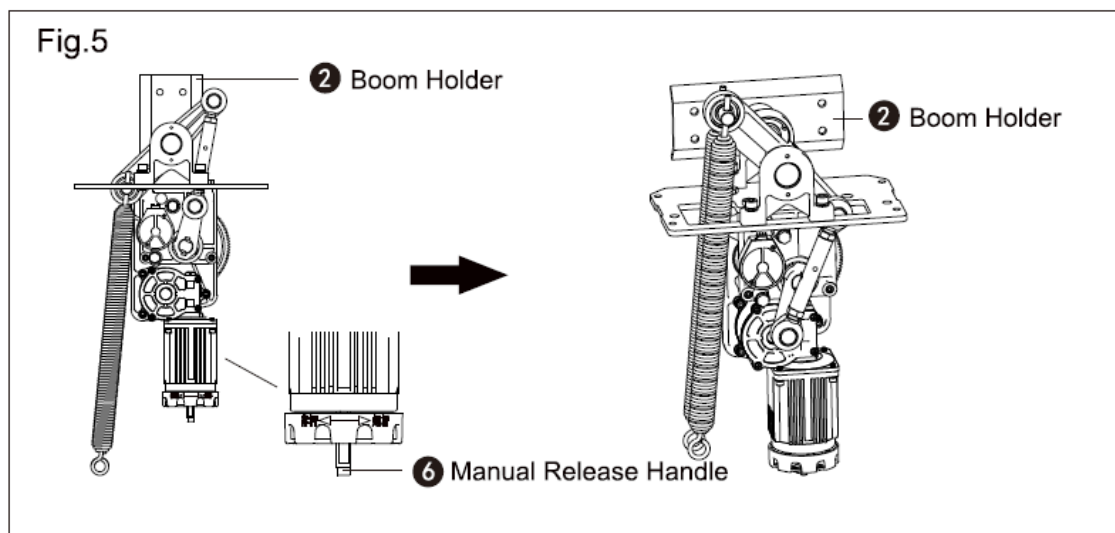


4.2 Boom Installation

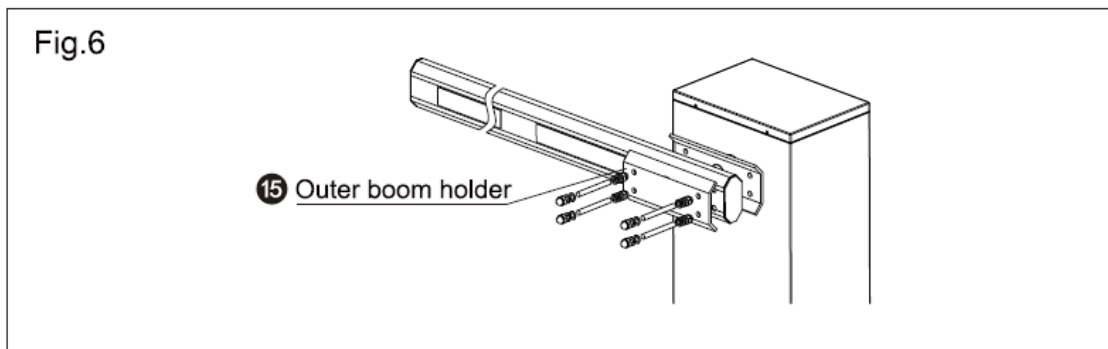
4.2.1 Loosen **13** the Screws and move **4** the spring(s) away from **14** the Spring Support. (Fig. 4)



4.2.2 Using **6** the Manual Release Handle to steer **2** the Boom holder to horizontal position.

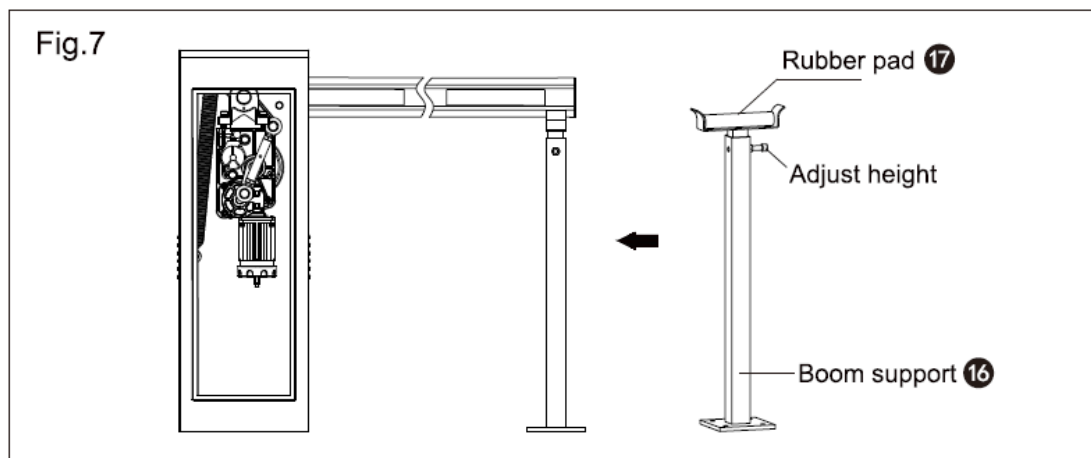


4.2.3 Install the boom and 15 the Outer boom holder according to Fig. 6.



4.2.4 Fix 16 the Boom Support on the ground. Adjust the height as 17 the Rubber pad touches the boom when the boom is at horizontal position.

(Fig. 7)



5. Setting Springs' Balance with Boom Weight

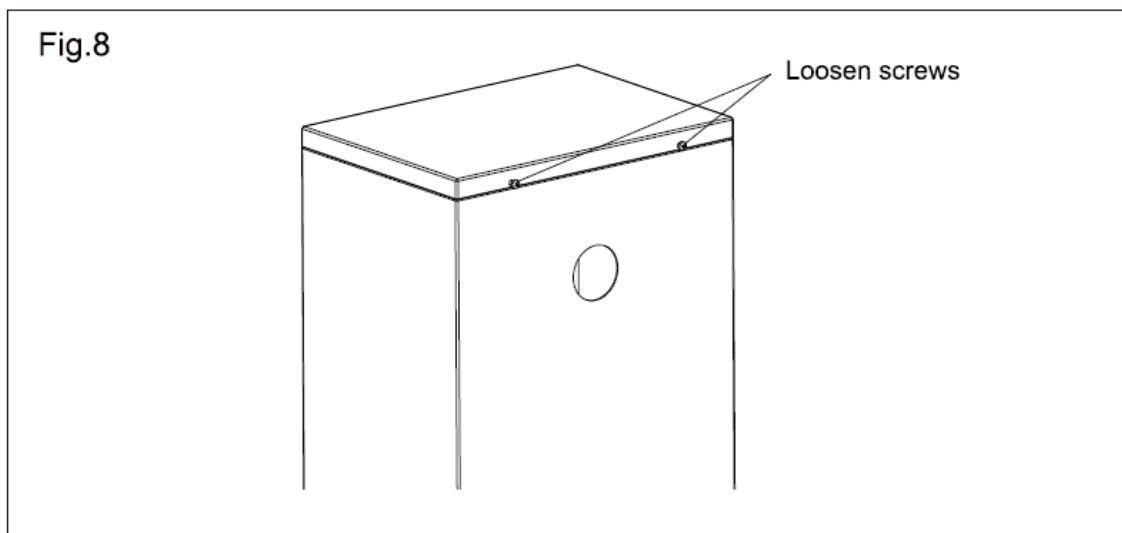
Attention: The springs are set to be balanced in factory. DO NOT change the boom length or weight if it is not necessary. If the boom length or weight must be changed (e.g.: adding a Stop Sign on the boom), the balance must be adjusted by a qualified service person.

5.1 Spring Quantity and Size

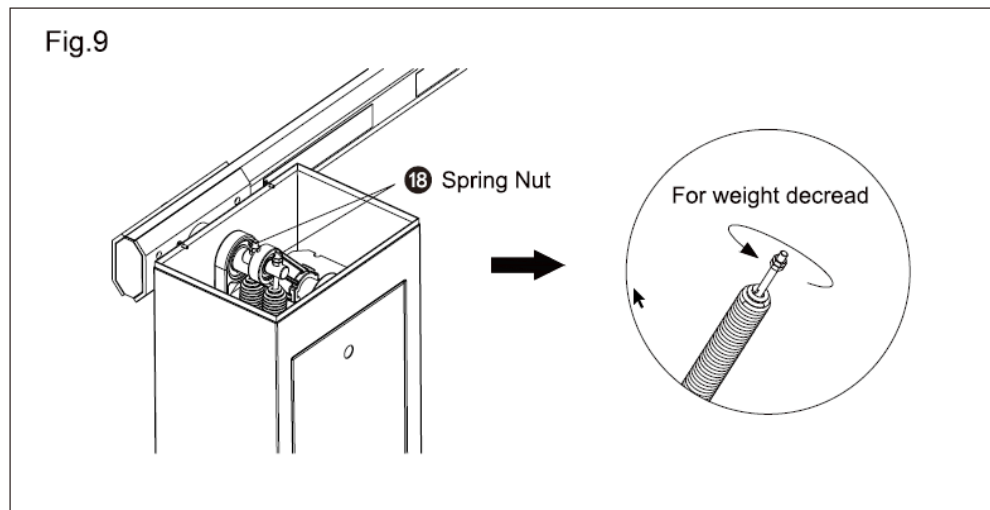
Boom Length	Quantity of spring	Spring Size
$x \leq 3m$	1	$\Phi 4$
$3m < x \leq 4m$	1	$\Phi 5$
$4m < x \leq 5m$	2	$\Phi 5$
$5m < x \leq 6m$	2	$\Phi 5 + \Phi 6$

5.2 Spring Adjustment

5.2.1 Remove the screws on the Cabinet hat, and remove the hat. (Fig. 8)

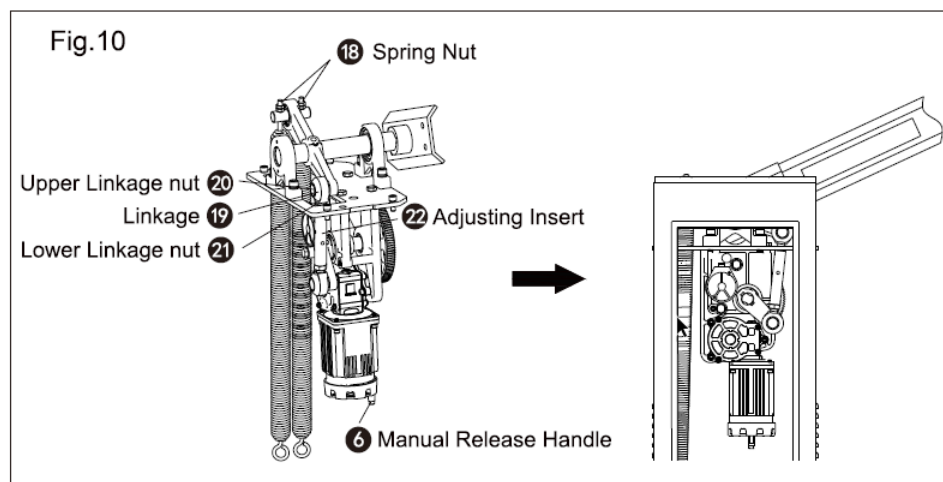


5.2.2 Based on the weight added or subtracted on the boom, adjust the **18** Spring Nut. Tighten the nut clockwise if the weight increased. Loosen the nut counter-clockwise if the weight decreased. When adjusting, all nuts should be turned at the same cycles, in order to avoid the unevenly distributed loads. (Fig. 9)



5.2.3 Loosen **21** the Lower Linkage nut and take off **20** the Upper Linkage nut. Turn **6** the Manual Release towards Open Status to pull out **22** the Adjusting Insert. Turn the Manual Release towards Close Status, and stop when the boom is between 30° to 60°. If the boom moves towards Open Status, **18** the Spring Nut should be loosened or reduce the number of springs. If the boom moves toward Close Status, the Spring Nut should be tightened or increase the number of springs. (Fig. 10)

Tighten the Upper and Lower Linkage nuts after the adjustment.



6. Operating Instructions

- A. Use remote controller to operate Automatic Boom Barrier.
- B. During power outage, turn the Manual Release towards Open Status to open the Automatic Boom Barrier. (Fig. 11)

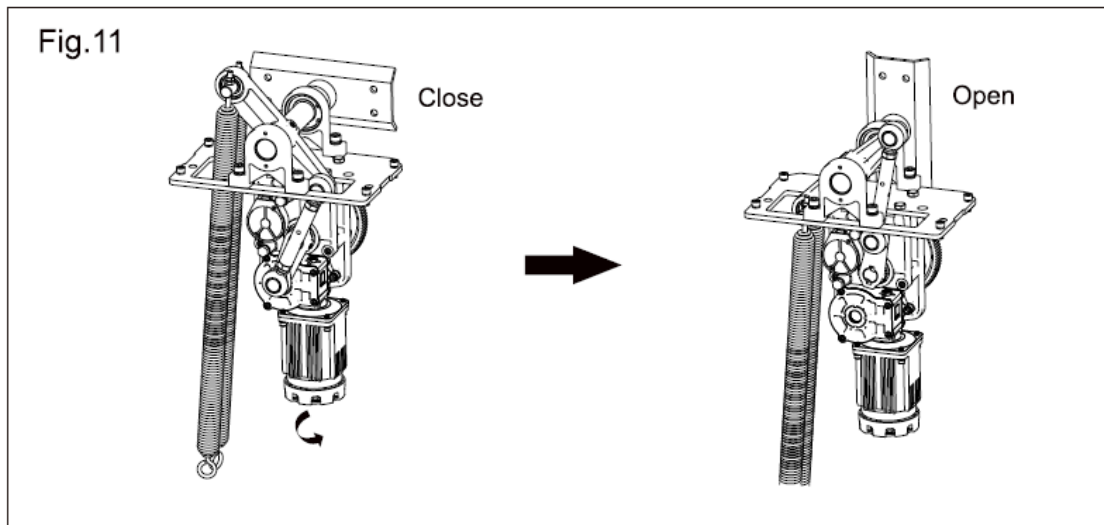
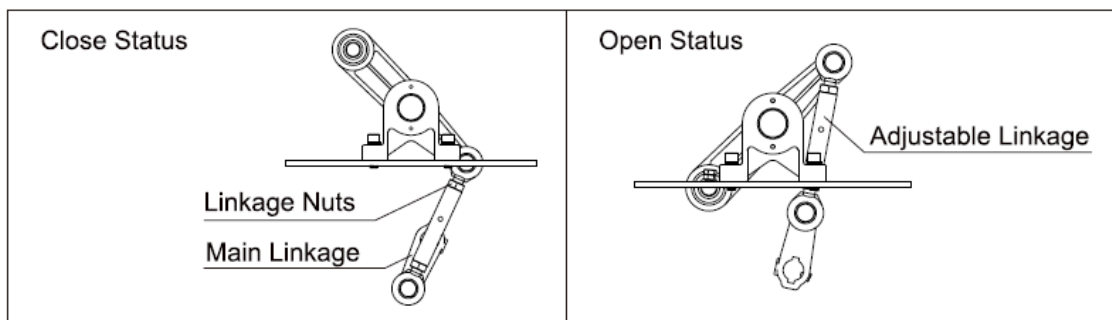
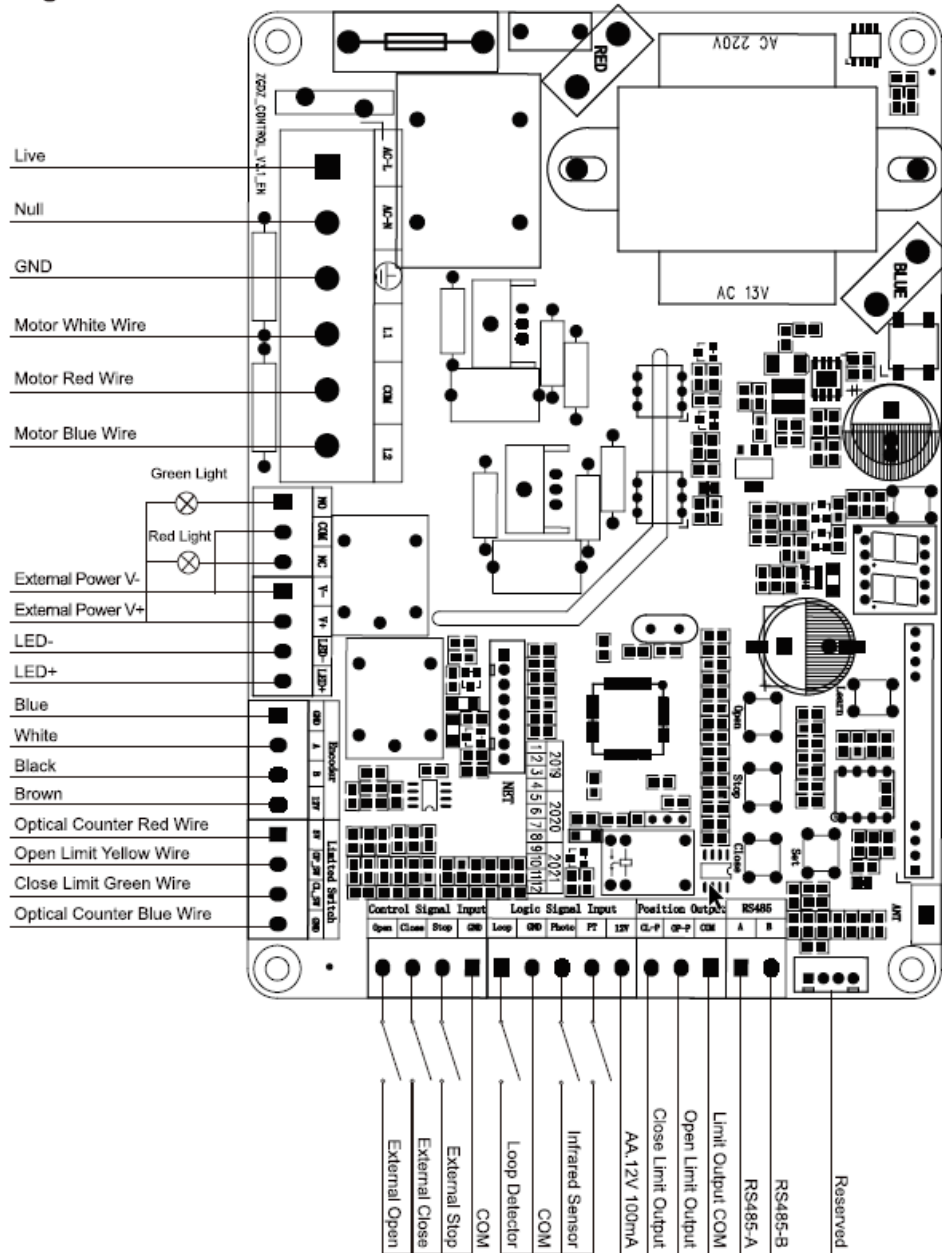


Fig. 15B(follow up page12)



7. Control Board Diagram

Fig.12



8. Limit Adjusting

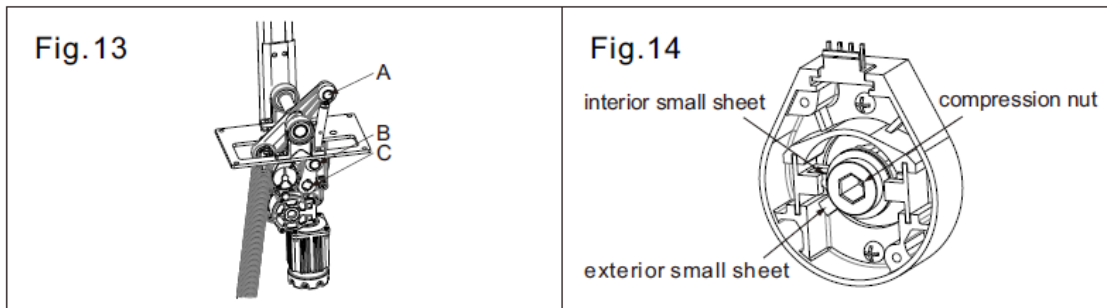
8.1 For Left Closing

8.1.1 Open limit

Ref. Fig13. First, adjust A,B,C three axis to a line (make sure the boom is perpendicular to the ground.)

Second, Ref. Fig 14, adjust the interior small sheet metal to Block the left photoelectric switch with a cross screwdriver.

Then, tighten the compression nut.

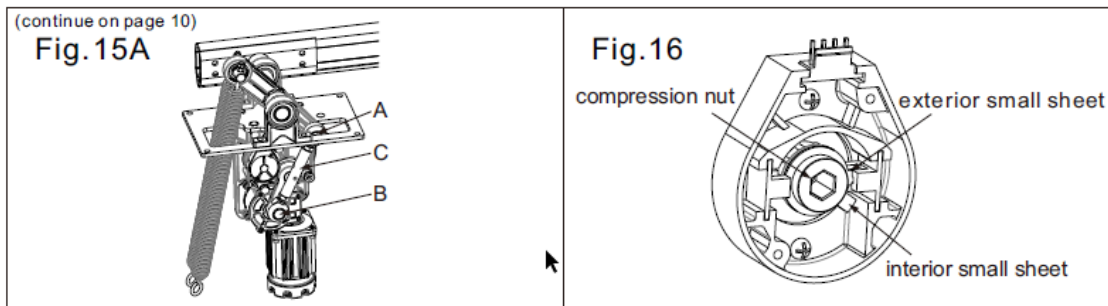


8.1.2 Close limit

Ref. Fig15. First, adjust A,B,C three axis to a line (make sure the boom is parallel to the ground.)

Second, Ref. Fig 16, adjust the exterior small sheet metal to Block the right photoelectric switch with a cross screwdriver.

Then, tighten the compression nut.



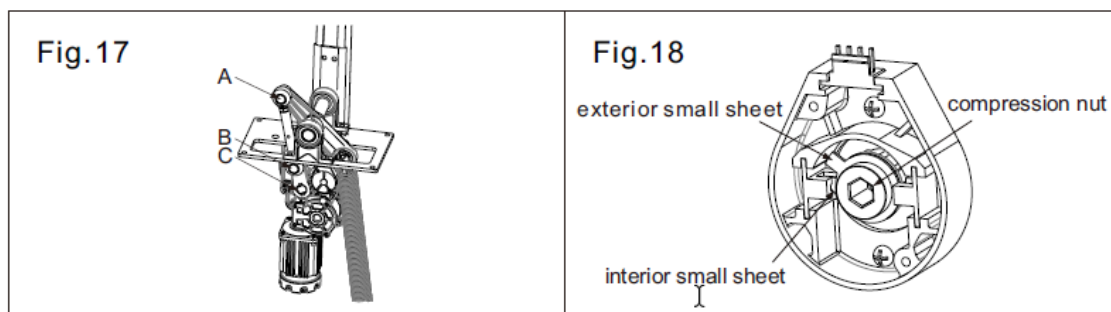
8.2 For Right Closing

8.2.1 Open limit

Ref. Fig17. First, adjust A,B,C three axis to a line (make sure the boom is perpendicular to the ground.)

Second, Ref. Fig 18, adjust the interior small sheet metal to Block the left photoelectric switch with a cross screwdriver.

Then, tighten the compression nut.

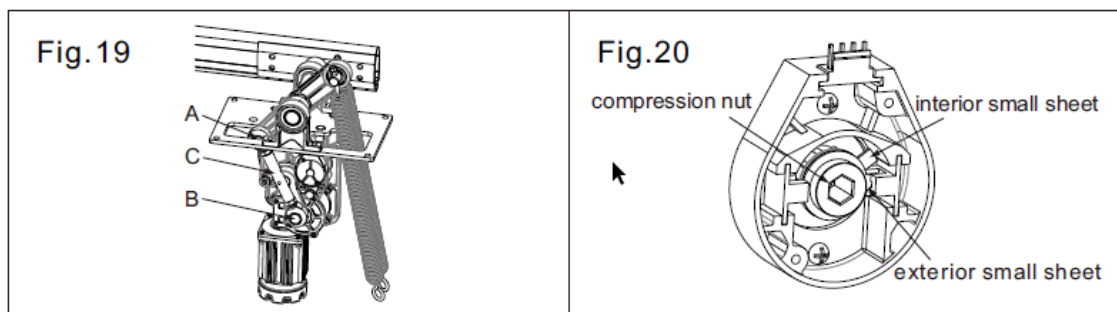


8.2.2 Close limit

Ref. Fig19. First, adjust A,B,C three axis to a line (make sure the boom is parallel to the ground.)

Second, Ref. Fig 20, adjust the exterior small sheet metal to Block the right photoelectric switch with a cross screwdriver.

Then, tighten the compression nut.



9. Function Parameters

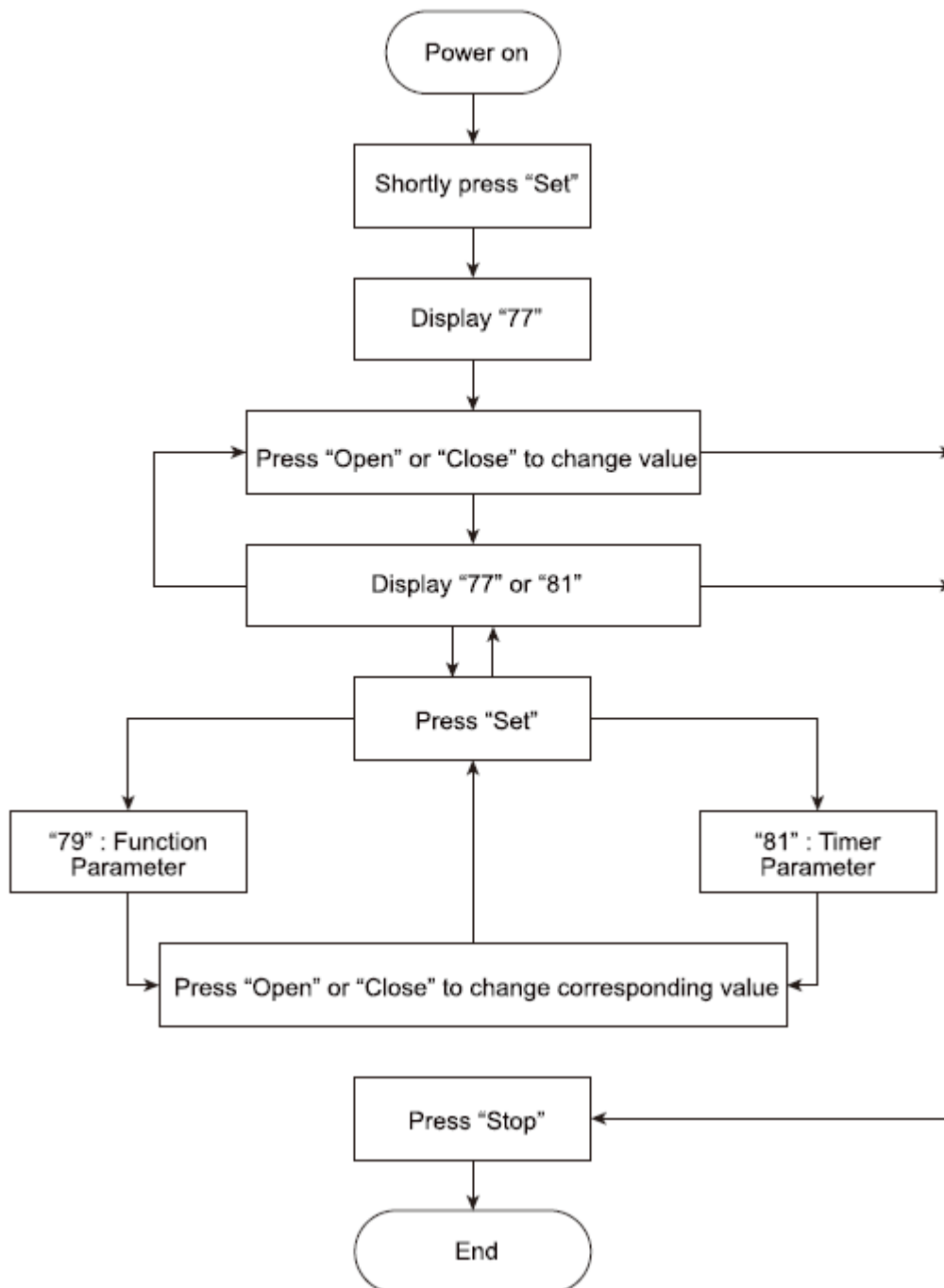
9.1 Function Definition

F0	Factory Setting (Caution!)
F1	Open Limit Micro-adjustment(for digital encoder)
F2	Close Limit Micro-adjustment(for digital encoder)
F3	Auto-Close Timer (s). Max.: 99s. Default: 00 (Means auto-close function disabled)
F4	00: Normal Mode (Default). 01: Counting Mode.
F5	00: Normal Mode (Default). 01: Stay OPEN.
F6	01: Stay Light-on when open to limit(Default). 00: Light out when open to limit
F7	01: Encoder Value (Default) 00: Operation Status.
F8	Signal Input Mode. 00: N.O. (Default). 01: N.C.
F9	Alarm or Light. 01: Light (Default) 00: Alarm.

9.2 Timer Definition

F0	Year
F1	Month
F2	Day
F3	Hour
F4	Minute
F5	Second
F6	Light-on Hour. Default: 18
F7	Light-on Minute. Default: 00
F8	Light-out Hour. Default: 06
F9	Light-out Minute. Default: 00

9.3 Parameters of Function and Time Resetting



10. Transmitter (Remote control) setting

10.1 Transmitter's code setting

Press "LEARN BUT TON", the "LEARN LED" light on, then, press and hold the button w
you choose on the transmitter till the "LEARN LED" flashes and goes out, now, the transmitter
is coded. Other transmitters can be coded as this way.

10.2 Erasing the transmitter's code

Press" LEARN BUTTON" and hold on to make the "LEARN LED" light on and till go out. Now,
all codes of transmitters which had been learnt are cleared.

11. Error Codes

Code	Meaning	Solution
Err1	Optical Counter Limits	Check the Optical Counter Limits wires
Err2	Motor Nonstop Running Over Limits	1.Check the Optical Counter Limits Connecting 2.Check the Mechanical System
Err3	Motor Locked Rotor	1.Check the Mechanical System 2.Check Motor Wires Connectors
Err7	Photocell is Triggered	Remove the Object that Blocks the Photo Beam
Err8	Air Wave Sensor Triggered	Remove the Object that Block the Air Wave

12. Trouble Shooting

Trouble	Possible Reason	Solution
Power On, operate remote controller(transmitter), but no reaction.	Fuse blowout.	Check fuse inside control box and power supply.
	No battery or dead battery in remote controller(transmitter).	Change the batteries in transmitter.
	Frequency interference.	Press "Open" or "Close" on the Main Board to test if needed, connect a wired controller.
	External protectors' circuit malfunctioned or at working status.	Check the External Protectors or change them if need.
	Optical counter malfunction.	Change Optical counter.
	Control board malfunction.	Change control board.
Motor is functional but the boom doesn't work.	Boom starts at middle position.	Use manual release to set the boom at Open status or Close status, then use controller to start again.
	Spring force is not balance.	Readjust the balance.
	Low power voltage.	Check if the input power is at proper range.
Boom does not reach correct position when opening and closing.	Incorrect Linkage adjustment.	Refer to Fig.15 (See page 10).
	Incorrect Limits setting.	Reset.
Boom shakes at Open Limit and Close Limit.	The Lock Flat Key between Boom Main Shaft and Boom Holder is loose.	Change the Lock Flat Key.