Maintenance Manual

Parking Barrier

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English

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If there is any issue related to the product, please contact us.

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About the Company

ZKTeco is one of the world's largest manufacturers of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/Floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader door locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

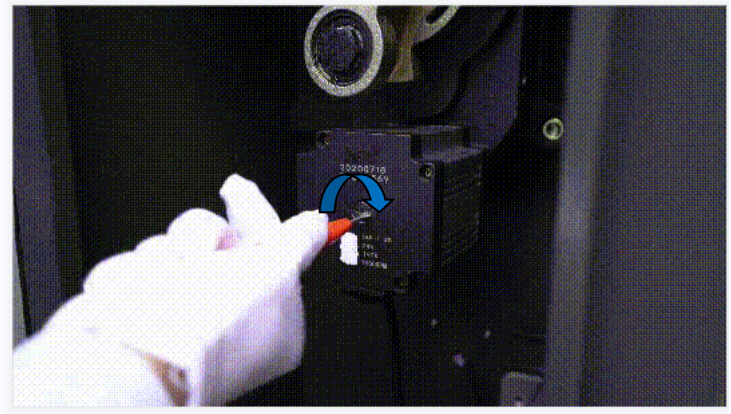
This manual introduces the maintenance of **Parking Barrier**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Table of Contents

1. Mechanical Movement Part Maintenance

Inspect the mechanical movement of the parking barrier to ensure that the boom arm moves up and down smoothly and is in the correct position.

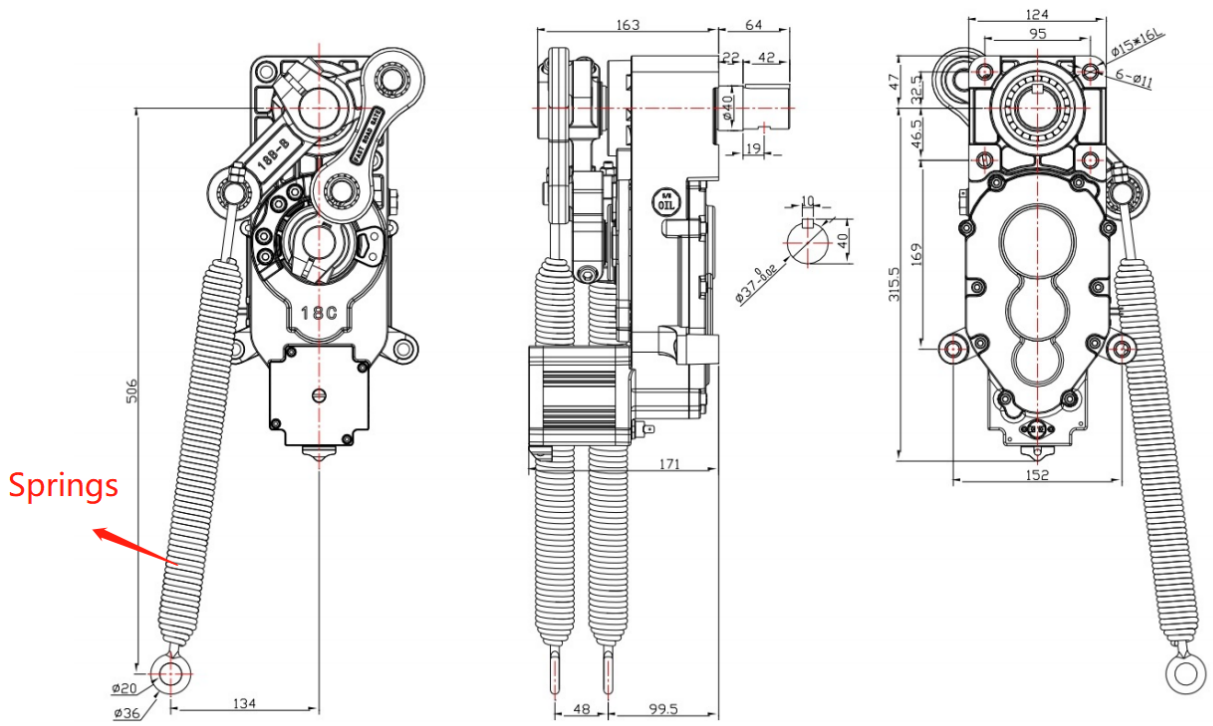


First, remove all the springs that balance the weight of the boom arm.

Using a straight screwdriver, twist here to unlock the motor movement, and then manually push the boom arm up to the vertical position.

If the boom arm can move up smoothly to the desired position, it indicates that both the mechanical moving part and the motor movement are functioning properly.

2. Balance Between Boom Arm and Springs

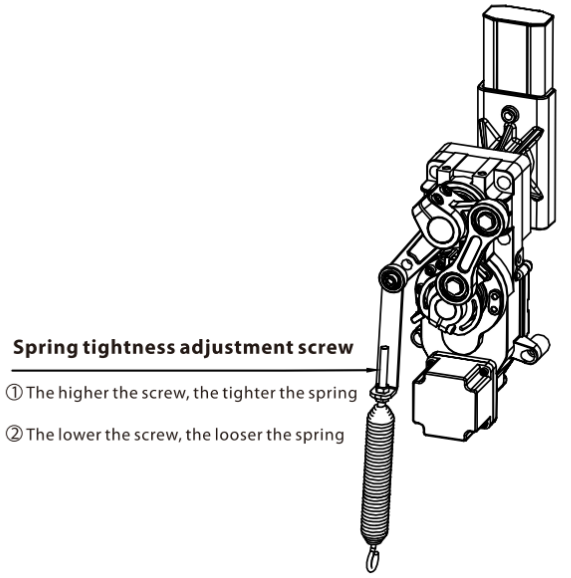


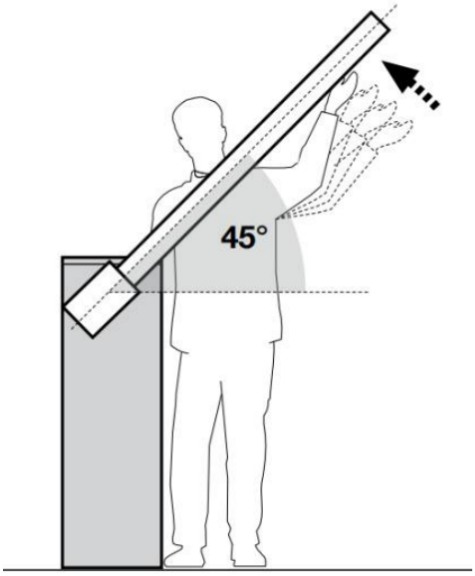
The spring is used to balance the weight of the boom arm when it moves down to the horizontal position. The quantity of springs required depends on the length and diameter of the boom arm.

Check if there is any cracking on the spring, try to replace it if so.

Check the balance between the boom arm and the spring. If the balance is appropriate, the boom arm should come to a stop at the 45-degree position.

If the boom arm shakes when it rises, you can adjust the spring loosely, and if the boom arm shakes when it falls, you can adjust the spring tightly.



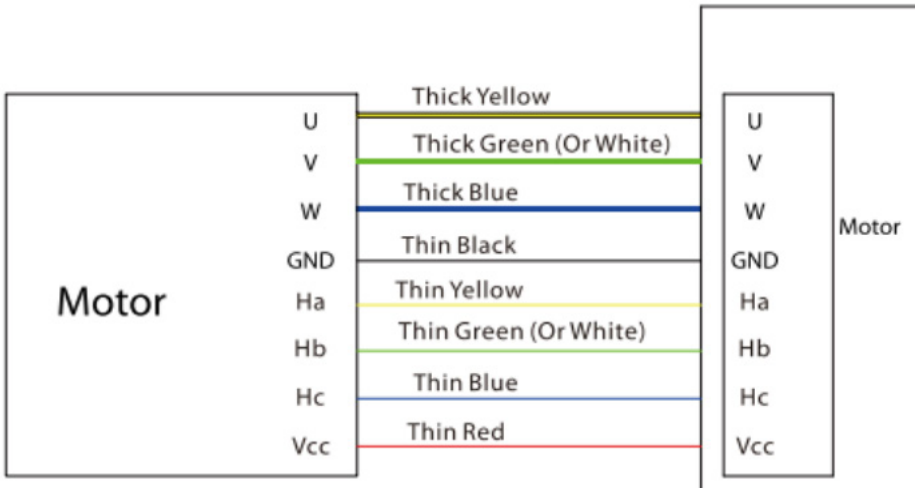


1) When the barrier boom is at 45°, it is the best balance.
2) The spring wire diameter is adjusted according to different boom lengths:
   - A 3m boom requires a φ4.5mm wire,
   - A 4.5m boom requires a φ5.5mm wire, and
   - A 6m boom requires a φ6.5mm wire.

Note: If the boom length is shorter than 2m, please do not install the spring.

3. Connection between Main Board and Motor

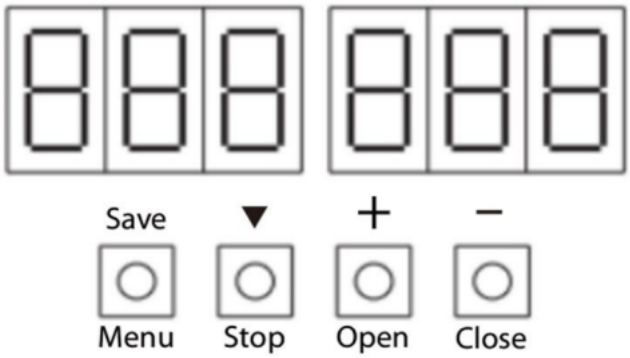
The motor is controlled by the DC 24V main board, and the connection is illustrated in the diagram shown below.



The wire connection should be firmly and well, if there is any loose on the wire connection, we need to reconnect it.

4. Self-checking of the Machine

When initially powering on the parking barrier, press the up button to raise the boom arm to the vertical position. Then, press the down button to lower it to the horizontal position. This process, known as 'self-checking,' enables the main board to track the entire movement process and determine the position of the boom arm.



Menu/Save: Menu options/Confirm and Save.

Stop/▼: Stop the boom arm /Flip down the parameter

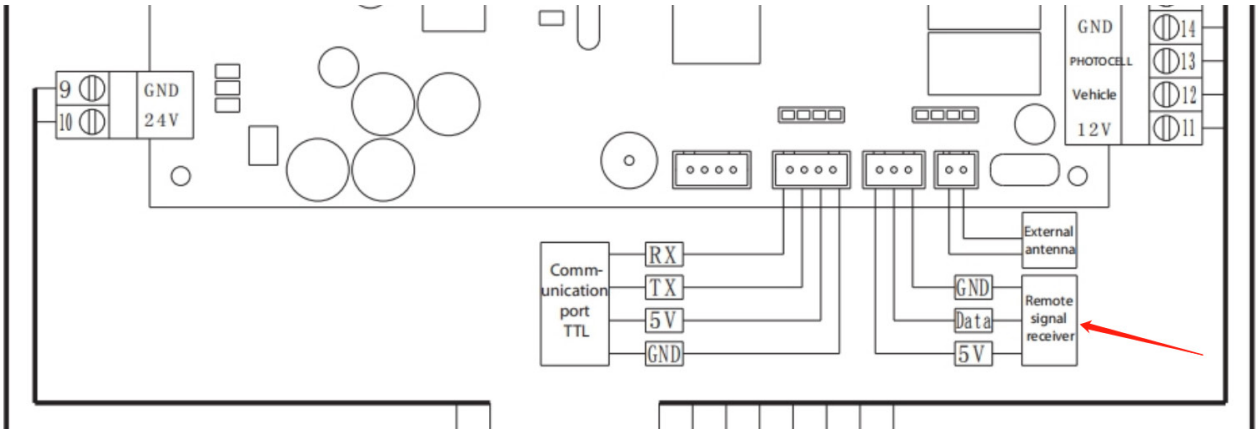
Open/+: Increase parameter/value

Close/-: Decrease parameter/value

Once the self-checking process is complete, we can use the remote to control the movement of the boom arm.

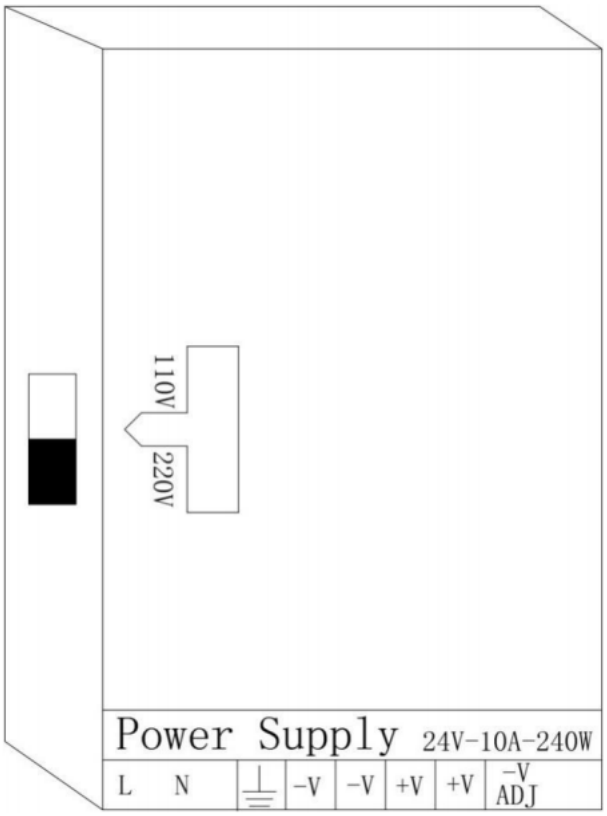
5. Remote Control

After completing the self-check process, check if the remote control is functioning. If the remote is not working, maybe it ran out of power, we can observe if there is red light on when pressing the remote.
Also the remote receiver may be not connected to the main board, or it was broken, anyway, we can try to double check them.



6. Main Board of the Parking Barrier

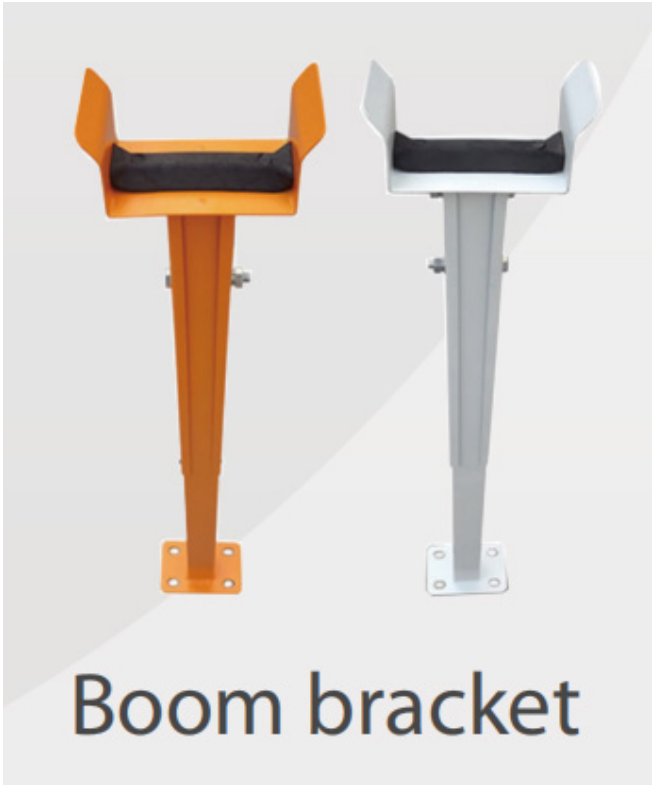
The main board is supplied with 24V power. However, when we power it on, the main board does not work at all. To troubleshoot, we can measure the power input. If there is no power input or it measures below 20V, it indicates a potential issue with the power supply. In such a situation, it is advisable to replace the power supply.



If there is power input to the main board, it could indicate that the board has been burned. In such cases, we should check for any signs of burning on the electronic components of the main board. If any burned signs are found, we should investigate the cause and consider replacing the main board.

7. Wind-resistant Intensity Checking

When installing the parking barrier in an area where the wind is consistently strong and poses a risk of damaging the boom arm, consider two possible solutions: adding a boom bracket for additional support or opting for a round boom arm, which gives better resistance against such conditions.



8. Surface Cleaning

The parking barrier machine body should be cleaned monthly or weekly with a soft and wet cloth if water or dust remains on it, making the barrier not good-looking.

9. Equipment Maintenance Schedule

Number	Item	Schedule
1	Overall Cleaning: Rust	Half a year
2	Mechanical movement part	Half a year
3	Balance between boom arm and springs	Half a year
4	Connection between Mainboard and motor	Half a year
5	Mainboard	Half a year
6	Wind-resistant intensity checking	Half a year

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