

Maintenance MANUAL

Tripod Turnstile

Version : 2.0

Date : December, 2017

www.zkteco.com

1. Introduction

Thank you for purchasing the tripod turnstile product manufactured by ZKTeco. This product is manufactured in strict accordance with quality control standards. To protect the device from component abrasion and ensure long-term stable operation, it is recommended to perform periodic maintenance on the device.

2. Housing Cleaning and Interior Dust Removal

Check for dirt such as smudges and stains on the tripod turnstile housing on a periodic basis. Use cleaning agents to remove dirt, wipe the surface with soft cloth, and then apply a layer of rust preventive oil. Should accidental scratches occur, ask a qualified repair service to smooth out the patterns.

Note: It is recommended the housing be cleaned once every two weeks.

3. Periodic Maintenance of Internal Components

Usage Times (Million)	Mechanism					Electronic				
	D50	D30	Position recover spring	Block arm	Hook on the block arm	Wire	24 V power supply	Control board	Indicator light	Proximity switch
0.5+	○	○	○	○	○	○	○	○	○	○
1.0+	○	●	○	●	●	○	○	○	○	○
1.5+	○	○	○	○	○	○	○	○	○	○
2.0+	○	●	○	●	●	○	○	○	○	○
2.5+	○	○	○	○	○	○	○	○	○	○
3.0+	○	●	○	●	●	○	○	○	○	○
Remarks: ● indicates Replace; ○ indicates Check.										

@0.5Million Maintenance record

● Maintenance	In good condition after checking (√)	Clean after checking (C)			
	Fasten after checking (F)	Replace after checking (R)			
● Mandatory items	Housing cleaning and interior dust removal				
	Mechanism oiling				
● Check items					
D50		D30		Block arm	
Position recover spring		Hook on the block arm		24 V power supply	
Proximity switch		Control board		Indicator light	
Wire					

@1.0Million Maintenance record

● Maintenance	In good condition after checking (√)	Clean after checking (C)
	Fasten after checking (F)	Replace after checking (R)
● Mandatory items	Housing cleaning and interior dust removal	
	Mechanism oiling	
● Check items		
D50	D30	Block arm
Position recover spring	Hook on the block arm	24 V power supply
Proximity switch	Control board	Indicator light
Wire		

@1.5Million Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)		
	Fasten after checking (F)		Replace after checking (R)		
● Mandatory items	Housing cleaning and interior dust removal				
	Mechanism oiling				
● Check items					
D50		D30		Block arm	
Position recover spring		Hook on the block arm		24 V power supply	
Proximity switch		Control board		Indicator light	
Wire					

2.0Million Maintenance record

● Maintenance	In good condition after checking (√)	Clean after checking (C)			
	Fasten after checking (F)	Replace after checking (R)			
● Mandatory items	Housing cleaning and interior dust removal				
	Mechanism oiling				
● Check items					
D50		D30		Block arm	
Position recover spring		Hook on the block arm		24 V power supply	
Proximity switch		Control board		Indicator light	
Wire					

2.5Million Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)	
	Fasten after checking (F)		Replace after checking (R)	
● Mandatory items	Housing cleaning and interior dust removal			
	Mechanism oiling			
● Check items				
D50		D30	Block arm	
Position recover spring		Hook on the block arm	24 V power supply	
Proximity switch		Control board	Indicator light	
Wire				

3.0Million Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)		
	Fasten after checking (F)		Replace after checking (R)		
● Mandatory items	Housing cleaning and interior dust removal				
	Mechanism oiling				
● Check items					
D50		D30		Block arm	
Position recover spring		Hook on the block arm		24 V power supply	
Proximity switch		Control board		Indicator light	
Wire					

4. Appendix (Method and Tool)

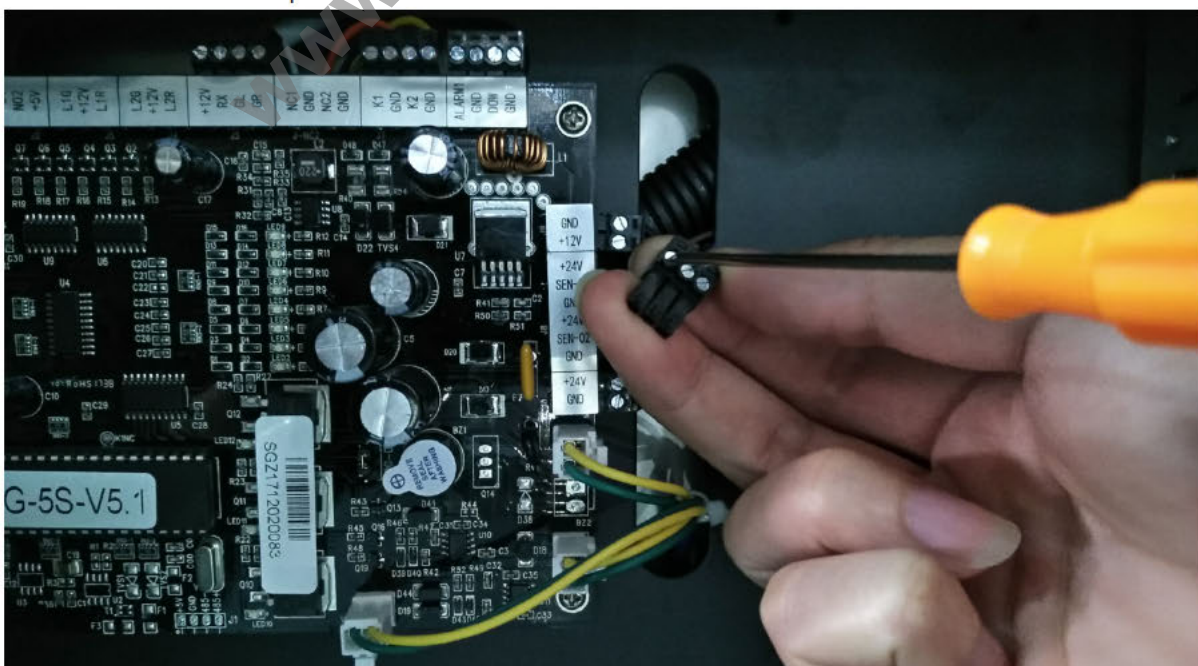
4.1 Housing Maintenance and Interior Dust Removal

- Use cleaning cloth soaked with industrial alcohol to wipe the housing. Then apply a layer of rust preventive oil.
- If the arm for drop arm device is loose, tighten it clockwise, and use an Allen key to fasten the set screws.
- Remove dust on the internal PCB.



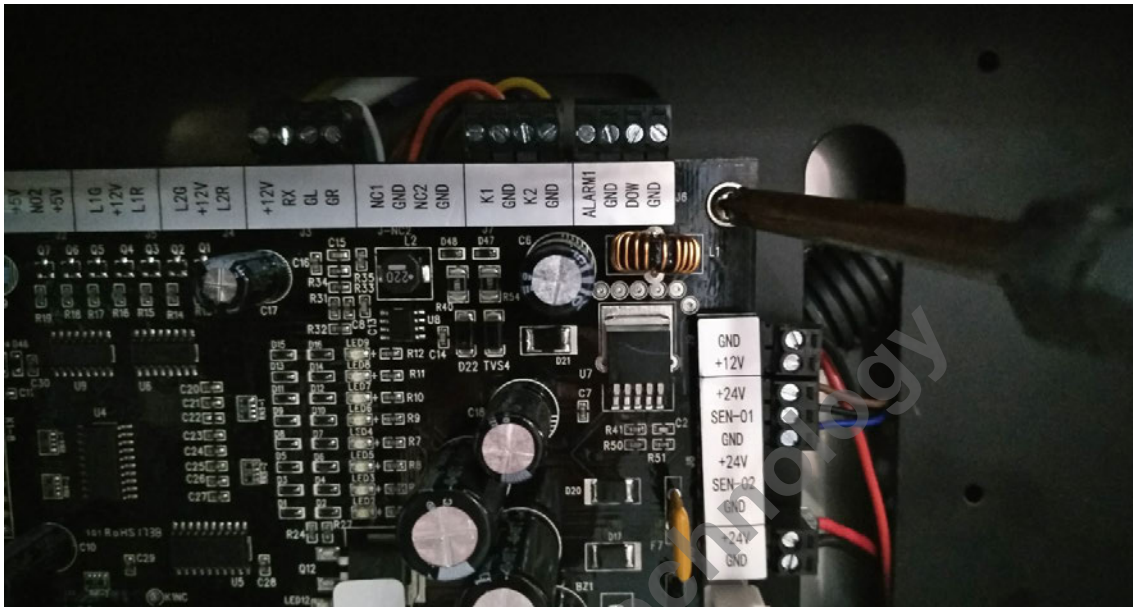
4.2 Wire Checking

- Check that all terminal posts are in good contact and free from exposed copper. Re-insert loose terminal posts if any. If exposed copper exists on a conducting wire, remove the terminal from the PCB, use a flat-head screwdriver to loosen the screws on the terminal, re-insert and tighten the wire into the terminal, and then re-insert the terminal. After that, check related components.



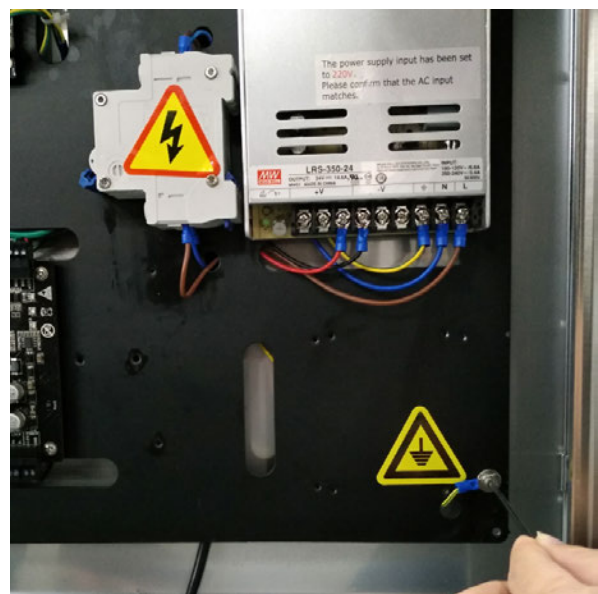
4.3 Master Board Replacement

- Remove wiring terminals from the master board, mark the ports (to ensure correct wiring of the new board), unfasten the four screws, take off the PCB to be replaced, install the new board, fasten the screws, and then reconnect the wiring terminals.



4.4 The 24V Power Supply Replacement

- Turn off the air switch and unscrew the four fixed screw, take off electrical mounting plate.
- Use screwdriver to unplug the wire on the power supply, unscrew the fixed screw from the power supply, then remove it and replace the new one.



4.5 Mechanism Lubrication

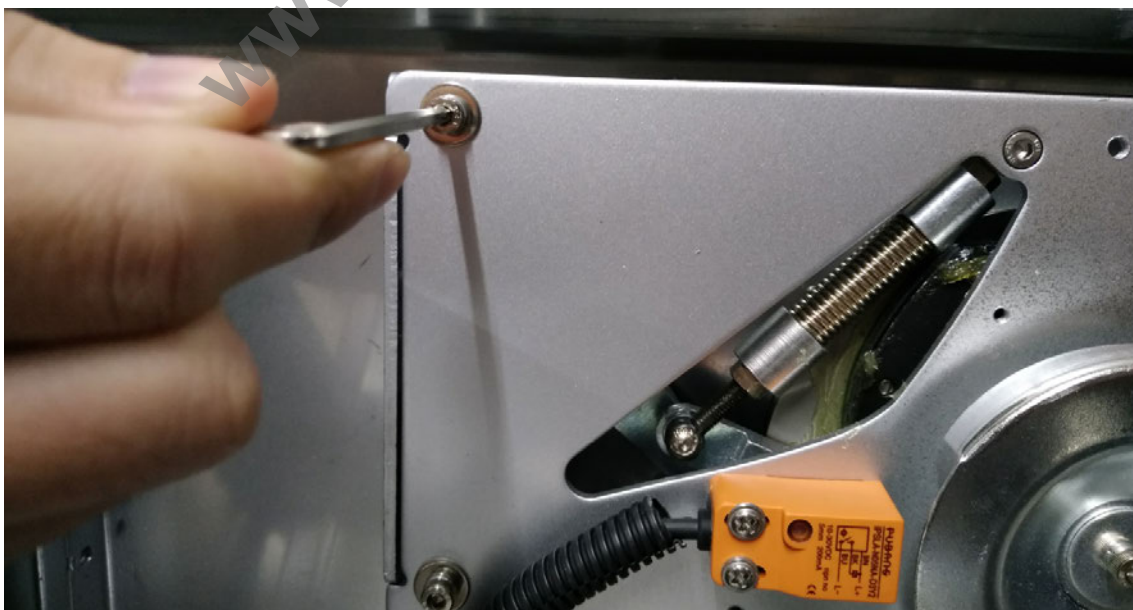
- Apply lubricating oil inside the mechanism evenly while rotating the tripod turnstile arm, as shown in the following figure.



4.6 Mechanism Checking

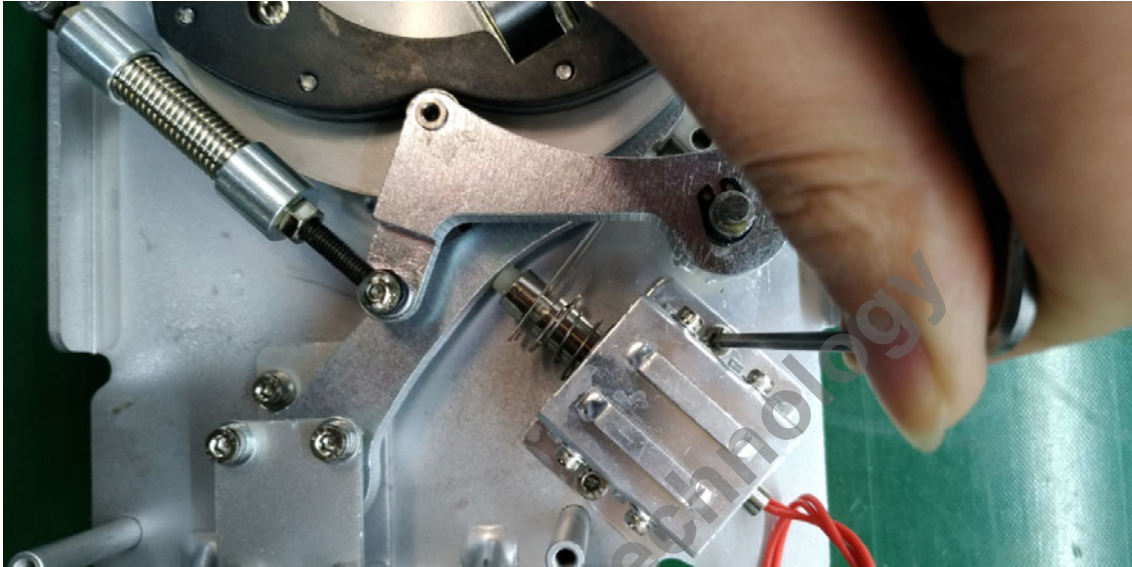
4.6.1 Core Cover Removal

- Use an Allen key to unfasten fixed screws from the proximity switch blocker, take off proximity switch blocker. Use an Allen key to unfasten the five screws from the mechanism cover and take off the cover.



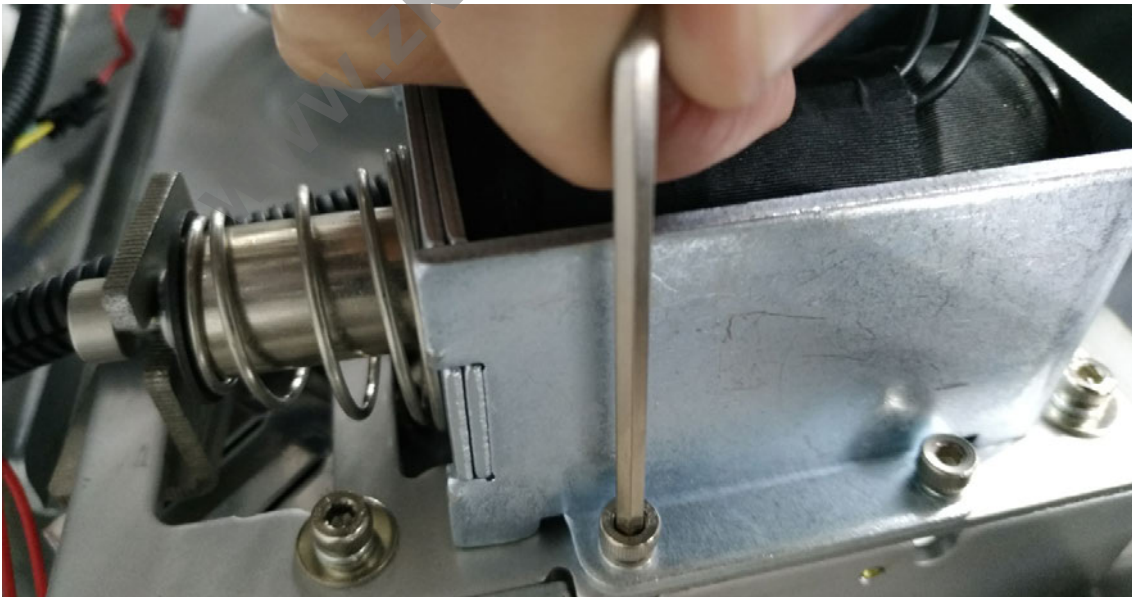
4.6.2 Unlock Solenoid Replacement

- Use an Allen key to unfasten the screws from the unlock solenoid, remove the terminal posts, and take off the unlock solenoid.
- Install the new unlock solenoid on the mechanism base, apply screw glue, use the Allen key to fasten the screws, and re-insert the terminal posts. (The replacement method is the same for the left and right solenoids.)



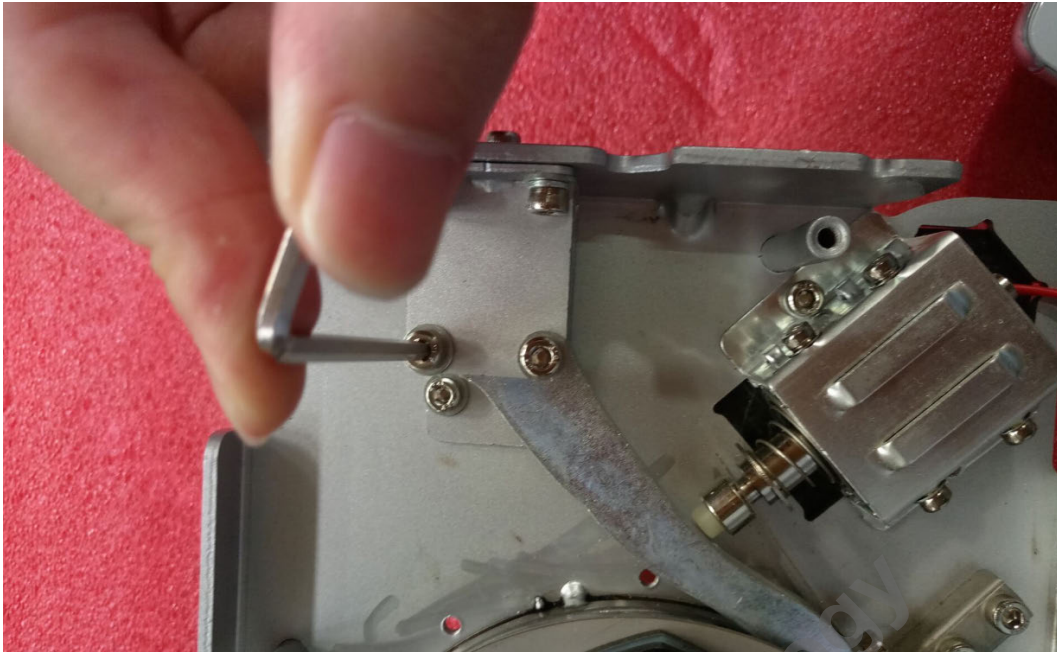
4.6.3 Drop Arm Solenoid Replacement

- Unfasten the four screws that fix the drop arm solenoid on the mechanism cover and take off the drop arm solenoid. Install the new one, fasten the screws, and re-insert the terminal posts.



4.6.4 Block Arm Replacement

- Unfasten the screws from the block arm and take off block arm.
- Install the new block arm, apply screw glue, and fasten the screws.



4.6.5 Position Recover Spring Replacement

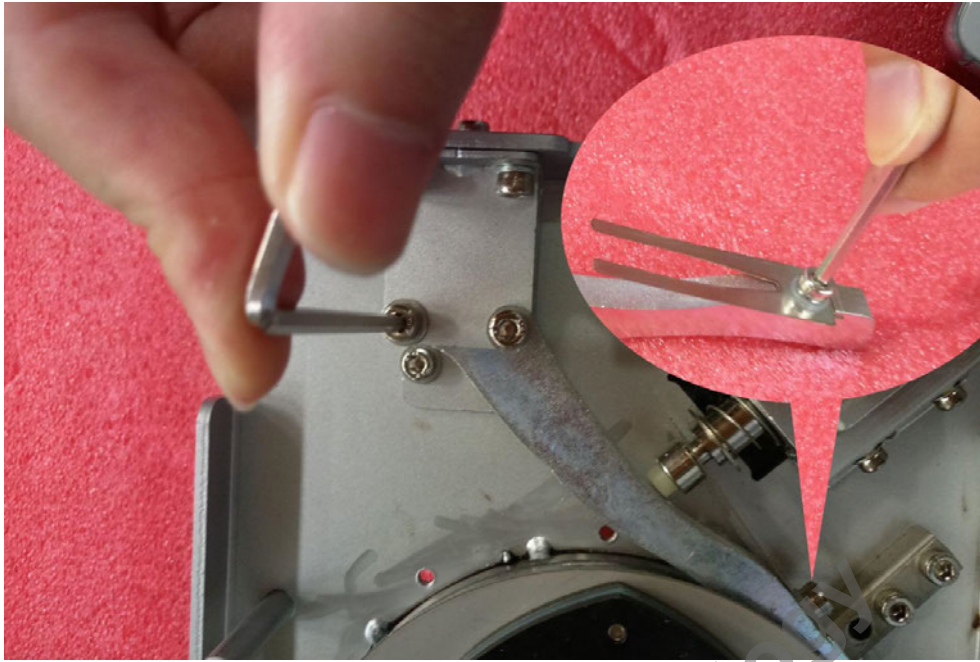
- Check whether the position recover spring is deformed and nuts are loose. Replace the position recover spring if deformed or fasten any loose nuts, as shown in the following figure.

Figure: Testing the position recover spring



4.6.6 Hook Replacement

- Take off the unlock solenoid.
- Take off the block arm and replace the hook.



5 Maintenance Tool Kit

Allen key set 	Multi-blade screwdriver 
Scissors 	Lubricating oil 
Multimeter 	Industrial alcohol 
Anaerobic adhesives 	Cleaning cloth 
Rust preventive oil 	