

User Manual of Needle Detector



Read before Operation

Before operation this machine, please read this manual thoroughly, and keep a copy with the machine for future reference. This manual is to be considered part of your machine.



Notes on Safety Use

I. PAY ATTENTION TO SAFETY USE

- Before using the detector, please carefully read the instructions and keep the instructions as reference. If you lose your manual, please contact our company for a new one.
- To ensure safety, power, plugs, and sockets must be grounded to prevent static electricity or electric operation. Be careful not to plug the wrong power supply.

II. NOTES ON WEAR DURING OPERATION

- Forbid to wear ties, scarves (including decorative scarf) and other things easy falling from the body. You should pay attention cuffs, skirt hem and sleeve in case they get rolled into conveyer belt and O-type belt. Do never wear metallic jewelry, watches, magnetic cards, cell phones, in order to avoid interference.

III. NOTES ON CLEANING WORK

- Please make sure the instrument cleaning work and checking work after operation work. First, turn off the power; unplug the power cord from the outlet. Second, after the cleaning work, cover the instrument with covers (Cloth).

IV. NOTES ON HOW TO CLEAN INSTRUMENT

- There might be small metal particles, remnants of dust and remains after detection on belt surface and inside, as well as in joint part and channel detection part. They will cause false alarms and tear the conveyor belt. Therefore, it is very important to keep the two sides of conveyor belts clean for long term!

Note: You must cut off the power; unplug the power plug before you do the cleaning work.



How To

V. USAGES & FEATURES

1. Usages

It can be applied to detect broken needle or iron fragment in quilt, clothing, feather products (toy), shoes, hats, socks, food, medicines and other products. It also can check demagnetization effect of toys metal ornaments, zippers, but, etc.

2. Attention

- a) Metal ornament buttons, zippers, etc. must be strictly demagnetization before it is sewn, or affect the normal instrument inspection.
- b) The needles, pins, etc used in sewing must be a magnetic material of steel products. Pure stainless steel, aluminum, copper or plastic and other non-magnetic metal products will not be detected.

3. Features

- a) Conveyor belt will send the products to probe part. Probe part will detect any broken needles, or iron fragments. Once detected, the conveyor automatically stops alarm on, and automatically back.
- b) Not only to check one by one, even if the bundle and have a good packaging (nylon film bag) can be a good check.
- c) Because the probe (inspection) part is the bridge channels, according to the height of the items, to check the extent there are differences. Manufactures has taken the standard proposed by Japanese and approved by International standard.



VI. HOW TO PALCE MACHINE

1. Notes on where to place machine

1.1. Prevent Vibration

Choose a room is not vibration, preferably flat concrete floor or terrazzo floor is the best choice.

1.2. The impact of metal products on the machine

Do not put metal tables, metal chairs, metal boxes, metal shelves and any other metal products should be 1 meter away the machine. Sewing machines, cutting machines, loading machines must be 4 meters away from the detector machine.

1.3. Electromagnetic waves impact

No ceiling fan and other rotating machines should be installed above the detector machine. High voltage transformers, high frequency packaging machines can easy to generate strong electromagnetic fields and should keep away 10 meters from the detector machine. Avoid place where cars, trams passing frequently.

1.4. Notes on Environmental conditions

Please place the machine where is less dust and less changes of temperature and humidity.

1.5. Impact on other things

Inspection department will have a strong probe magnetic, so watch, VCD cards, credit cards, driver's license, BP machines, mobile phones and other items are affected easily by magnetic should be kept away.

2. Power Usage

The instrument uses 220V $\pm$ 10V 50HZ single-phase power, please equipped with single-phase grounding outlet, regular checks whether the connection is good in case the connection problem leads to motor, circuit components burned out.



3. How to move machine

When instrument is completely installed, do not move unless you have to move. If you have to move the instruments, please use proper way. Move a short distance, first adjustment bolt down four M16 nuts, the caster off the ground, adjust the plane level. If you have to move long distance, you have to fixed instrument on flat or moving vehicle.

Note: Do not push or pull shaft while moving.

4. How to Fix the instrument

You have to fix instrument on flat concrete floor and make four small wheels by adjusting bolts 0.5-1.5 cm high from the concrete floor, and then corrected horizontal level, otherwise easily cause belt slanting and false alarms.

VII. HOW TO USE THE INSTRUMENT

1. The staff of operation the instrument forbid to wear neckties, scarves, long hair woman must keep hair bound in working cap. No wear watches and metal jewelry.
2. Plug in the special 220V outlet with a grounding device.
3. Press the red power switch (upper right corner of electric box). See the red signal lights; Check the power connection is good. The lights without twinkling mean good connection of power.
4. Open power switch, power indicator light on, after the light of the control panel flashing three times, the display screen shows the current time, and goes in the standby state.
5. Check the sensitivity rage instruction is right. The regular sensitivity rage is around 8-9 for ordinary check. For special check, the sensitivity rage can be adjusted to 0-7 or 10. Non staff shouldn't adjust sensitivity rage.
6. Press the start / stop button, the machine runs well. Press "start/stop" button again, the machine stops.



7. The machine runs properly, after 2 seconds delay time (for maintaining longer machine life and reducing the electric impact, so set the delay device), put the standard test blocks onto the conveyor belt for testing to check the machine's performance; Repeat 2-3 times, and check whether the automatic rewind from the right location for regulation. If you need adjust rewind distance, please see: 5. 2 rewind time settings.
8. While machine detection performance is normal, you can place item onto conveyor belt to start testing.

Note: Put the item onto conveyor belt gently, non-throwing and other wrong operations.

- If there are something detected out from the thing and alarm and automatically stops the conveyor belt and rewind. The operator should remove item from belt, and then do not restart machine, the machine will automatically run and continue to check items (in the automatic function status).
- What's more, you should take the items away after detection, and find the magnetic material (broken needle), then check the items one more time in case there are more than one broken needles in the items.
- After completely inspecting or be duty off, remember press the start / stop button, turn the power off, plug out from plug base. Doing cleaning work and cover machine with nylon or clothes cover.
- Standard test block must be kept in proper place.

VIII. HOW TO AVOID FALSE ALARMS AND USE CORRECTLY

1. How to use better

- 1.1. The operator should operation the machine properly and read the manual familiarly.
- 1.2. Sewing needle must made by steel material.
- 1.3. If any broken needle is found during sewing, you must found the broken needle out then replace with new needle. Do never break the policy of broken needle management.
- 1.4. The metal decoration (including buttons, zippers) must be completely demagnetized before sewn.



2. Is it possible that the machine sends alarm without broken needle or iron fragment?

Yes!

- 2.1. The closely-arranged metal buttons or zippers might be not completely demagnetized and can be detected to incur false alarm.
- 2.2. Scissors (including those for machine use) may leave iron powder after grinding, dark chalk powder stick on clothes, they can also detected and incur false alarm. So scissors and knife after sharpen should clean carefully.
- 2.3. The greasy items easily absorb metal powder, which can be detected and incur false alarm.
- 2.4. Items with inhibited Rusty metal can be detected and incur false alarm.
- 2.5. Deep-color dyes with iron component, which can be detected and incur alarm, it is dyed cloth to be sent to state.

3. How to Inspection and Protection

- 3.1. During machine running, you should check carefully whether it has floating phenomenon look. If so, it means 4 bolts is loosed and re-adjust it horizontal level before fixing machine.
- 3.2. Completely check whether there are metal objects around 4 meters in movement from machine.
- 3.3. To check without load, to see whether shaft and other rotating parts send unusual sounds, if so, clean with a clean cloth or towel and lubricate the shafts and adjusting bolts with 2-3 drops of sewing machine oil.
- 3.4. To check unload whether the performance is instability, sensibility signal lights twinkling, it will send false alarms in serious case. Please do check the list below after disconnect the power:
 - 3.4.1. To check whether the department of the upper and lower surface of the channel has stuck metal fragment, and clean the department with a clean towel.
 - 3.4.2. To check whether the metal fragments or powder on the conveyor belt, if no obvious objects, use clean wet towel seriously and carefully to clean two sides several times! Note: cut off power before you clean the machine.



IX. HOW TO USE CONTROL PANEL

1. **The date and time settings:** press function button, enter the year, month, date, and time, rewind time settings. first press the function key, the display shows "Y200X" in which "X" constantly flashing means to select, X is actually a number such as "5" "2" "3". Please press the up or down arrows to select year, after selecting the right feature set, and press function button to confirm, so that year set is complete. At this time the display shows "daabb", and "aa" constantly flashing means to select, "aabb" are the actual figures, "aa" represents the month as "01" "03", you should also press the up or down arrow to select the month, select the right feature set and press function button to confirm, so the month set is complete. At this time the display "bb" flashing ~ so set the date and time.
2. **Rewind time setting:** press the function button, the display shows "n = xy", as "xy" is also means number, such as "1.6" "1.8." For example, "1.8" means 1.8 seconds rewind time. "xy" flashing, and you choose, the choice of sensitivity up and down arrows, each time plus or minus 0.2 seconds rewind time, after selected press function button to confirm.
3. **Print settings:** Press the function button, the display shows "P = C or P = E", and constantly flashing, then press the print button will print out the test results. "P = C" means print in Chinese, "P = E" means print in English, press the function button to display "P = C or P = E", and you choose, the choice of sensitivity up and down arrows.
4. **Test standard settings:** press the function button, the display shows $F = 0.5$, or $F = 0.8$ ~ then press the arrow button to select the test standard, for example, $F = 1.0$, means the sensitivity testing standards is the $F_e = \varnothing 1.0$ of steel ball size. From $F = 0.5$ to the $F_e = 4.0$ for a total of eleven detections supplied for different test needs.
5. **Operation mode settings:** Press start / stop button to start the machine, according to the requirement to press Functions button to select "b" or "c" type, the display on the left shows the state of your choice. If the height of items to be detected less than 2cm, must be selected "b" type, otherwise the machine will take items as nothing for mistake, will not alarm either. If the height is more than 2cm, both "c" and "b" types all can be detected. Press counting switch button to choose "qualified", "detected", "total" and a corresponding indicator light up.



6. **Clear the count setting:** In standby mode, press the count switch button to clear the object, hold down the count switch button, number starts flashing on the display until after the release, then click the count switch button again to clean count.
7. **Startup mode settings:** Press the Auto / Manual button to select automatic start or manual start. In automatic mode, the alarm automatically starts after the return conveyor belt, no need press start button.
8. **Broken needle position display:** broken needle position can be showed the approximate location through indicator lights, so workers can use small hand-held needle detector to quickly find the broken needle.
9. **Automatic protection model:** In the automatic mode, the machine has a protective circuit without the items can be detected property within 10 minutes, it will automatically shut down and go into standby mode. It can save power energy and extending machine life. In the manual mode, no same function, you need to manually shut down.



X. PROBLEMS AND SOLUTIONS

Before debug problems, you must cut the power off. Machine problems debug must be with professional staff.

Phenomenon	Cause	Solutions
1. C-type status: After starting, sensitivity red signal light flashes. 2. B-type status: Without load, the machine sends out warning and stop running after starting.	1. Outside environment Interference 2. Metal fragments on conveyer belt.	1. Check if there are iron matters(sling fan for instance) moving around, or newly installed equipment is too near and beyond the safety distance. 2. Refer to the instruction as well as the mark on the machine, and clean the conveyer belt.
3. There are strange sounds after starting	Parts loosened and parts need to be lubricated	To prevent belt slanting ,add some sewing machine oil to the idler wheel
4. Machine can not start after power on.	1. connection problems 2. There are something wrong with button, motor and capacitor 3. Power supply voltage is low	To check whether the power connection is ok, change button, motor and capacitor
5. After machine sends out alarm, it still running without stop.	1. relay part problem 2. signal alarm system problem 3. power supply voltage is low	1. Lift the box lid, try to exchange the two relays, or change relay part. 2. Inform supplier aftermarket service for help
6. C-type status: After starting, sensitivity red signal light keep on, and have no reaction when put products on.	1. The shaft is magnetized 2. Signal circuit control system problem.	1. Change the shaft 2. Inform the supplier
7. The machine is ok, but some items can pass check while some other items fail.	There is too much iron molecule in raw materials.	1. Lower the machine sensitivity in terms of the floor level of inspection 2. Reduce the number of products to be inspected on the conveyer belt.



XI. QUALITY ASSURANCE

I 、 The guarantee period is 12 months (consumer goods and travel cost are not included).

II 、 The main quality warranty maintenance certificate

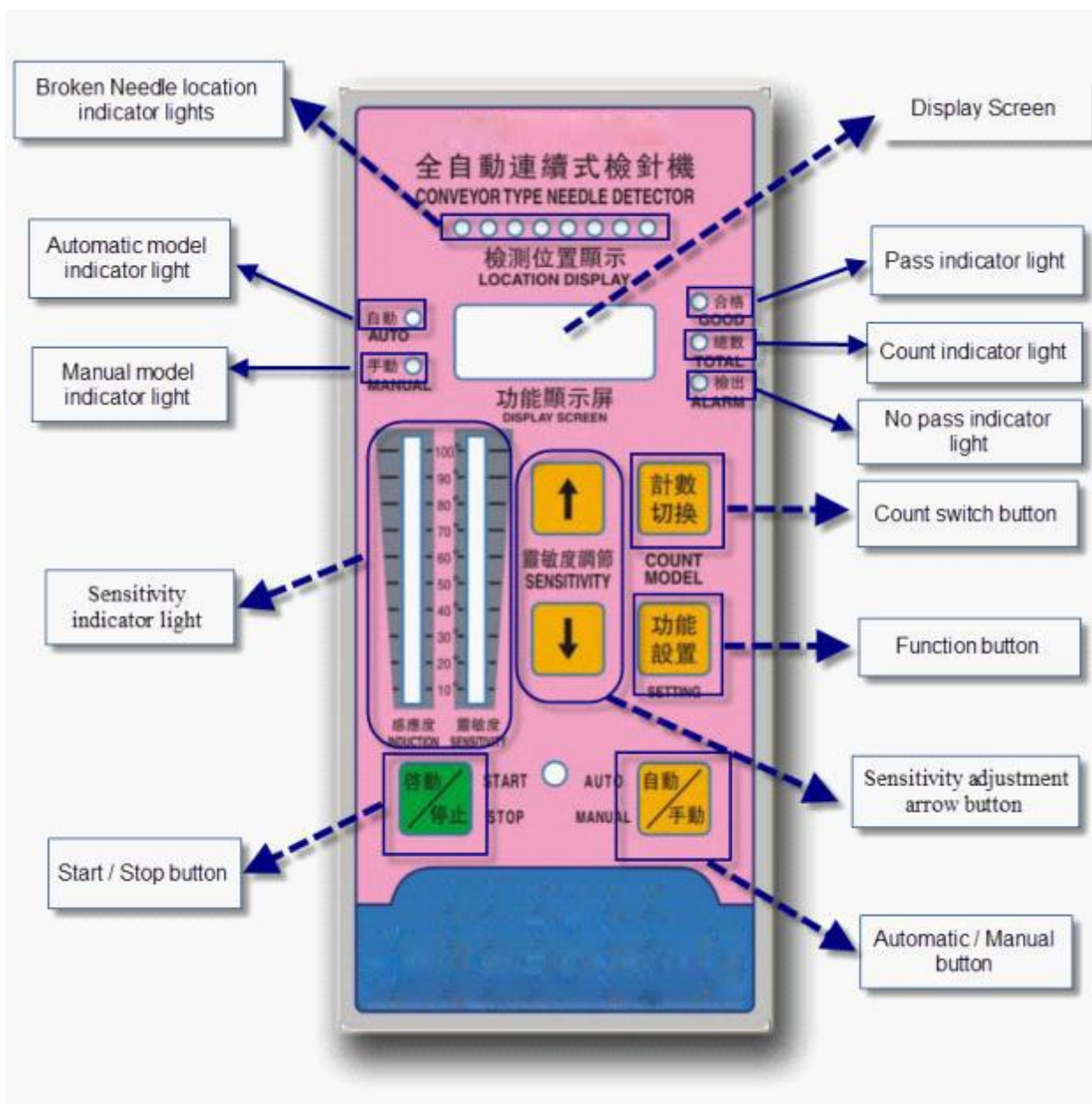
1. Please keep this guarantee letter, if you lost it, please connect with us in a month.
2. If this guarantee letter has been altered or it has no our stamp, it is useless.

III、 The following conditions need to pay reasonably even in the assurance period.

1. Natural reasons
2. Operating mistakes
3. Voltage is not fit for our operation instruction
4. Repack it without our guides
5. Damaged for borrowing to others
6. Damaged for authorized machine modification
7. Damaged for authorized calibration
8. Authorized transshipment mistake
9. Serve for long distance area

IV、 Notes:

1. Where the original in Guangdong province installation of our products, if the product moved to outside Guangdong-area use, whether or not within the effective warranty period, the transportation and travel expenses of the service personnel should be paid by the client.
2. All customers outside of Guangdong province, whether or not in the warranty period, the service of transportation and travel expenses paid by the customer.





MACHINE PARTS

