

Intelligent Micro-computer Automatic Metal Detector

Operation manual



Please read the instructions carefully before using the device

Troubleshooting method

1.conveyor belt running deviation

- 1) Judge the tension degree of the conveyor belt, if the belt loose it will running deviation easily.
- 2) Near the exit end of the conveyor belt has two adjusting screws,you can adjust the tension degree by these two screws.

Observed the tension degree on both sides .If the tension degree of both sides is inconsistency ,this will lead to belt deviation

- 4) Through these two screws adjustment can solve the problem of belt deviation.

Instrument without sensitivity

- 1) check the detector head hole if there is a large metal , such as cions, keys, screws, etc.
- 2) Whether the product selection is correct.
- 3) Whether sensitivity is the minimum or data collection is too high.

If the dynamic data collection is too high, it maybe high voltage lead to low sensitive .

Do dynamic collection again if the date is still high then changed to a static collection.

If the static data collection in the normal range metal objects or loose screws.Exclude metal objects and tighten the screws solve the problem

If the static data collection is high also maybe high-power sources of interference around the machine, such as vibration or power supply instability, then you can install power supply .

If not resolved, please call our Service Department.

Periodic instrument alarm by mistake

1) conveyor belt whether polluted by metal impurity, if conveyor belt metal impurities from pollution, whenever the contaminated parts through the detection region, detector alarm, cleaning the conveyor belt, metal impurity.

2) even if the belts don't put product no-load test, instrument still periodic alarm by mistake. At this time may be a detector with high power interference sources around, such as vibrating screen, etc.

Machine can't start

open the control box, press the "start" and "stop" on the panel , observe the control module relay , if action, that machine capacitor motor broken or damaged. Can buy a same motor change, or contact the company after-sales service department. Non-professional personnel shall not do the maintenance to prevent electric shock risk.

If the relay is no action, you can make the control module is damaged, or loose cables,Exclude cable loosening, observe whether the fault is removed,If the motor still does not start, please contact the company service department.Non-professionals are not allowed to repair, to prevent improper maintenance damaging other parts.

6 no electricity

Observe whether the power switch of the light is bright, if no light, please check whether Power outlet fuse is blown, or whether power plug is loose, please put random spare if burn out the fuse.

Press the start key conveyor belt start to run, when the machine into steady state it began to detect. Press the stop key conveyor belt stop running. If fitted with foot switch, foot switch can complete start and stop functions also. In the running state you can observe material type and detection mode. You can set SUS and Fe sensitivity respectively in this interface, 10 is the highest sensitivity, 1 is the lowest sensitivity, just directly click the number as your need.

8. Installation and maintenance

Installation

1. To prevent accidental electric shock, please do not put sundry above equipment, especially not in electrical connection.
2. The machine equipment use 220 v / 50 Hz power supply, please make sure the power supply voltage is correct.
3. In order to prevent accident, please connect circuit breaker in the machine power supply place, to cut off power supply in a timely .
4. In the workplace with water immersion, must connect a earth leakage circuit breaker on the power cord.
5. Requirements are as follows: with a diameter not less than 1.6 mm copper wire grounding. Grounding resistance should be less than 100 ohm.
6. Adjustment base adjustment screw, equipment adjustment to smoothly.
7. Shall not be close to the big movement of metal, such as mobile cart, metal door, etc.
8. Shall not be close to the high power motor or inverter device.
9. Shall not be installed on the ground vibration

Installation steps

1. Careful open the packing, placed the equipment in the qualified installation location.
2. Adjusting screw adjusting base to make the equipment adjustment to stability, there shall be no shaking.
3. Check device fixed screw, whether loose because of transportation.
4. Connect the power cord, pay attention to the power cord connection is reliable and correct. The power cord connection installation of a circuit breaker is recommended ,so that accidental moment protection equipment. Remove all foreign body around detector head, switch on the power and press the start button, trial run to observe the machine is correct.

Mechanical drive debugging

1. Connect and open power supply.
2. Puts equipment running state, set the minimum sensitivity state is (1)
3. Press start button , machine start to work. Test for about 5 minutes, observe whether the machine run smoothly, whether the conveyor belt running deviation. If the conveyor belt running deviation, adjust two socket head bolts in the conveyor belt output part until smooth operation. (Clockwise rotating belt tighten, counterclockwise rotating belt loosen. The belt to the side, adjust the side tighten, or adjust other side loosen.)
4. Adjust conveyor belt, observe whether belt is appropriate, whether the conveyor belt will probe the bottom friction. If loose or tight, adjust the two adjustment bolts to make conveyor belt tightness moderately.

Company profile

Our company specialize in the research and development of the security equipment based years experience. We now developed a new generation Intelligent Micro-computer Automatic Metal Detector with high sensitivity, high reliability touch screen interface. The detector brings great convenience of maintenance and automatic diagnostic function for users. Its characteristics and operation are description as below:

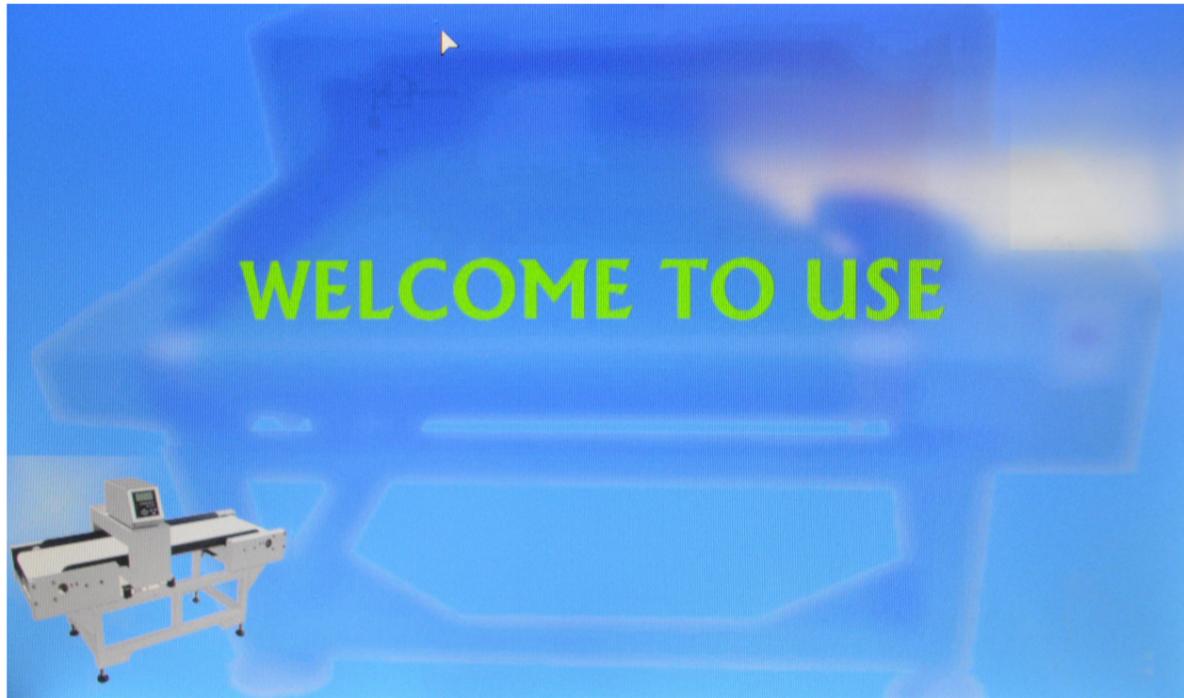
Features:

1. Full new analog circuit and digital circuit are combine. Greatly improving the production of reliability and intelligence.
2. Consist of new 4.3inch full color touch screen input and large scale intergrate circuit. by the CPU to complete the analog signal collection and convert to the digital quantity processing. The output, automatic search cable detect object to the best point of metal content. Greatly improve the detection of sensitivity and reliability.
3. Using hummization interface design, the whole of operation process is simple and intuitive. Human machine interface be clear at a glance. All functions on the screen direct operation can be completed to executive of the function.
4. You can set all the nessarry feature ,mode and dianogisis function. Sensitivity: Sub-file position, can adjustable to increase and decrease (1-10 files ajustable). The digital number more higher and the sensitivity more stronger. Detecting trace metals, sound, light and instrument will be alarm work together. Unqualified production to be automaitc return to stop status and remove device control separation.

Instructions:

1. Power on

The machine power switch on the left of the rack power supply box, turn up for power on, press down for power off. After power on, the power indicator light is on. The screen display entrance boot screen. as shown in picture 1:



Picture 1 welcome to use interface

Click on any part of the screen of welcome-interface. It will immediately enter main menu, as shown in picture 2

the product to test, if the product passed successfully represent the machine can be used normally . If the moisture content, salt or sugar food products did not pass the machine ,you can use this product for dynamic collection, observation data changes.the data is higher than no-load dynamic collection, this phenomenon is called material effect.

Material effect means the product without any harmful metal, but because of moisture content, salt or sugar in it,so when the product pass the machine it will cause interference and false alarms.

For high moisture content, salt product material effect is obvious, for dry food, plastics and other products material effect is weak.

The forward and backward adjustment key in Screen is designed for this product which material effect is obvious.You can manually set the optimal data weakened material effect to make the material effect on our acceptable range, in order to ensure the normal product through the detection zone when the machine is not false alarms.

Adjusted method as follows:

Select forward and backward adjustment key make the adjustment date is 1, then press dynamic collection key, five seconds later you can put the object on conveyor belt and observe the collection data of Fe.

If the date is big , you can select the adjustment date 2 and put the object on conveyor belt again and observe the collection date .

Repeat the operation until the collection data of Fe is small enough.

After completing the collection data adjustment,you can press the return key to start detection operation. .Data collection can avoid false alarms and ensure high sensitivity.This machine can save ten kinds of material data collection results.

7. Test run

Click on Test run,and go into Run interface, in picture 13



6. Environment test

First, adjust the four foot pad to make the machine balance.
When the machine steady can make the following operating .
Click on Environment test,and go into interface, in picture 12.
This function is very important, you should hold good.



Environmental testing can be divided into two kinds of test method, which is used in the custom mode:conveyor running test or conveyor stopping test.

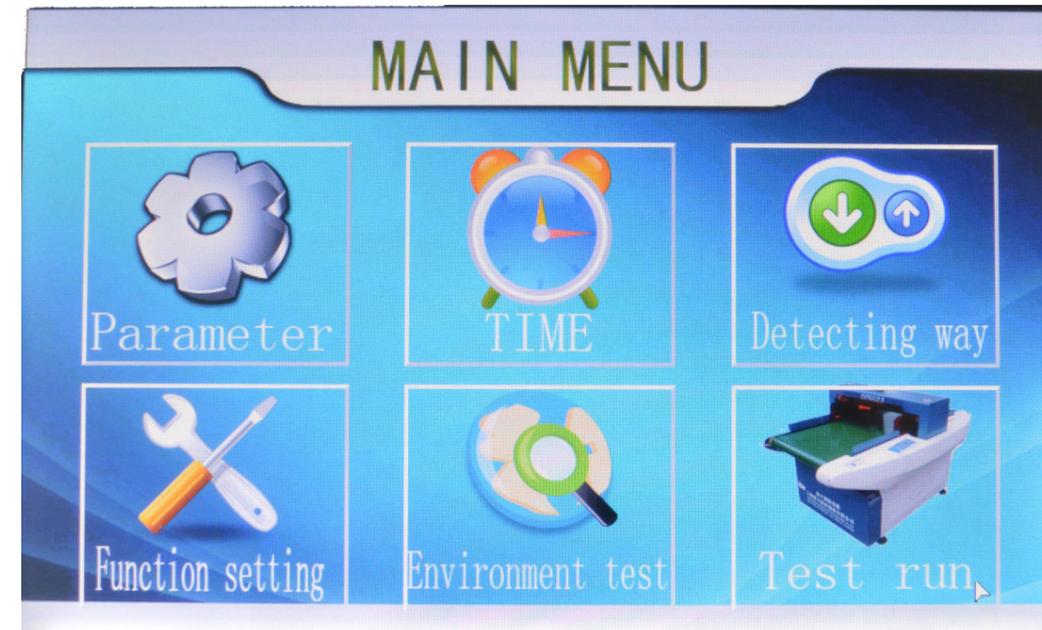
1: dynamic collection is conveyor running test. Please observe the screen data before dynamic collection, when the data value is less than 20 press dynamic collection key, then the conveyor running and starts test.Upper left corner of the screen displays the time countdown, ahead five seconds the machine without detection,five seconds latter the machine starts to testing .Please do not touch the machine at this time.Conveyor will stop automatically after one minute dynamic collection , and the test results will as baseline when detect products.The lower the date the higher the sensitivity.

2.Static collection is conveyor stopping test.When the data of no-load dynamic collection is too high, you can use this function to determine the interference signal from the detection head itself or belt.

The test time is 1 minute, but the data is not as product detect standards just for confirm the dynamic collection date is right.

When the no-load dynamic collection data is too high, up to 30 or more, and the static collection date is 10 or less.it represent the detection head is normal but belt dirty or something else cause interference .you can get rid of the material on the belt until the no-load dynamic collection date is almost the same with the Static collection date .

If you want to exit can press the stop key at any time.After the test is finished you can press the return key to execute the detection.Put the test card to test first, the machine should be able to detect the test card.Then put

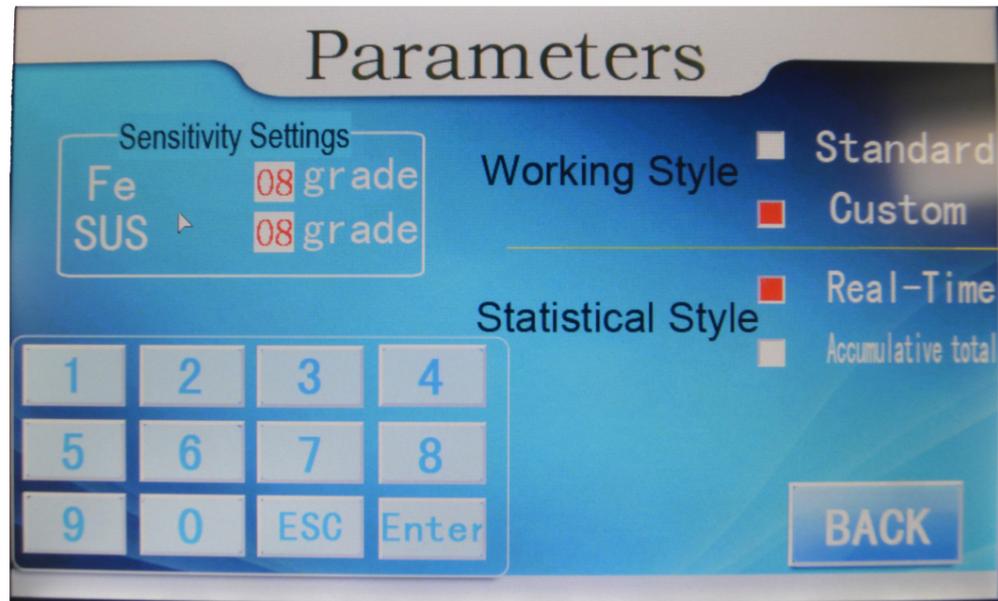


Picture 2 Main menu interface

There are six functions to complete machine all the function on the main menu, The following are respectively introduced:

The main menu interface single-click the main menu of three arbitrary one word, The screen will enter to boot interface.Click on parameters set in the main menu,The screen display in picture 3

2. Parameters setting



Picture 3 Parameter set interface

The parameters setting have sensitivity set, working mode option and statistical method option function the determine.

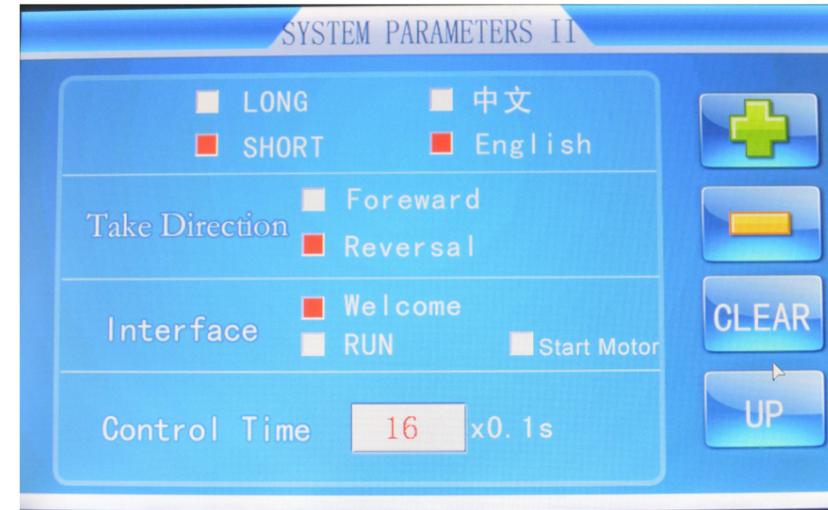
A. Standard work way for a fixed sensitivity, It's in the self-diagnosis mode determines the sensitivity of reference signal and the fixed sensitivity is 9 grade and can't be modified. Under normal standard circumstance use standard methods, Namely, to ensure sensitivity, Low false positives. Selected by click standard two words that available. The corresponding red box is selected.

B. Custom work method can be selected iron(Fe) or (USU)stainless steel sensitivity parameters. The modified of way first selected custom functions, Click on any customize of three words. the corresponding box is red, this moment the sensitivity setting is activated, If you want to change iron or stainless steel of the sensitivity of level. Just click on the Arabic numerals of the corresponding red area code. the box for red. and used the ESC key to clear for 00. just now with a small key input the required sensitivity of number. 1 for 01 level, 2 for 02 level. The highest sensitivity for 10 level.

C. Statistical methods: Each enter into detection operating status for real time. Detection quantity and unquality of number starting from 0, Cumulative way keep the previous count result. based on this count. Restart after shutdown still remain before the count results. Press the return key to save the data after setting parameters :

2. Screen saver, it's running when the machine is in working status, according to the time of opening, the time to closed the conveyor belt, the screen appearance the screen switch back and forth, if need start again can press start button or step on a footswitch can continue to run.

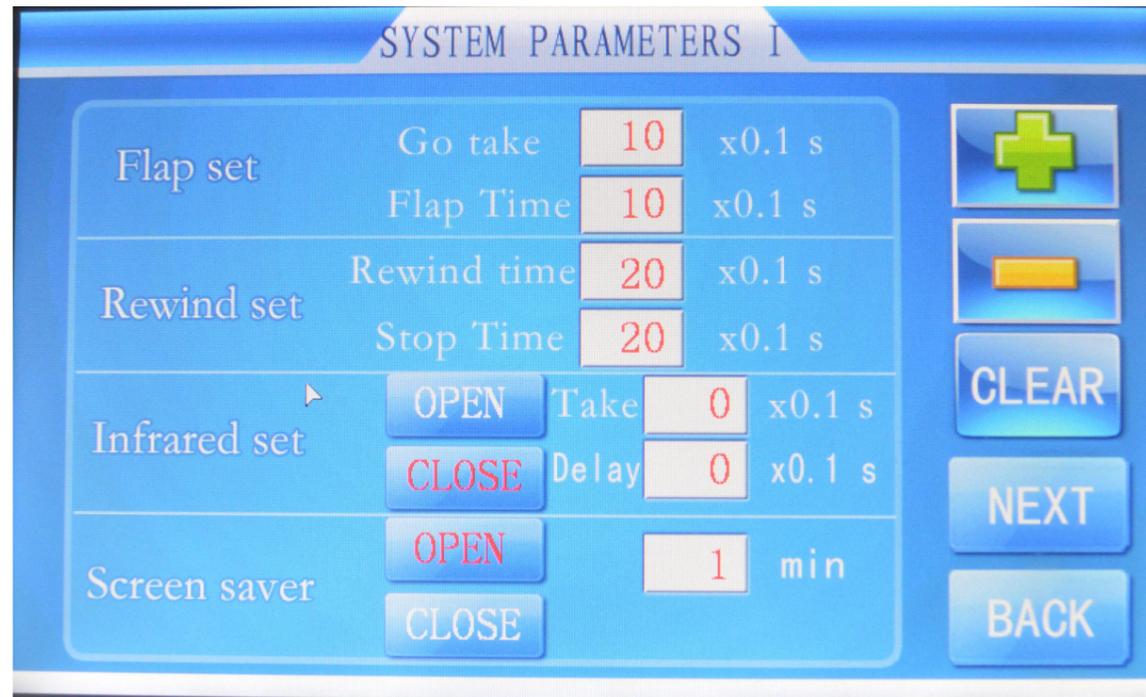
Above for the modified method, if need revised a content click the corresponding to the Arabic of the digital frame, the digital frame turns to red indicator the modification are activated, using + - operator to make modified. Press back key save.



system parameter setting interface in picture 8

In the system parameter 1 interface click the next page key. the screen change to system parameter 2 interface. as shown in picture 8

System parameter 2 including as follows, Alarm sound, rewind direction and language selection, interface selection. the preceding four items direct hits the red for the selected.



1 Picture system parameter setting interface

3. Date setting

Click on the date time in the main menu,enter set interface.as shown in picture 4



picture 4 date setting interface

Date set instrution as follows:

Year/month/day under the red line can be modified number.using +- number adjustable increase or decrease,if modified the content.use the set key to change,Each press a set key. under red line to move on the right once. Date of manufacture can't modify at this moment.just give tips.Press save botton to save after modified,back key return to the previous menu.

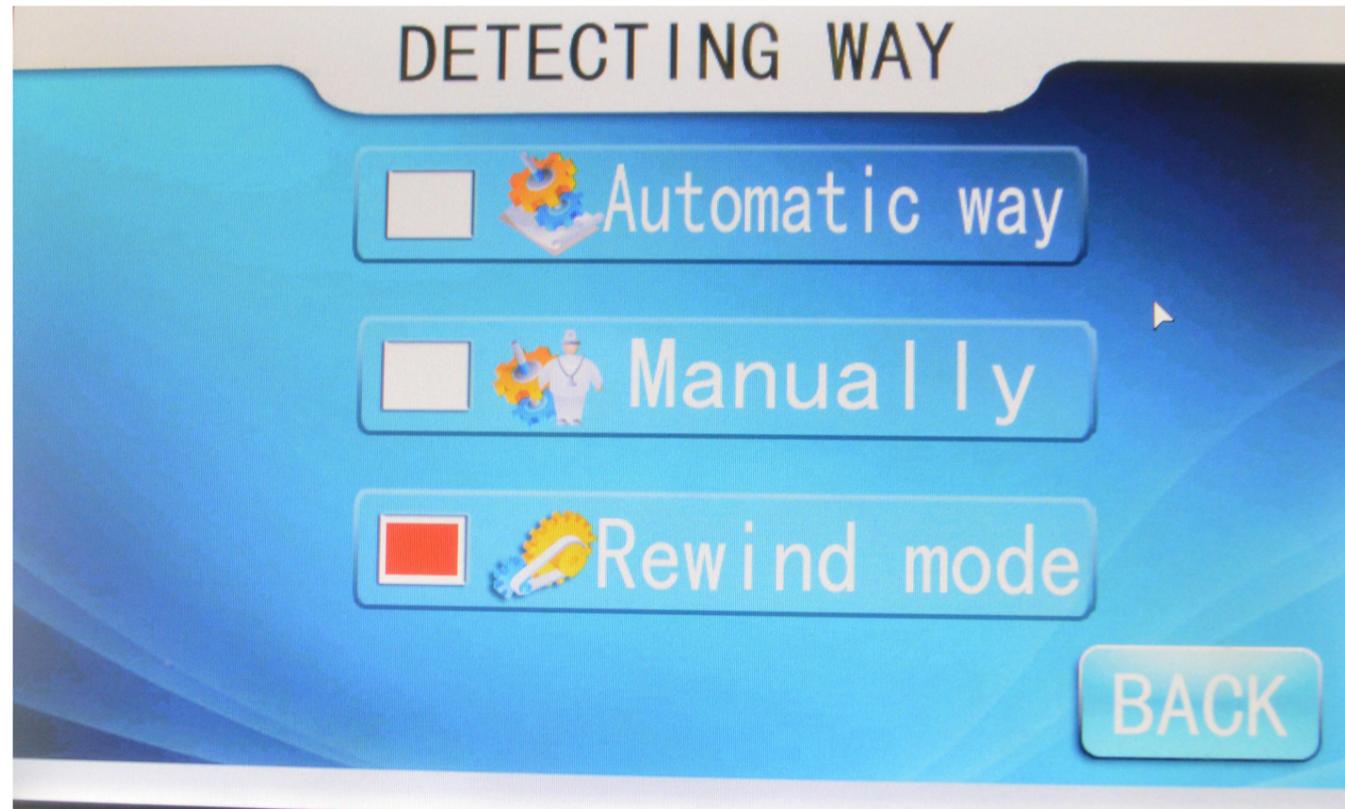
1. Flap set, its corresponds to detecting way of the automatic way come down to the parameter of the content. Go take for the detecting to alarm signals.Substandard goods is seized from the probe to exclude the device distance of the go take.The reverse turning bed is the excluder device of the electromagnetic valve and response time.

2. Rewind set,It corresponding to the detecting way of the rewind mode involved to the parameter of the content.rewind time for the detecting alarm signals,Substandard goods from the probe back to the location to the enterance conveyor belt return time.stop time for the operators take away the unqualified products of the time.Normal rewind and stop time is 15.

3. Infrared setting,this feature for the heavier items put into the conveyor belt when vibraiton interference and the detecting increase the number of goods Statistics device. Parameter setting and the motor go with the direction of the relevant.for the reversal of the motor parameters according to the installation location of the infrared sensor.infrared probe location items go to the tape, delay time of the seizure of goods to leave the infrared to probe the distance of time.The motor is transferred go to the tape delay to setting 5.if the infrared is closed,the machine will be detecting alarm.but the alarm position will be difference.

4. Detecting way

5 In the main menu click detecting way. enter detecting way set interface, as shown in picture 5:



Picture 5 detecting way interface

Detecting way have three choose ways. Selected in some way can directly click on the character block. Red for selected.

1. Automatic way for detecting alarm signals. conveyor belt non-stop. continue move forward and output the flap signals (use the flap), how long move and the length of the flap signal can be setting. setting method see the system parameter 1
2. Manual ways for detecting the alarm signals immediately stop. if need restart can press the start button or trample a pedal switch can continue to run.
3. Rewind way for detecting alarm signal, the conveyor belt moving in the opposite direction. moving distance and stop can respectively set this time. specific methods check the system parameters 1.

5 Function setting

In the main menu click the function setting, enter function set interface, as shown in picture 6:



picture 6 function setting

Feature setting covers many content, we should learn more about use the production. Need to seriously grasp the operation methods. Feature setting to be completed by three function on the interface, The system parameter for the main content, namely a system parameter 1, system parameter 2, the other setting for the end user can't enter the interface unless input the password to activate, for the manufacturer and retailer can control content. This documents for the maintenance and operation manual.

There are two pages for the system parameter content. click the system parameter come out system parameters figure 7 system parameter 1