

# Microcomputer Intelligent Automatic Metal Detector Machine

## MCD-F500QE

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### Introduction

Our company based on many years worked on the research and development of the production security equipment based on, Now show a fresh of microcomputer intelligent high sensitivity, high reliability touch screen interface metal detector, this product in the same products from the use of maintenance and automatic diagnosis function brings great convenience to users. Its characteristic and operation are as below:

### Features

1. It's consist of the new analog and digital integrated circuit, greatly improving the product's reliability and intelligence.
2. Using the new 7" high input touch LCD screen and large scale integrated circuit composition, by the CPU to complete the analog signal collection and convert to the digital quantity processing, output, automatic detection cable receive things metal in best points, and greatly improve the detection sensitivity and reliability.
3. Using hommization interface design, the whole operation process simple with intuitive, and man-machine interface be clear at a glance, and all functions on the screen direct operation can be completed to executive a function.
4. Can be set all kinds of required functions and mode, and diagnosis function.  
Sensitivity: Sub-file status, adjustable increase, reducing (1-10 file adjustable), the digital number more higher the sensitivity more big. Detecting to trace metals, sound, light and instrument will be alarm at the same time , unqualified products to be automatic return to stop state and remove device control separation.

# User instructions

## 1. Turn on power

This machine is the power switch in the probe of the end of the upper left round press-button switch: press for open, raise for off. Put through power supply, probe the tail like a warning lights are shining above 2 seconds hint, honking a buzzer. , interface into the starting up screen, such as machine Settings as operation interface, for 5 seconds later interface directly into operation interface, such as have not set to starting up interface screen stop in this screen. As shown in picture 1



Picture 1 welcome to use interface

Click on any part of the screen in the starting up interface, the screen immediately enter the main menu, as shown in picture 2



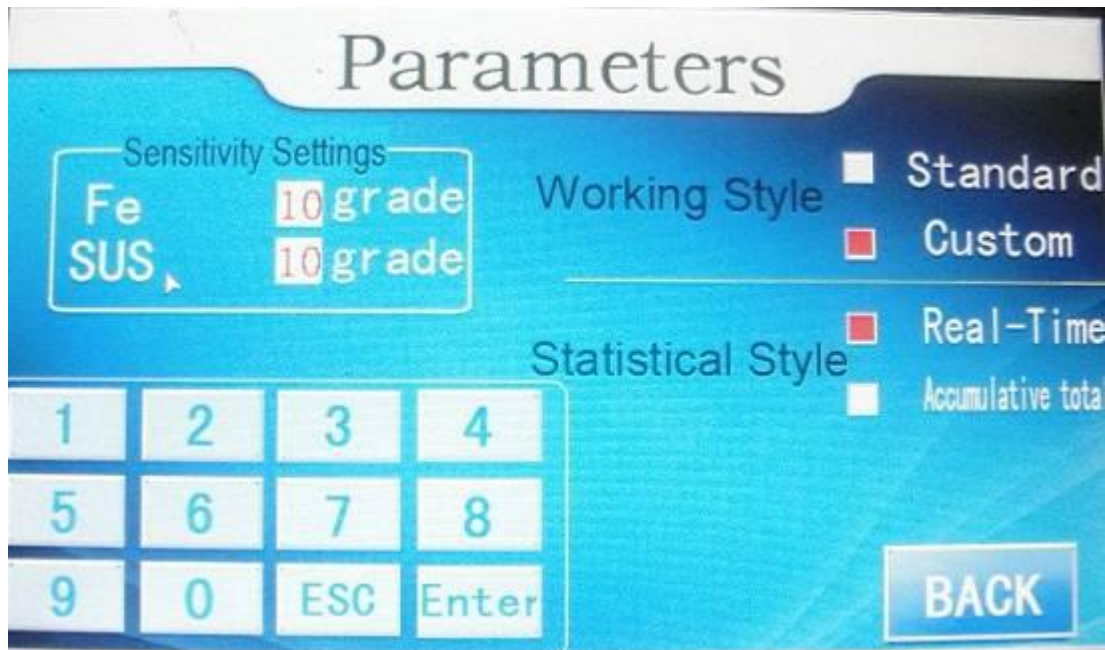
Picture 2 main menu interface

The main menu has six functions to complete machine all the function, the following were respectively introduced:

In the interface of the single click on the main course of three main menu as meaning that a word, the screen will enter to boot interface.

In the main menu click on parameters set, as shown in picture 3

## 2. parameters set



picture 3 parameters set interface

Parameters Settings have sensitivity Settings, work mode option and statistical way selection function identified.

A standard work method for A fixed sensitivity, it is in the diagnosis of sensitivity when the way to determine the benchmark signals, and fixed for 9 th sensitivity, is not modify number. Normally use standard way, then can ensure sensitivity, misinformation the minimum, when it choose just click standard 2 words it's ok, corresponding to the to "red" for selected.

B custom work way divide into (Fe) iron or (SUS) stainless steel sensitivity parameters, The modified method first selected custom function, click on the custom any 3 words, corresponding to the to "red", this moment the sensitivity settings is enabled, if you want to change iron or stainless steel of the level of sensitivity, just click on the Arabic Numbers corresponding to the area code, the box is for red, and use ESC key clearing for 00, right now with small keyboard input required sensitivity numbers, 1 for 01 level, 2 for 02 level, the highest sensitivity for 10 level,

C statistic method; For each into a real time detection operation state, testing the quantity and the unqualified number from 0. Cumulative way before we reserve count results, based on this count. Off to restart can still keep after before counting the results

After setting up the parameters press back key and then save data

## 3. Date time

In the main menu click the time, enter set interface, as shown in picture 4



Picture 4 date time set interface

Time set instructions as below

“Year,month,date” under red line can be modified number, with +-number to increased or decreased, such as to change modify content, use the set key to change , each press a set key, under red lines to move right once, the production date in this can't modify, just give hints, After modify press save key to save, back key to return to the menu.



## 4. Detecting way

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



picture 5 detecting way interface

Detecting way have 3 choose way, , to red for selected

1 Automatic way for detecting alarming signals, conveyor belt non-stop, continue to move forward the flap and output signal, how long the flap and move the length of the signal can be set separately, setting method of system please check parameters 1.

2 the manual way to detect to the signal to stop the machine immediately, if want to restart can press the start button or trample a pedal switch can continue to run.

3 rewind mode for detecting alarm signal, the conveyor belt is moving in the opposite direction, mobile distance and stop this time can be set respectively, and the specific method please check system parameters.

## 5. Function setting

Click this function in the menu, enter the date setting panel, Picture 6:

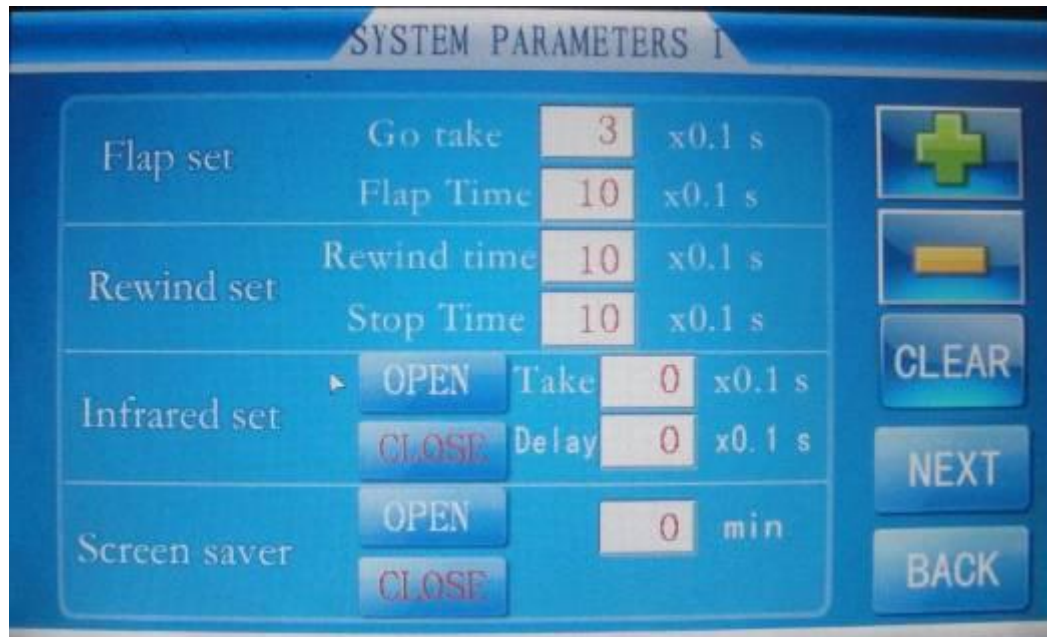


Picture 6 function setting

This function setting covers many features. We should learn well on the operation method. The function setting with 3 main features, the system parameter is the importants ( system parameter 1 & system parameter 2 ) the other setting can not be entered by end-users unless enter the password to activate. This is for the manufacturer and the sales control content . this is the documents for the maintain and the operation. Okay, now we click the system parameter.

## 5.1 System parameter setting

There are 2 pages for the system parameter. It shows the system parameter after we click it. Shows the picture 7



Pic 7 System parameter setting pannel

There are 4 terms of the setting frame:

- 1 Flat set, It corresponds to the contents of the automatic detection method of the parameters involved, which shows the time for detecting alarm signal, from the time of detecting to time we take the goods away. Flap time is for the shutter time is excluder devicessolenoid valve pull-in time.
- 2 Rewind Set, Rewind time is when detecting the un-pass goods turn back to the entrance, stop time is when it turn back to the entrance , user take out the un-pass goods from the entrance. General the rewind time and the stop time is 15 sec.
- 3 Catching rabbits and motor anti-parameter settings to 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 infraredto probe the distance of time. The motor is transferred to the tape, the tape delay is set to 5.



In case the infrared is closed, the machine will be detecting alarms, but there is differences for the detecting position

4, The screen saver, it's running when the machine is in working state. according to the time of opening, time to shut the motor conveyor belt to stop this, the screen appears the screen switch back and forth, again start can be the start button or step on a footswitch can continue to run.

Above to modify the method, if you want to modify a content click on the digital box, digital box turns red to indicate that modifications are activated, the + - operator to make changes. Modify the data, press the Return key to save

We turn to next page, and now shows the system parameter 2 , shows 8



Pic 8, system parameter2

The system parameters include three elements, alarm sound, rewind direction of parameter settings and automatic diagnosis, including automatic diagnosis of the main contents of the first two direct click the red for the selected. Auto-diagnostic functions and the use of the process should pay attention to the requirements as follows .

Automatic diagnosis of the size of the noise test to be completed by the probe static and dynamic signals, the detection area on the probe of the eight time-sharing scan test, a static time of 30 seconds, the dynamic time of 1 minute . Strict best touch probe and the rack in the diagnostic testing process, otherwise the test error in the testing process 1-8 box lights flicker test after 1.5 minutes after the buzzer sound prompt, indicating that diagnosis to the end and show the red and green sidedecision

marked green means tested, red corresponding to probe the existence of failure, such as static through the whole dynamic of a marked in red, indicating that the area corresponding to the relevant parts of the fault or conveyor belt foreign body interference, should be given to exclude. For in the diagnosis of half-way exit, press the Clear key to stop. Baseline data after the test result data as a standard mode, the end of the normal diagnostic process to determine the sensitivity of the control signal. After the end of the automatic diagnosis should be green, indicating that diagnosis by Back to the system parameter setting interface.

## 5.2 Function setting

Function setting panel, click other setting then shows pic 9



Pic 9 password input panel

Other settings such as in Picture 9, you must input the password to enter after press ENTER key then we go in next other settings interface in picture 10

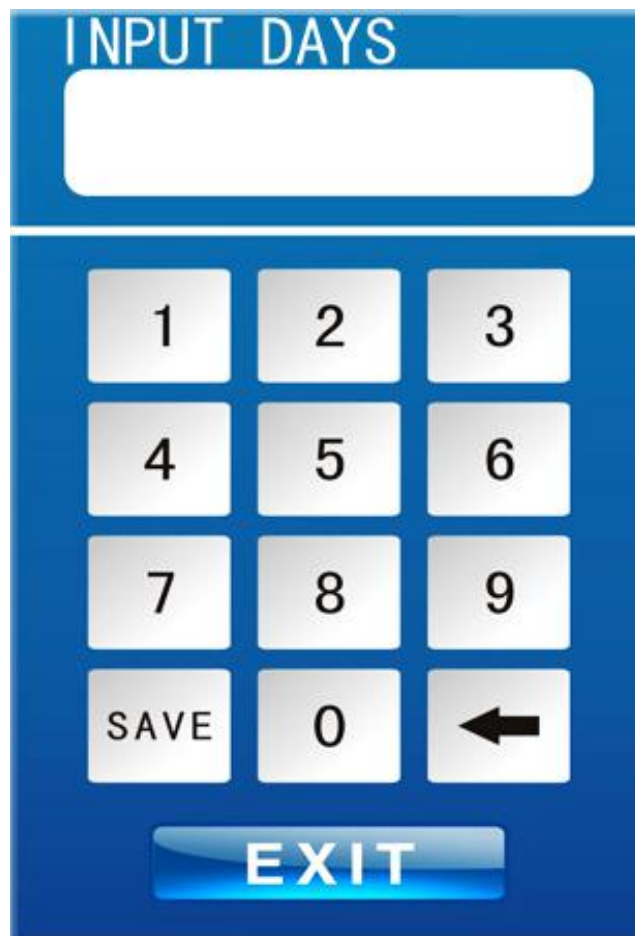


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Picture 10 other setting

There are 6 items of setting in this other setting pannel

1 Factory data in the pannel click year/month/date, to change the figure, picture 11



clicked on year, and input current year, then SAVE , pressed EXIT to return to the higher authority menu. like months, date, their sets are the same as year set.

2 running times. if make running time of machine arrive 30 days, after the manufacture date determination, clicked on day, and went into interface like picture 11. inputs 30, press the SAVE preservation, again presses EXIT to return to the higher authority menu. If running time is 0, that mean to have no limit the running time. machine will run continuously.

3 language choices. Chinese, English, others. that clicking red typeface indicated selecting current language.

4. surfaces enter, when go into surface, machine will display manufacturer and address. If is neutral surface, after 5 seconds, machine will go into main menu.

5 Named. There are three groups machine production and sales manufacturers, named 1, named 2, named 3, close mean neutral, click on any a group of red to make it activated.

crowns at present within the aircraft is loaded with three groups to produce and to sell the factory, respectively for crown 1, crown 2, crown 3, the closure is a neutrality, clicks on random group for red, indicates the activation.

6 password protection. click on password set. input 4 figure password. and then SAVE and press EXIT to return to higher authority menu .

### 5.3 instructions for use

The instruction for use contains set of some parameters and the connection method of electric circuit wiring. The picture sees the appendix.

## 5. The Environment Test



Picture 12

clicks on the environment test in the main menu, then to enter to picture 12 surface, this function operation is very important, don't forget. it is used for testing machines' sensitivity in current environment.

The environment test may divide into two test methods, they are Dynamic and Static, whatever you use any of two to test environment. don't touch machine in testing processing, because this will affect testing result. testing time is one minute. after finished, you can see data result. the smaller the better usually. data should less than 10. if data is over 10. You had to inspect for the electrical circuit, the conveyor belt and the probe head. After testing normally, returns to the higher authority menu, and then run and start to work.

#### 7. Test Run



picture 13

clicks on Run, and go into Run interface.

Presses the start key, machine starts to inspect products. and count detection and disqualified number.

#### Installation and maintenance

Picture 15 is installation guide of the control panel joint interface, in which electrical machinery interface, the infrared interface, the buzzer interface, the probe head indicating light and the collection board interface wire consists with 6300 completely, at the meantime. adds the flap set valve control interface, pedal switch interface and the video output interface.

Picture 17 is installation position schematic drawing, maintenance still need to be perfect.





Picture 15



Picture 16