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# **Semi - automatic solder paste printer**



## **User Manual**

## **Introduction to machine characteristics**

1. The use of precision motor and linear rail set made of the use of scraping knife printing more stable.
2. Double scraper printing pressure can be used separately with the scraper on the cylinder with the fine throttle set scraper lifting speed to avoid resonance.
3. The printing of the seat to be raised in the 45 degrees and fixed, while the blade of the loading and unloading and steel version of the cleaning.
4. The printing seat can be moved forward to match the location of the steel version of the pattern to take less shortcuts printing effect.
5. The printing of the level of the double scraper has also set the fine adjustment of the digital pole reference.
6. Printing plate and steel plate spacing level, there are fine adjustment of the adjustment of the pole set the display.
7. The machine arm can be adjusted around the appropriate for 470-750mm different inches.
8. One of the combination of printing press groove and positioning PIN, set a simple, dress up quickly, and for single-sided substrate and double-sided substrate production operations.
9. The school version of the way through the arm (steel) mobile with printed matter (platen) X, Y, Z correction adjustment.
10. The electrical action using microcomputer PLC control, man-machine interface touch control, but also free to choose a single / double scraper

and manual, foot and other ways.

## Electrical panel instructions

1. Microcomputer touch screen.
2. Left printed potentiometer.
3. Right printed potentiometer.
4. Reset.
5. Power control.

## ● Machine operation and adjustment essentials

1. The machine origin confirmation:

(X1, X2) or (X1, X3) after power on (transmission) origin self-confirmation

2. Zero setting method:

Select (a) steel version of the rise and fall keys, the steel mesh version of the seat down to the starting point, the use of ruler or PCB placed in the platen and the clamp between the seat into a horizontal line, while the pitch shift rotation scale set, PCB thickness determines the printing pitch.

3. Press setting method:

The positioning of the machine by positioning the positioning of the PIN, according to the steel mesh diagram of the PCB will be placed in the appropriate medium plate

4. On the version of the set:

After the completion of the above (a) action, in the use of artificial correction (under the printing plate and printed circuit board proofing)

On the version of the essentials: first R, C, L, or in pairs of fixed-point, looking for the target, the fixed steel re-use plate correction.

5. Printing stroke setting method:

One after another to complete the PCB set on the bit, and then use the two left and right sensor switch switch, respectively, according to the steel mesh pattern, the size of the switch set the left and right sensor switch position.

## 6. Scraper assembly:

Scraper mining center of the screw-type assembly, the use of scraper aluminum handle the central aperture, in accordance with the center of the knife seat, fixed a screw can be.

## 7. Scraper height adjustment method:

First, adjust the knob to adjust the screw, adjust the screw down is the level of the scraper adjustment.

## 8. Scraper elevation method:

Scraper inside and outside with a single screw to control the elevation angle, before and after the screws to complement each other to control the blade before and after the elevation angle. 9. Printing speed setting: Printing gap: 2.0mm

## ● **Touch screen operating instructions**

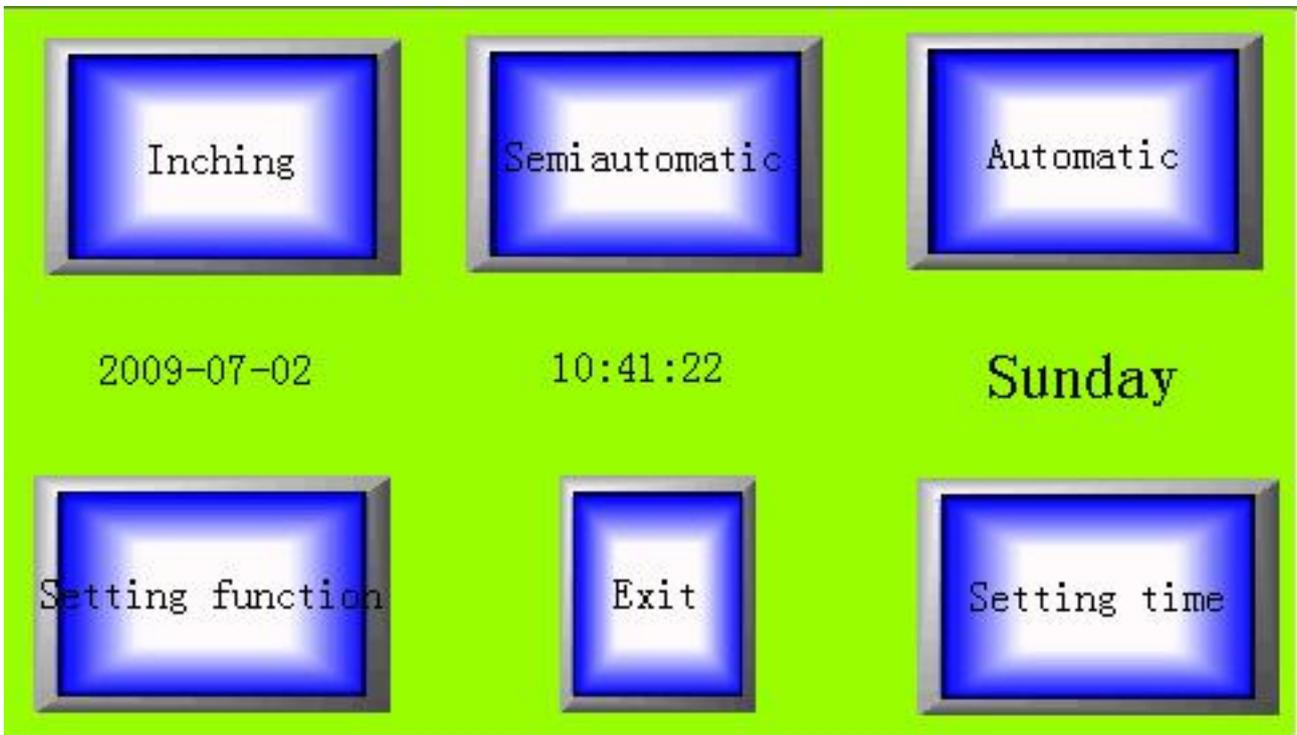
Touch screen operating instructions

First, the menu screen

Press the power switch on the machine control panel, turn on the power screen screen for 5 seconds, click the next page to display the menu screen:

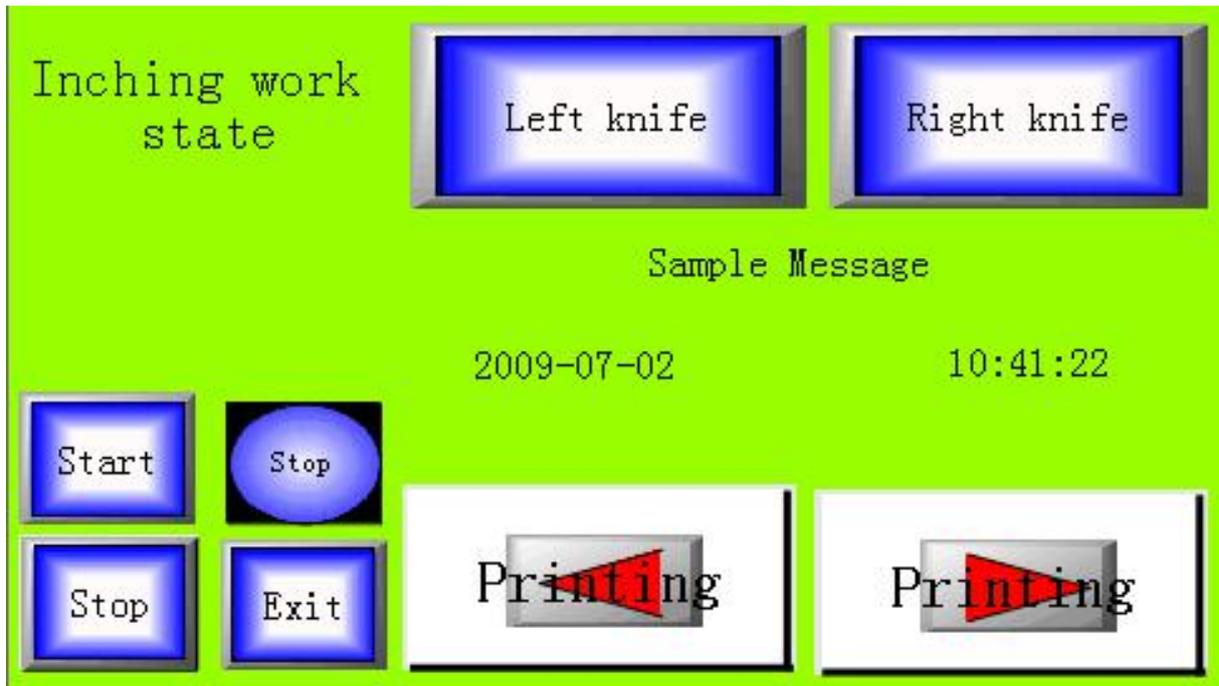
- 1) press the jog button to enter the jog work screen:
- 2) press the semi-automatic button to enter the semi-automatic work screen:
- 3) Press the Auto button to enter the Auto Job screen
- 4) Press the parameter setting button to enter the parameter setting screen, the parameter setting screen has two pages:

5) Note: Please check whether the parameter setting is normal before working in the machine. If the parameters are not correct, the machine will run abnormally

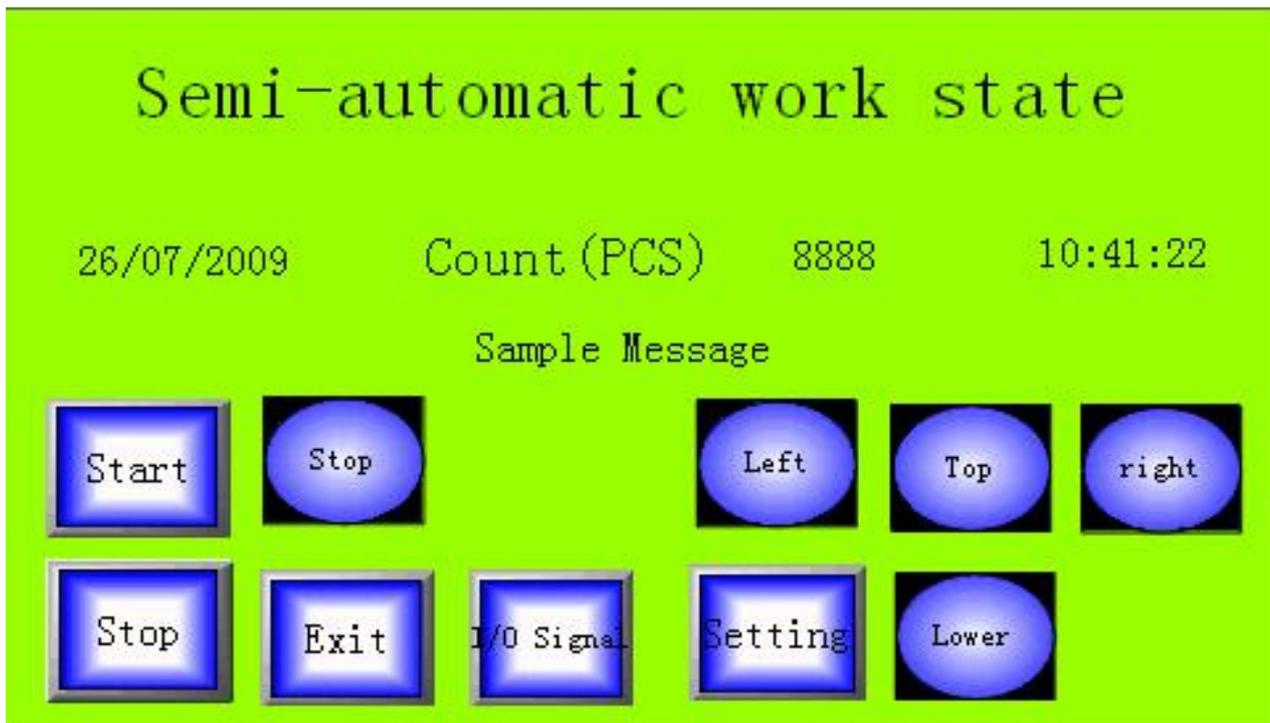


In the menu screen, press the Inching button to enter the Inching work screen

- 1.First click the start button, start the jog function. Note the Start button next to the LED display has “run”or“not run”.
- 2.Push the button: the left knife release, right knife release, left printing, printing to the right, respectively, press these buttons, you can achieve the corresponding jog function, release is stopped.
- 3.Exit the jog screen, please click the stop button



Third, semi-automatic work screen In the menu screen, press the semi-automatic button, enter the semi-automatic work screen



Press the start button to start the semi-automatic function, pay attention to see the start button next to the indicator light is running

- 1、 1.In one second at the same time press the machine on the two start button, semi-automatic printing.

Note: The program requires two start buttons to be pressed in one second at the same time, according to the provisions of the international safety control, such as the program is not set, the operator for the convenience of the map, one of the buttons with a long press , As long as the work, as long as the use of one hand press another button, you can semi-automatic printing, and then because of the effect, the other hand may still under the steel net, there will be security incidents.

If you press the two start buttons on the machine at the same time, you can not start the semi-self printing, then open the I / O signal interface, press and release the two buttons, see I / O signal interface on the left Button X5, right start button X7, is not turned ON at the same time, or becomes OFF, such as one of the long-term ON or OFF, can not start semi-automatic printing. The other is the semi-automatic interface to start the button did not press the start button next to the light did not show the operation, can not start semi-automatic printing.

Semi-automatic printing, in addition to the normal printing function, there are the following features:

(1) Semi-automatic midway detection: In the semi-automatic interface point parameter setting button, enter the parameter setting screen and then the next page, enter the function setting screen, the screen has a semi-automatic half-way detection button, press down, then start semi-automatic Midway detection function. This is set for the soft plate, the operator put the soft board on the table, press the two start button, the printing seat in place, but not immediately printed, the operator check

PCB board and steel mesh is good Bit, press the two start button again, then the rest of the printing action to complete.

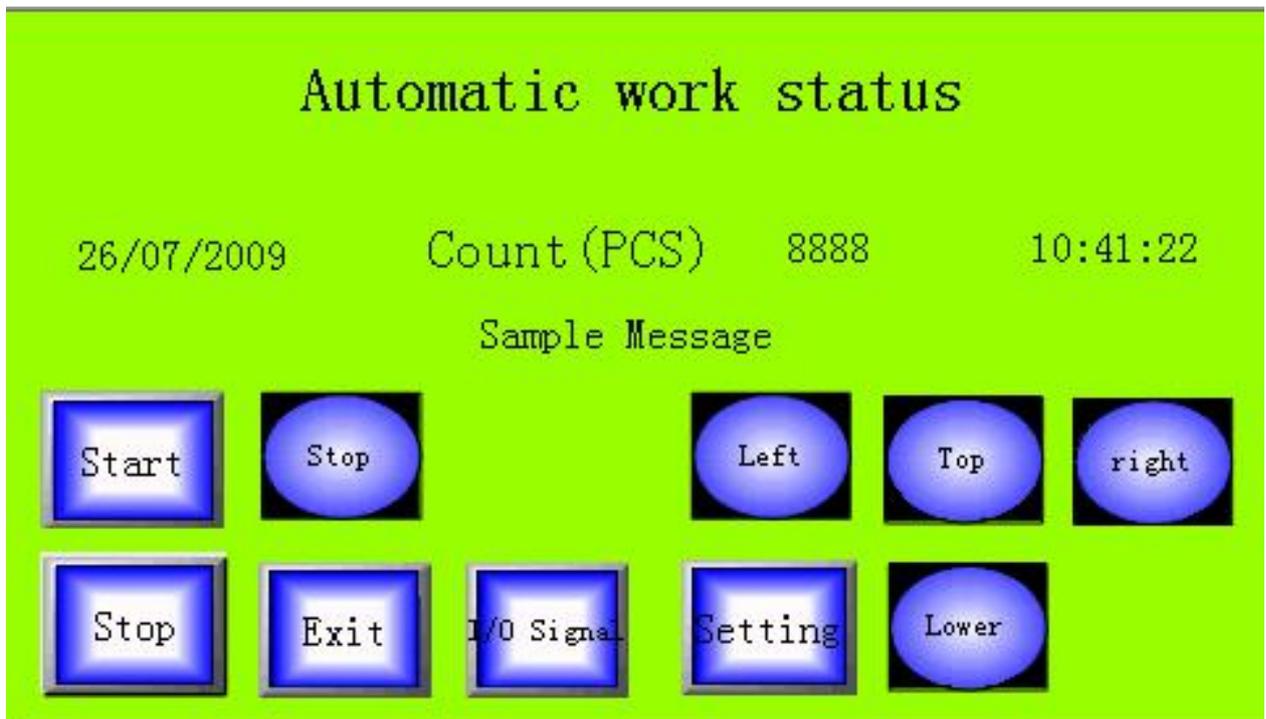
(2) Suction vacuum: also set for the soft plate, the operator press the two start button, suction vacuum start, the soft board suction on the table, easy to print, printing is completed, the vacuum automatically stop. Vacuum function, all the models in the program have this function, but the mechanical part, depends on the purchase of the printing press is not bought the vacuum part of the purchase, if not purchased is not.

(3) Clamp steel mesh: pneumatic clamp steel mesh, the mechanical part of this function have to buy a separate purchase machine, the standard model is not, but there are procedures. This function starts the button with a semi-automatic midway detection button on a screen and press it to activate this function.

**2.**In the semi-self-interface, there are I / O signal and parameter settings two buttons, click the I / O signal button, enter the I / O signal interface, the input point is X, the output point is Y, , Observe the input and output points ON and OFF, the maintenance of help. Click the parameter setting button to enter the parameter setting screen..

Fourth, the automatic screen

In the menu screen click on the automatic button to enter the automatic screen.



Press the start button to activate the auto function. Note the Start button next to the LED display has not run. At the same time in one second press the machine on the two start button, then start the automatic printing.

Automatic printing and semi-automatic printing is basically the same, the difference is:

A) fully automatic semi-automatic mid-range detection function, there is no vacuum suction plate function

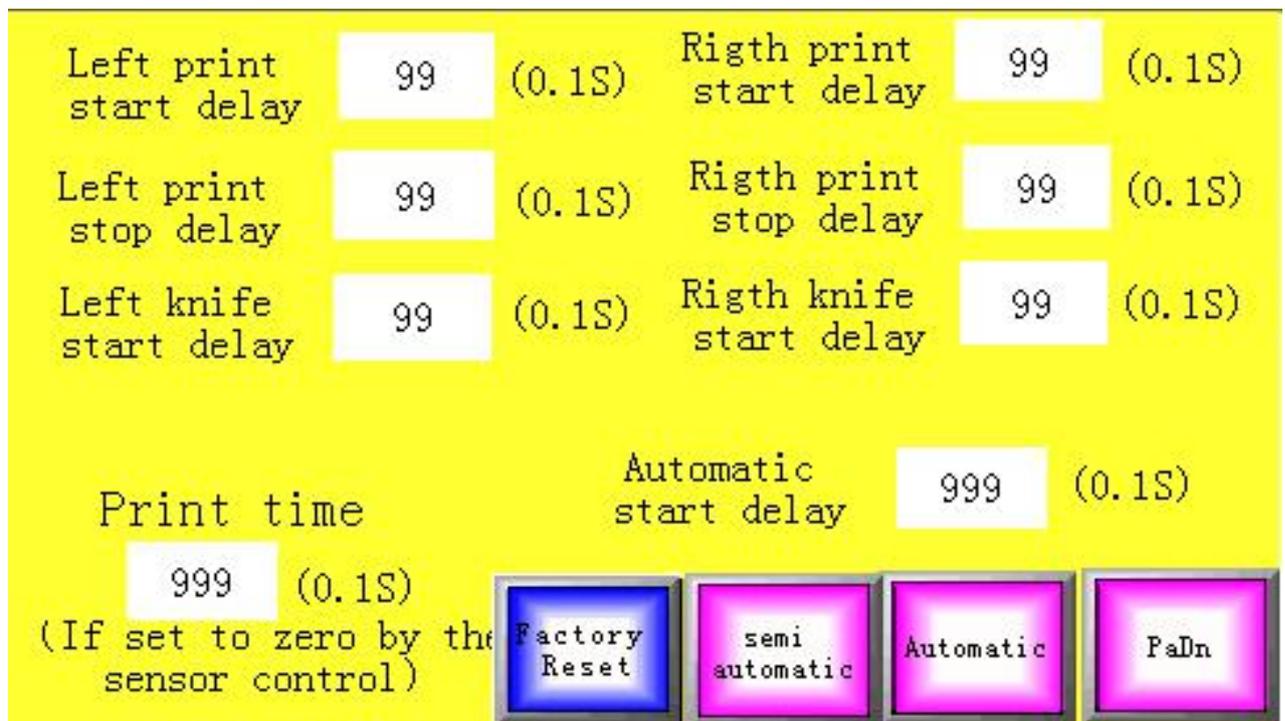
B) automatically print a work cycle, the delay after a certain period of time, automatically the next work to follow the printing, semi-automatic operator will once again press the machine on the two start button in

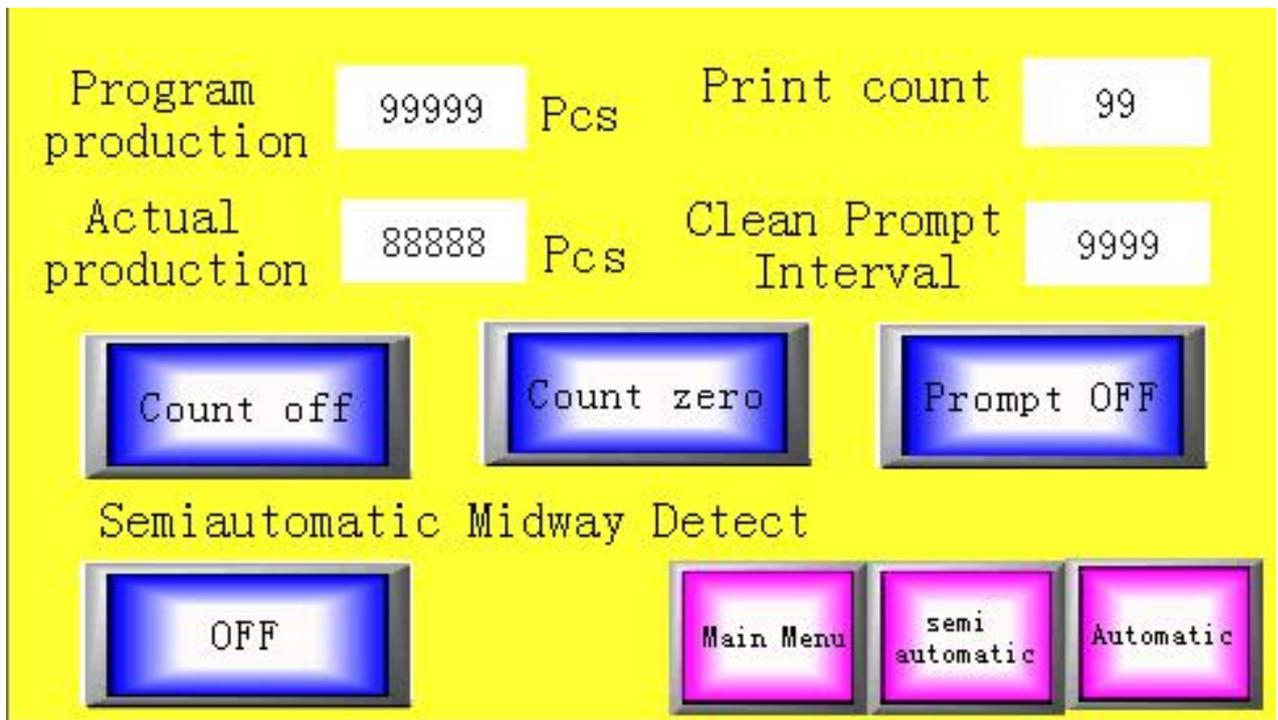
order to carry out the next working cycle print. Automatic machine is mainly used in the manufacturers where the aging operation, where users generally do not use.

C) In the automatic, please pay attention to safety, printing up, do not reach out to the steel net below, because it will automatically come down.

Fifth, the parameter settings

In the automatic or semi-automatic screen, click the parameter setting button, enter the parameter setting screen





(1) parameter settings have two pages, the first page of the main set some of the printing time parameters, the second page to select some of the printing function.

(2) In the first page, click to restore the factory value of the button, all the parameters can be set all at once.

In the first page, the left shift delay start, right shift delay set to 3 or 5, the remaining parameters are set to 0, especially the time to start the scraper printing this parameter, be sure to set to 0, or else Running abnormally

(3) In the second page, the number of printing this parameter is set in the printing seat in place, the number of times the blade back and forth printing, generally set to 1, scraping a go up, such as set to 2, Right scrape once will go up.

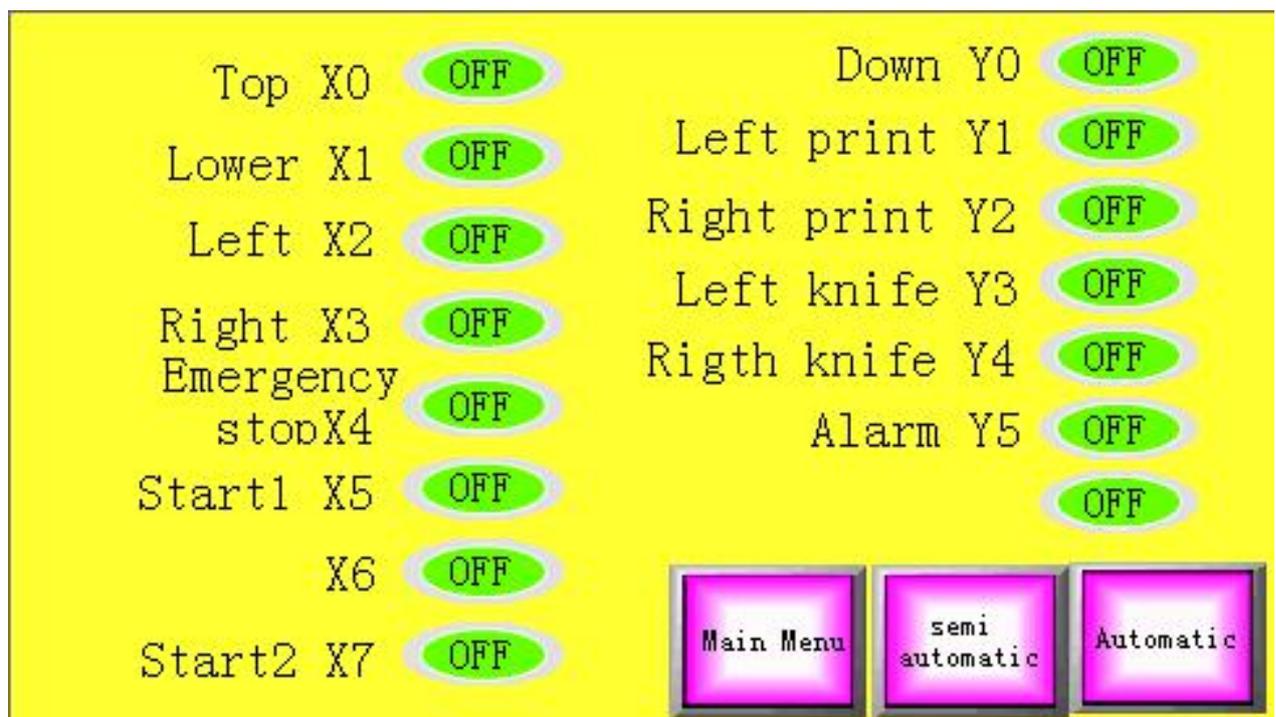
(4) Semi-automatic midway detection and folder steel net button, in the semi-automatic interface has been introduced. Cleaning steel mesh

prompt gap, is set how many times the printing, the touch screen appears text and sound alarm, prompting the operator to clean steel mesh, alarm 5 seconds automatically disappear.

Six, I / O signal ininterface

In the automatic or semi-automatic screen, click the I / O signal button, enter the I / O signal screen

I / O signal interface display control PLC programmable controller PLC input point and output point of the switch state, the input point with X said, the output point with Y said, connected with ON said, off with OFF said. The function of the I / O signal interface is to assist in the maintenance and inspection of the machine control section.



## **Air pressure maintenance instructions**

### **Attachment: daily maintenance**

1. Air compressor air supply is generally controlled at 6-7 kg.
2. Rails, nose, poles, columns, active parts of the oil.
3. Clean the machine.