Operation manual of Face mask machine

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1. Preface

First of all, thank you for adopting our automatic face mask making machine. We will serve you wholeheartedly at the most reasonable price and most reliable quality. Please read the manual before using this machine.

Safety Precautions:

Do not install, operate, maintain or inspect this machine until you have read this operation manual carefully and learned how to used it correctly.

Please operate the machine after getting acquainted with the machine's knowledge, safety information, and all relevant precautions.

In this manual, the safety level is divided into "danger" and "caution".



Incorrect operations may result in death or serious injury.



Incorrect operations may result in general minor injuries or damage to the machine's hardware.

Note: Depending on the situation, the items of "Attention" level may also cause serious consequences. Please follow the two levels of precautions because they are important for personal safety.

2. Safety Precautions

1) Prevent electric shock

Danger

- When the input power of this system is high voltage (AC220V), please pay attention to the safety of electricity on using! (Note: The control system is a safe voltage DC24V)
- When the power is connected, do not open the rear cover, otherwise electric shock may occur.
- Please do not operate the machine when the rear cover is disassembled, otherwise it may touch the high-voltage terminal and cause electric shock.
- Except for wiring and periodic inspection, please do not disassemble the rear cover, even when the power supply is disconnected. Otherwise, electric shock may occur due to the internal charging circuit of the power supply.
- The machine must be firmly grounded.
- The works including wiring and inspection should be carried out by professional technicians.
- The cable needs to be protected, please do not apply excessive pressure or rubbing on it, otherwise it will cause electric shock.
- Do not replace components during operation.

2、Prevent fire

Caution
● Do not put flammable and explosive products near this equipment, otherwise it may cause fire ● Please do not short circuit the two wires of the power supply directly, as this may cause a fire

3、Prevent damage

Caution
● The voltage applied to each terminal can only be the voltage specified in the data in this manual to prevent bursting, damage, etc. ● Make sure that the cable is connected to the correct terminal, otherwise accidents such as bursting or damage may occur ● Always maintain the correctness of the positive and negative poles to prevent bursting, damage, etc. ● Shortly after being powered on or disconnected from the power supply, please do not touch various moving parts and parts that generate heat during operation to avoid burns or pinching

4、Other considerations

Please pay attention to the following precautions to prevent accidents, injuries, electric shock, etc.

（1）Handling and installation

Caution
● When moving the product, please use the correct lifting tool to prevent damage ● Prevent from getting wet and handstand during handling. ● Confirm that the installation location and objects can withstand the weight of the machine ● Prevent screws, cable fragments or other conductive objects or oil and other combustible objects from entering the distribution box ● This machine is a precision device, do not drop the machine or subject to strong impact ● Please contact the machine with no corrosive objects to prevent surface damage

（2）Testing

Caution
● Please confirm and adjust each parameter before running. Unexpected movements of machinery may occur

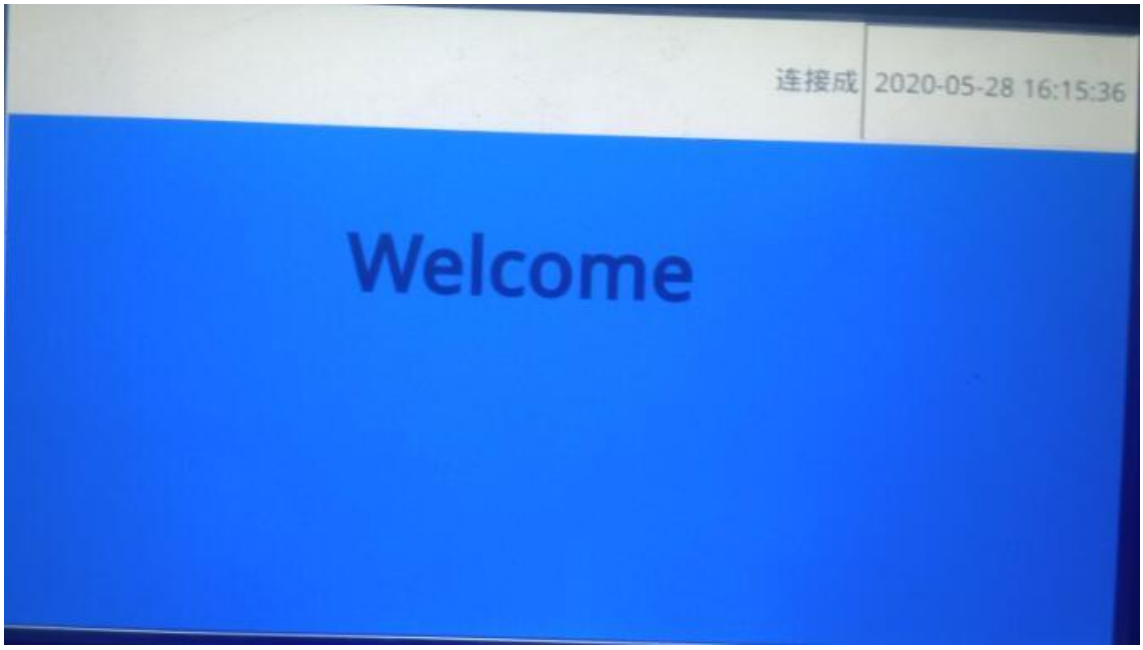
Caution

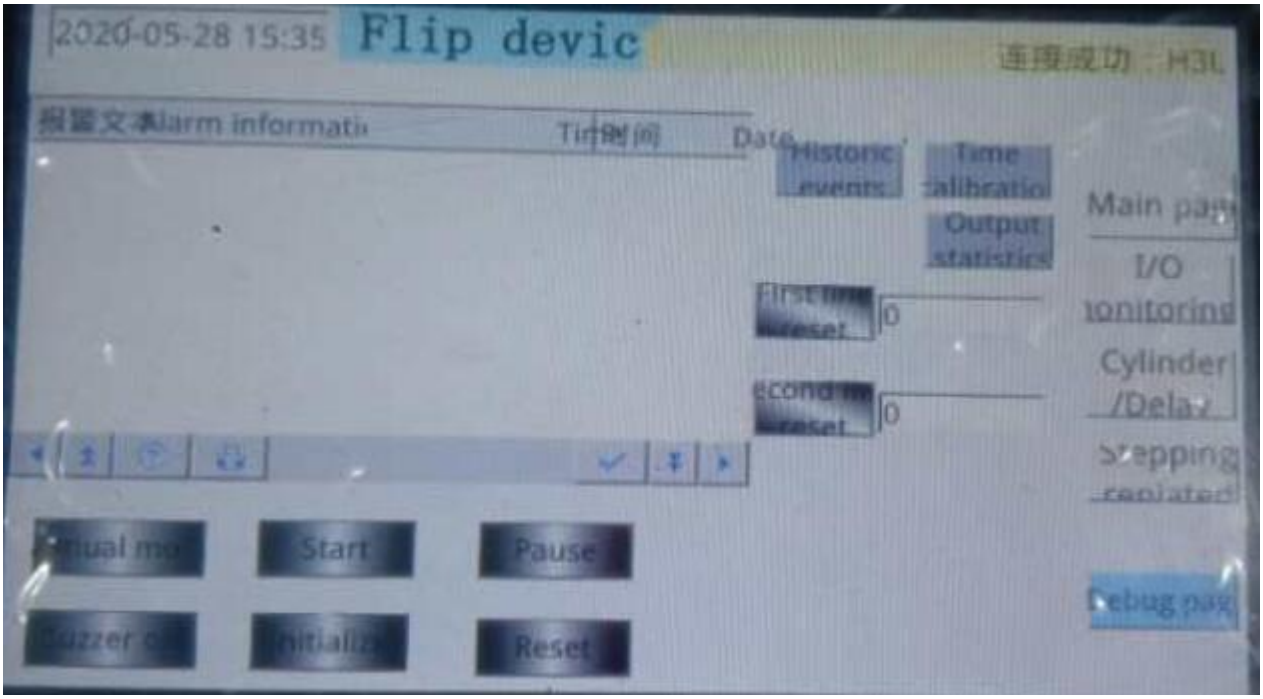
- After pressing the emergency stop or stop, please do not immediately touch the moving parts, otherwise there will be a risk of pinching
- Even when the power supply and air source are completely disconnected, do not immediately touch the sports and heating parts, otherwise there will be a risk of pinch and burn.
- Please do not carry out equipment modification, otherwise our company has the right not to deal with problems
- Ventilation should be good, far away from the source of metal dust pollution, so as to prevent dust and metal dust from entering the switching power supply, PLC and relay to cause a short circuit, making the machine unable to use
- Keep away from strong electromagnetic radiation sources to prevent electromagnetic interference and cause the machine to malfunction

Three, Machine operating instructions

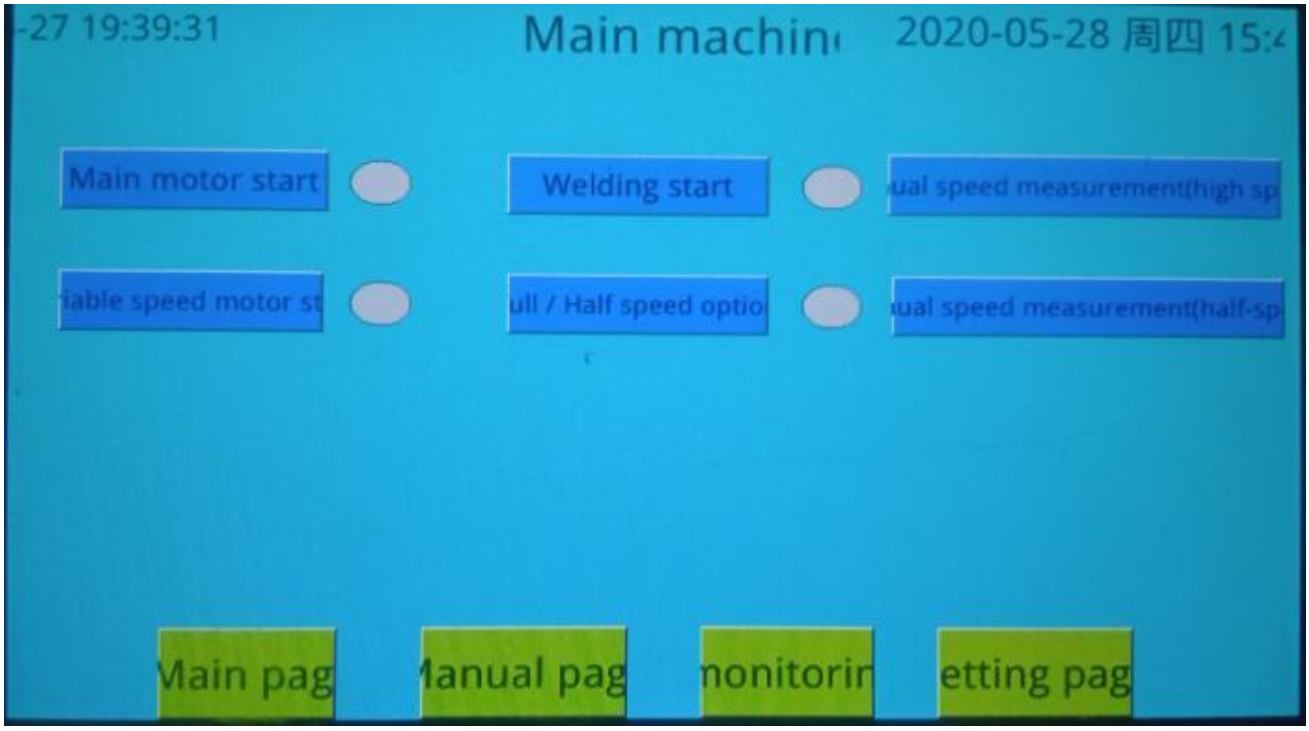
Equipment paragraph 1:

After power on, the human-machine interface (touch screen) will enter the company homepage screen:



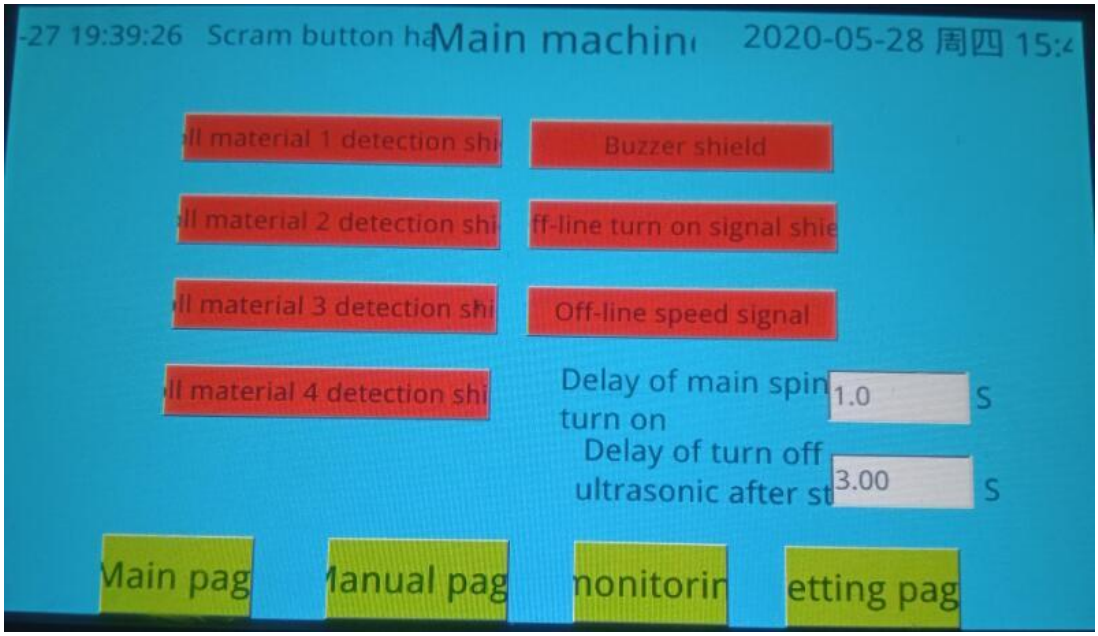


Manual page:



The main motor starts: the motor that transmits the mask cloth starts
Welding start: start ultrasonic welding
Speed control motor start: start the pipeline motor that transmits the cut mask
Full speed and half speed selection: this machine is one for two, when one pipeline is opened, half speed is selected, and when two pipelines are opened, full speed is selected

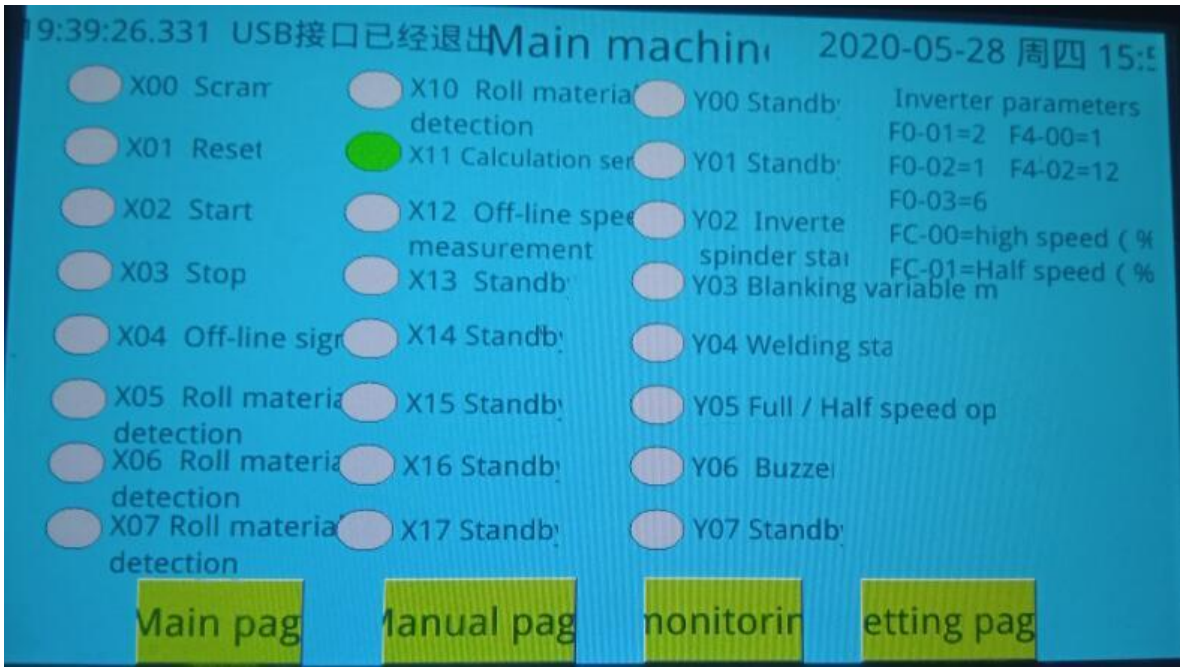
Setting page：



Reel material detection and shielding: the shielding detects whether there is a material signal. When shielding, the system believes that there is always material (the same is true for the rest)
Offline startup signal: when there is no startup signal during offline, the machine cannot be produced, and an alarm will be prompted to shield this signal.

The remaining buttons are not described

IO Monitor：

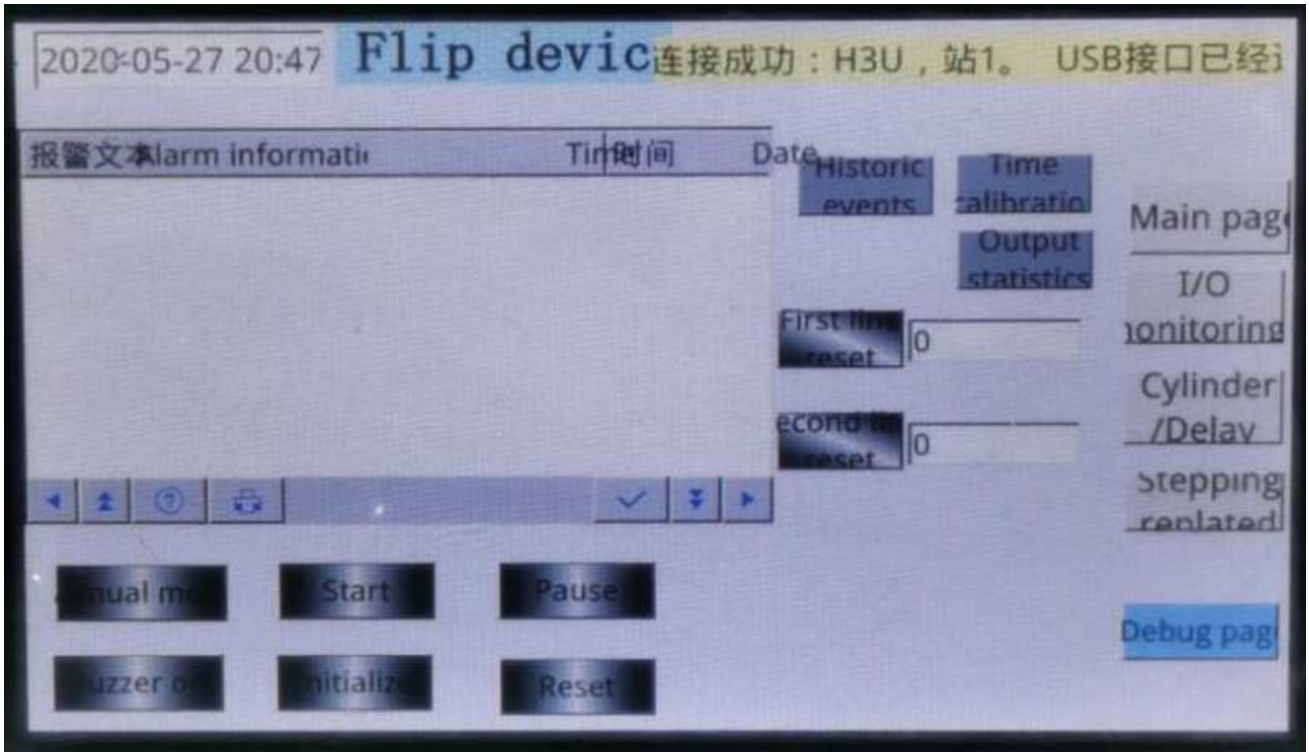


IO monitoring, convenient for real-time monitoring of input and output points

Equipment paragraph 2:

After power on, the man-machine interface (touch screen) will enter the company

homepage screen:



历史事件：Record historical alarm events

时间校正：Change touch screen time

修改密码：Change user password

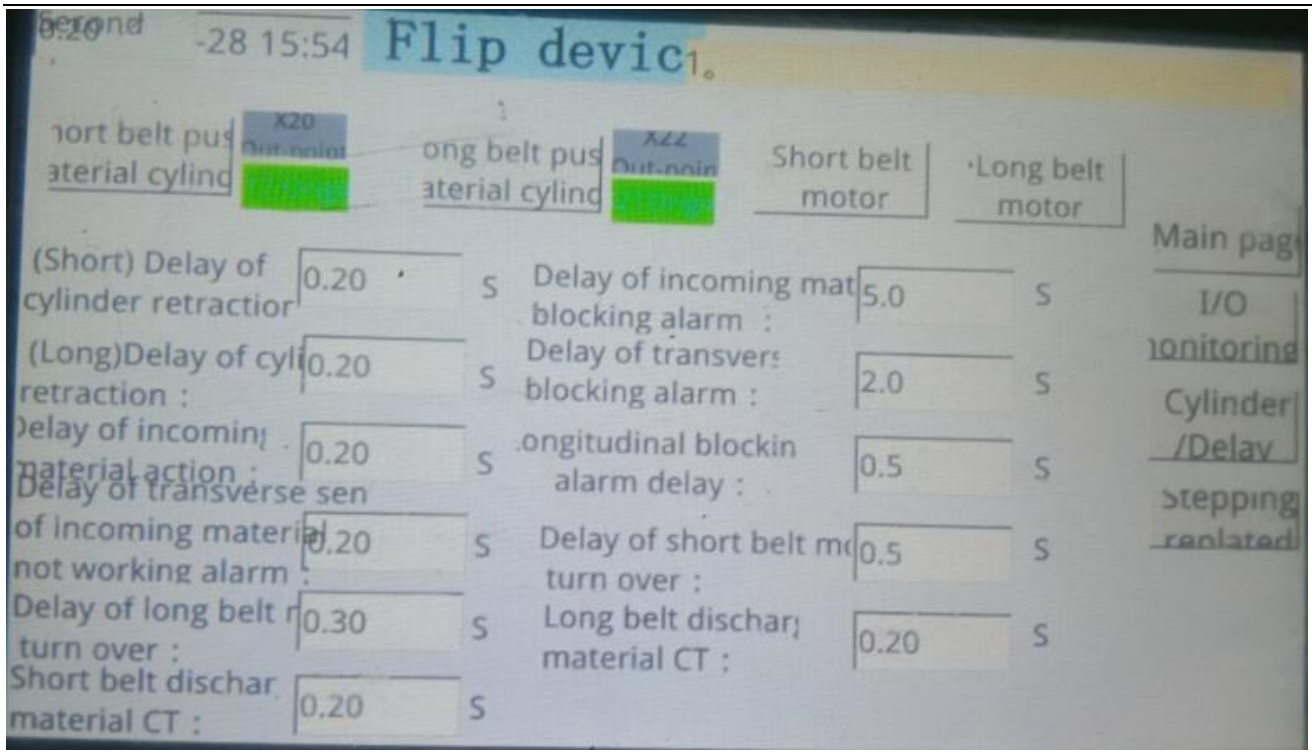
产量统计：Statistics historical capacity

CT 0 秒：Cycle time for mask production

1侧产量清零：No. 1 production line capacity reset

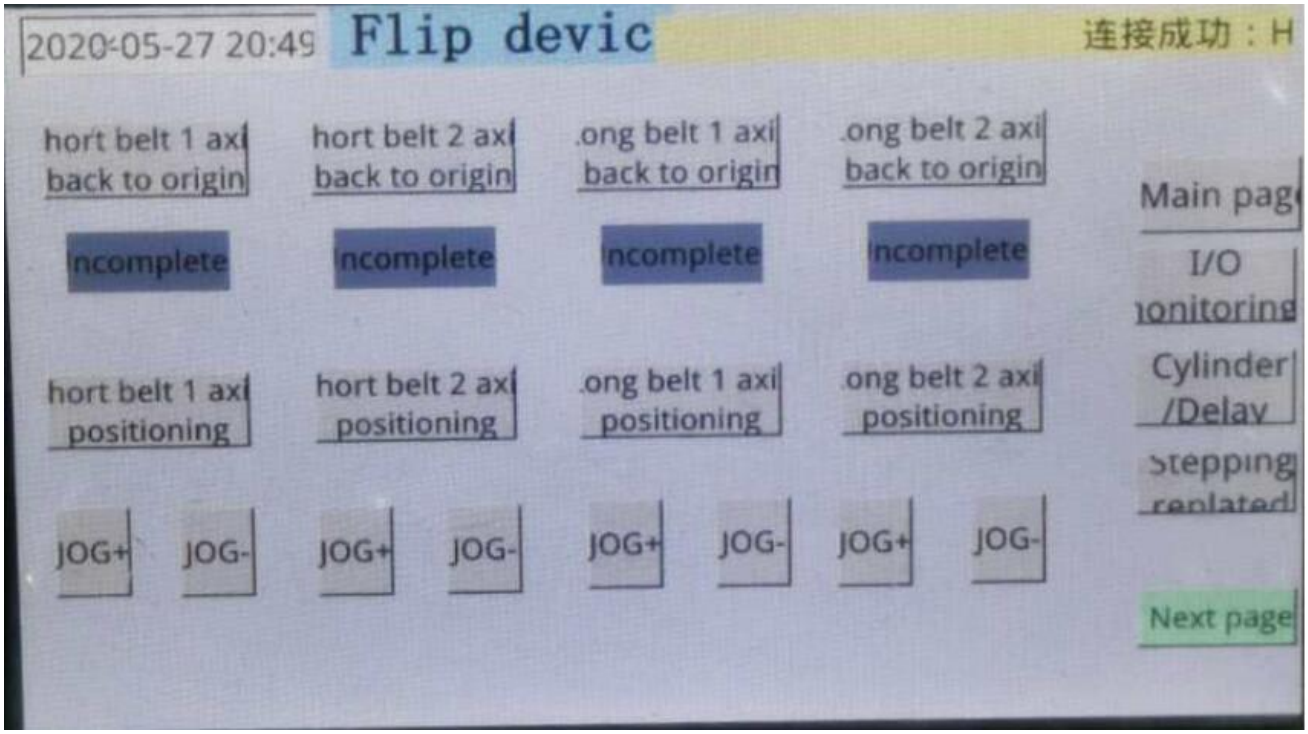
2侧产量清零：No. 2 production line capacity reset

Cylinder delay screen:

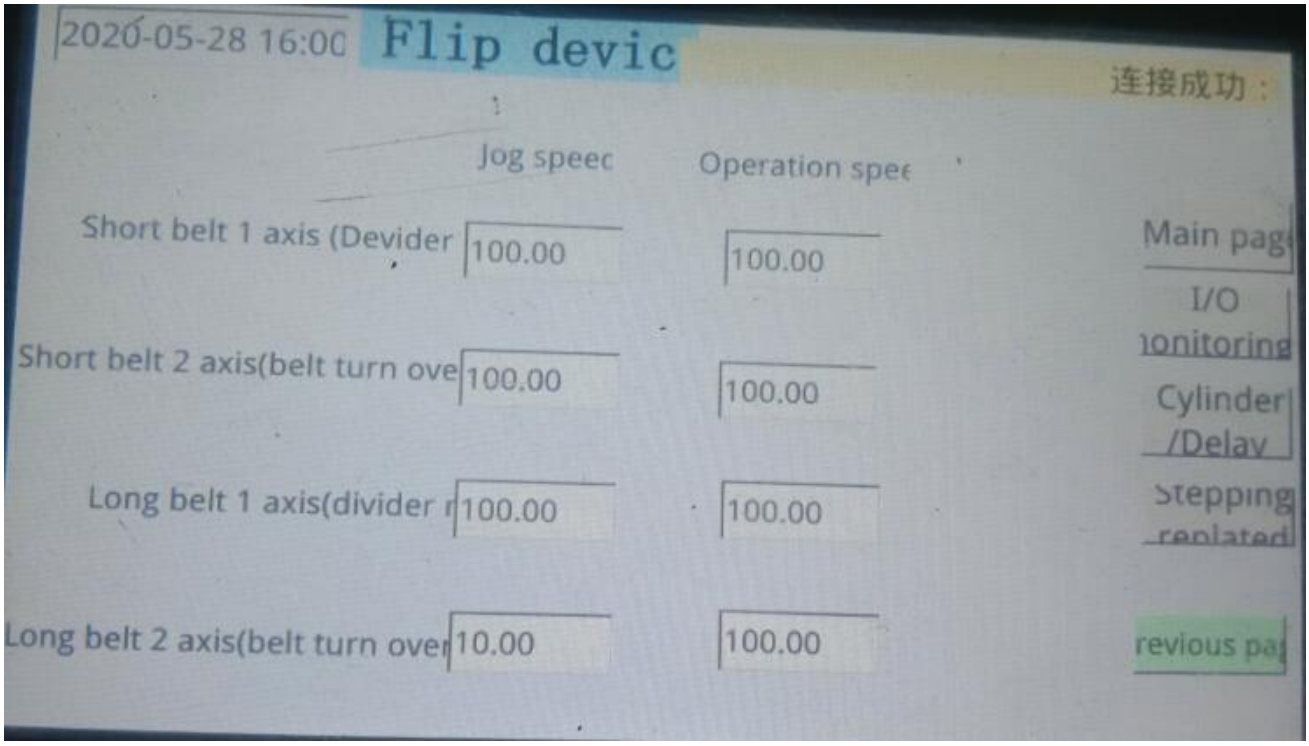


Push material 1 delay: push material 1 cylinder extended push mask time
Push material 2 delay: push material 2 cylinder extended push mask time
Lateral 1 turning delay: the time from when the cylinder pushes out the mask to when the mask will be turned to the right
Lateral 2 turning delay: the time from when the cylinder pushes out the mask to when the mask will be turned to the left
Incoming material blocking alarm delay: the incoming material detection optical fiber senses the mask, and the mask is not turned left and right within the set time.
Lateral material blocking alarm delay: after pushing the mask cylinder action, within the set time, if the mask does not flow out abnormally, it will alarm
Longitudinal material blocking alarm delay: after the operation of the flip mask motor is completed, within the set time, if the mask does not flow out abnormally, it will alarm
Lateral induction failure alarm: after the motor is overturned, if there is no detection of incoming material within the set time, it will alarm

Stepping related:



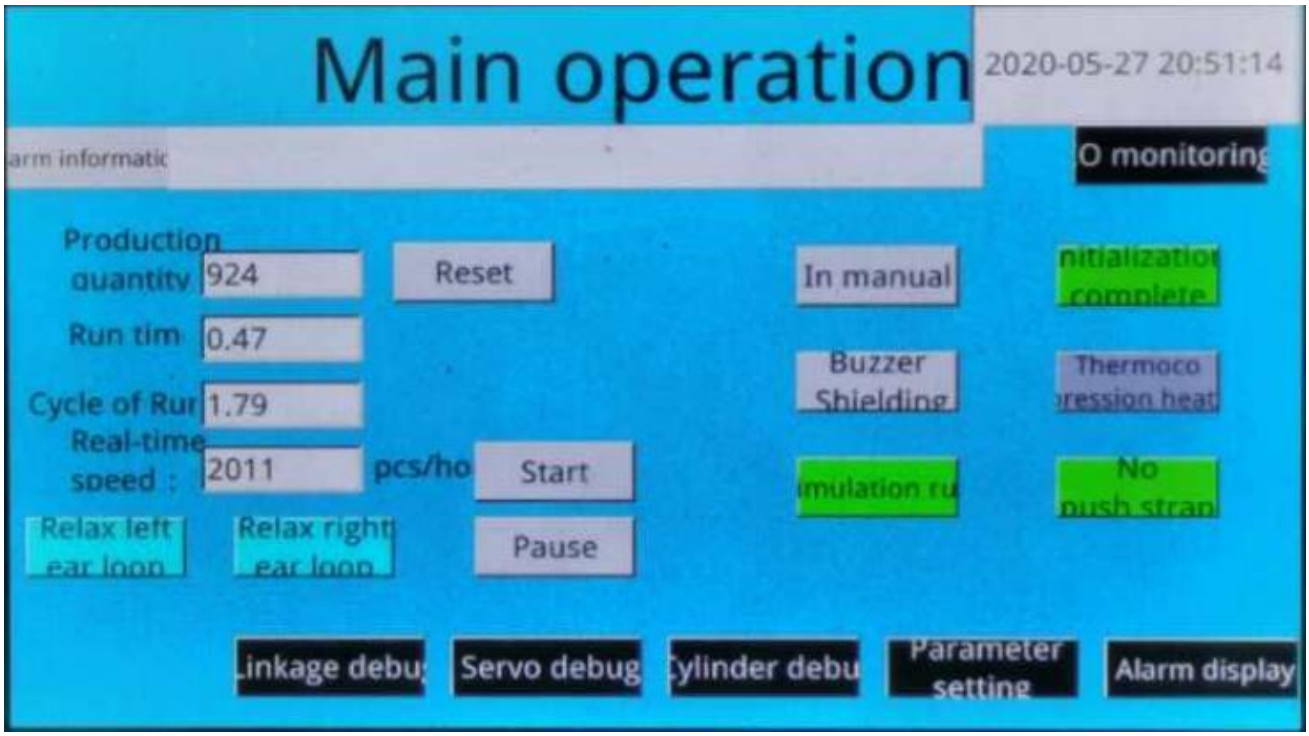
This page is for the corresponding axis to return to the origin, 180 degrees flip positioning, and clockwise flip and counterclockwise flip



For the speed setting of the corresponding axis, the base speed is the starting speed of the motor, set to about 50-100; the acceleration and deceleration time is set to about 100; the crawl frequency is acceleration; the regression frequency is the return speed; the jog frequency is the jog speed; Positioning frequency is positioning speed

Equipment paragraph 3:

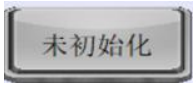
After power on, the human-machine interface (touch screen) will enter the company homepage screen:



Click the touch screen to enter the main operation screen:



：Can be manually / automatically switched



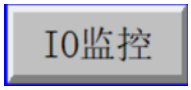
：When starting up, the machine should initialize the equipment. After the initialization is complete, the machine can start automatic production



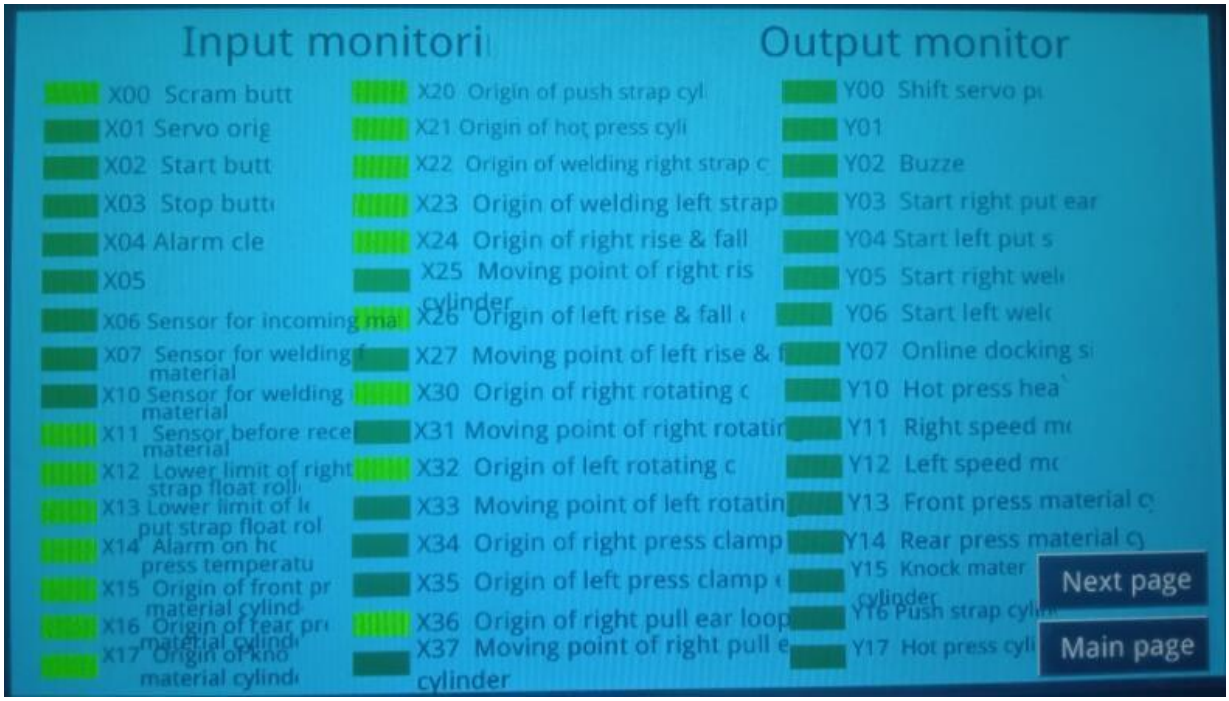
： The alarm sound of the buzzer can be turned off

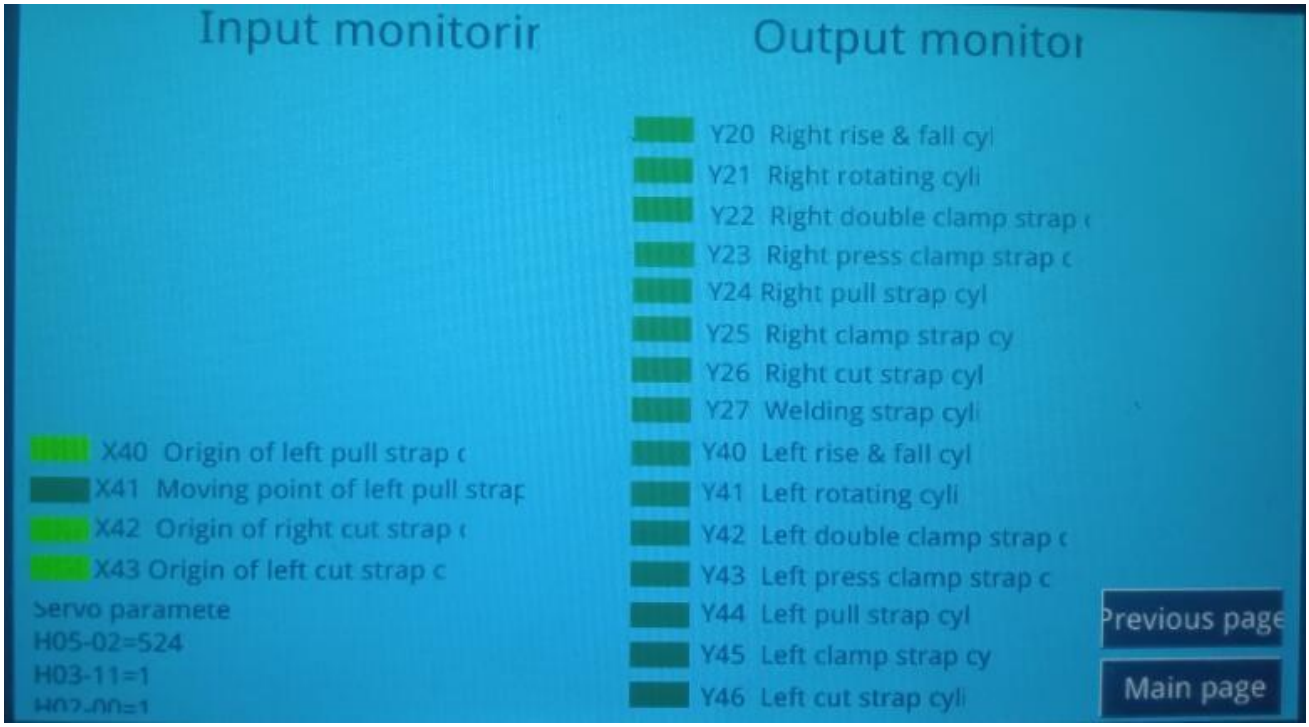


： It can make the rear pressing part turn on heating or turn off heating

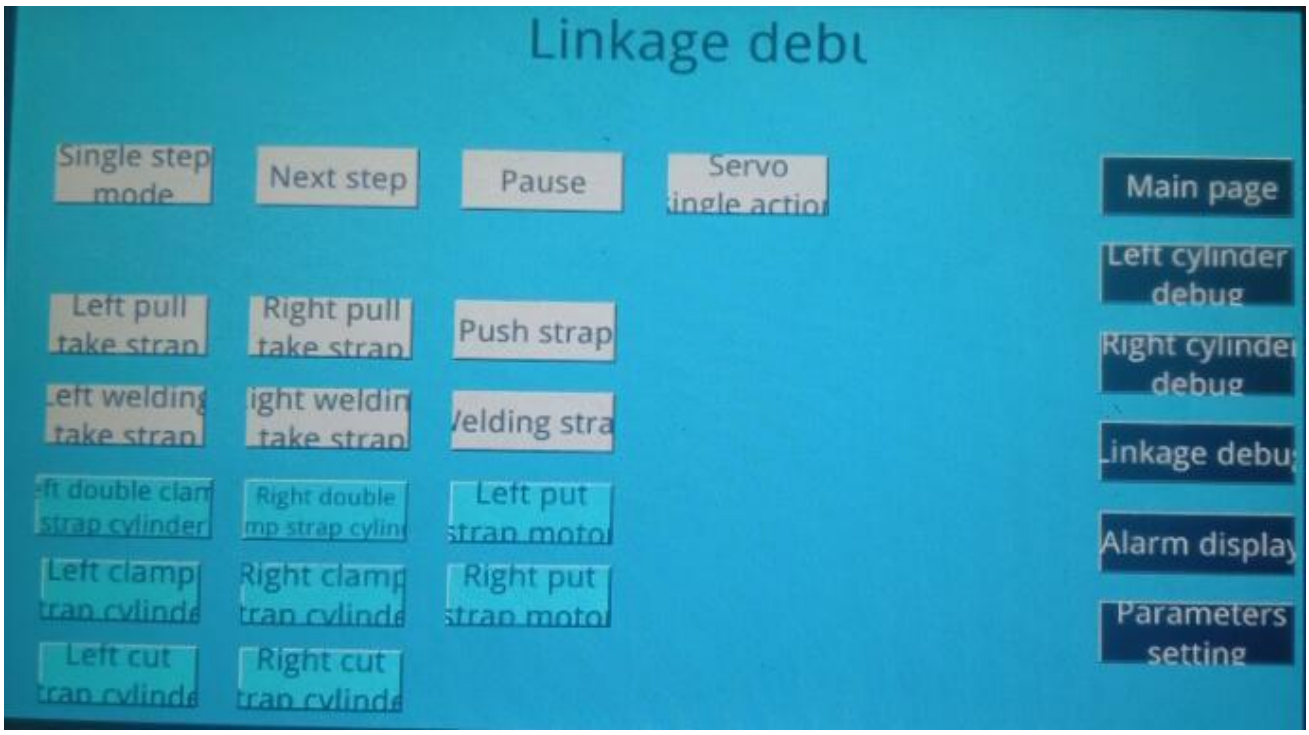


： Signals at input and output points of the display device



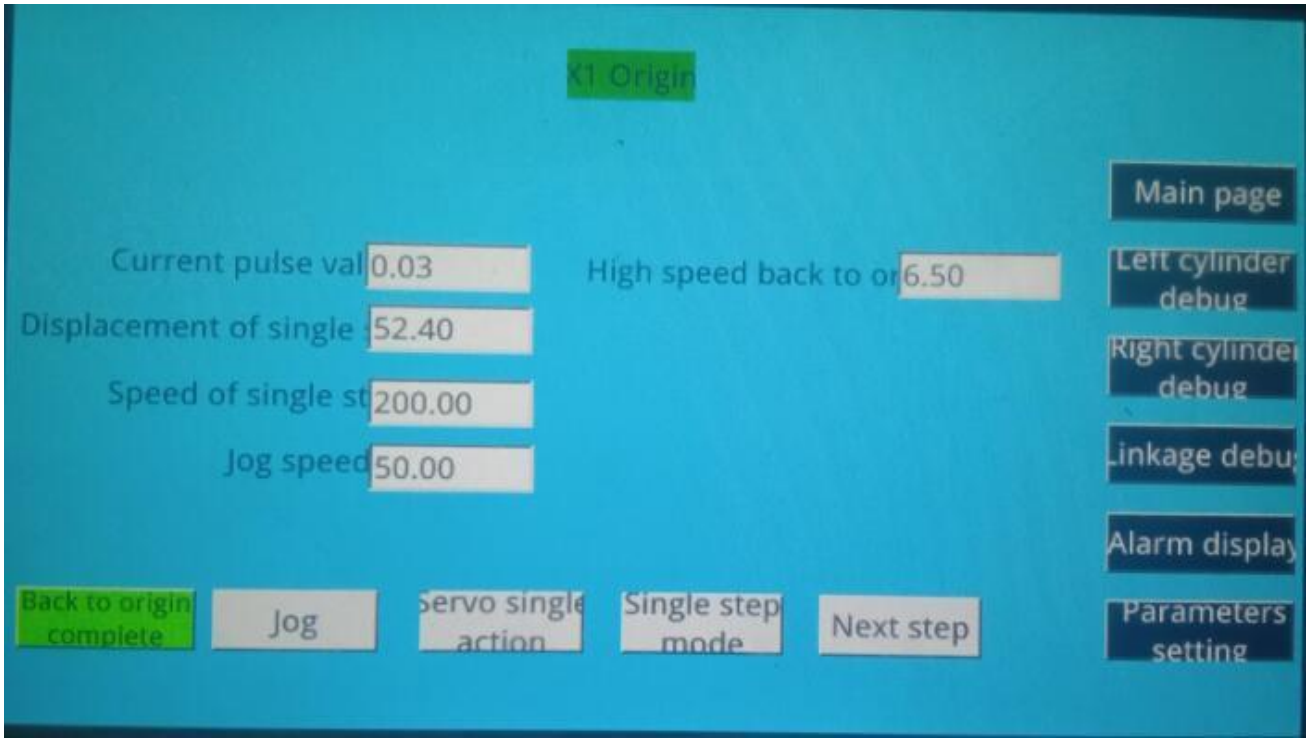


Linkage debugging:



Pull the left belt to take the ear strap: it is to take the cylinder to extend, clamp the ear belt rope, and then pull back to wait for several consecutive actions (the same on the right)
Take the ear strap from the left welding strap: the left double clamp ear belt cylinder clamps the ear belt, the cylinder rises, and then the cylinder rotates to the welding position and a series of actions (the same on the right)
Welding ear straps: the cylinder lowers the welding ear straps and moves up after completion
Pushing ears: the rear pressing cylinder descends and presses, the pushing ear belt cylinder extends out of the pushing ear belt, and then the cylinder returns to position
Single step: can perform single step and continuous action
Next step: Only in single step mode can the next step be performed

Servo debugging:

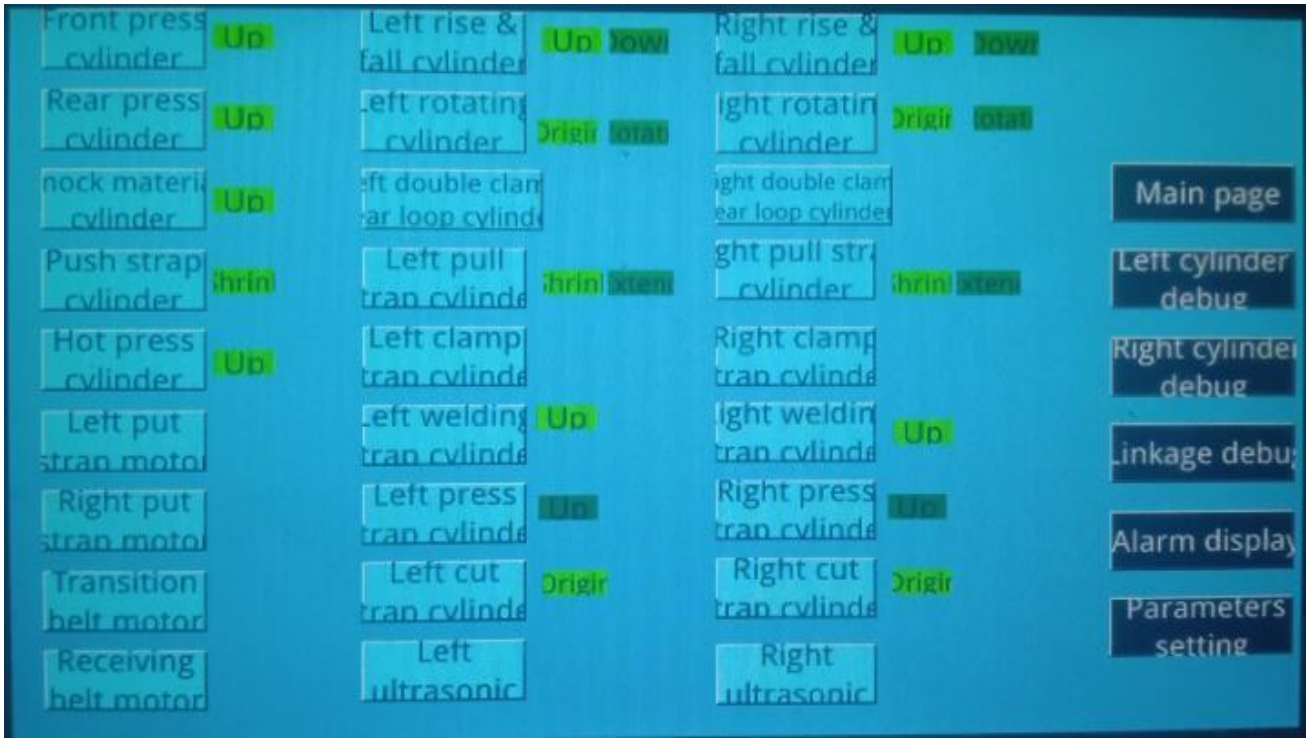


Current pulse value: the current coordinate value of the chain axis of the mask plate is displayed
Single step displacement: the distance the axis moves at a time
Single step speed: the speed when moving a plate distance
Jog speed: the speed of manual movement
Feeding tray moving distance: set to the width of a masked dish
Feeding plate moving speed: the speed when the feeding plate moves



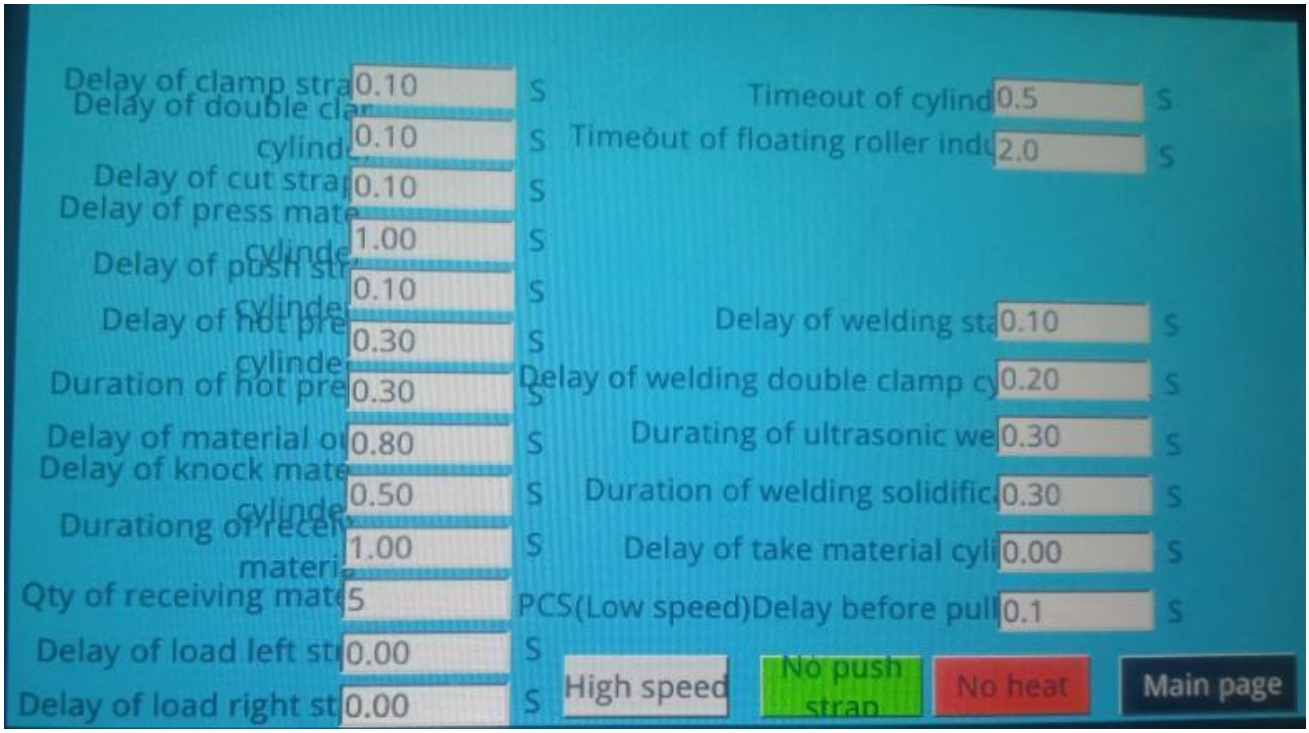
：Click the button to reset the axis to zero again

Cylinder commissioning:



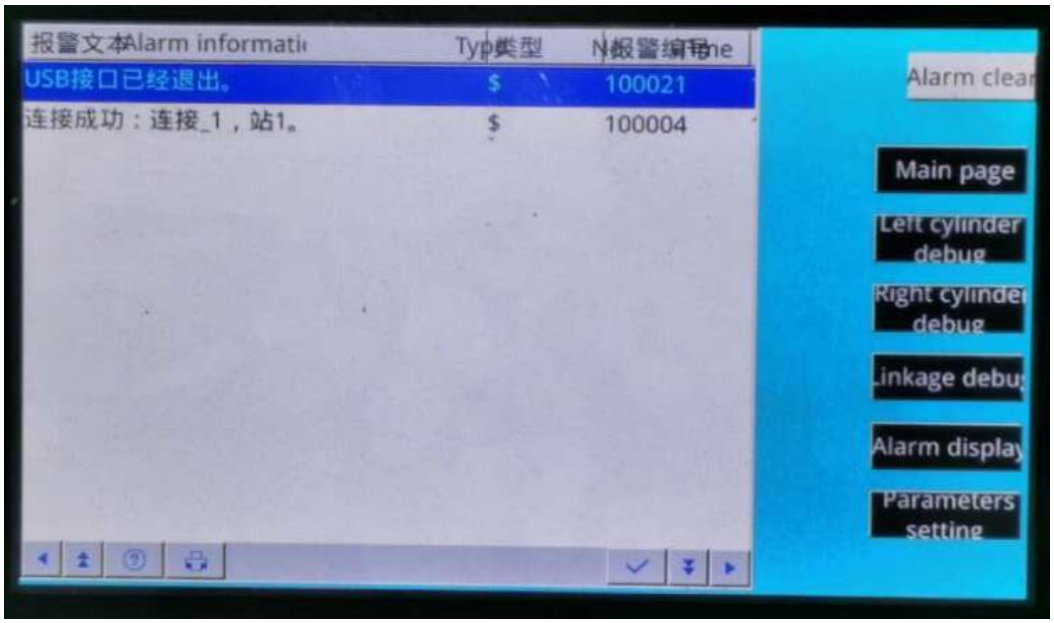
Click the corresponding button, the corresponding cylinder will cycle action, it is convenient for the debugger to adjust the cylinder speed, one person can operate, when the cycle action, then click the corresponding button to stop the action

Parameter settings:



Parameter setting, setting the corresponding time, flexible setting, making the machine action more efficient

Alarm screen:



Display alarm records to find abnormalities.