

# RUK CUTTING BED

## User's Manual

MCC03



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## Mio Said

It is a great honor for you to buy the flat bed of our computer. The computer single-layer cutting machine is a computer cutting equipment designed by our company for clothing, bags and packaging enterprises. It not only has the advanced computer aided design of function and a set of superior numerical control program, at the same time is fast, accurate, low noise, simple process and easy to learn, and many other advantages, smooth cutting line, ensure the excellent quality of products of the production.

Help you better use the equipment, we at the time of writing this manual makes every effort to do simple, comprehensive, suitable for all levels of self-study, is convenient for you to grasp from the installation steps, basic operations, security considerations, to the simple troubleshooting and so on various aspects of knowledge. Before the first time you use this equipment please read this user manual fine, in order to use correctly, and keep this manual, if you have don't understand the question or system failure occurs, turn to this handbook will give you help.

### Specify

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- This manual copyright belongs to the company all;
- The company shall not make any guarantee to manual, the user of this manual may cause misunderstanding not responsible;
- This manual content such as with the purchased computer monolayer cutting bed there is any discrepancy, the company reserves the final interpretation;  
if you are using the company computer appear in the process of the monolayer cutting bed problem, please call the customer service center service hotline: 400-680-9891

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## 一、 Laying of bed

### 1-1 The choice of setting the bed environment

Before installing the equipment in the open box, the first step is to select a suitable environment for placing the equipment. This environment should meet the following requirements:

- The ground should be flat and the ground is dry
- Avoid the proximity of heat source, static electricity, strong magnetism, so as not to interfere with the transmission of the equipment
- Avoid excessive moisture and dust
- Avoid using the same power source with other large or disturbed appliances to keep the power stable
- Should not put in the place that the light intensity is intense, avoid sunshine point-blank to make mesa bask, affect the service life

### 1-2 Handling instructions

- The outer packing should be packed in wood
- Strong vibration and collision should be prevented during transportation
- It is necessary to use a forklift truck for loading and unloading
- Handle with care, according to the instructions on the outer packing
- Do not place the equipment in the water pile or wet place to avoid the leakage of the equipment
- When unpacking, the operator should wear gloves to avoid scratches

### 1-3 Cut off the bed and check

1) Open the outer packing, and check the parts in the box:

A Attachment box B platform C box E electrical box F display stand



DIAGRAM FORM1-1

A box of accessories: vibration knife tools, neutral cap of a pen, neutral pen a cable one, Allen key a, a screwdriver with a warranty card, a cutting blade and some screws.

Notice:

- 1、 Please count the above parts before installation
- 2、 The above parts are subject to physical object, subject to change without notice.
- 3、 1-4 Lay out the structure of the bed

The computer cutting bed consists of the following seven parts (as shown in FIG. 1-2) : Rack + platform + engine box + drive + machine head (knife, pen) + air pump + display stand



Diagram form1-2

#### 1-5 Cutting bed assembly

##### Notice:

After the mesa has been installed, adjust the feet under the feet to make the surface of the cutting table and the ground level。

## 1-6 Install knives, pens, tools

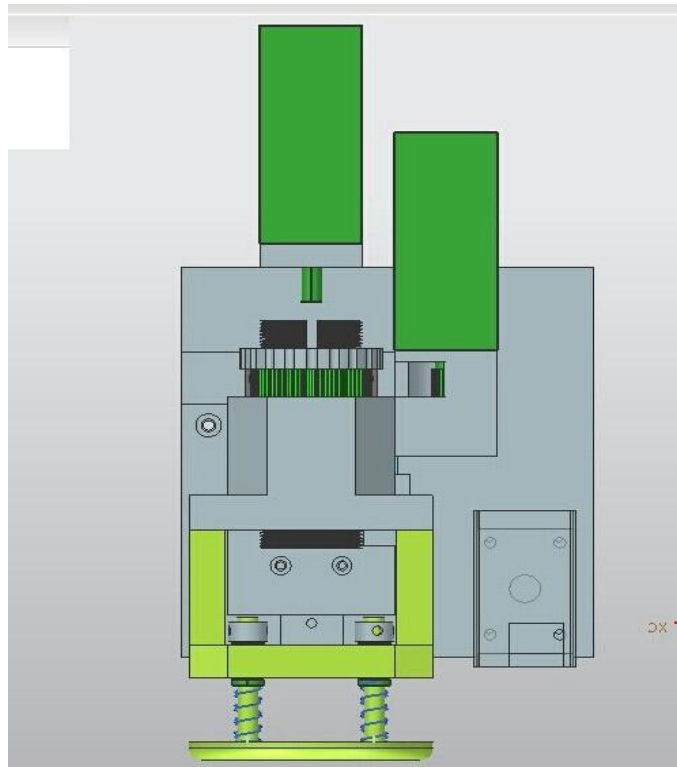


Diagram form 1-3

After the equipment is installed and confirmed all accessories are ready, follow the steps below to install and debug the unit

## 1-7 line connection

Power wire connection: see below picture 1-4 shows, This cutting adopts national standard circuit, chassis using standard 220 V power supply, air pump use three-phase 380 V power supply, pay attention to the L1 (U), L2, L3 (V) (W) for wire ( $\sim 380$  V), GND for ground, do not wrong.

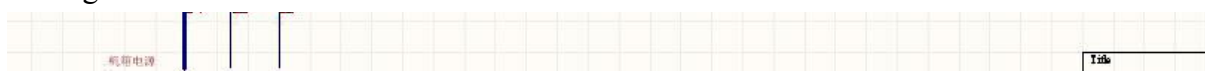


Diagram form 1-4

Transmission connection: the bed USES the network port transmission mode. Take out the

network output line from the attachment box, insert the end of the network line into the inside of the machine box, and insert the interface of the computer host at the other end.

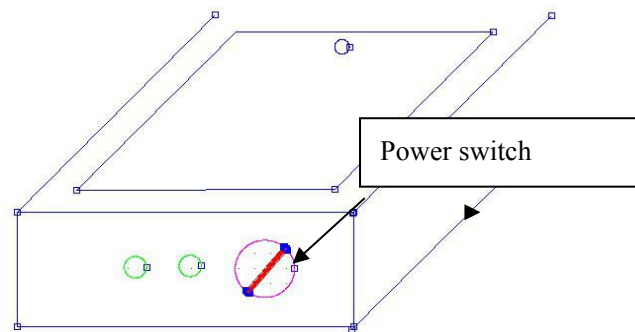


图 示 1-5

Notice:

1. When connecting the power lines, the total power switch must be in the [OFF] position. Please check whether the power connection is correct before starting up。
2. When connecting the network port output, connect the LAN port to connect the network line port to the transfer machine or router.
3. power source specification:  $220V \pm 10\% / 50HZ$ .
4. Ensure that the voltage of the power supply is 220V and the voltage regulator is recommended.
5. Avoid using the same power source with other large or disturbed appliances to keep the power stable

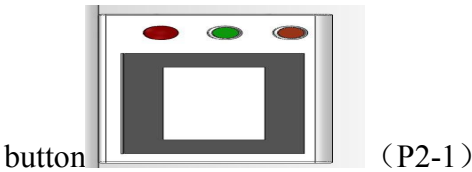
## 二 RJMCC Series operation and touch screen interface Settings

### • 2-1 RJMCC Power On/Off

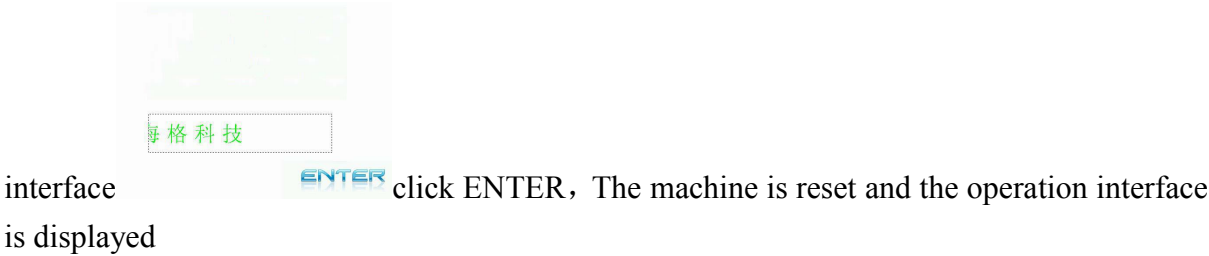
1) Starting up:

- (1) Connect the power cord and turn on the power switch and emergency stop





(2) After pressing the red button, the LCD screen appears to be initialized, waiting for the device system to be initialized in about 10 seconds, and the LCD screen appears in the main interface, which can be operated on the system. LCD screen appears welcome



- 2)Power off:  
Turn off the power switch and turn off the power switch。

2-2 System touch face plate and function, see Picture2—2 show



P2-2

## 2-3 Touch screen key operation



图 示 2-3

- 1) Air pump: Click once to open the air pump, and click the second to close the air pump. If the machine is not operated, the suction wind will be opened automatically when cutting, and the suction will be turned off automatically after cutting.
- 2) Reset: Reset the machine to the mechanical origin.
- 3) Manual debugging:

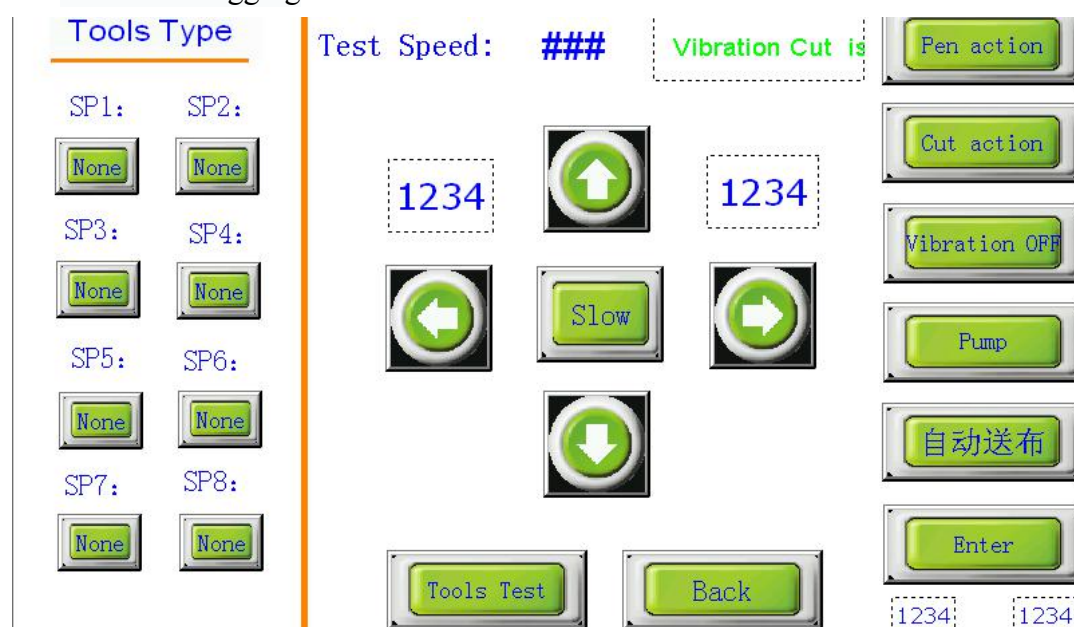






图 示 2-4

- (1) : press on not stop and We can move in the direction of X "+"
- (2) : press on not stop We can move in the direction of X "-";

- (3) : Press on  not stop We can move in the direction of Y "+";
- (4) : Press on  not stop We can move in the direction of Y "-";
- (5) Pen/knife action: press a pen/knife to move down, and return to the position for the second time;
- (6) Temporary origin: the origin is defined at the cursor position of the machine head;
- (7) Shake open: test tool head vibrate function whether normal;
- (8) Fine tuning: when the X, Y movement and the next page are moved, the movement speed is adjusted to 1/10
- (9) Tool type: pen, knife setting, option free, pen, half knife, knife

4) Press on , shows below

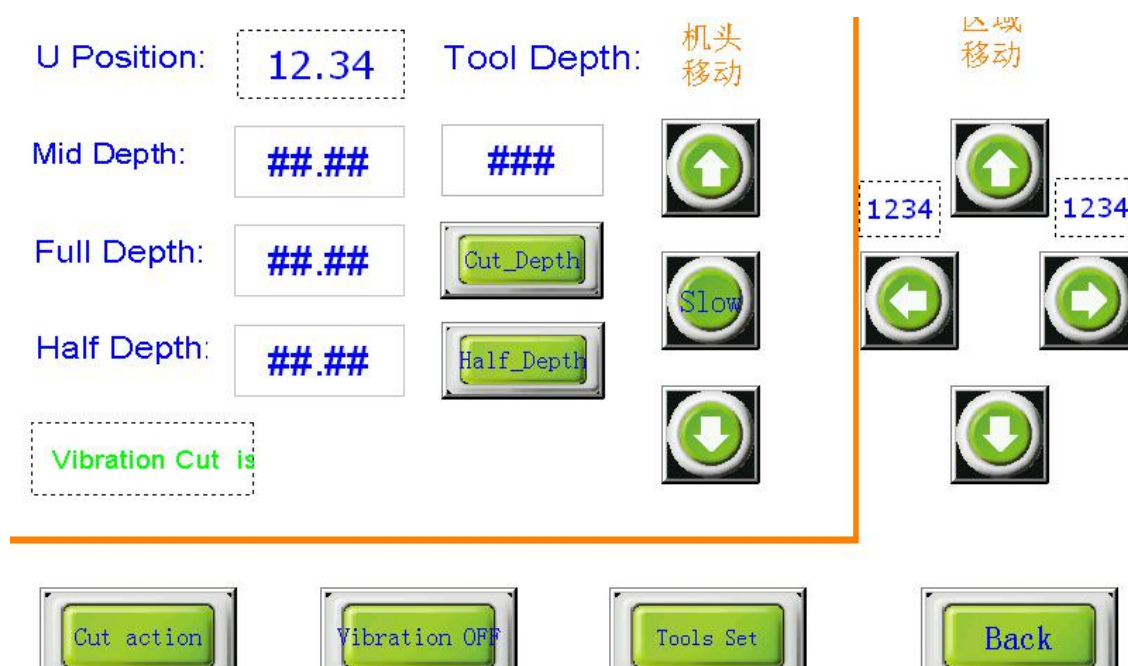

















图 示 2-5

- (1) Cutting head movement   To adjust the depth of tool tool, When adjusting to the appropriate height, press a "knife depth" or "half depth" to save the current height for the tool depth; The tool test speed is modified to adjust the speed of the manual up and down;
- (3) Area offset     Holding the direction key, can continuously move the knife action: the position of the knife function to the depth of the full blade;
- (4) Half knife depth: the half knife used in the selection of the tool, the height of the half knife is the value of the depth of the half knife, and the unit is MM.
- (5) Knife action: the position of knife function to full depth value

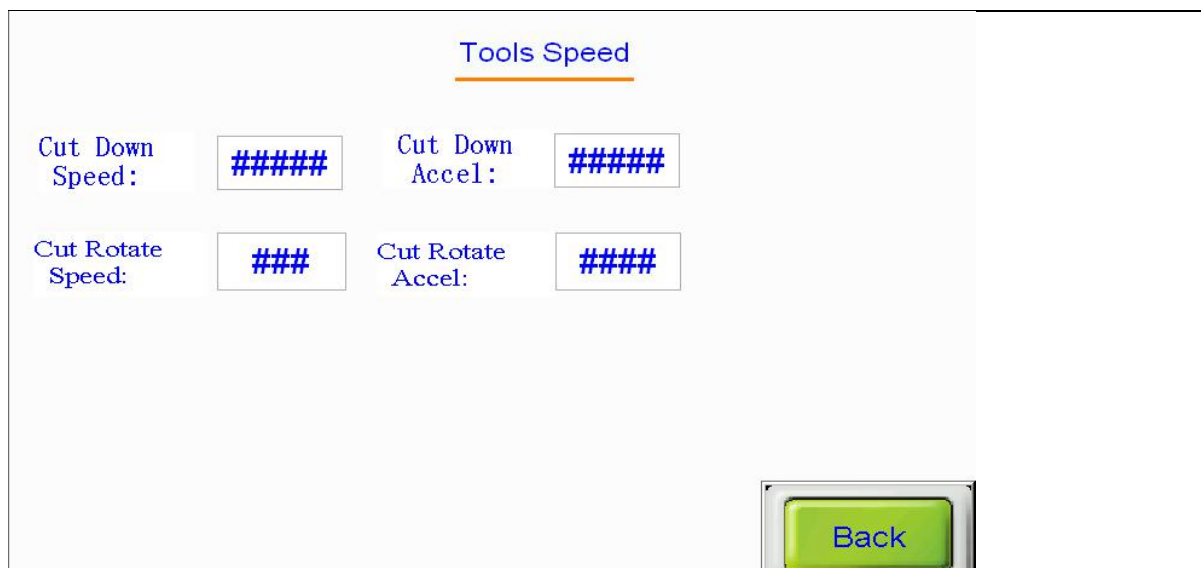
Vibration switch: control vibration switch of vibration knife

5) Click on , shows as

Auto Send SW:		Test Speed:	###	
Send Pump:				
Send Speed:	####	1234		1234
Send Acc:	####			
Send Offset:	##.#			
Pump Delay:	##			

- (1) Click  Button for mobile machine;
- (2) Auto scroll: whether to open automatic scroll switch;
- (3) Scroll-sucking air: when rolling, control the air intake;
- (4) Clamp belt, pressure feed, air release: control of the solenoid valve can be used for debugging;
- (5) Rolling speed, rolling acceleration, feed offset: rolling speed of automatic rolling feed, rolling acceleration, feeding offset;
- (6) Suction delay: the time between the completion of the cutting and the opening of the roll
- Normal mode: the suction air is open, the rolling suction is open, the air suction delay can be reduced

- 6) Tool parameter

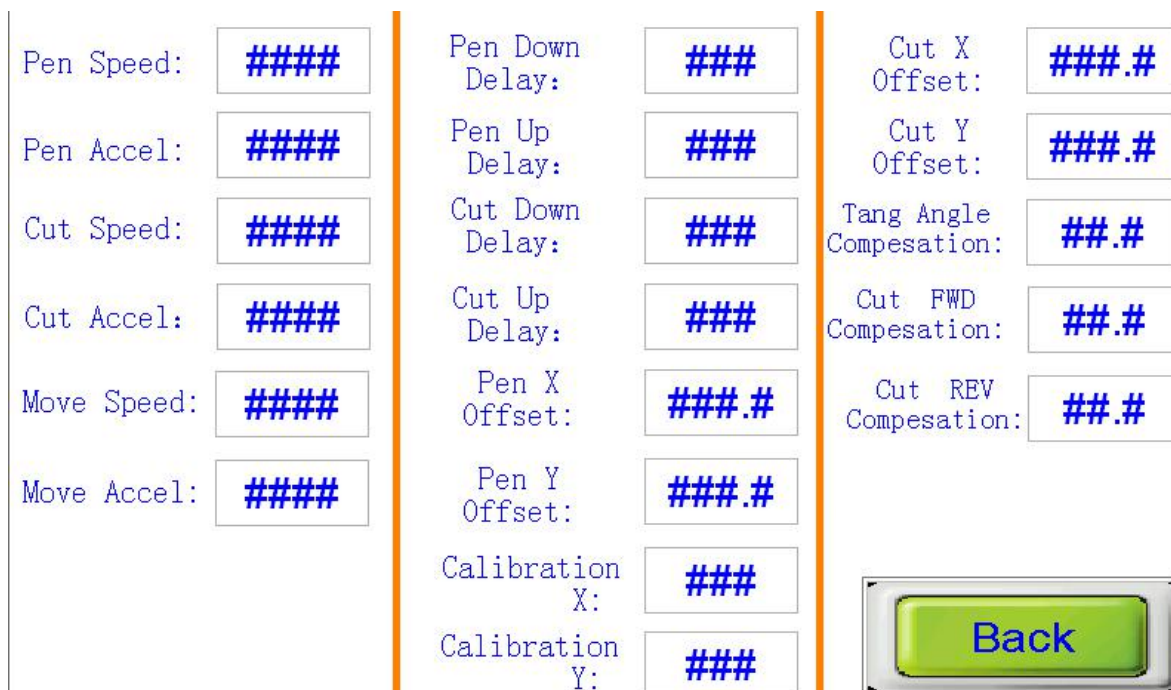


Piture2-6

(1) Lower knife speed: the speed of knife tool setting tool; Lower knife acceleration: the acceleration of knife-edge tool ;

(2) Rotation speed of knife: the speed of rotation of tool tool; The rotation acceleration of the knife: the acceleration when the tool is rotated;

7) Parameter setting:



P2-7

(1) Pen speed: the speed of the system in the execution of strokes;

(2) Pen acceleration: the acceleration of the device when the stroke command is executed;

(3) Knife speed: the speed of the device when the knife is cut;

(4) Speed of the knife: the acceleration of the device during the execution of the cutting instruction;

- (5) Airspeed: the speed when the device moves;
- (6) Space acceleration: the acceleration of the device when it is moving;
- (7) Pen offset X: the offset value of the X direction pen and cursor position;
- (8) Offset Y: the offset value of the position of the pen and cursor in the Y direction
- (9) Knife offset X: adjusts the offset value of the X direction U tool and cursor position;
- (10) Knife offset Y: adjusts the offset value of the Y direction U tool and cursor position;
- (11) X correction: to adjust whether the unit size of X is consistent with the actual situation;
- (12) Y correction: whether the unit size of the Y direction is in accordance with the actual conditions
- (13) Lower pen delay: the device is delayed for N milliseconds after the next action;
- (14) Lifting pen delay: the device is delayed N milliseconds after lifting the pen;
- (15) Lower knife delay: the device is delayed N milliseconds after making a knife motion;
- (16) Lifting knife delay: the equipment is delayed N milliseconds after lifting the knife.
- (17) Rotary knife Angle compensation: adjustment compensation for rotation Angle of tool tool;
- (18) Before the rotary knife overcharge compensation: the amount of the cutting of the knife tool when cutting the knife, the unit is MM
- (19) After the rotary knife overshoot compensation: the adjustment tool cutting the current knife, the unit is MM

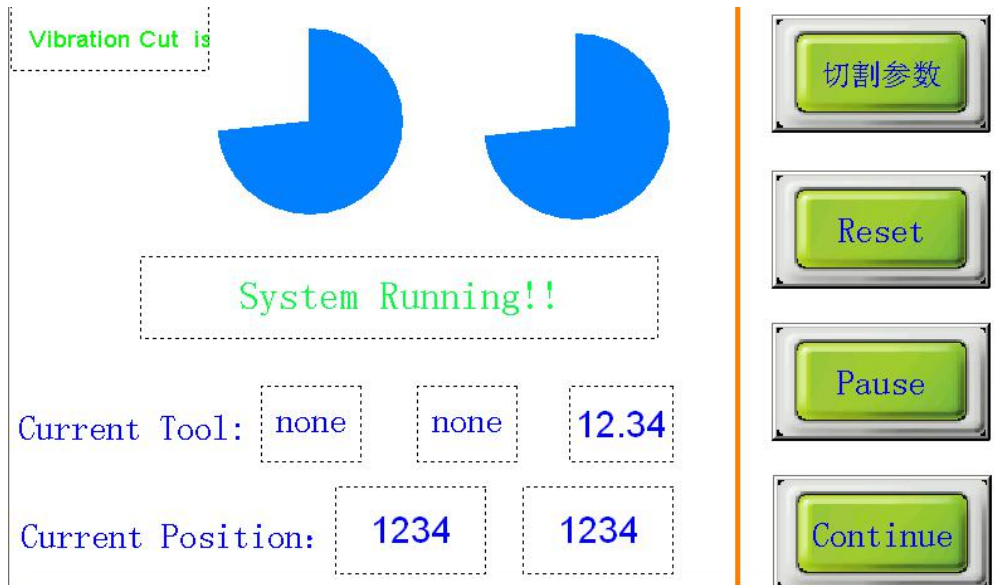
## 8) advanced setup

Machine Type:		MCC02-1516	
PDA:	##.#	PSA:	##.#
CDA:	##.#	CSA:	##.#
Optimize Angle:	###.#	Optimize length:	####
Turn Angle:	###.#	Gradient:	##.#
Chinese		Reset Default	Back

图 示 2-8



- (1) Machine model: sets the current model of the equipment;
- (2) Pen deceleration Angle and pen stop Angle: adjust the speed of stroke curve;
- (3) Knife reduction Angle, knife stop Angle: adjust the speed of cutting arc;
- (4) Algorithm Angle: the function is not used;
- (5) Algorithm length: adjust the speed of arc;
- (6) Torque correction: beam torque correction;
- (7) Corner: Angle of execution;
- (8) Air pump frequency: shows the frequency of air pump operation
- 9) operating state:



P2-9

When the device is running, the system will alert "system run" (see figure)

- (1) Current tool: displays the current running tool number and tool;
  - (2) Current location: displays the location of the current machine head;
  - (3) Current depth: shows the depth of the tool currently in use;
  - (4) Pause: when the machine is in the distance, press the first stop, the second is to cancel;
  - (5) Continue: press "continue" button to continue in the timeout mode;
  - (6) Reset: restore machine to boot state;
- 10) When run, click the cut parameter

## Cut Set

Pen Speed:	####	Mid Depth:	##.##
Pen Accel:	####	Full Depth:	##.##
Cut Speed:	####	Half Depth:	##.##
Cut Accel:	####		
Move Speed:	####		
Move Accel:	####		

Back

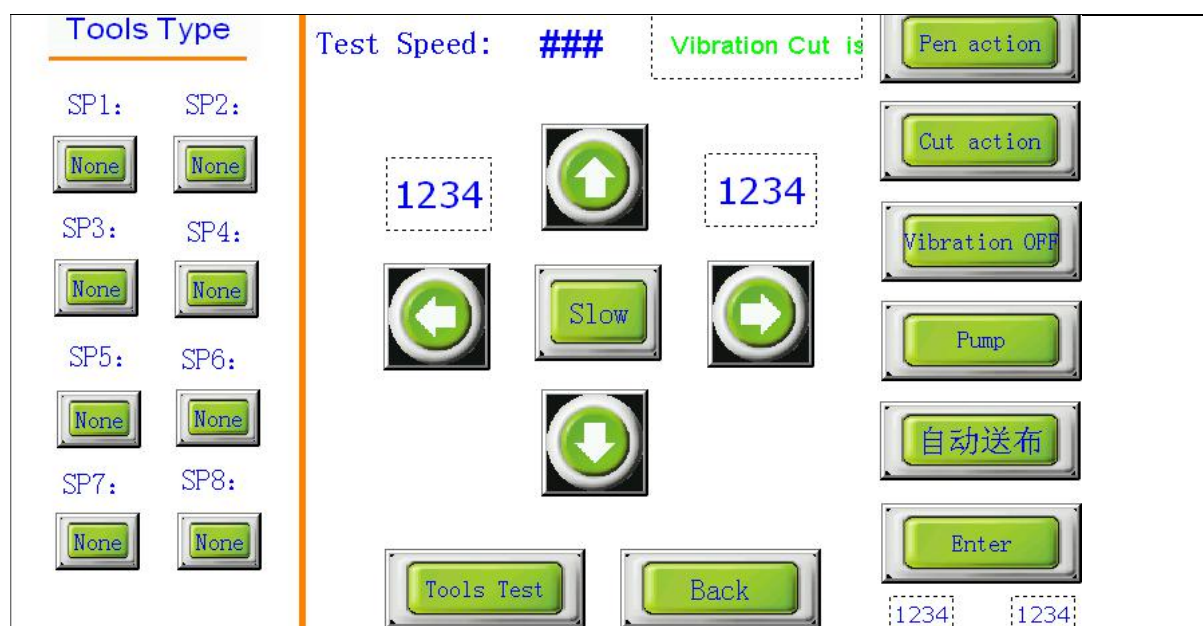
P2-10

Running, click on the cutting parameters and can modify the parameters as shown (pen speed, pen acceleration, velocity, knife, air speed, air speed, depth, middle depth, half of the whole knife knife), then click continue to return, equipment can run in modifying the values of the parameters

#### 2-4 For example

- 1 ) Set the pen and knife (the pen is SP1, the knife is SP2, and the wheel is SP3).
- ( 1 ) Click the "manual debug" button in the main interface and select the "tool test" button;
- ( 2 ) Set SP1 to "pen" and SP2 to "knife";
- ( 3 ) Setup complete





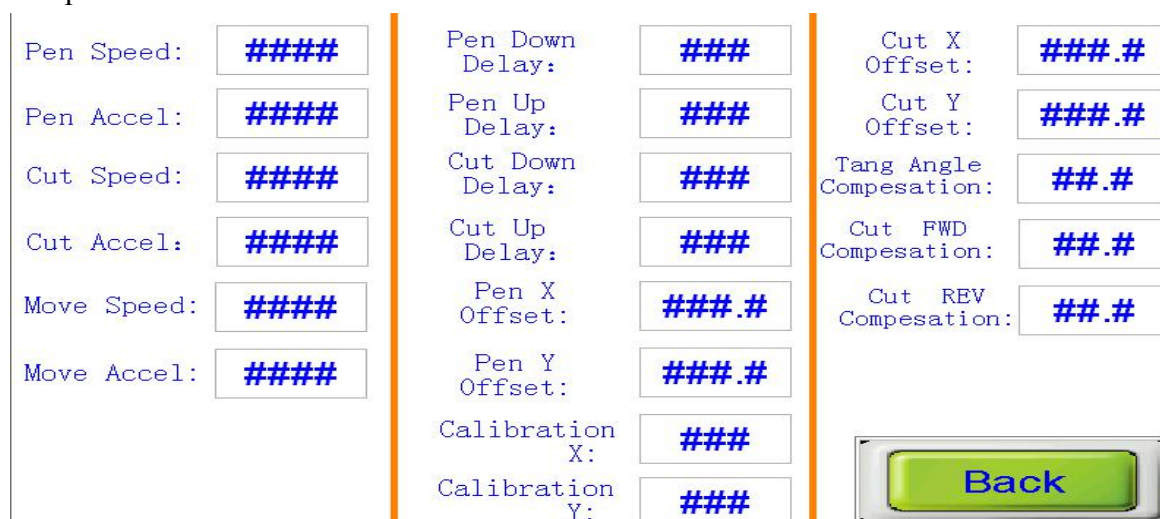
P2-11

## 2) Acceleration Settings (setting pen acceleration for example)

( 1 ) In the main interface, click "system Settings" button, and click "parameter Settings" button after the system Settings interface

( 2 ) In the acceleration Settings interface, click the "pen acceleration" to the right, and the system pops up the numeric keypad input "3000", press ENTER.

( 3 ) Click "back" button to go back to the main interface, and the pen acceleration is completed.



图示 2-12

## 3) Set Ethernet port

Ethernet set (Take the example of connecting the local computer)

(1) Click "parameter Settings" button on the main interface to interface with the interface;

(2) Set the "download port option" to "Ethernet",

(3) Set the IP address, the current IP address of the local computer is "192.168.0.26", and

the IP address of the device can be set to "192.168.0.250".

(4) Ethernet Setup completed. (note: IP address cannot be repeated)

(5)设置完成后重新启动。

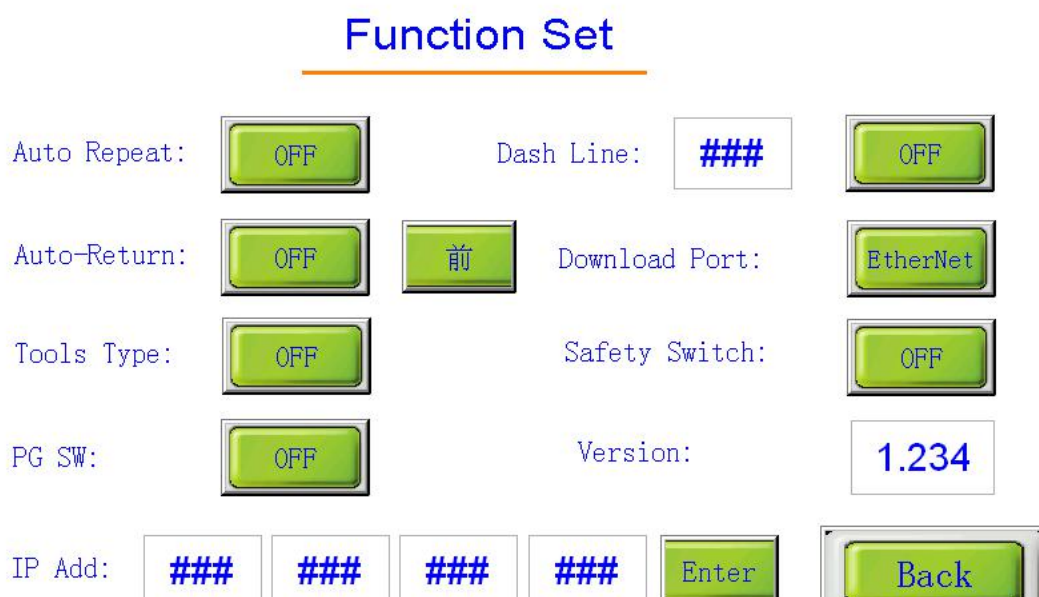
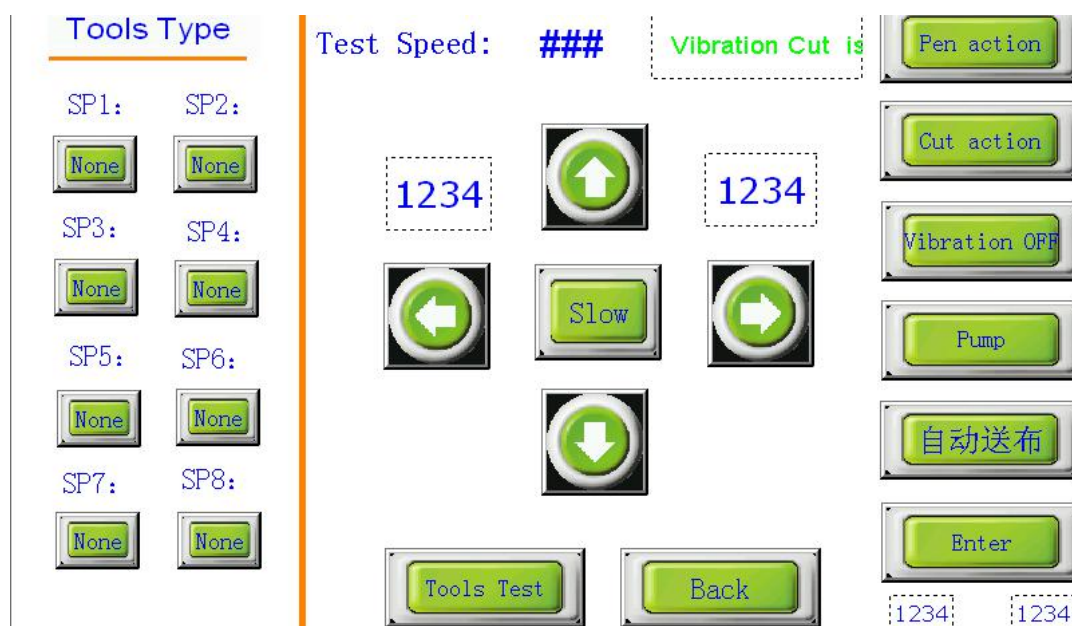


图 示 2-13

4) Temporary origin



P2-14

( 1 ) Click "test" button in the main interface to show the test interface;

( 2 ) In the "test" interface, press "X-axis - / +" or "Y-axis + / -" to position the origin, click the "temporary origin" button, return to the main interface, and the origin location is completed. Each time the output sample is cut with the newly defined origin (position of the machine head cross cursor).

(note: to cancel the location can click on the "reset" button of the main interface, the device will cancel the temporary origin)

## 2-5、decode

图 示 2-15

1) When the system shows that "the program has expired, please contact the manufacturer", indicating that the machine has expired, please contact us。

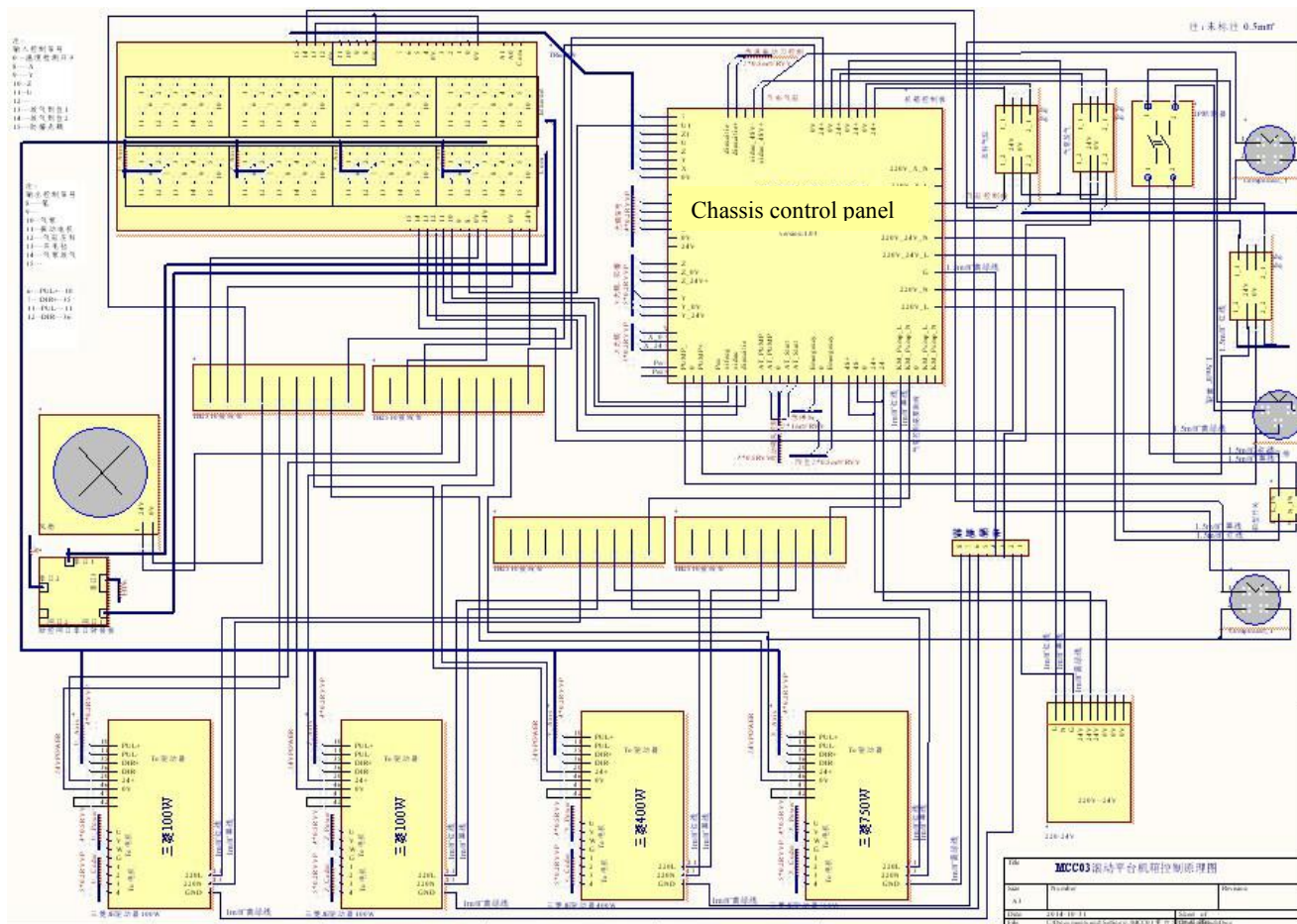
2) Boot up and restart the machine. When entering the "ENTER" press the upper left corner of the touch screen. The screen will jump to the decryption screen, ENTER the corresponding password, return - click the ENTER of the initial screen. “

The screenshot shows a decryption interface with the following elements:

- Serial Number:** A text label followed by a text input field containing the value "1234".
- Safety Switch:** A text label followed by a toggle switch currently set to "OFF".
- Date Left:** A text label followed by a text input field containing the value "12345".
- Please Input Password:** A text label followed by a text input field containing the value "12".
- Decryption Code:** A large text input field at the bottom containing the value "####".
- BACK Button:** A green button with the text "BACK" located at the bottom right of the screen.

图 示 2-16

## 2-6、schematic diagram



user agreement

▲Electricity specification: 220V / 380V, 15KW, alternating current shall be installed to prevent static electricity

▲The single-layer cutting bed of computer should prevent stronger vibration and collision

during transportation.

▲Keep the equipment table clean, regularly wipe the machine table with alcohol (do not pour alcohol directly into the table to wipe), and prevent the suction wind from blocking.

▲Do not press the rails and beams on both sides of the bed to avoid damaging the rails.

▲Do not place the scissors on the cutting table to avoid the machine head when starting the machine;

▲Plug plugs and cables should be plugged into the plug body, so that the cable should not be plugged in, and the cable should not be plugged in.

▲Don't put the equipment in a humid, dusty environment;

▲if there is a loud noise or movement, make sure to cut off the power immediately. Do not use it again. Contact the supplier immediately。

▲Any person who USES this equipment must satisfy the following conditions:

- 18 years of age;

—I have received training from technical personnel of our company;

—Read and understand the contents of the manual;

Safety precautions]

The operator must operate the machine with the attendant of experienced personnel

## 一、Common problems and solutions of cutting bed

The fault phenomenon	Reason	Repair methods
Switch on the power switch LCD screen without display	Whether the power cord is in good contact and whether the switches are opened	Rewiring, turn on the switch
Out of service	Computer work voltage below 220 v lead to can not work normally	Install the regulator
Model in some places cut well, and in some places cut	Not enough deepen knife,	Deepen the knife.
The equipment will not move when the sample is cut	Bad contact of signal line	See if the signal is plugged in
The cutting sample has a rough edge	Too fast or vibrate not open or cut	Cut the cutting speed and open the shock switch

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### **Tips for laying out the bed**

The cutting bed is a precision mechanical and electrical products, machine includes chassis control and precision machinery parts, so I really need to maintain, prevent all kinds of fault, in order to prolong the service life of equipment. The following items should be noted:

- 1、 Choose a good environment to use the bed, should not put in the place that the light is strong, avoid direct sunlight, make the mesa sundry, affect the service life (see the first chapter 1-1).
- 2、 Regularly wipe the machine table with alcohol and prevent the suction of the wind. (do not wipe the alcohol directly into the counter.)
- 3、 Do not weigh or place scissors on the device to avoid starting the machine;
- 4、 Do not weigh the rails and beams on both sides of the equipment to avoid damaging the rails。
- 5、 To avoid the cable plug, the on-line cable of the equipment is strictly prohibited, otherwise the equipment or computer will be damaged.
- 6、 Electricity specification: 220V / 380V plus/minus 10/50hz, ac power must be installed to prevent static electricity;
- 7、 The computer system is regularly maintained, optimized, and anti-virus, and the instability of computer system can also affect the normal operation of the equipment;
- 9、 During the operation of the machine, please do not close the head to the running beam or the head, so as to avoid the accident;
- 10、 The packaged computer cutting system should prevent stronger vibration and collision during transportation;
- 11、 If there is a loud noise or an obstruction of motion, be sure to cut off the power immediately. Do not use it again. Contact the supplier immediately
- 12、 Cover the bed with dust cover after use, in case the dust gets into the machine.



## 二、 Specification

machine model	RJMCC03-1516 RJMCC03-1818 RJMCC03-2516 RJMCC03-2518
Body design	Bellows, digital servo motor drive
Numerical control panel	Chinese and English touch screen display
Maximum speed	600--1000mm/s
Cutting thickness	≤15mm
Cutting material	PU、PVC、TPU、Imitation leather, woven fabrics, chiffon cloth, non-woven fabrics
Knife/pen/line wheel	High speed vibration knife
repeatability	≤0.1mm
data format	HP-GL compatible format
Data port	Ethernet port
Drive material	Imported linear guide
Vacuum	12.5KW
Voltage	220v/380V±10%/50HZ
Effecitve cut area	1500*1600 mm 1800*1800 mm 2500*1600 mm 2500*1800 mm

附件、参数记录表 以下参数仅供参考

参数记录表					
机型		日期		修改人	
参数名称	记录值	参数名称	记录值	参数名称	记录值
高级参数					
笔减速角		笔停止角		U 刀深限制	
刀减速角		刀停止角		U1 刀深限制	
算法角度		算法长度		X 复位偏移	
转角		扭矩校正		Y 复位偏移	
工具参数					
U 旋转速度		U 旋转加速度		下刀速度	
U1 旋转速度		U1 旋转加速度		下刀加速度	
下轮速度		铣刀下速度		半刀下速度	
下轮加速度		铣刀下加速度		半刀下加速度	
圆刀下速度		圆刀下加速度		V-Cut 下速度	
V-Cut 下加速度		V-Cut 垂直方向偏心距		V-Cut 前进方向偏心距	
V-Cut 斜度					
偏移设置					
笔偏移 X		U 偏移 X		U1 偏移 X	
笔偏移 Y		U 偏移 Y		U1 偏移 Y	
下笔延迟		下刀延迟		校正 X	
抬笔延迟		抬刀延迟		校正 Y	
U 旋转角度补偿		U1 旋转角度补偿		旋转刀过冲补偿前	
旋转刀过冲补偿后		半刀工具补偿			
自动送料					
滚动速度		滚动加速度		送料偏移量	
吸风延时					



传输软件参数					
X 方向比例		X 方向限制值最小		X 方向限制值最大	
Y 方向比例		Y 方向限制值最小		Y 方向限制值最大	
旋转		相对刀的坐标 X 偏		相对刀的坐标 Y 偏	
镜像		机器移动区间 X		机器移动区间 Y	
速度		是否尝试自动找到第一个点		寻找次数限制	
目标类型		标记圆半径		时间	
备用参数记录表					

参数记录表					
机型		日期		修改人	
参数名称	记录值	参数名称	记录值	参数名称	记录值
高级参数					
笔减速角		笔停止角		U 刀深限制	
刀减速角		刀停止角		U1 刀深限制	
算法角度		算法长度		X 复位偏移	
转角		扭矩校正		Y 复位偏移	
工具参数					
U 旋转速度		U 旋转加速度		下刀速度	
U1 旋转速度		U1 旋转加速度		下刀加速度	
下轮速度		铣刀下速度		半刀下速度	
下轮加速度		铣刀下加速度		半刀下加速度	
圆刀下速度		圆刀下加速		V-Cut 下速	

		度		度	
V-Cut 下加 速度		V-Cut 垂直 方向偏心距		V-Cut 前进 方向偏心距	
V-Cut 斜度					
偏移设置					
笔偏移 X		U 偏移 X		U1 偏移 X	
笔偏移 Y		U 偏移 Y		U1 偏移 Y	
下笔延迟		下刀延迟		校正 X	
抬笔延迟		抬刀延迟		校正 Y	
U 旋转角度补 偿		U1 旋转角度补 偿		旋转刀过冲补偿 前	
旋转刀过冲补 偿后		半刀工具补偿			
自动送料					
滚动速度		滚动加速度		送料偏移量	
吸风延时					
传输软件参数					
X 方向比例		X 方向限制值最 小		X 方向限制值最 大	
Y 方向比例		Y 方向限制值最 小		Y 方向限制值最 大	
旋转		相对刀的坐标 X 偏		相对刀的坐标 Y 偏	
镜像		机器移动区间 X		机器移动区间 Y	
速度		是否尝试自动找到第一 个点		寻找次数限制	
目标类型		标记圆半径		时间	
备用参数记录表					