ET9584EYA-BB1

TWXBCB85

Desktop four-axis welding robot

use Household hand book

Thank you for choosing our products!

This manual gives a detailed introduction to the use of the automatic welding robot system, including system characteristics, component operations, process

Style design and processing instructions. Please read this manual carefully before using this control system and related equipment. this will

Help you use it better! After reading, please keep it in a safe place for future reference.

Due to product upgrades or design changes, the products you received may differ from the statements in this manual in some respects.

Into. Without notice!

table of Contents

Chapter One Safety Precautions

1.1 Safety symbol

Serious warning	
	• There is a risk of electric shock. • Do not touch the parts that may be charged easily. Non-professionals should not easily change it to prevent touching Electricity. • When an emergency occurs, please press the red emergency stop switch immediately, and the machine will disconnect the power supply. Do not use when the power cord is damaged. • When not in use for a long time, please turn off the power switch, cut off the power, and pull out the power plug. • Pay attention to the power status when performing circuit maintenance. Please turn off the power before performing careful maintenance, Check work. • This product uses a three-wire grounding plug, which must be inserted into a three-hole grounding socket. Don't change the plug Or use an ungrounded three-head adapter to make the grounding poor. If you need to extend the wire, please use the ground Three-core power cord. • Dangerous voltage inside the device! Inexperienced work is dangerous to life! system When a malfunction requires repair, only experienced and authorized experts can repair the device. Or contact the agent or manufacturer. • After emergency stop or power failure 10s Please don't restart inside, otherwise it will damage the drive.
	• There is a risk of injury. • Do not extend your limbs when the power is on or the machine is operating. • Do not get the machine wet, and do not disassemble the machine or pull the power cord during use. • Please pay attention to keep the machine and its surroundings clean, which will help reduce accidents.
	• When repairing, be sure to cut off the power and air pressure, and non-professionals should not repair at will. • This product is non-explosion-proof and strictly forbidden to be used in a potentially explosive environment.
	• Before use, make sure that the heating controller components have been firmly fixed on the machine. • It is strictly forbidden to stack flammable and explosive objects or gas solvents in the work area.
caveat	
	• Do not move the movable parts by hand to avoid damage to the machine. • Make sure not to touch the moving parts during work, otherwise it may damage the machine or cause an accident. • During the operation of the machine, please do not put your hands into the equipment at will, which may cause the user to suffer

	• Injury or cause substantial damage to the involved objects. When the machine is paused, please check the condition carefully before performing manual operations, otherwise it may lead to
	• Injury the user or cause substantial damage to the involved objects. • When taking out the equipment and various accessories from the bag, if necessary, ask someone to help take them out together to avoid packing the contents Fall or cause an accident. • Pay attention to the bracket or guard plate on the upper part of the machine to prevent head collision. • After transporting to a suitable workstation, be sure to place the equipment on a flat ground to avoid tilting. An accident occurred obliquely.
	• This product should be used or stored in a place with suitable temperature and humidity. • The suitable temperature requirement is 0~40 ℃, the humidity requirement is 20%~90% (No condensation).
	• This equipment is heavy. Please place it in a single layer instead of stacking it to avoid damage or accidents. outer. • Do not stack objects within the working range of the machine. • Before daily handling or moving, please make sure that the movable parts of the equipment have been fixed (such as X The shaft may be fixed with sheet metal parts or rope for safety reasons), and then enter Line handling. • After unpacking, before using, please make sure the movable parts of the equipment are fixed (such as X The shaft may be fixed by sheet metal parts or rope for safety reasons) has been removed, Then use it again.
	• Regular inspection, maintenance and repair of this product will help ensure the performance of the equipment. Extend its service life. • Please follow the normal program to boot. • Please check that there are obstacles in the movement range of the movement mechanism before starting up.
	• Make sure to use the rated voltage, current frequency and pressure rating that meet the requirements Air pressure. • • Make sure the air source is clean and clean. • Please use suitable air pressure according to actual needs, it is recommended to use air pressure less than 0.7Mpa .
note	
	• Do not discard the packaging and foam of the device. • If you need to return the robot to the original factory or point of sale due to maintenance and other factors, you should pay attention to The original method is fixed and packaged. • Please place the packed robot upright, not upside down or horizontally. • The robot can be placed in the package only after it is reliably protected with foam.

- The packaging is made of non-moisture-proof material. Please do not get wet or rain during transportation or storage.

1.2 Package opening and parts inspection

Unpacking method:

1. Carton:

① Place the carton upright on a level ground, and tear off the shock-absorbing fixed film of the outer packaging.

② Open the upper cover of the carton and take out the parts in the upper plastic foam partition

③ Take out the plastic foam, two or more people work together to lift the machine from the bottom of the machine, and move it to a suitable station. And place it firmly. The specific parts are shown in the table below.

2. Wooden packing:

① Place the wooden box upright on a level ground, and tear off the shock-absorbing fixed film of the outer packaging.

② Use an electric drill to take out the wood fixing screws of the wooden box, and open the upper cover and the surrounding covers.

③ Take out the spare parts, two or more people work together to lift the machine from the bottom of the machine, move it to a suitable station, and Place firmly.

④ After unpacking, before using, please make sure the movable parts of the equipment are fixed (such as X The axis may come from Safety considerations should be fixed by sheet metal parts or fixed with rope) has been removed before use.

⑤ The specific parts are shown in the table below.

Parts List

Serial number	name Weigh	type number	Number of Units	image
1	Heating controller	378FA	A	1 
2	Teaching box	9011D	A	1 
3	Teaching box connection line	DB9	A	1 

4	power cable	/	A	1	
5	Manual	User manual and teaching box say Bright	Share	2	
6	Tin dross box	9026GP	A	1	
7	Metal wire cleaning ball	/	group	1	
8	Button box	8031A	A	2	

Check carefully whether the machine and accessories are missing or damaged. If you have any questions, please contact the manufacturer.

Chapter 2 Product Overview

The automatic welding robot is a set of full three-dimensional, high-precision dedicated motion control system. In addition, the system provides users with

Provides more convenient programming instructions, larger storage space, faster speed, richer parameter settings, and more effective

The flow control of the system also improves the production efficiency to a large extent; at the same time, according to the actual production needs, the

Under the premise of the target, the product structure is optimized to meet the requirements of flexibility and speed in the operation process, and the product

The reliability.

2.1 System characteristics

- Comprehensive 3D support, including 3D straight line, 3D graphics teaching, 3D custom array and other functions. Adopt trapezoidal acceleration and deceleration,

  Speed forward-looking, micro-line segment interpolation and other technologies can realize arbitrary 3 High-speed continuous motion of a three-dimensional space curve.

- Large storage area.

- Custom array function. Easily cope with the deviation of mold and soldering tip replacement, supports three-dimensional custom array, and changes in motion

  Speed and high-speed trajectory smoothing function, customizable corner speed up and down processing.

- Group function. Multiple points can be quickly copied, deleted, corrected, arrayed, and translated.
- Excellent teaching function. Support array expansion, graphical browsing, rotation, three-dimensional ellipse, insertion of commonly used graphics libraries, group Advanced functions such as group editing, subroutine, and condition call subroutine.
- Unique file connection function can realize complex multi-layer irregular array and non-array pattern interweaving processing.
- Resistive touch screen, display temperature, count, starting point correction, cleaning, reset function, convenient and quick;
- Digital temperature calibration and password lock function to ensure welding process;
- The sensor on the front of the soldering pen enables rapid temperature recovery and precise temperature control;
- The elastic contact design of the fixed element of the welding pen and the adjustable angle can meet the welding requirements of different processes;
- Built-in real-time temperature monitoring function, and communication function, can be connected with the computer, real-time monitoring and setting temperature to ensure welding Connection process;
- With temperature alarm, tin shortage alarm function, foolproof design;
- Exquisitely clean the welding tip, convenient and fast, prevent tin dross from splashing, and protect the product and working environment;
- It provides multiple processing modes such as single-step operation, overall processing, simulation operation, and loop automatic processing.

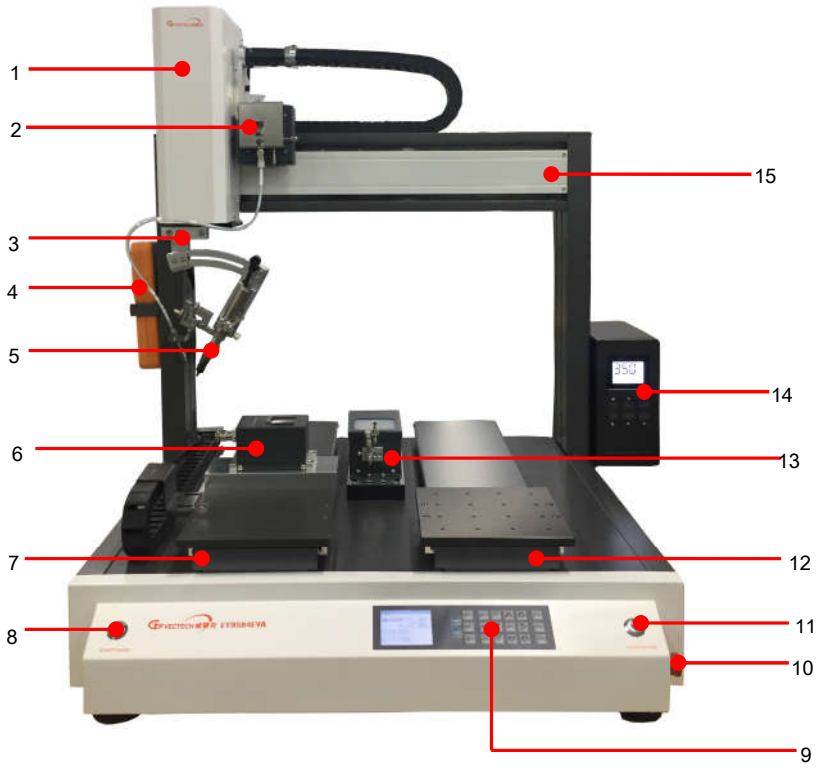
2.2 The main technical parameters

model		VECTECH ET9584EYA-BB1-TWXBCB85
★Input voltage (AC)		100-130VAC 50/60HZ
		200-240VAC 50/60HZ
Machine power (W)		400
Motor control axis		4 axis
Axis dynamic range	X (mm)	500
	Y (mm)	400
	Z (mm)	100
	R (°)	± 180
Shaft speed range	X (mm/sec)	0.1~800
	Y (mm/sec)	0.1~800
	Z (mm/sec)	0.1~300
	R (°/ sec)	0.1~800
Repeatability	X/Y/Z axis(mm)	± 0.01
	R Axis (°)	± 0.02
Resolution	X/Y/Z axis(mm)	0.01
	R Axis (°)	0.01
specified load	Workbench kg)	8
	Nose(kg)	3
Teaching file (Max)		255 Files, 60000 Points
Processing file (Max)		128 Files
Coordinate type		Cartesian coordinates
Basic action control method		Point-to-point control (PTP)/Linear interpolation (CP)
Input and output interface		RS422 , RS485 , DB37
Programming method		PCBA Motion control board + teaching box
noise		< 70dB (Distance during no-load operation 1m Measurement)
Use environment	temperature	0 ~ 40 °C
	humidity	20 % ~ 90 % (No condensation)

Dimensions (mm)	long	690
	width	630
	high	850
weight(kg)		65

Note: The external input voltage must be consistent with the nameplate information.

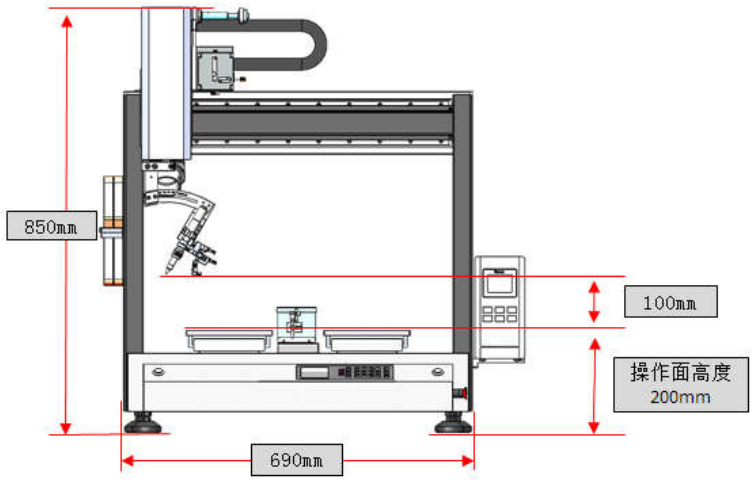
2.3 Parts description



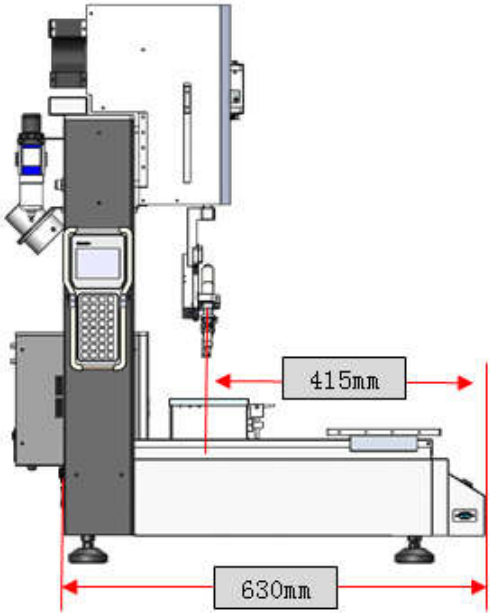
Label	name	Label	name
1	Z Shaft stepper motor + timing belt	9	Console
2	Tin feeding device	10	Emergency stop button
3	R axis	11	Right start/pause button
4	Teaching box	12	right Y Shaft hybrid servo motor + timing belt
5	Welding handle assembly	13	Slag box (welding tip cleaning device)
6	Soldering iron tip calibration device	14	Heating controller
7	left Y Shaft hybrid servo motor + timing belt	15	X Shaft stepper motor + timing belt
8	Left start/pause button		

2.4 Equipment dimensions

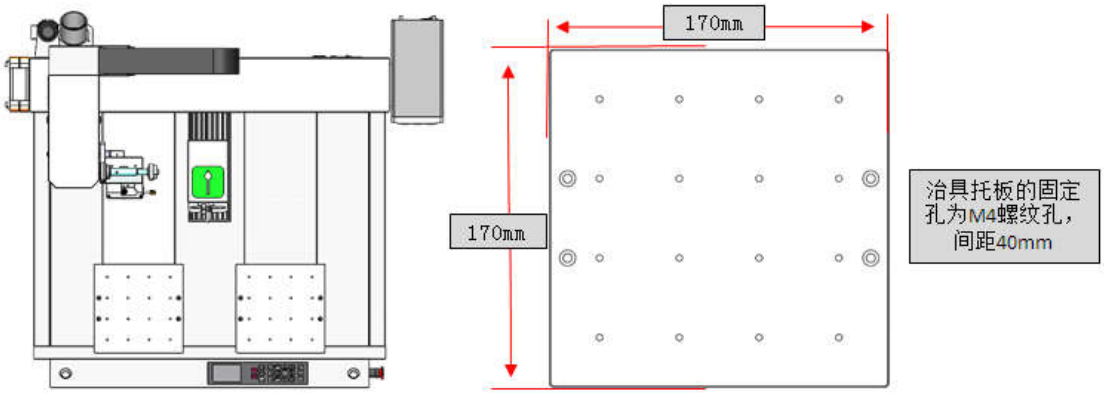
Main view



Left view



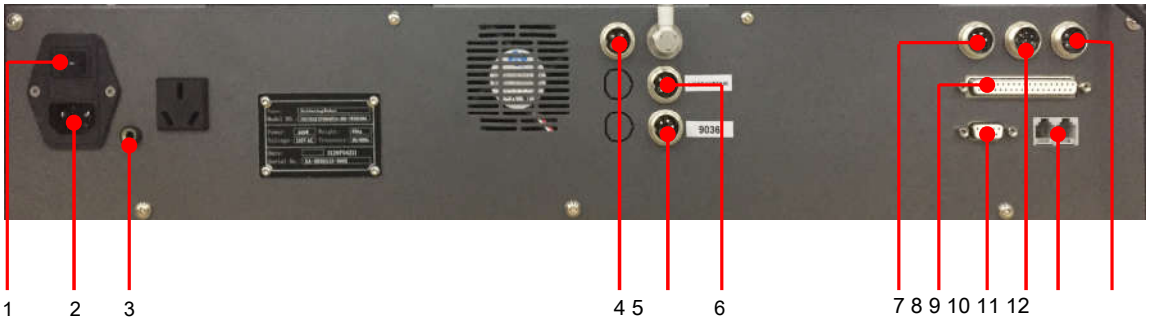
Top view



unit: mm

Chapter 3 Component Connection and Use

3.1 Device connection



1. Power switch: Control the on/off of input power.

2. Power jack: connect external 110V Input power.

3. ESD socket

4. Four-core metal socket: connect to the right button box, port function reference **3.2.2 Wiring instructions for four-core metal sockets** .

5. Five-core metal socket: connect the welding tip correction device, port function reference **3.2.3 Wiring instructions for five-core metal sockets** .

6. Five-core metal socket: connect grating, port function reference **3.2.3 Wiring instructions for five-core metal sockets** .

7. Five-core metal socket: connect heating controller, port function reference **3.2.3 Wiring instructions for five-core metal sockets** .

8. DB37 Port: spare port, port function reference **3.3 DB37 Port description** .

9. DB9 Port: spare port, port function reference **3.4 DB9 Port description** .

10. Seven-core metal socket: connect heating controller, port function reference **3.2.4 Wiring instructions for seven-core metal sockets** .

11. RJ45 Port: connect the heating controller, this port executes RS485 Standard communication protocol.

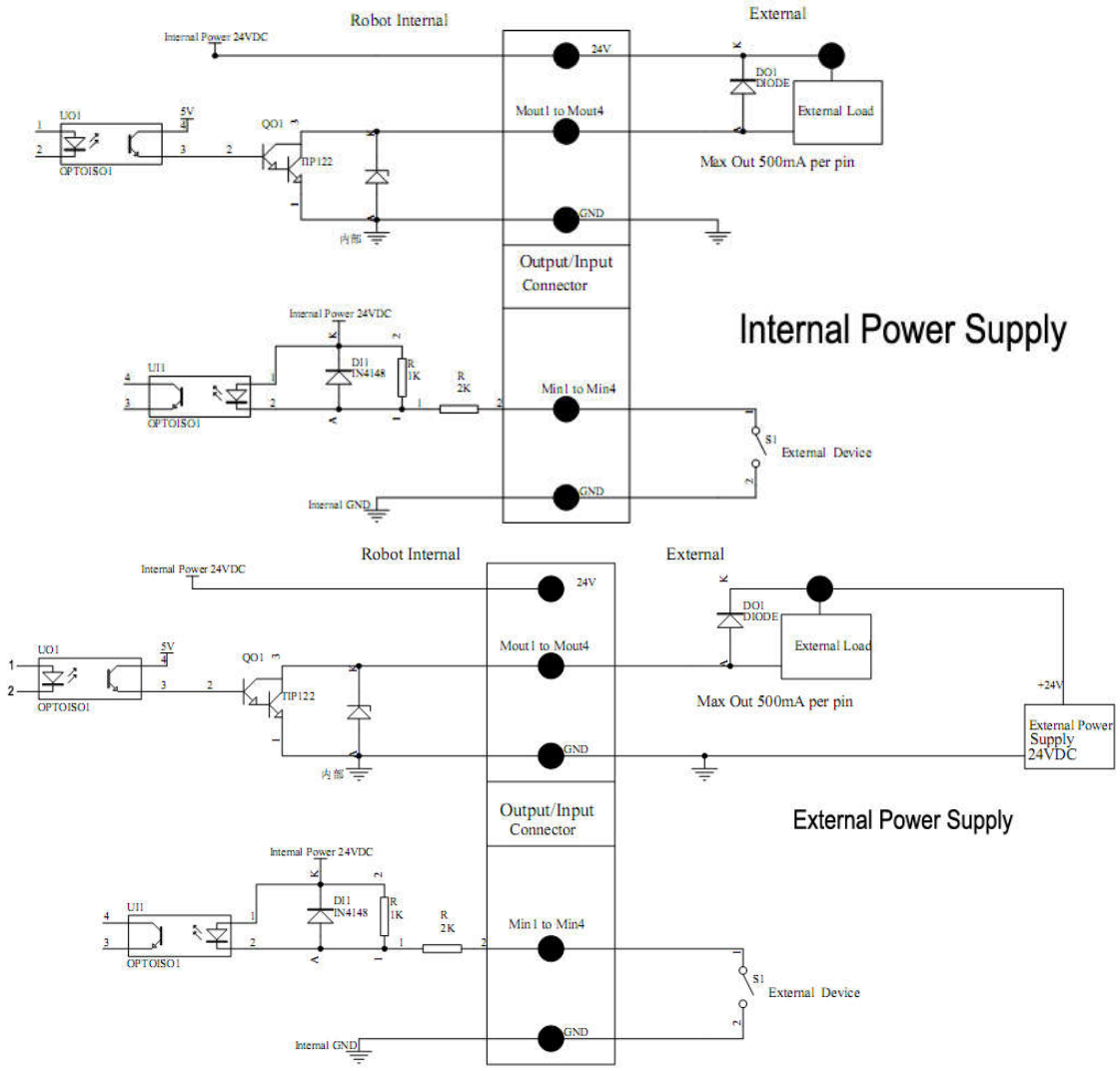
12. Four-core metal socket: connect to the left button box, port function reference **3.2.2 Wiring instructions for four-core metal sockets** .

by PU The pipe connects the external air source and the pressure regulating valve together.

⚠ Note: Connect the power cord after all cables have been connected.

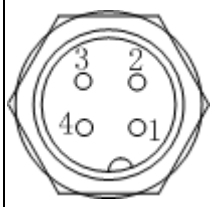
3.2 Socket description

3.2.1 Wiring instructions for the internal and external power supply of the socket

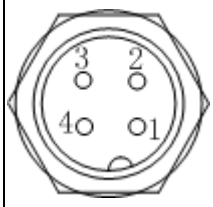


3.2.2 Wiring instructions for four-core metal sockets

The four-core metal socket in the following table is used to connect the left start/pause button, and the pin functions are as follows:

	Pin No.	Pin Name	Description	Application of this device
	1	Min4	Main input 4	Can be used to connect the left start/pause button.
	2	GND	Power ground	
	3	Min1	Main input 1	Can be used to connect the reset button (ORG)
	4	Min2	Emergency stop	Can be used to connect emergency stop button

The four-core metal socket in the following table is used to connect the right start/pause button, and the pin functions are as follows:



Pin No.	Pin Name	Description	Application of this device
1	Ein16	Extended input 16	Can be used to connect the right start/pause button.
2	GND	Power ground	
3	Min1	Main input 1	Can be used to connect the reset button (ORG)
4	Min2	Emergency stop	Can be used to connect emergency stop button

Remarks: For special needs, the input and output can be reset in the teaching box to define new functions.

3.2.3 Wiring instructions for five-core metal sockets

The five-core metal socket in the following table is used to connect to the heating controller, and the pin functions are as follows:

Pin No.	Pin Name	Description	Application of this device
1	24VDC	Power is positive	
2	GND	Power ground	
3	Min3	Main input 3	Normally used to connect safety signals
4	Ein13	Extended input 13	Normally used to connect the lack of material alarm signal
5	Ein14	Extended input 14	Normally used to connect temperature alarm signal

The five-core metal socket in the following table is used to connect the safety grating, and the pin functions are as follows:

Pin No.	Pin Name	Description	Application of this device
1	24VDC	Power is positive	
2	GND	Power ground	
3	Min3	Main input 3	Normally used to connect safety signals
4	NC	Not connected	
5	NC	Not connected	

The five-core metal socket in the following table is used to connect the welding tip correction device, and the pin functions are as follows:

	Pin No.	Pin Name	Description	Application of this device
	1	24V	power supply" 24V "	
	2	0V	power supply" 0V "	
	3	Ein9	X axis	X Axis origin sensor signal
	4	Ein10	Y axis	Y Axis origin sensor signal
	5	Ein11	Z axis	Z Axis origin sensor signal

Remarks: For special needs, the input and output can be reset in the teaching box to define new functions.

3.2.4 Wiring instructions for seven-core metal sockets

The five-core metal socket in the following table is used to connect to the heating controller, and the pin functions are as follows:

	Pin number	Pin name	Description	Application of this device
	1	24V	Power is positive	
	2	GND	Power ground	
	3	Mout1	Main output 1 , The current is less than 0.5A	Can be used for discharging
	4	Mout4	Main output 4 , The current is less than 0.5A	Can be used for cylinders
	5	Ein12	Extended input 12	Normally used to connect the blocking alarm signal
	6	Mout2	Main output 2 , The current is less than 0.5A	Can be used for working status output
	7	Mout5	Main output 5 , The current is less than 0.5A	Only valid in pulse control

Remarks: For special needs, the input and output can be reset in the teaching box to define new functions.

3.3 DB37 Port description

3.3.1 DB37 Pin function description

DB37 Pin number	DB37 Pin definition	DB37 Adapter board I/O mouth	DB37 Pin number	DB37 Pin definition	DB37 Adapter board I/O mouth

1	GND	P01	20	GND	P20
2	Eout8	P02	twenty one	Ein8	P21
3	Eout7	P03	twenty two	Ein7	P22
4	Eout6	P04	twenty three	Ein6	P23
5	Eout5	P05	twenty four	Ein5	P24
6	Eout4	P06	25	Ein4	P25
7	Eout3	P07	26	Ein3	P26
8	Eout2	P08	27	Ein2	P27
9	Eout1	P09	28	Ein1	P28
10	COM	P10	29	GND	P29
11	GND	P11	30	Ein16	P30
12	Eout16	P12	31	Ein15	P31
13	Eout15	P13	32	Ein14	P32
14	Eout14	P14	33	Ein13	P33
15	Eout13	P15	34	Ein12	P34
16	Eout12*	P16	35	Ein11	P35
17	Eout11*	P17	36	Ein10	P36
18	Eout10*	P18	37	Ein9	P37
19	Eout9*	P19			

Note: The above output interface with * can set special functions in the teaching box. The special function interface is described as follows:

Ready signal: when the machine enters the normal standby state (once it receives the "start" signal, it can run), then

The output is conducting, otherwise it is not conducting.

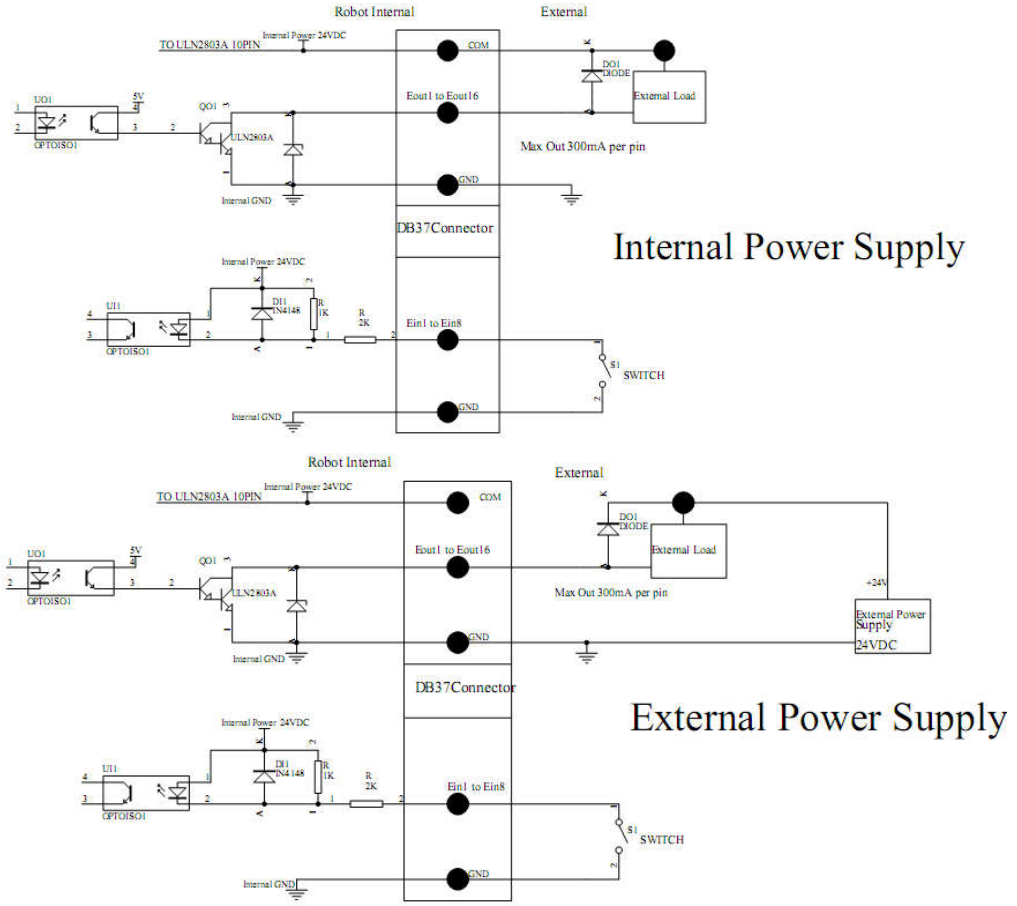
Alarm signal: indicates that the machine is set to an alarm state. Once an abnormal state is detected, the output will be turned on, otherwise it will not be turned on

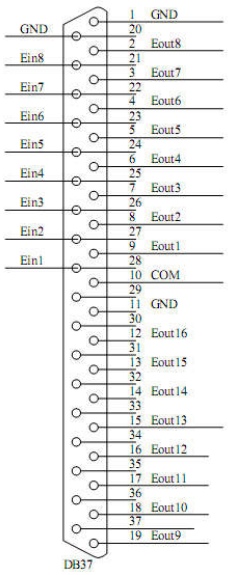
through.

Running indication: It means that as long as the machine enters the state of processing motion, the output will be turned on, otherwise it will not be turned on.

End signal: once the machine is processed, the output is turned on 200ms , Otherwise it will not conduct.

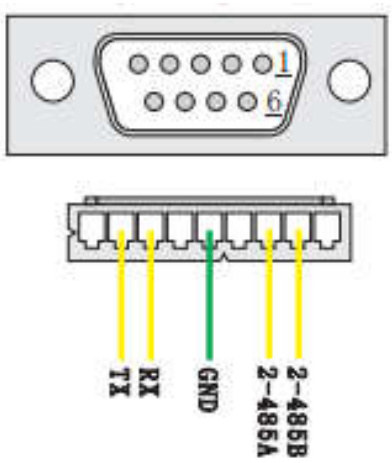
3.3.2 DB37 Connection circuit description



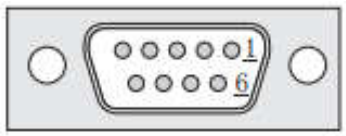


DB37 Connection diagram

3.4 DB9 Port description



3.4.1 DB9 Pin function description



Serial number	Pin	Features	Serial number	Pin	Features
1	9P-1	not connected	6	9P-6	not connected
2	9P-2	TX(transmit a signal)	7	9P-7	2-485A
3	9P-3	RX(receive signal)	8	9P-8	2-485B
4	9P-4	not connected	9	9P-9	not connected
5	9P-5	GND(Connect the power supply "0V")			

3.5 Input and output port description

- The following input and output interfaces correspond to the main input ports (Min)/Main output port (Mout)/Expand Exhibition input port (Ein)/Extended output port (Eout). These input and output ports are connected with the "inputs" of the function test of the teaching box. Input and output test interface" Min/ Mout/ Ein/ Eout Correspondingly, once set up, it can be tested before use. The following input and output
- interfaces must be in the teaching box "system configuration 2 "Settings.
- The motherboard definition ports are shown in the following table:

Port description	Port number	Features
Expansion input port	Ein12	Blocking alarm
	Ein13	Lack of material alarm
	Ein14	Temperature alarm
	Ein16	Right start/pause button
Main input port	Min1	Reset button input signal
	Min2	Emergency stop button input signal
	Min4	Left start/pause key signal
Main output port	Mout1	Send tin motor pulse
	Mout4	Tin dross box cleaning
	Mout5	Soldering motor direction

3.5.1 Input and output port definition

1. In the input function setting interface of the teaching box, the input port can be set:

Input port	Definable function of each input port
Min1	-- , Shortcut keys 1 , Reset button, safety signal- 1 , Safety signal- 2
Min2	-- , Shortcut keys 2 , Stop button, safety signal- 1 , Safety signal- 2
Min3	-- , Shortcut keys 3 , Start button, safety signal- 1 , Safety signal- 2 , Material shortage signal, material blocking signal, temperature Degree signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down
Min4	-- , Shortcut keys 4 , Foot pedal, safety signal- 1 , Safety signal- 2
Min5	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure signal
Min6	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure signal
Min7	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure signal
Min8	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure signal

Ein1~8	-- , Shortcut keys 5-259
Ein1	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure Signal, hotkey 5
Ein2	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure Signal, hotkey 6
Ein3	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure Signal, hotkey 7
Ein4	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure Signal, hotkey 8
Ein5	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure Signal, hotkey 9
Ein6	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure Signal, hotkey 10
Ein7	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure Signal, hotkey 11
Ein8	--, Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Lack of material signal, Blocking signal, temperature signal, temperature/feeding failure, cylinder sensor up, cylinder sensor down, air pressure Signal, hotkey 12
Ein09	-- , Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Material end correction X Limit, quick key 260 , Cylinder sensor up, cylinder sensor down, air pressure signal
Ein10	-- , Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Material end correction Y Limit, quick key 261 , Cylinder sensor up, cylinder sensor down, air pressure signal
Ein11	-- , Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Material end correction Z Limit, quick key 262 , Cylinder sensor up, cylinder sensor down, air pressure signal
Ein12	-- , Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Shortcut keys 263 , Material shortage signal, material blocking signal, temperature signal, temperature/feeding fault, cylinder sensor up, gas Cylinder sensor, air pressure signal
Ein13	-- , Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Shortcut keys

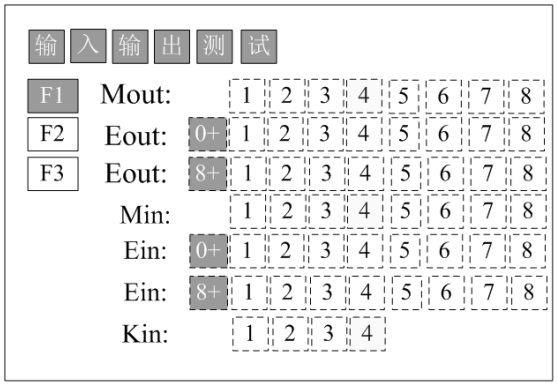
	264 , Material shortage signal, material blocking signal, temperature signal, temperature/feeding fault, cylinder sensor up, gas Cylinder sensor, air pressure signal
Ein14	-- , Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Shortcut keys 265 , Material shortage signal, material blocking signal, temperature signal, temperature/feeding fault, cylinder sensor up, gas Cylinder sensor, air pressure signal
Ein15	-- , Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Shortcut keys 266 , Material shortage signal, material blocking signal, temperature signal, temperature/feeding fault, cylinder sensor up, gas Cylinder sensor, air pressure signal
Ein16	-- , Reset button, stop button, start button, foot pedal, safety signal- 1 , Safety signal- 2 , Shortcut keys 267 , Material shortage signal, material blocking signal, temperature signal, temperature/feeding fault, cylinder sensor up, gas Cylinder sensor, air pressure signal
Kin1	-- , Cylinder sensor up, cylinder sensor down
Kin2	-- , Cylinder sensor up, cylinder sensor down
Kin3	-- , Cylinder sensor up, cylinder sensor down
Kin4	-- , Cylinder sensor up, cylinder sensor down

2. In the teaching box output function setting interface, the output port can be set:

Output port	Definable function of each output port
Mout1~Mout8	-- , Head 1 , Head 2 , Head 3 , Head 4 , Running instruction, end signal, cylinder, cleaning
Eout01~Eout08	- , Head 1 , Head 2 , Head 3 , Head 4
Eout09~Eout16	-- , Preparation signal, alarm signal, running instruction, end signal, cylinder, cleaning, pause signal Number, left indicator, right indicator

3. In the teaching box, the output interface Eout09~Eout16 Corresponds to "input and output test interface" and " OUT Point setting introduction

Noodles Eout8+ interface.



which is:" Eout8+1 "Indicating extended output port Eout09 " Eout8+2 "Indicating extended output port Eout10 " Eout8+3 "

Indicates extended output port Eout11 , And so on.

" Ein8+1 "Indicating extended input Ein09 " Ein8+2 "Indicating extended input Ein10 " Ein8+3 "Means

Expansion input Ein11 , And so on.

3.5.2 Function description of input port and output port

Input port function	Input port function description
--	No specific function is defined.
Reset button	Input the reset signal to the motion mechanism through the corresponding signal pin, and the motion mechanism performs the reset operation.
Stop button	Input a stop signal to the motion mechanism through the corresponding signal pin, and the motion mechanism stops moving.
Start button	Input the start signal to the motion mechanism through the corresponding signal pin, and the motion mechanism starts (or pauses) Processing operation.
Foot pedal	Input the pedal signal to the motion mechanism through the corresponding signal pin, and the motion mechanism will execute according to the pedal signal Task, its function is similar to the start key.
Safety signal- 1	Through the corresponding signal pin to input "ground connection" to the motion mechanism, the motion mechanism enters debugging state the State (cannot exercise, only programming).
Safety signal- 2	Through the corresponding signal pin to input "ground connection" to the motion mechanism, the motion mechanism enters the debugging state State (cannot exercise, only programming).
	Input the lack of material signal to the motion mechanism through the corresponding signal pin, and the motion mechanism execute the phase after detecting will Material shortage signal Should be operated (pause, alarm, etc.) after processing at a certain processing point.
Blocking signal	Input the blocking signal to the motion mechanism through the corresponding signal pin, and the motion mechanism will execute the phase after detecting it. Should be operated (stop processing immediately, alarm, etc.).
Temperature signal	Input the temperature signal to the motion mechanism through the corresponding signal pin, the motion mechanism will execute the phase Should be operated (stop processing immediately, alarm, etc.).
Temperature/Feeding barrier	Input the "temperature fault or feeding fault" signal to the motion mechanism through the corresponding signal pin, After the mechanism detects it, it performs corresponding operations (stop processing immediately, alarm, etc.).
Cylinder sensor on	Input the signal "on the cylinder sensor (retracted state)" to the exercise machine through the corresponding signal pin The movement mechanism judges whether the cylinder is retracted in place.
Cylinder sensor under	Input the signal of "cylinder sensor down (extended state)" to the exercise machine through the corresponding signal pin The motion mechanism judges whether the cylinder is in place.
Material end correction X Limit	The dispensing model is not used. Corresponds to Ein09 Input port, through which the signal is output to the material head X The axis position is automatically corrected.

	(Note: only X/Y/Z The three axes can be corrected simultaneously to correct the position of the material head. Connect only" 9036 "Tip position correction device" is valid.)
Material end correction Y Limit	The dispensing model is not used. Corresponds to Ein10 Input port, through which the signal is output to the material head Y The axis position is automatically corrected. (Note: only X/Y/Z The three axes can be corrected simultaneously to correct the position of the material head. Connect only" 9036 "Tip position correction device" is valid.)
Material end correction Z Bit	The dispensing model is not used. Corresponds to Ein11 Input port, through which the signal is output to the material head Z axis limit The position is automatically corrected. (Note: only X/Y/Z The three axes can be corrected simultaneously to correct the position of the material head. Connect only" 9036 "Tip position correction device" is valid.)
Hotkey	Corresponding to the shortcut number under the processing file, the shortcut number can be found in the "shortcut number" on the processing interface of the teaching Set in options. Used by the robot to quickly find the corresponding file.
Hotkey 1	Corresponds to Min1 Input port
Hotkey 2	Corresponds to Min2 Input port
Hotkey 3	Corresponds to Min3 Input port
Hotkey 4	Corresponds to Min4 Input port
Hotkey 5~259	Corresponds to Ein1~Ein8 Input port, namely Ein1~Ein8 This 8 The high and low level status of each input port 255 (1~255) Kinds of combinations, its value plus 4 That is, the shortcut key value represented by this combination.
Air pressure signal	Air pressure status signal

Output port function	Output port function description
--	No specific function is defined.
Feed 1	Indicates the material head of the machine 1 Once the program is executed, the output is turned on, otherwise it is not turned
Feed 2	on. Indicates the material head of the machine 2 Once the program is executed, the output is turned on, otherwise it is not
Feed 3	turned on. Indicates the material head of the machine 3 Once the program is executed, the output is turned on, otherwise it is
Feed 4	not turned on. Indicates the material head of the machine 4 Once the program is executed, the output is turned on, otherwise
Ready signal	it is not turned on. Indicates that the machine enters a normal standby state, that is, the output is turned on, once the "start processing" letter is received No., it can run, and the output will be turned off automatically after starting to run.
Alarm	Indicates that the machine is set to an alarm state, once an abnormal state is detected, the output is turned on, otherwise it will not Conduction.
Operation instructions	It means that as long as the machine enters the state of processing motion, the output will be turned on,
End signal	Indicates that once the machine is processed, the output is turned on 200ms , Otherwise it will not conduct.

cylinder	It means that once the machine executes the cylinder movement, the output will be turned on and the cylinder will be controlled, otherwise it will not be turned on.
Cleaning	Indicates that once the machine executes the cleaning program, the output is turned on and the cleaning action (blowing or spinning Brush), otherwise it will not conduct.
Pause signal	Output signal during pause
Left indicator	double Y When the left button box is pressed, the status signal of the indicator light
Right indicator	double Y When the right button box is pressed, the status signal of the indicator light

Note: 1 , In order to ensure the normal operation of the machine, the above setting operations are completed by our company's professionals and are not open to users.

2 , The above functions are subject to change without notice.

Chapter 4 Debugging and Use

4.1 Debugging steps

4.1.1 Safety check before operation

 When checking the circuit, if there is a broken circuit or wet parts, please do not turn on the power immediately! Need to be removed or maintained

When repairing, please find a professional to operate!

 Pay attention to safe use of electricity to prevent the risk of electric shock.

When the machine is newly installed or idle for a long time, before powering on and ventilating the machine and operating, the following safety must be done

Full inspection:

1 , Check whether the power supply is at the rated voltage.

2 , Check whether the equipment is properly grounded.

3 , Make sure that no extraneous objects are left on the movable parts of the electrical cabinet and the machine.

4 , Check whether the moving part is fixed.

5 , Check whether the emergency switch is pressed.

6 , Check whether the main power switch is in OFF status.

7 , Push and pull the movable part by hand to check whether the movement is smooth.

8 , Check whether the wiring plugs and air pipes are well connected and whether there is any air leakage.

4.1.2 first time using

If it is the first time to use, perform function test and adjustment according to the following steps.

The first step: installation and function test

Before use, you need to connect and install all parts correctly.

First, please use the test function of the teaching box to test whether the basic functions of the system are normal (refer to the "Teaching Box User Manual"

Function test"). Including: Whether the positive and negative axial movement of each axis is normal.

Step 2: Set the system parameters and system equipment instruction parameters

Set the system parameters and the parameters required for equipment operation. For the setting of system parameters, please refer to "System parameter settings".

Note: Be sure to set these parameters correctly! Otherwise, it may cause difficulties for further use.

Step 3: Show the tutorial design

To teach a graphic, please refer to "Quick Start of Tutorial-based Design in the User Manual of the Teaching Box".

Step 4: Starting point calibration and setting file parameters

1. Starting point correction: The starting point of the teaching file generated for the first time needs to be corrected. Please refer to teaching for the process of starting point correction "Start point calibration" in the box manual.
2. For setting file parameters, please refer to "Teaching File Parameters" in the teaching box manual.

Step 5: Download and process

1. Download: Please refer to "File Download" in the teaching box manual.
2. Processing: Please refer to the "File Processing Operation Instructions" in the teaching box manual.

4.1.3 Debugging steps

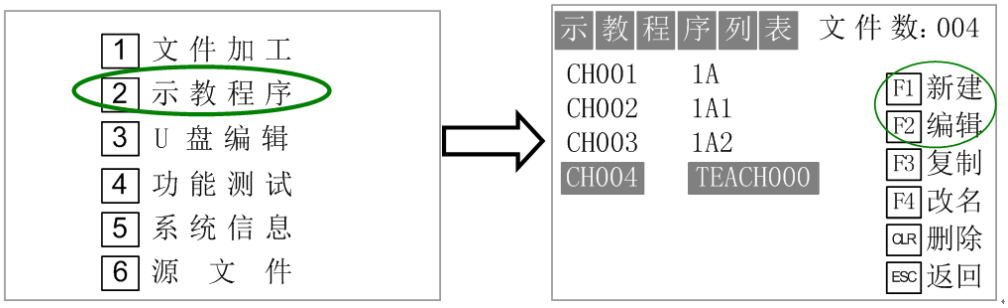
 When debugging the machine or the machine is running, pay attention to the high temperature near the soldering iron tip, do not touch it directly!

 When the machine is in motion, do not put your hands in or touch the moving parts to prevent your hands from being caught!

1. After connecting all the interfaces, connect the power cord and connect the vent pipe to the input end of the oil-water separator.
2. Turn on the switch knob and open the pressure regulating valve of the oil-water separator to the appropriate air pressure.
3. Press "on the main interface of the teaching box 7 "Press the button to enter the temperature control setting interface, by clicking " SHIF "Press to close the soldering station.

4. In the teaching box file editing, insert the isolated point and move the position of the isolated point to the welding position. The specific operations are as follows:

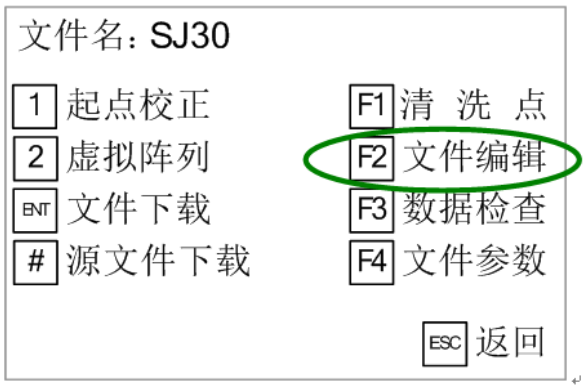
Select in the main interface of the teaching box 2 "Show tutorial style"



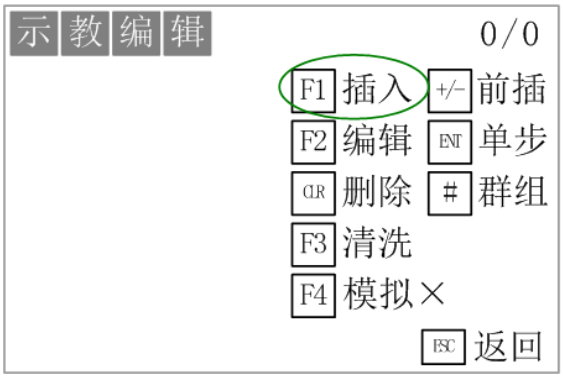
① →After entering the tutorial-style menu, click " F1 "Enter the new file interface, enter the file name (the file name can

Therefore, it can only be a maximum of eight digits for letters, digits, or a mixture of letters and digits), click " ENT "save.

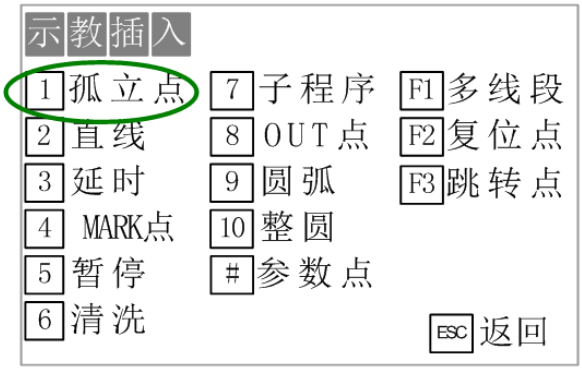
② Click " F2 "Edit the relevant parameters of the new document, click F2 After entering the interface.



③ →After entering the file menu, click " F2 "File editing.



④ →After entering the file editing interface, select 1 "insert".

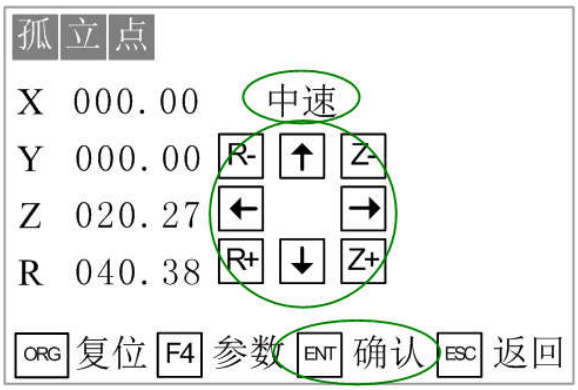


⑤ → Then select 1 "Isolated point".

⑥ →The interface automatically returns to the teaching editing interface, on the left 001 The isolated point is a newly inserted isolated point.

⑦ →Move the direction movement key on the teaching box (↓→↑← etc.), select the inserted isolated point, the state is shown in the figure above

To have selected this isolated point, click " F2 "Enter the isolated point interface as shown below.



⑧ →After entering the point editing interface, move the direction movement keys on the teaching box (↓→↑← etc.), SHF key

Adjust the moving speed (low, medium and high). Move the welding tip to the point to be welded and click " ENT "Save point coordinates

value.

⑨ Set the parameters of the welding point (take the isolated point as an example): enter the isolated point, select the parameter setting (this part can be referred to

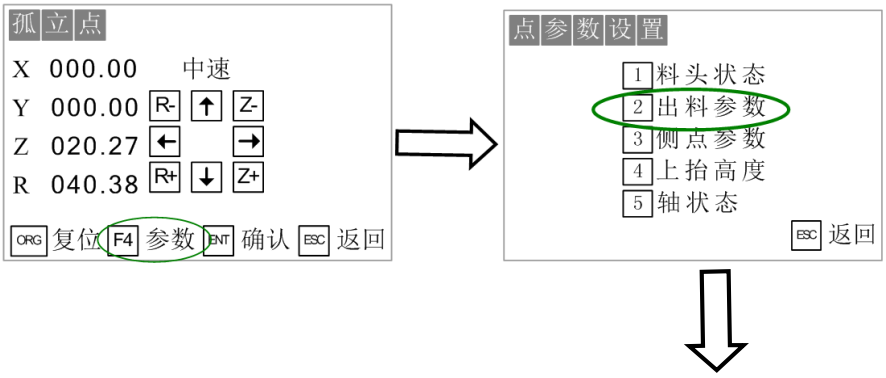
Refer to "Instructions for Welding Robot Teaching Box"), and set the feeding height, feeding length, and feeding delay here. Feeding height

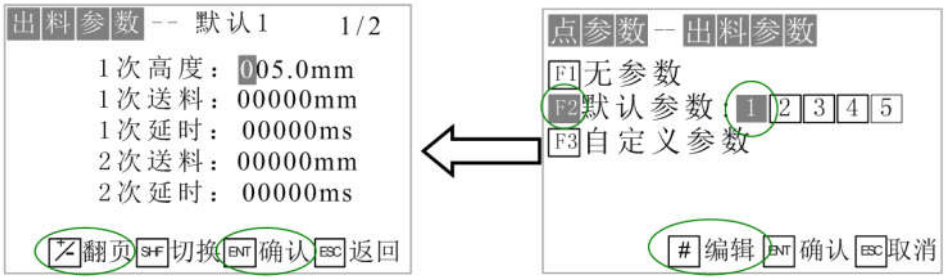
It is the lifting height of the soldering iron tip between two feedings, and the feeding length represents the length of tin feeding during processing. Soldering iron during one feeding

The head stays at the height of one feeding; one time delay means: no feeding, the tip of the soldering iron drops to the welding isolated point, and the welding point is heated

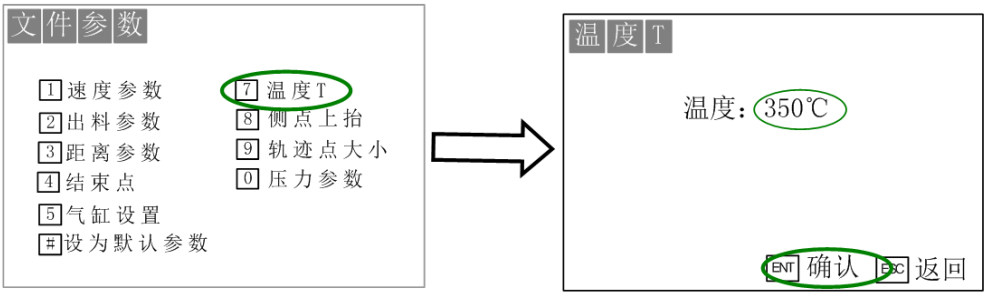
And tin is applied; the second feeding means supplementary feeding, the welding head stays at the isolated point, and the residence time is the second delay time.

The three feedings are consistent with the above feeding content. The specific operation method is shown in the figure below:





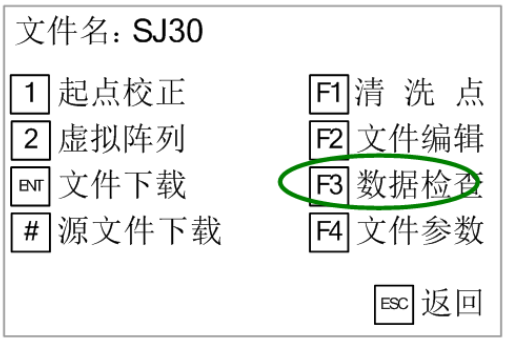
Press "in the teaching file interface F4 "After entering the file parameter interface, press" 7 "Set the welding temperature and confirm after setting the temperature.



⑩ →After the last point is determined, return to the teaching file menu, press first F3 Carry out data check, check

Whether the program has an error that exceeds the limit, click and display "Data is normal!" to continue; if the check result is not

If the material is normal, return to file editing, adjust the points, and modify the points that exceed the limit.



5. Adjust the angle of the tin needle so that the needle is straight to the center of the soldering iron tip, and the distance between the needle tip and the soldering iron tip is approximate

0.5~1mm Otherwise, if the temperature is too high during heating, the needle will stick to the soldering flux, which will cause the tin to not be smooth. If the welding is straight

Plug-in pin, the pin can not be clamped between the soldering pin head and the soldering iron head, otherwise Z After the shaft is lowered, the tip of the soldering iron is easy to get stuck

At the pin. The direction and angle of the universal ball at the fixed position of the tin-out needle can be adjusted.

6. Adjust the position of the soldering iron tip, move the isolated point so that the soldering iron tip is close to the soldering point, and at the same time move the soldering handle upwa

Lifting, there is a buffer mechanism at the handle. In order to prevent hard contact with the product, lifting the buffer mechanism is for analogy of the motion situation.

Prevent interference during movement and find out in time. On the other hand, it is to prevent the product from being forced by the moving position too low pressure. Hands repeatedly

The handle is lifted and put down along the buffer mechanism, and the position is moved to make it more precise. After selecting the isolated point position, you can press OK,

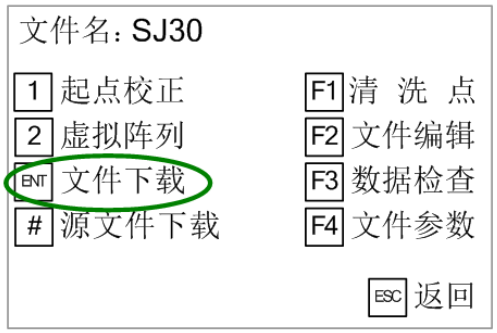
Then run it once to see if the movement is smooth.

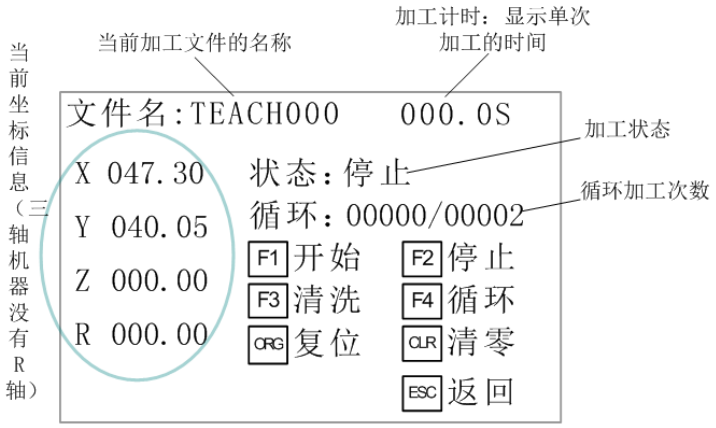
7. After adjusting the position and parameters, start welding. The program will then be run as follows:

After the parameters and points are determined, return to the teaching file menu and press ENT Download the file. After the download is complete,

Enter the file processing interface automatically. Choose Start to start running the edited isolated point program. **Note: When the download is complete, the temperature control preset**

Is open.





After soldering, observe whether the soldered points meet the requirements, and modify and adjust the soldering parameters.

4.2 Interrupt to continue processing

1. Function: If the current processing operation is interrupted unexpectedly, the work can be resumed from the interruption point after the elimination process.

2. Interruption to continue processing operation mode: After eliminating the interruption accident, press the "start" key to exceed 2 Seconds, the robot

Continue to work at the memorized interruption point; if the time of pressing the "start" key is not greater than 2 Seconds, the robot is still

Start to work.

3. According to the different ways of triggering the interrupt, the interrupt can be divided into the following situations:

Break category		Interrupt mode number	Stop method
1	Press "stop STOP "key	A/B/C/D	Stop now
2	Press "emergency stop EMERGENCY "key	A/B/C/D	Stop now
3	Press "Reset ORG "key	A/B/C/D	Stop now

4	Press "Pause PAUSE "key	A/B/C/D	Stop now
5	"Lack of material" alarm*	A/B/C/D	Stop now
6	"Blocking" alarm*	A/B/C/D	Stop now

⚠note:

- If the emergency stop button triggers the interrupt, the emergency stop switch must be pulled out and the reset button is pressed before subsequent actions can be performed.
- The above "interrupt type" is only suitable for processing, and the ones with "*" will not work in the programming debugging mode.

4. According to the way the robot stops working when the current processing operation is unexpectedly interrupted, the interruption form number can be divided into A/B/C/D , Its definition is described in the following table:

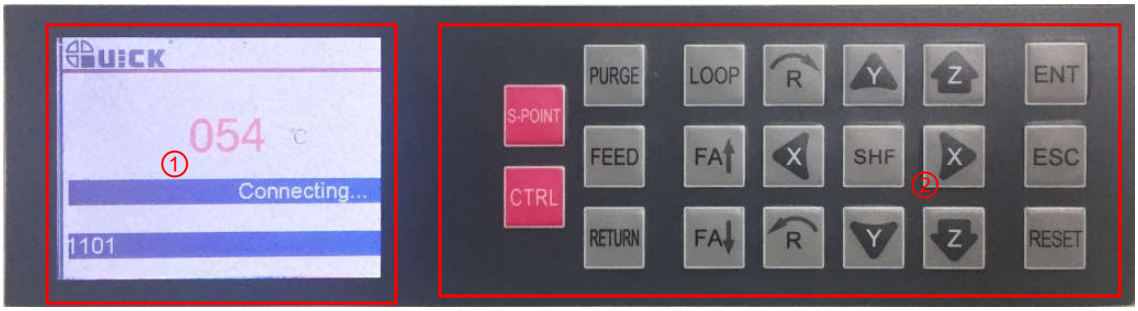
Interrupt stop mode

Interrupt mode number	Where the interrupt occurred	Position to continue processing after interruption
A	Feeding has started to within the distance of welding completion	Skip the work point when interrupted and go directly to transport Next processing point
B	During idle movement	Go directly to the next processing point
C	During pause	To run the next processing point
D	Within the lift height distance	To run the next processing point

⚠Note: If the power is interrupted during the operation, the processing after the interruption process cannot be continued.

Chapter 5 Operation Panel

5.1 Operation panel overview



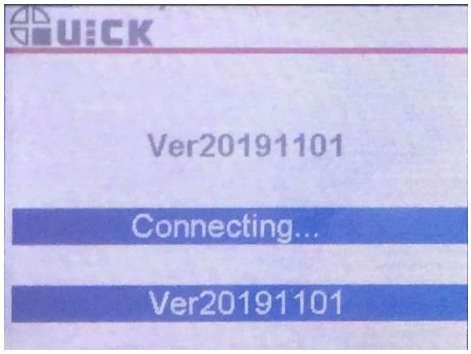
① Display area

Display temperature, communication status and version information and other related content.

② Operation button

Operation buttons	Features	Operation button	Features
RETURN	Back tin button	Y Y	Y Axis running direction button
PURGE	Tip cleaning function	Z Z	Z Axis running direction button
FEED	Send tin button	SHF	Speed control button
LOOP	Loop processing button	ENT	OK button
FA FA	Cylinder open/close button (conventional For screw machine)	ESC	Back button
R R	R Rotation direction of shaft motor	RESET	Reset button (the device will automatically Reset to the preset origin)
X X	X Axis running direction button	CTRL	Heating controller switch button
S-POINT	Welding tip back to the starting point of processing button		

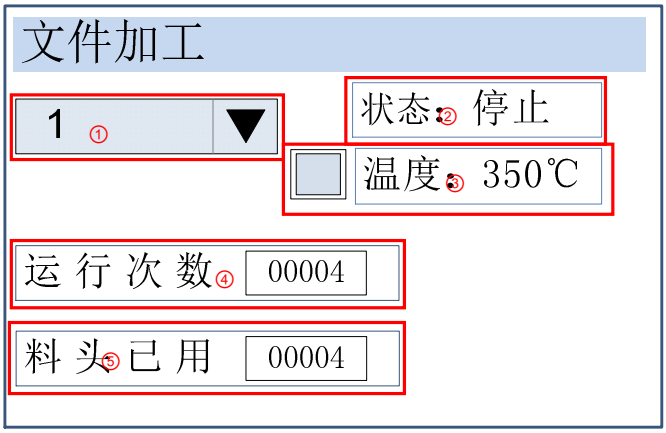
5.2 Main interface (teaching box is connected)



- Power on the device.
- Connect the cable of the teaching box to RS422 port.
- Display information such as version number, communication status, etc. The operation buttons

5.3 Main interface (teaching box is not connected)

When the teaching box is not connected to the device, it will automatically jump to the file processing interface, as shown in the figure below:



① Display the current processing file name

By clicking SHIF Press to select the file name.

② Running status

Real-time display of device operating status.

③Temperature

Display the current temperature value of the welding tip, the user can click " CTRL "Button to select this function.

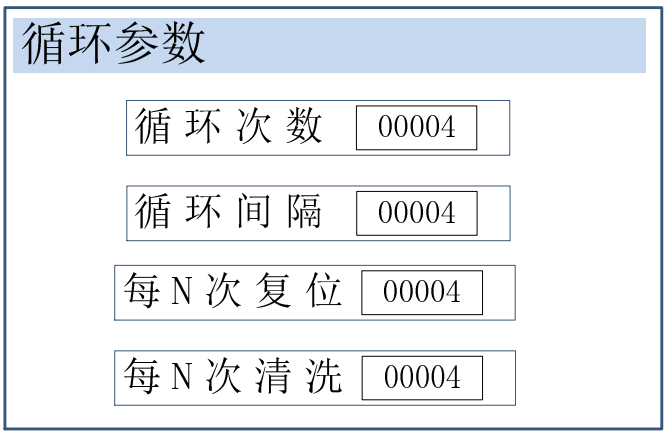
④ Number of runs

A counter for the number of times the equipment is operated

⑤The material head has been used

The soldering iron tip uses a counter.

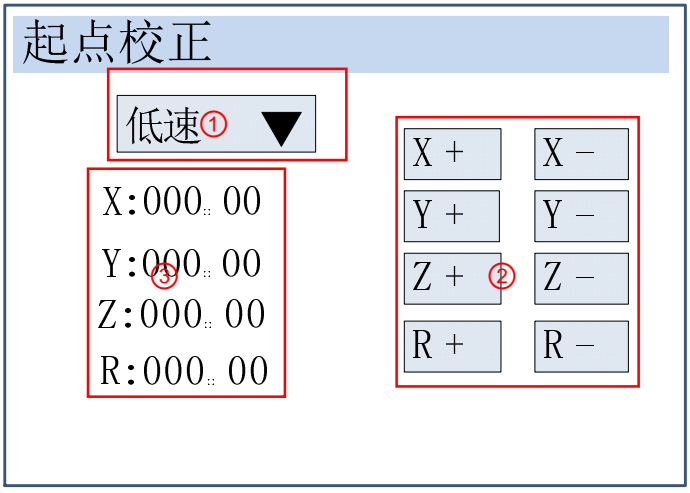
5.3.1 Loop parameter interface



● Click " LOOP "Button will directly enter the loop parameter setting interface, as shown in the figure above.

● Click  Press the button to change the number of digits, click  Change the digit size.

5.3.2 Start point calibration interface



Click " S-Point "Button to directly enter the starting point calibration interface, as shown in the figure above.

① Speed control symbol

The user can select the speed (high speed, low speed, medium speed) through the drop-down list.

② Jog symbol

The user can click the axis operation button  Control the jog side of the running axis to.

③ Display area

Real-time display of welding tip coordinate value.

Chapter 6 Failure and Maintenance

6.1 Faults and solutions

Serial number	Fault type	possible reason	solution
1	System boot does not reset	Please check if the emergency stop button is pressed	Release emergency stop and press reset
2	During processing Z Shaft or XY Inaccurate axis positioning	The load is too heavy or the speed is too fast	If a certain axis deviation is particularly obvious Obviously, reducing the acceleration of this axis can slow down Solution to this phenomenon. Reduce speed and acceleration Processing after small
3	The motor works abnormally	Motherboard program problem or motor broken.	First, the motors of several axes on the drive board The signal lines are interchanged. If the fault is In the old, the motherboard program problem was ruled out, and then Connect the motor lines of several axes on the drive board Exchange. If the good shaft is changed to the bad The above is also bad, that means The drive is broken, if the broken shaft is replaced with a better one The top is still broken, then it means that the electricity If the machine is damaged, just replace it with a new one.
4	The LCD on the panel keeps showing Show EMERGENCY STOP PLEASE RESET .	Not reset or the relay on the power supply board The appliance is broken.	Please unscrew the emergency stop button first, and press reset key. Then it should be eliminated, and often. If after trying it still can't Is a relay on the power board broken.
5	Turn on the fuse to blow.	If replacing the fuse still occurs The fault may be that the motherboard is broken.	Replace with new products
6	The motor is at the origin when reset Jitter.	The photoelectric switch is broken or the driver boa problem.	Replace the photoelectric still failure is the drive The problem.
7	X The axis only goes in one direction movement.	Generally X The drive plate of the shaft is broken to make.	Replace with new products.
8	The machine keeps alarming.	If the alarm still remains after troubleshooting No warning signal was returned.	Press emergency stop to see if it will power off, check Is there any fault?
9	Drive motor drive shaft broken	Due to long-term forced operation, the drive dismantles the drive shaft and welds, tightening and loosening	

Serial number	Fault type	possible reason	solution
	crack.	The screws of the shaft and the base are loose, resulting in moving screws. Cracks, causing wear and tear.	
10	Moving parts are stuck.	The proximity sensor screw is loose, causing The offset of the proximity sensor position.	Correct the proximity sensor.
11	The accuracy of the machine is reduced.	1. The guide rail is loose. 2.X Shaft and Y The axis is not vertical.	1. Readjust the straightness of the guide rail, vertical Straightness and levelness. 2. Adjust the connecting screw of the beam and the machine bolt.
12	There is a foreign body in the screw	1. Debris infiltrates or is damaged in the bearing. 2. Lack of lubricant.	1. Clean or replace bearings 2. Add lubricant
13	The screw swings when it is running, There are periodic scratches.	1. The screw rod is bent due to misoperation. 2. The screw rod and the motor shaft are not concentric.	1. Replace the screw. 2. Readjust or replace.
14	Pressure gauge needle jumps when working Move, and then set the pressure value Swing back and forth nearby.	The valve sealing surface is moisture or oxidized 物Attachment.	Disassemble the valve, remove the attached moisture and Oxide removal.
15	The triangle belt is slipping.	1. The belt is too loose 2. The belt is contaminated with lubricant.	1. Adjust the motor base to draw the belt closer 2. Wipe off the oil on the belt and eliminate it Keep happening.
16	Sliding block movement lag, guide The rail heats up seriously, and the Now the phenomenon of wear.	gap between the rail and the slider is too small	1. Adjust the gap between the guide rail and the slider. 2. When wear and puncture, you need to remove the guide Rails, sliders, repair scratches and punctures Location.

6.2 Daily inspection and maintenance

Safety instructions for daily inspection and maintenance:

Risk of electric shock

Be sure to open the door of the control cabinet after power off.

Cut off the power 5 Minutes later, replace the servo unit (including the rectifier) and the control power unit.

During this period, please do not touch the terminal!

Risk of electric shock and injury

After the repair, please do not forget the tools in the electric control cabinet, and confirm whether the door of the electric control cabinet is closed.

During maintenance, paste “No power on” and “No power on” on the main power control cabinet and related control boxes.

"Power on" and other warning signs to prevent non-related personnel from closing the switch.

Inspection cycle of robot items:

power supply OFF When (when not operating) inspection						
Check item	Check location	daily an examination	1 Months an examination	3 Months an examination	6 Months an examination	12 Months an examination
Confirm the presence of screws/bolts Loose/sway	Guard plate, cover plate screw	√	√	√	√	√
	Robot setting bolt	√	√	√	√	√
	Lock bolts of each mechanical shaft	√	√	√	√	√
	Bolts/screws around the shaft					√
	Bolts for motors, reducers, etc. / Screw					√
Confirm whether the connection socket is loose Move, if so, step up	External connection on the robot socket	√	√	√	√	√
	Robot cable unit		√	√	√	√
Visually check for Department defects. Clean up Dust etc.	Robot appearance	√	√	√	√	√
	External cable		√	√	√	√
Check for bending or Position offset. Enter when necessary Repair it or place it properly.	The position of each axis of the robot	√	√	√	√	√
State of grease	Please refer to the following "Ball wire Maintenance of the bar Maintenance of the rail"				√	√

power supply ON Time (operation time) inspection						
Check item	Check location	daily an examination	1 Months an examination	3 Months an examination	6 Months an examination	12 Months an examination
Confirmation of work area	Each axis					√
Shake the cable gently by hand to confirm the external cable (including the machine Whether there is disconnection	Robot cable unit)				√	√
in MOTOR ON Use in the state Press each robotic arm to confirm that there is No shaking.	Each robotic arm					√
Whether the human-computer interaction interface function Normal, including each button and press Key light, whether the emergency stop button can be released The drive is powered off. If there is touch Screen should check the touch screen Whether the screen function is normal.	Operation panel, emergency stop button, lighthouse. (Touch screen)	√	√	√	√	√
Check if there is abnormal sound Sound, abnormal vibration.	All	√	√	√	√	√

Maintenance cycle of robot equipment

Maintenance of equipment	Maintenance project	Maintenance time	Remarks
Electric control cabinet body	Check whether the door of the electric control cabinet Close	every day	
	Check that the sealing part has No gaps and damage	per month	
Heating table	Check whether the heating surface is clean net	every day	
Cabinet fan and rear fan	Confirm fan rotation	appropriate	When turning on the power
Emergency stop button	Action confirmation	appropriate	When the servo is turned on
Safety switch	Action confirmation	appropriate	In teaching mode
Three-color light	Alarm function and sound check	every day	When the device is powered on

Note: This equipment may not involve the maintenance of some parts, please choose the corresponding maintenance by yourself!

6.2.1 Maintenance steps of robot motion mechanism

(1) Daily maintenance

1. Remove tin dross residue after processing.

2. Check the soldering iron tip for perforation and damage before use, and store it with new tin after use.

3. Do not touch the guide rail with your hands to prevent rust.

4. Check whether the parts are normal before daily work.

(2) Regular maintenance

For frequently used machines, regular maintenance should be done carefully and carefully, the cycle is about three months, and the content is as follows:

1. Remove X Shaft guard, clean the oil stains on the lead screw and guide rail (preferably with silk cloth), check the lead screw, nut seat and front and rear of the lead screw

Whether the screws at the support etc. are loose, check whether the coupling screws are loose. Then add lubricating oil (grease) on the lead screw and guide rail

(Lithium-based grease No. 2), let the machine head assembly move back and forth several times to add enough lubricating oil (grease).

2. Remove Y Shaft guard, clean the oil stains on the screw and guide rail (preferably with silk cloth), and clean the underside of the workbench

check Y Axis photoelectric, whether the connection is reliable, check Y Whether the shaft guide rail, screw element, nut seat, etc. are loose, check the coupling

Whether the screws are loose, after checking, Y Add sufficient lubricating oil (grease) to the shaft guide and lead screw. Reinstall Y Shaft guard plate.

3. open Z Shaft guard, clean the dirt that may enter, check whether the screws of the lead screw and the support are loose; give the lead screw after inspection

Add lubricating oil (grease). an examination Z Whether the shaft connecting plate is loose, you can push and pull it by hand, shake it to see if there is any gap, and then check

Nose and Z Whether the connecting plate of the shaft is loose, add lubricating oil to the guide rail after inspection, and check the connecting plate of the drag chain and Z Shaft connection

Whether the screws fixing the board are loose, check again X Whether the screw connecting the shaft to the light inspection baffle is loose.

4. Belt: Check whether the belt tightness has changed monthly to prevent the change of belt tightness from affecting the transmission. V-belt adjustment

Method: Loosen the bolts that fix the motor, move the motor backward, and apply it at the midpoint of the belt by hand. 10N Pressure, belt

bending 10~15mm It is appropriate to tighten the bolts that fix the motor.

5. Regularly check the straightness, verticality of the guide rail and the running accuracy of the machine every quarter, and adjust it in time if it is abnormal.

6. The severely worn and damaged parts should be replaced in time.

7. The maintenance of the electrical part is mainly to check the condition of the plug and socket, and check whether each plug is skewed and whether the wire is damaged.

And the situation of welding off.

8. To clean the dust on the machine platform, carefully clean and check whether the joints are loose, whether the appearance of the components is abnormal, the switch and

Whether the buttons are all operating normally.

9. After all inspections are completed, check the signal, and then measure the motion characteristics. After confirming that it is correct, run the tutorial

If the clock does not lose synchronism (requires travel in all directions to the limit), it means that the regular maintenance is completed. Not too for use

For frequent users, the period of regular maintenance can be once every six months, and the maintenance content is the same.

6.2.2 Daily maintenance and maintenance of oil-water separator

1. It is forbidden to drop or subject it to strong impact during installation to avoid damage.

2. It can be used only after confirming that it has been safely and reliably fixed to the welding robot with screws.

3. It is recommended to use air pressure less than 0.7Mpa .

4. Always drain the water in the oil-water separator, remove it regularly and clean it with a test tube brush.

6.2.3 Linear guide maintenance method

1. Every walk about 100km Replenish grease. Even if you don't use it often, you should add it once a month.

2. Do not add too much grease.

3. Do not apply grease directly to both sides of the slider without injecting it into the inside of the slider.

4. Prevent the slider from entering foreign objects to affect the life.

5. Grease injection steps:

① In the stopped state, inject from the nozzle 0.7cc Of grease.

② Let the slider move back and forth to make the inner steel ball roll completely.

③ After repeating ① and ②, check whether there is any trace of grease adhesion at the end of the slide rail.

6.2.4 Ball screw maintenance method

1. Use the oil gun to inject several times. After each injection, let the screw shaft rotate half a circle (each injection 0.7cc , For injection 7.0cc ,

This needs points 10 Injection). Note: Injecting the specified amount of grease at one time will make the amount of grease injected into the nut different

foot.

2. After injecting a certain amount of grease, push the lead screw slider to move back and forth to distribute the grease evenly.

6.2.5 Daily maintenance and maintenance of tin delivery mechanism

1. Regularly check and clean out the tin conduit to prevent it from being blocked. After using for a period of time, the tin delivery tube is likely to be rosin

If it is blocked, the tin pipe should be soaked in alcohol solution.

2. During use, do not excessively bend or rotate the tin tube forcibly to avoid blocking it.

3. Different specifications of tin wire and corresponding specifications of the tin outlet pipe are used in conjunction with each other, such as the diameter Φ0.8mm Tin wire and

0.8mm The tin-out conduit is used together. Please pay attention before use, so as not to damage the machine or affect the effect of tin production.

4. If the soldering force is not enough, the solder wire will not be automatically sent out. At this time, the pressure adjustment screw can be adjusted clockwise to increase the output Tin strength; if the strength is too large and the solder wire is squeezed and deformed, the pressure adjustment screw can be adjusted counterclockwise to weaken Out of the tin intensity.

5. Under normal circumstances, do not tighten the pressure adjustment screw too tightly to avoid damage to the pressure spring.

6.2.6 Daily maintenance and maintenance of heating controller

1. When not in use, please turn off the power switch of the heating controller; when it is not applicable for a long time, please cut off the power of the heating controller.

2. It must be grounded reliably before use. Do not use ungrounded power cords.

3. If the fuse of the heating controller is damaged, it can be replaced separately.

(1) Pull out the power plug from the power socket and remove the fuse cover.

(2) Take out the broken fuse, replace it with a new one, and install the fuse board.

6.2.7 Daily maintenance and maintenance of soldering pen

Soldering iron tip: The soldering iron tip should be tinned every time it is used up to protect the soldering iron tip to prevent oxidation. Excessive temperature. If the soldering iron tip is severely oxidized or worn, it needs to be replaced with a new one. Replacement method: (Close the soldering station to avoid hot Injury) Unscrew the nut on the steel pipe of the soldering iron head, then pull out the soldering iron head, replace the new soldering iron head and screw the nut on.

What to do when the soldering iron tip has been oxidized:

1. First adjust the soldering station temperature to 300 ℃, then clean the welding tip with a cleaning sponge and check the condition of the welding tip.

2. If the tin-plated layer of the solder tip contains oxides, a new tin layer can be plated, and the tip of the soldering iron can be wiped with a cleaning sponge. Repeat the cleaning to completely remove the oxide, and then plate a new tin layer.

note : **Do not use a file to remove the oxide on the welding tip.**