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# 1 用户注意事项

Note for users

感谢您使用深圳市易通自动化设备有限公司生产的 HT-D12 高速点胶机!

Thank you for using the HT-D12 high-speed dispenser produced by SHENZHEN ETON Automation Equipment Co., Ltd.!

## 安全提示 safety warning:

- 本机器只能由专业维护及维修人员或培训合格的人员进行操作
- This machine can only be operated by professional maintenance and repair personnel or qualified personnel
- 通电之前，应确认外接输入电源与该机器的额定电压及电流相符
- Before energizing, confirm that the external input power supply is consistent with the rated voltage and current of the machine
- 本机器内含运动装置及机械传动，操作时应注意人身安全
- This machine contains motion device and mechanical transmission, please pay attention to personal safety when operating

## 注意事项 Precautions:

- 操作本机器前请仔细阅读本用户手册
- Please read this user manual carefully before operating this machine
- 请不要把本机器安装在电磁干扰源附近
- Please do not install this machine near electromagnetic interference sources
- 请使用规定的电压、电流、功率（详见机器安装与调校）
- Please use the specified voltage, current and power (see machine installation and adjustment for details)
- 机器不使用时，请关闭电源、气源
- When the machine is not in use, turn off the power and air supply
- 保养、维修之前，请关闭机器电源
- Please turn off the power of the machine before maintenance and repair
- 请按本手册要求定期对机器进行保养
- Please regularly maintain the machine according to the requirements of this manual
- 勿改变本机器电控箱内的软体及硬体设置
- Do not change the software and hardware settings in the electrical control box of the machine
- 请妥善保管本手册，以便维护保养及维修时查阅
- Please keep this manual properly so that it can be consulted during maintenance and repairs



## 2. 机器安装与调校 Machine installation and adjustment

### 2.1 工作环境及条件 Working environment and conditions

1. 本设备应放置在平坦坚固地面；

The device should be placed on a flat and firm ground

2. 工作环境温度应在 22~28℃之间；

The working environment temperature should be between 22~28°C

3. 工作环境湿度应在 45~75RH%之间；

The working environment humidity should be between 45~75RH%

4. 机器附近不能有强磁场；

There should be no strong magnetic field near the machine

5. 使用具有 380V/50HZ 稳定电压的电源（保证接地良好）；

Use a power supply with 380V/50HZ stable voltage (guarantee good grounding)

6. 使用气源 0.5~0.6MPa (气源为大气压霜点: -17℃以下, 微粒粉: 粒径 5 μm 以下, 最高油分浓度: 5 mg/m³ 以下)。

Use air source 0.5~0.6MPa (air source is atmospheric pressure frost point: below -17°C, particulate powder: particle size below 5 μm, maximum oil concentration: below 5 mg/m³)

7. 海拔: 1000m 以下

7. Altitude: Below 1000m

### 2.2 机器安装 Machine installation

1. 开箱后将本机平稳落位，装上三色信号灯；

After unpacking, place the machine steadily and install the three-color signal light

2. 根据本机与上下工位设备的接驳情况，将其调整到正确的位置；

Adjust it to the correct position according to the connection between the machine and the upper and lower station equipment

3. 升高并调整机架底部的固定脚杯，使机架成水平状态并达到正确高度；

Raise and adjust the fixed foot cup at the bottom of the rack to make the rack level and reach the correct height

4. 接入电源（380V/50HZ）、气源（气压 0.5~0.6MPa）；

Access to power supply (380V/50HZ), air source (air pressure 0.5~0.6MPa)

### 2.3 机器调校 Machine tuning

该设备出厂前已调试完毕，若需调整可按如下方法进行：

The equipment has been debugged before leaving the factory, if you need to adjust it, you can proceed as follows

1. 调整机器底部的脚杯可使机器处于水平。

Adjust the foot cup at the bottom of the machine to make the machine level

2. 如需其他调整请联系我司售后服务部。

For other adjustments, please contact our after-sales service department



## 2.4 装箱清单 Packing List

包装箱内除本机以外，还包括以下附件，如有短缺请与易通公司售后服务部联系

In addition to the machine, the packing box also includes the following accessories.

If there is a shortage, please contact the after-sales service department of ETON

◇ 《用户手册》电子档《User Manual》electronic file

◇ 加密狗1个 1 dongle

◇ 工具箱1个 Toolbox 1

◇ 保险管：3A、10A各5个 Insurance tube: 5 pieces each for 3A and 10A

◇ 电脑一套 A set of computers

以上附件是本公司的标准配置，若有差异，请按销售合同为准。

The above attachments are the standard configuration of our company. If there is

any difference, please refer to the sales contract



## 3.机器说明书 Machine manual

### 3.1 概述 Overview

我司 HT-D12 系列是透镜 BCP 单轨道专用全自动高速点胶机，根据 PCB 的矩阵的特性，采用 X、Y 轴连续移动喷射点胶技术，点胶速度快，稳定性高。采用最先进的视觉定位方式，以补偿进板时产生的偏差，保证点胶位置的准确性以及一致性。

Our HT-D12 series is a special automatic high-speed dispensing machine for lens BCP single track. According to the characteristics of the PCB matrix, it adopts X and Y axis continuous movement jet dispensing technology, fast dispensing speed and high stability. The most advanced visual positioning method is used to compensate for the deviation caused by the board feeding and ensure the accuracy and consistency of the dispensing position

#### 本机主要特点 Main features of this machine:

- 采用视觉定位，工控电脑控制系统；  
Using visual positioning, industrial computer control system
- 多项声光报警功能，并有报警原因提示，便于故障查找及处理；  
Multiple Sound and light alarm functions, and alarm reason prompts, easy to find and deal with faults
- 运输轨道可根据 PCB 宽度软件点动调节；  
The transportation track can be adjusted according to the PCB width software
- 具有信号通信接口，可与其它机器在线接驳。  
With signal communication interface, it can be connected with other machines online

### 3.2 主要技术参数 The main technical parameters

1、外形尺寸：1800mm\*1050mm \*1500mm;

Dimensions: 1800mm\*1050mm \*1500mm

2、质量：800KG

Quality: 800KG

3、PCB 尺寸：最大 1200X300mm

PCB size: maximum 1200X300mm

4、电源：AC380V/50HZ

Power supply: AC380V/50HZ

5、功率：3KW

Power: 3KW

6、气源：0.5~0.6MPa

Air source: 0.5~0.6MPa



### 3.3 机器工作流程 Machine work process

HT-D12 高速点胶机适用于最大 1200X300mm 透镜 PCB 板，是机-电-光以及计算机控制技术的综合体。根据 PCB 的矩阵，采用 X、Y 轴连续移动喷射阀喷射点胶的工作方式。它通过：定位→查找→校正→点胶等功能，在不损伤元件和印制电路板的情况下，实现了快速而准确地点胶至 PCB 板所指定的位置上。PCB 板的定位方式有机械定位、传感器定位、等定位校正方式。该高速点胶机由机架、x-y-z 运动机构(直线导轨、直线伺服电机)、点胶头、PCB 承载机构、工控电脑控制系统组成，整机的运动主要由 x-y-z 运动机构来实现，其中 X、Y 采用直线伺服电机直接驱动，以避免滚珠丝杆传所产生的间隙误差、并由直线导轨运动实现定向的运动，这样的传动形式不仅其自身的运动阻力小、结构紧凑，而且有非常高的运动精度有力地保证了点胶位置的高精度。该多功能贴片机采用机器视觉系统进行 PCB 板 Mark 识别。机器视觉能自动求出这些 Mark 中心系统坐标，建立高速点胶系统坐标系和 PCB 待点胶位置坐标系之间的转换关系，计算得出机器的运动精确坐标；点胶头根据导入的坐标位置点胶，相机镜头依照视觉处理程序对 PCB 板上 Mark 点的检测、识别与校正后点胶头的运行轨迹将通过 PCB 预定位置的上方并精确的将胶喷射至预定的位置。这一系列校正、点胶的动作都是工控电脑根据相应指令获取相关的数据后指令控制系统自动完成。

HT-D12 high-speed glue dispenser is suitable for the largest 1200X300mm lens PCB board. It is a complex of machine-electricity-optical and computer control technology. According to the PCB matrix, the X and Y axis continuously move the injection valve to spray glue. It can quickly and accurately place glue to the designated position on the PCB board without damaging the components and the printed circuit board through the functions of: positioning→search→-correction→dispensing. PCB board positioning methods include mechanical positioning, sensor positioning, and other positioning correction methods. The high-speed dispenser is composed of a frame, XYZ motion mechanism (linear guide rail, linear servo motor), dispensing head, PCB bearing mechanism, and industrial computer control system. The movement of the whole machine is mainly realized by XYZ motion mechanism, where X, Y is directly driven by a linear servo motor to avoid the gap error caused by the ball screw transmission, and the linear guide movement realizes the directional movement. This type of transmission not only has low movement resistance, compact structure, and very high The movement precision effectively ensures the high precision of the dispensing position. The multifunctional placement machine uses a machine vision system for PCB board Mark recognition. Machine vision can automatically calculate the coordinates of these Mark center systems, establish the conversion relationship between the high-speed dispensing system coordinate system and the PCB to be dispensing position coordinate system, and calculate the precise coordinates of the machine movement; the dispensing head is based on the imported coordinate position For dispensing, the camera lens detects, recognizes, and calibrates the Mark points on the PCB according to the visual processing program. After the running track of the dispensing head passes above the predetermined position on the PCB, the glue is accurately sprayed to the predetermined position. This series of correction and dispensing actions are all done automatically by the control system after the industrial computer obtains the relevant data according to the corresponding instructions.

## 3.4 机器操作说明 Machine operation instructions

### 3.4.1 通电前检查 Check before power on

1. 检查供给电源是否为本机额定的电源；

Check whether the power supply is rated for the machine

2. 检查机器是否良好接地；

Check if the machine is well grounded

3. 检查气压是否调整为需要值；

Check whether the air pressure is adjusted to the required value

4. 检查紧急掣是否已弹起；

Check if the emergency button has bounced

5. 查看本用户手册有关提示及注意事项部分的说明，确认整机调整已经完成。

Check the instructions and precautions in this user manual to confirm that the adjustment of the whole machine has been completed

### 3.4.2 软件介绍 3.4.2 Software Introduction

1. 双击  图标启动机器控制软件，经如下欢迎动画后进入登录界面。

Double click  The icon starts the machine control software and enters the login interface after the following welcome animation



2. 登录界面如下图所示，通过下拉条选择用户名并输入密码登陆后出现软件主界面

The login interface is as shown in the figure below, select the user name through the drop-down bar and enter the password to log in and the main software interface appears





3. 主界面如下图所示 The main interface is shown below:



该界面为生产界面，左半部分主要用于显示各项工作信息，主要分为：

This interface is a production interface, the left half is mainly used to display various work information, mainly divided into

a. 左上方黄色区域的坐标显示区

a:Coordinate display area in the yellow area on the upper left

b. 右上方淡蓝色区域为运行日志显示区

b:The light blue area on the upper right is the operation log display area

c. 下方为模型图区域

c:Below is the model map area

中间为运行状态以及各种运行参数显示区

In the middle is the operating status and various operating parameter display areas

软件主界面右半部分为工作控制区，包含各个功能按钮，以及相关信号指示灯。

The right half of the software main interface is the work control area, which contains various function buttons and related signal indicators

### 3.4.3 点胶程序编制 Dispensing programming

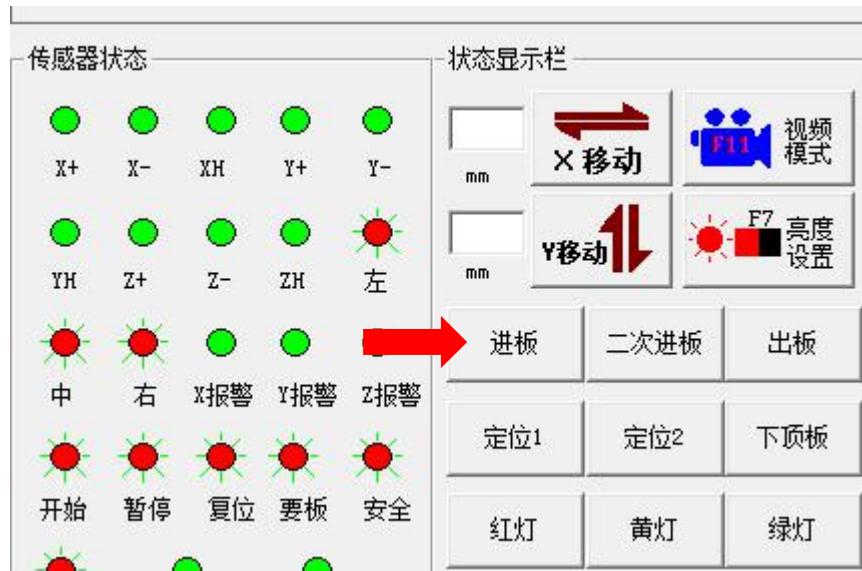
1. 打开软件后首先点击界面上方击“回原点”按钮，等待机器各控制轴回原点完成。

After opening the software, first click on the "Back to Origin" button at the top of the interface, and wait for the machine control axis to return to the origin.



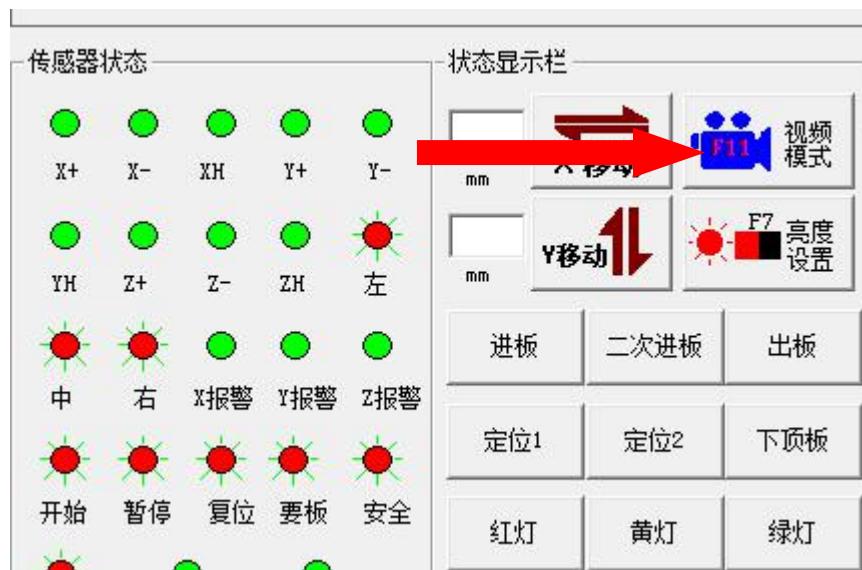


2. 点击工作控制区“进板”按钮，将待加工 PCB 版送入机器轨道，待机器自动进板完成。  
Click the "Into Board" button in the work control area to send the PCB board to be processed into the machine track, and the standby device will automatically enter the board.



3. 点击工作控制区“视频模式”按钮，打开机器头部相机。

Click the "Video Mode" button in the work control area to turn on the machine head camera



4. 点击界面上方击“坐标修改”按钮，将工作状态切换至坐标修改模式，

Click the "modify coordinate" button at the top of the interface to switch the working state to coordinate modification mode





通过键盘方向键控制工作头移动至待点胶位置，并通过鼠标点击影像画面调整将其至相机视野中央。

Use the keyboard arrow keys to control the working head to move to the position to be dispensed, and click on the image screen to adjust it to the center of the camera's view



5. MARK 相机找到坐标中心后，点击鼠标右键，点击坐标显示区空白处，出现如下图所示子对话框 After the MARK camera finds the coordinate center, click the right mouse button and click the blank space in the coordinate display area, and a sub-dialog box as shown in the figure below appears:



点击插入坐标，即可在生成该点的坐标并显示在坐标显示区

Click to insert coordinates, then the coordinates of the point can be generated and displayed in the coordinate display area





6. 移动点胶头至该行点的最后一个位置处，在拼版数量输入框中输入该行的总点数，点击“拼版”按钮，生成该行整行需点胶位置的坐标。

Move the dispensing head to the last position of the row of dots, enter the total number of dots in the row in the imposition quantity input box, and click the "imposition" button to generate the coordinates of the position to be dispensed in the entire row



7. 直到整张 PCB 版需点胶位置均导入至机器中，点击保存按钮，保存该 PCB 板需点胶位置的坐标文件。

Until the entire PCB board needs to be glued into the machine, click the save button to save the coordinate file of the PCB board need to be glued

8. 通过移动点胶头至 PCB 板 MARK 点处，点击“拍照按钮”，在点击“生成 MARK”按钮，如 MAEK 生成不成功则需通过调整 MARK 直径、灰度值等参数，直到 MARK 生成成功。

By moving the dispensing head to the MARK point of the PCB board, click the "photograph button", and then click the "generate MARK" button. If the MAEK generation is unsuccessful, you need to adjust the MARK diameter, gray value and other parameters until the MARK generation is successful

9. 点击菜单栏“修改”菜单，点击“导入 MARK1”按钮，会提示导入 MARK 成功，请保存文件，此时再按一下保存按钮。

Click the "Edit" menu in the menu bar, click the "Import MARK1" button, it will prompt that the import MARK is successful, please save the file, and then click the save button



10. 重复步骤直到所需 MARK 均导入机器完成，并保存文件。并再次点击一下“坐标修改按钮”退出坐标修改模式。

Repeat the steps until all required MARK are imported into the machine and save the file. And click the "coordinate modification button" again to exit the coordinate modification mode

11. 按下机器“复位”按钮，待点胶头回原位，夹板机构将 PCB 板松开后将板取出。

Press the "reset" button of the machine, wait for the dispensing head to return to its original position, the clamping mechanism will loosen the PCB board and take it out

12. 调整好机器各项工作参数。

Adjust the working parameters of the machine

13. 按下机器“启动”按钮，此时机器即可开始进入全自动工作状态。

Press the "start" button of the machine, and the machine can start to enter fully automatic working state

以上为一次完成点胶的 PCB 板编程。

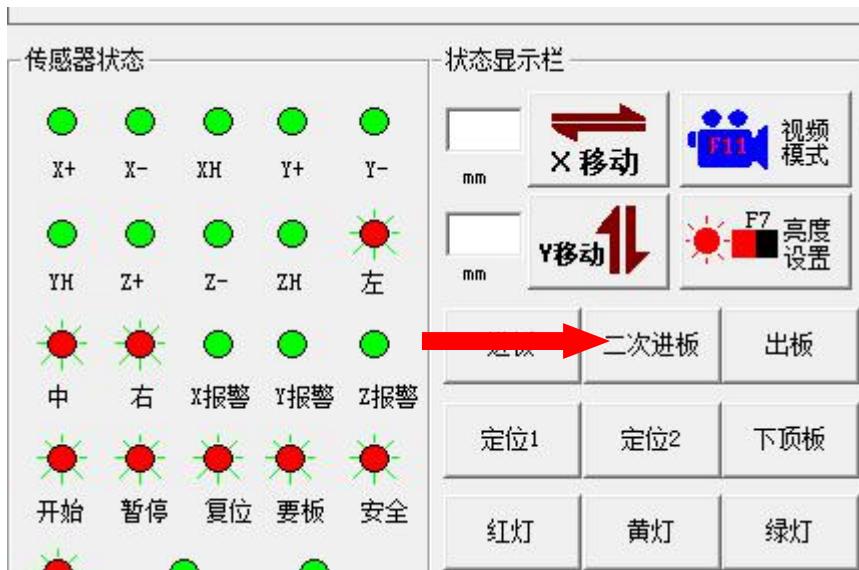
**The above is the PCB board programming that completes the dispensing at one time**

### 3.4.3.2 长 PCB 板两次进入的编程方法。

**Programming method for long PCB board twice entry**

第一段编程完成后，点击二次进入 PCB 板。

**After the first programming is completed, click twice to enter the PCB board**





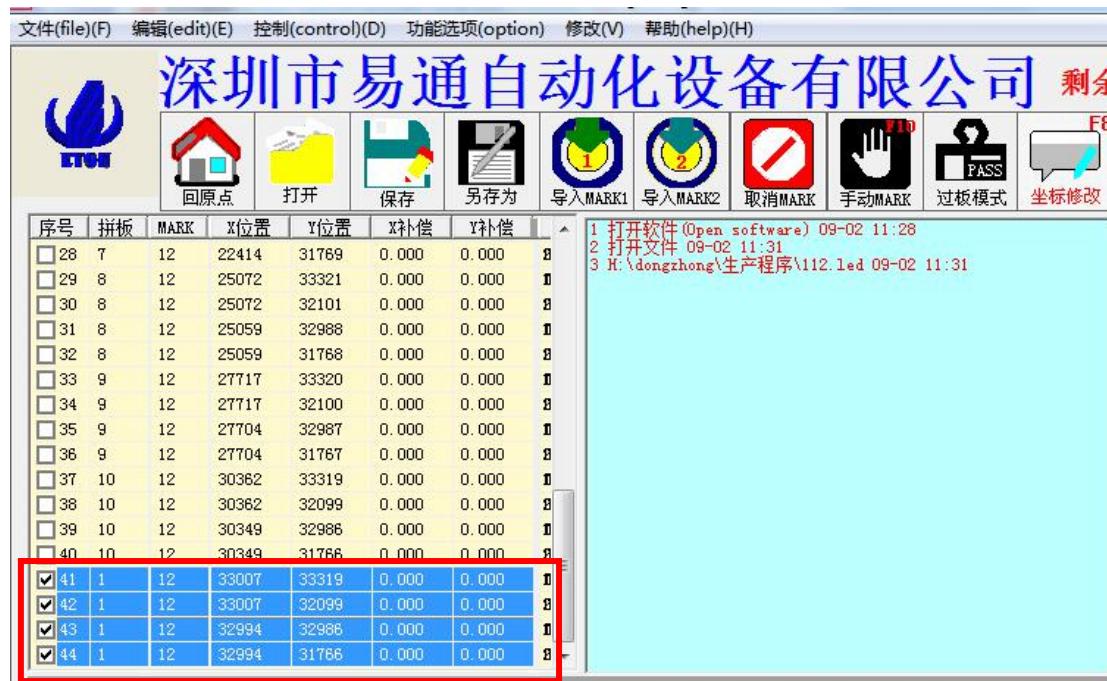
编辑基准坐标，选择勾选坐标复制。

Edit the reference coordinates, select the check box to copy



复制完坐标后，把此组全部勾选。

After copying the coordinates, check all this group





以勾选复制坐标，完成后编辑 MARK 点完成。

To check the copy coordinates, edit the MARK point after finishing



### 3.5 常见问题与处理 Common problems and solutions

以下是 HT-D12 常见问题与处理 The following are HT-D12 common problems and solutions:

机器不通电或者启动不了 The machine does not power on or cannot start.

请检查以下项目 Please check the following items:

1、机器总电源插头是否接好。

Whether the main power plug of the machine is properly connected

2、总电源开关是否合上。

Whether the main power switch is closed

3、继电器是否跳闸。

Whether the relay is tripped

4、保险丝是否熔断。

Whether the fuse is blown

电脑无法正常启动 The computer does not start normally.

请检查以下项目 Please check the following items:

1、电脑主机是否通电。

Whether the host computer is powered on

2、电脑启动开关工作是否正常。

Is the computer start up switch working properly

三、电脑显示器没有显示 The computer monitor does not show。

请检查以下项目 Please check the following items:

1、电脑是否已开机。

Is the computer turned on

2、显示器电源是否有电。

Whether the monitor power supply has power

3、显示器信号线是否接好。

Whether the display signal line is connected properly

4、键盘是否损坏。

**Whether the keyboard is damaged**

四、复位不正常 Abnormal reset。

请检查以下项目 Please check the following items:

1、相对应的感应器信号工作是否正常(查看软件测试页面输入信号)。

Whether the corresponding sensor signal is working normally (check the software test page input signal)

2、机器是否已被限位感应器限位。

Whether the machine has been restricted by the limit sensor

五、电机不工作或者转动 The motor does not work or rotate。

请检查以下项目 Please check the following items:

1、电机线路是否断线或连接不良。

Whether the motor circuit is broken or poorly connected

2、驱动器是否报警。

Does the drive alarm

3、电机是否被杂物卡住。

Whether the motor is stuck by debris

六、电机只能往一个方向动作 The motor can only move in one direction.

请检查以下项目 Please check the following items:

1、是否碰到原点感应器。

Does it touch the origin sensor

2、是否碰到限位感应器。

Whether it hit the limit sensor

九、点胶效果出现上下偏 Dispensing effect appears up and down.

请检查以下项目 Please check the following items:

1、偏上，两点之间垂直距离是否偏大或拼板垂直距离是否偏大

To the top, whether the vertical distance between two points is too large or whether the vertical distance of the puzzle is too large

2、偏下，两点之间垂直距离是否偏小或拼板垂直距离是否偏小

Lower, whether the vertical distance between two points is too small or whether the vertical distance of the puzzle is too small

3、X 轴设置系数是否设置好;

Is the X axis setting coefficient set?

4、送板设置系数是否设置好。



Whether the setting coefficient of feeding plate is set

十、点胶效果出现左右偏 The dispensing effect appears left and right:

请检查以下项目 Please check the following items:

1、拼板或模块的水平间距做是否做好;

Whether the horizontal spacing of the puzzle or module is done well

2、进板长度是否做好;

Whether the length of the board is good

3、X 轴设置系数是否设置好

Is the X axis setting coefficient set?

十一、点胶效果出现无规律偏差 Irregular deviations in the dispensing effect.

请检查以下项目 Please check the following items:

1、参数是否设置好。

Whether the parameters are set

2、每次放板的位置是否一致。

Is the position of the board consistent every time

3、机器电机轴间隙是否过大。

Whether the shaft clearance of the machine motor is too large

十二、某点出现规律性偏差 A regular deviation.

请检查以下项目 Please check the following items:

1、该点设置参数是否做好;

Is the parameter set at this point done?

2、是否使用原点修正;

Whether to use origin correction

3、是否复位正常。

Whether the reset is normal

十三、软件出现自动关闭 The software appears to close automatically

请检查以下项目 Please check the following items:

1、机器的加密狗是否安装正常。

Whether the dongle of the machine is installed normally

2、软件安装是否正确。

Is the software installed correctly

十四、气缸不工作 Cylinder does not work.

请检查以下项目 Please check the following items:

1、光电传感器的信号是否正常。

Whether the signal of the photoelectric sensor is normal

2、气管堵塞或者气管接头是否没接好。

The trachea is blocked or the trachea joint is not connected properly

十五、直线导轨滑动不顺畅 The linear guide does not slide smoothly.

请检查以下项目 Please check the following items:

1、滑块的钢珠是否脱落。

Whether the steel ball of the slider falls off

2、直线导轨直线度，平行度是否达到要求。

Whether the straightness and parallelism of the linear guideway meet the requirements

3、滑块是否没及时换润滑油或者有杂物。



Whether the sliding block has not changed the lubricating oil in time or has debris

## 4、维护与保养 maintenance

尊敬的用户，为了延长机器的使用寿命请按以下项目对机器进行维护、保养。

Dear users, in order to extend the service life of the machine, please maintain and maintain the machine according to the following items.

序号	维护保养项目 Maintenance items		维护保养要求 Maintenance requirements
1	日常检查及保养 Daily inspection and maintenance	机器表面 Machine surface	清洁、干净。 Clean and clean
2		检查输入气源气压 Check the input air pressure	气压在 0.5-0.6MPa 范围内 The air pressure is in the range of 0.5-0.6MPa
3		点胶阀 Dispensing valve	干净、无杂物 Clean and free of debris
4		喷胶嘴 Spray nozzle	无磨损、变形，并定期清洗喷胶嘴 No wear, deformation, and regular cleaning of the glue nozzle
5		各传感器保养 Maintenance of each sensor	擦拭传感器的灰层或杂物 Wipe the dust layer or debris of the sensor
6		各电机的控制信号 Control signal of each motor	检查信号是否正常 Check if the signal is normal
7		活动部分的螺丝 Screws for moving parts	检查螺丝，有松动，及时拧紧 Check the screws, if they are loose, tighten them in time
8	周保养 Weekly maintenance	机器内部 Inside the machine	清洁机器内的灰层或杂物 Clean the dust layer or debris in the machine
9		各压力表 Pressure gauge	检查负压值是否正常 Check whether the negative pressure value is normal
10		光栅尺清洁 Scale cleaning	无尘纸清洁 Clean with dust-free paper
11		相机镜头 camera lens	定期清洁相机镜头的灰尘和杂物 Regularly clean the camera lens dust and debris

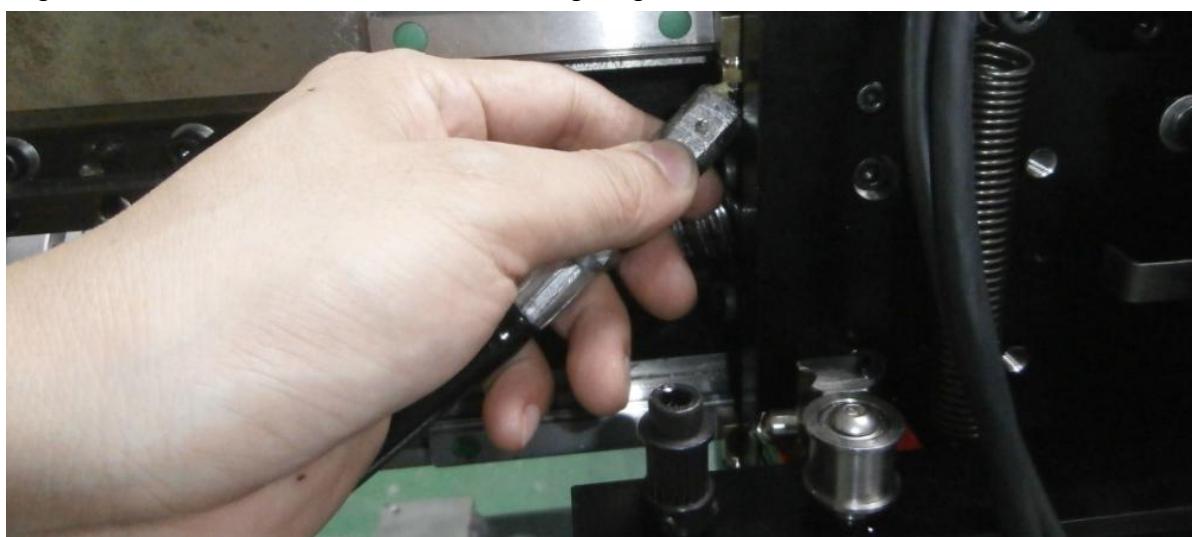


12	月保养 Monthly maintenance	活动部件 Moving parts	清除灰层、杂质、油垢
13		X、Y、Z 轴丝杠, 导轨滑块 X, Y, Z axis screw, guide rail slider	清除灰层、杂质、油垢并上洁净的黄油 Remove ash, impurities, grease and put on clean butter
14		机器头部 Machine head	清除灰层、杂质、油垢并上防锈油 Remove ash, impurities, grease and apply anti-rust oil

## 4.1 导轨保养 Rail maintenance

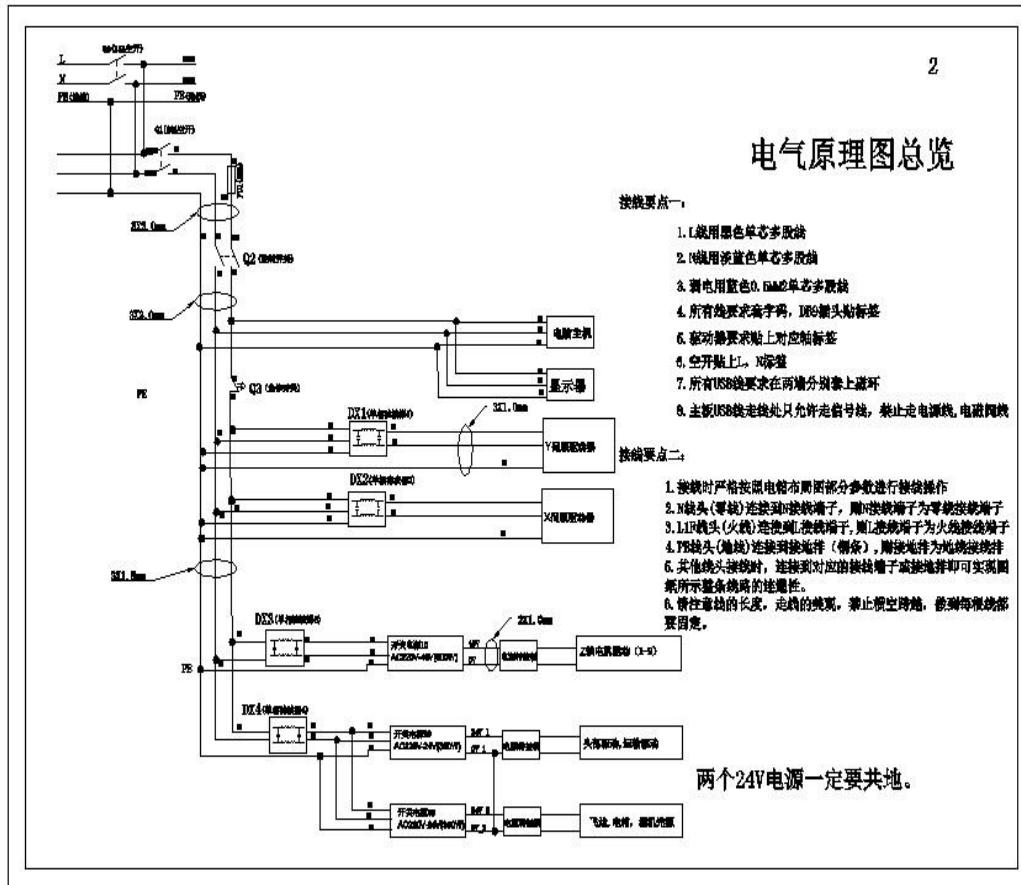
导轨保养：所有导轨加油前先用抹布清除旧的油垢,然后用油枪油嘴插入导轨滑块中的油嘴，固定后再将润滑油直接注入到滑块中，直到油从滑块中溢出停止加油，然后将滑块沿导轨来回滑动几次完毕。

Guide rail maintenance: Before refueling all the guide rails, use a rag to remove the old grease, then insert the grease nipple of the grease gun into the grease nipple in the guide rail slider, and then inject the lubricating oil directly into the slider until the oil overflows from the slider to stop refueling , And then slide the slider back and forth along the guide rail for several times.





## 5 电气原理图 Electrical schematic





## 6 机器保修信息 Machine warranty information

### 6.1 保修卡 Warranty Card

#### 保修卡 Warranty Card

机器名称 Machine name\_\_\_\_\_

规格型号 Specification model\_\_\_\_\_

铭牌编号 Nameplate number\_\_\_\_\_

日期 date: \_\_\_\_\_ 年 Y \_\_\_\_\_ 月 M \_\_\_\_\_ 日 D

(以调试验收后为准 Subject to adjustment test acceptance)

生产商盖章 Manufacturer's stamp

(盖章签字有效 Signature is valid)

客户名称 client's name: \_\_\_\_\_

联系电话 contact number: \_\_\_\_\_

客户地址 customer address: \_\_\_\_\_

#### 保修条例 Warranty regulations

本文记载的内容是约定免费修理的事项 The content recorded in this article is an agreement for free repair

1. 本机器按合同协议条例条款保修壹年，保修时间为 This machine is guaranteed for



one year in accordance with the terms of the contract and agreement, and the warranty time is:

( Y 年 M 月 D 日 - Y 年 M 月 D 日 )

2. 在保修期间，按照使用说明书进行正常使用的状况下产生的故障（由本公司正式工作人员判定），予以免费修理。

During the warranty period, faults (as determined by the official staff of the company) arising from normal use according to the instruction manual will be repaired free of charge.

3. 在保修期间，如发生以下情况之一，必须作为收费修理：

During the warranty period, if one of the following occurs, it must be repaired as a fee:

(1) 、不能够提供本保修卡或有效购货凭证。

Cannot provide this warranty card or valid purchase certificate

(2) 、使用上的错误以及自行不当的修理所造成的故障及损坏。

Faults and damages caused by misuse and improper repairs

(3) 、买入后的运送、搬动、碰撞等造成的故障或损坏。

Failure or damage caused by transportation, moving, collision, etc. after purchase

(4) 、其它不可避免的外来因素造成故障及损坏。

Failure and damage caused by other inevitable external factors

(5) 、使用不当导致机器进水、短路造成的损坏。

Improper use causes damage to the machine caused by water and short circuit

(5) 、使用指定以外的电源、电压所造成的损坏。

Damage caused by using a power supply or voltage other than specified

4. 在本保证书规定期限内，按以上约定条件进行免费修理。

Within the time limit specified in this guarantee, free repairs will be carried out according to the above agreed conditions

5. 本卡作为本公司保修凭证之一，请妥善保管。

Please keep this card as one of the company's warranty certificates

## 6.2 维修记录卡 Maintenance record card

以下由我司售后服务人员填写，若机器需要维修，请联系售后服务部，电话：400-0682-800  
The following is filled out by our after-sales service personnel. If the machine needs repair, please contact the after-sales service department at 400-0682-800

日期 date	维修内容 Repair content	更换物料 Replacement material		维修员 Repairman
		名称 name	数量 Quant ity	




## 7 售后服务信息 After-sales service information

为了能向你提供快捷、优质的售后服务，请通过以下方式联系深圳市易通自动化有限公司售后服务部！

In order to provide you with fast and high-quality after-sales service, please contact the after-sales service department of SHENZHEN ETON Automation Co., Ltd. through the following methods!

售后服务电话： 400-0682-800

After-sales service phone: 0755-29502322

传真fax: 0755-29502066

地址：深圳市宝安区福永白石夏永悦路 9 号 B1 栋 3 楼

Address: 3rd Floor, Building B1, No. 9 XIAYONGYUE Road, FUYONG BAISHI, BAOAN District, SHENZHEN

地址：江西省九江市瑞昌市江西易通智能制造有限公司江西易通

Address: JIANGXI ETON Intelligent Equipment Manufacturing Co., Ltd., RUICHANG City, JIUJIANG City, JIAXI Province

网址 URL: <http://www.eton-mounter.com>

<http://www.etonsmt.com>