# 1377/373D 三自动剪线控制箱说明书

SUPU 373D User manual of 0 Auto-Trimmer control box

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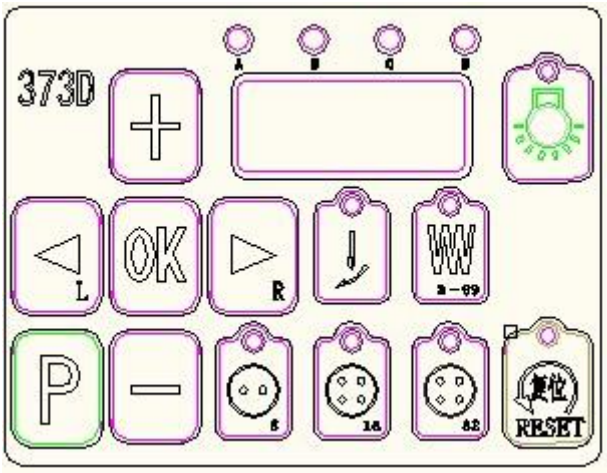
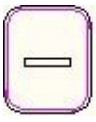
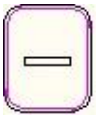
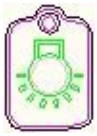
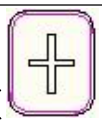
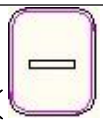
# 1：显示屏常用操作介绍

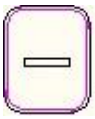
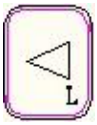
## Introduction of display screen common Operation




| 序 号<br>No.1 | 按键图标<br>Button Icons | 功 能 说 明<br>Function Description |
|---|---|---|
| 1 | LED（A） | **当压脚放下到位时 LED 指示灯 A 亮起，压脚抬起或压脚放置不到位时 LED 指示灯 A 熄灭。（可用作判断压脚实时情况，易可用来判断压脚动作传感器好坏）**<br>When Press foot put into correct place LED lamp A on, When Press foot up or put into wrong place LED lamp A off.(It can be analyzed the presser foot Actual situation，Also to judge the quality of the presser foot motion sensor ) |
| 2 | LED（B） | **当机器左侧开机找针位的小铝轮旋转到某个固定位置被传感器感应到后 LED 指示灯 B 亮起。（可用来判断感应铝轮传感器的好坏）**<br>When small aluminum wheel in left of machine is rotated to a fixed position ( The Al. wheel will auto to find needle stop position when machine open)，It will be detected by sensor, LED lamp B will light. (It also can be used to judge the quality of aluminum wheel sensor ) |
| 3 | LED（C） | **电机上针位指示 LED**<br>Up Needle position of motor LED |
| 4 | LED（D） | **此 LED 指示灯为系统状态指示灯，当系统处于运行状态时 LED 指示灯 D 亮起，当系统处于待机时 LED 指示灯 D 熄灭。**<br>This LED system status indicator, when system is running, LED lamp D light. When the system is on waiting, LED lamp D off. |
| | | |
| **P1** | | **钉扣机 8 针快捷按键，当此功能开启时按键上方 LED 亮起，钉扣机将运行在 8 针模式。（可与 16 针 32 针配合切换使用）** |

| | | |
|---|---|---|
| | | **Button sewing machine 8-pin shortcut keys, When the function open，LED lights on above the key, machine will run 8-pin mode. (Can with 16-pin or 32-pin switchable)** |
| **P2** | | 钉扣机 16 针快捷按键，当此功能开启时按键上方 LED 亮起，钉扣机将运行在 16 针模式。（可与 8 针 32 针配合切换使用）<br>**Button sewing machine 16-pin shortcut keys, When the function open，LED lights on above the key, machine will run 16-pin mode. (Can with 8-pin or 32-pin switchable)** |
| **P3** | | 钉扣机 32 针快捷按键，当此功能开启时按键上方 LED 亮起，钉扣机将运行在 32 针模式。（可与 8 针 16 针配合切换使用）<br>**Button sewing machine 32-pin shortcut keys, When the function open，LED lights on above the key, machine will run 32-pin mode. (Can with 8-pin or 16-pin switchable)** |
| **P4** | | 拨线快捷按键，功能开启时按键上方 LED 亮起，功能关闭时按键上方 LED 熄灭。<br>**Wiper shortcut keys， When the function open， LED lights on above the key，When the function close the LED off.** |
| **P5** | | 钉扣针数自定义键，点动（ ）键，屏幕显示 n-08，后面 08 在闪烁此时点动（ ）（  ）按键可直接调整针数，调整完 |

| | | |
|---|---|---|
| | | 毕后点动（ ）键将保存当前针数并运行自定义针数模式。<br>**Button sewing Pin Defined Button, Touch （ ）, Screen display n-08, after the number twinkling， touch （ ）（  ） can adjust the pin number, after finish touch （ ） to save the number and running the defined Button mode.** |
| **P6** |  | 机头 LED 灯开关按键，当按键上方 LED 灯亮起时表示机头 LED 灯开启，当按键上方 LED 灯熄灭时表示机头 LED 灯关闭。<br>**Head LED light switch button. The LED on means head LED lamp is on, otherwise it Off.** |
| **P7** | | 钉扣机开机复位按键，每次开始必须进行一次复位动作后方能运行。<br>**Machine Power reset button， when open the machine power, should be touch the reset one time, then can run the machine.** |
| | | |
| **1** | | 进入参数调整铺助键，可与（  ）（  ）键配合使用，不同配合将进入不同参数列表<br>**Enter parameter adjustment Secondary key, together with （ ） or** |

| | | |
|---|---|---|
| | | （ ） using, different Combination into different Parameter List |
| 2 | | 参数确定保存键<br>Parameter determines the Save button |
| 3 | | “+”键（修改参数时加）<br>“+” button (modify the parameters plus ) |
| 4 |  | “-”键（修改参数时减）<br>“-” button (modify the parameters minus ) |
| 5 |  | 向左键（在参数列表中用来返回上一页面用）<br>In the parameter list to return to the previous page |
| 6 | | 向右键（在参数列表中进入参数调整用）<br>In the parameter list to enter the parameter for adjustment |

# 快捷按键功能

**Shortcut Key Function**

| | | |
|---|---|---|
| | 长按（ ）键功能<br>Long press （ ） | 直接进入拨线参数调整<br>Direct into enter the Wiper parameter adjustment |
| | 长按（ ）键功能<br>Long press （ ） | 直接进入压脚参数调整<br>Direct into enter the press foot parameter adjustment |

| | | |
|---|---|---|
| | 长按（ ）键功能<br>Long press （ ） | 按一下（ ）键。显示 000。长按（ ）键 5 秒，还原出厂参数。<br>Touch （ ）button, Screen display 000, long press （ ） button 5 seconds, Restore factory settings |

# 2：如何进入参数与如何修改参数

How to enter parameters and how to modify the parameters

系统参数进入解析：

**System parameters entering analysis:**

按住（ ）键不放，在按（ ）键将进入“系统参数”列表，显示屏会显示出 4 个零，输入密码后按( )键即可进入。

进入后可看见系统参数编号，此时可以用（ ）（ ）键，切换系统参数编号，找到需要调整的参数时按下（ ）键，进入当前此项参数调整，最后按（ ）键，保存退出。

**Together touch** **and** **enter into “System parameters” list，screen display 0000, after input password, then touch (** **) enter into. After entering the system, the parameters number can be seen, then you can use (** **) (** **) key to switch the parameter number, when you find the need modify number, then touch（** **）key enter the current parameters, last touch（** **）button to save and Esc**

注： **以上是进入方法，具体参数号代表的参数意思详情如下：**

**Note: the up entry method, specific parameters No. on behalf of the parameters meaning as follows:**

# 3：操作参数说明表

Operating Parameter Description Table

**373D 系统参数列表：**

**373D System parameter list**

| 菜单号 System parameter list | 功能说明 Function Description | 功能参数默认值 Function parameter default values | 功能参数范围 Function parameter ranges | **参数说明 Parameter Description** | **注意事项 Precautions** |
|---|---|---|---|---|---|
| **002** | **复位速度 Reset speed** | **200** | **150 ~800** | **开机后寻找位置的运转速度** | **不易太快影响安全** |
| **021** | **还原系统密码 Restore the system password** | **000** | **000 ~ 003** | **此参数调到 003 长按 OK 键即可 This parameter is adjusted to 003 long press OK button** | **还原出厂密码 Restoring the factory password** |
| **023** | **显示速度 Display speed** | | **200 ~ 1800** | **按一下(P)键 Click the (P) key** | **显示电机转速 Display motor speed** |
| **024** | **调速器检测 Governor detected** | **200 左右（中点值） About 200 (Midpoint)** | | **检测脚踏板是否正常 Detection governor normal** | **在未复位前检测不然影响安全 Detection Should before reset, otherwise affect safety** |
| **025** | **自动磨合 Automatic Running** | **0** | **0：关闭 1：开启 0: close , 1:open** | **机器磨合运行 Machine Running run** | **关闭电源重新开启即可关闭该参数 Turn the power on again to close the parameter** |
| **031** | **抬压脚提前角度 Presser foot advance angle** | **80** | **10 ~ 90** | **提前角度越大灵敏度越强 Advance angle more bigger the sensitivity more stronger** | **意见参数值 40 ~ 80 Opinions parameter values 40 ~ 80** |
| **036** | **剪线延时启动时间** | **100** | | **参数越小，延时越少，参数越大，延** | |

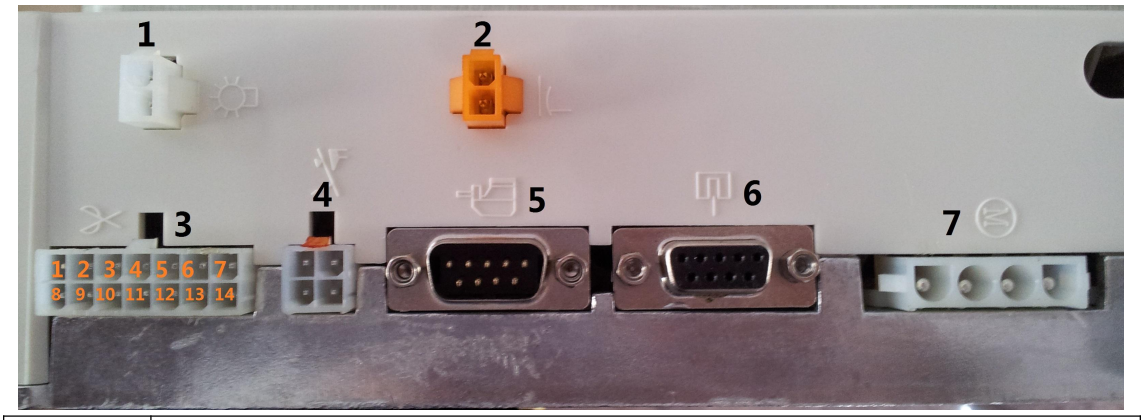
| | | | | | |
|---|---|---|---|---|---|
| | Trimming delayed start time | | | 时越长<br>The delay time less when the value is smaller, the delay time more when the value is larger | |
| 037 | 剪线保持时间<br>Trimming maintain time | 110 | | | |
| 038 | 剪线全功率时间<br>Trimming full-power time | 260 | | | |
| 039 | 剪线全功率功率<br>Trimming full-power power | 100 | | | |
| 040 | 剪线维持功率<br>Trimming maintain power | 50 | | | |
| 041 | 剪刀释放时间<br>Trimming releasing time | 45 | | | |
| 042 | 剪刀保护时间<br>Trimming protection time | 1 | | | |
| 046 | 拨线动作延时启动时间<br>Wiper action delayed start time | 50 | 10 ~ 2000 | | |
| 047 | 拨线动作时间<br>Wiper action time | 70 | 10 ~ 2000 | | |
| 048 | 拨线动作功率时间<br>Wiper action time at full power time | 70 | 10 ~ 990 | | |

| | | | | | |
|---|---|---|---|---|---|
| 050 | 拨线动作维持功率时间调整 Wiper action time at maintain power | 50 | 1～100 | | |
| 051 | 拨线动作释放保护时间 Wiper action to release the protect time power | 50 | 20～800 | | |
| 055 | 拨线功能开启开关 Wiper function on off switch | 000（关闭）(OFF) | 0001（开启）(ON) | | |
| 058 | 抬压脚全功率时间 Foot-lifter action time at full power time | 160 | 0～900 | | 不易过大影响电磁铁使用时间 Not good too big effect of electromagnets time |
| 059 | 抬压脚全功率功率 Foot-lifter full-power power | 100% | 0～100% | | 意见参数 80～100 Opinions parameter values 80～100 |
| 060 | 抬压脚维持功率 Foot-lifter Maintain power | 6% | 0～100% | 抬起压脚后挺留时的功率 Power for foot-lifter quite stay | 参数不易过大，容易发热，影响使用时间 Parameter is not good too large, easy to heat, affecting time |
| 061 | 放压脚后，下机针延时 | 1 | 1～900 | 当压脚放下时，运行电机需要的延时 | 当 63 号参数打开时保护开关 |

| | | | | | |
|---|---|---|---|---|---|
| | After the release of the presser foot, the time of delay needle down | | | 时间<br>When the presser foot down, operation of the motor required delay time | 起作用不需要延时<br>When parameter No. 63 open, the protection switch function open, no need delay |
| 062 | 抬压脚维持功率时间<br>Time to maintain foot-lifter the power of time | 180 | 0 ~ 900 | 电机运行后抬起压脚停留的时间<br>After motor running, foot-lifter Residence time | |
| 063 | 抬压脚保护机针传感器开关<br>Foot-lifter protection needle sensor switch | 1 | 0：关闭 OFF<br>1：开启 ON | | 当 63 号参数关闭时，需要将 61 号参数设置为 350 以上，不然容易断机针<br>When parameter 63 is closed, you need to set parameters No. 61 to 350 or more, otherwise easy to break the needle |
| 065 | 抬压脚延时时间<br>Delay time presser foot | 0 | 0 ~ 900 | | |
| 071 | 运行速度<br>Running speed | 1500 | 200 ~ 1800 | | |

# 4：控制箱端口说明

The control box Port Description




| 端口号码 **Port Number** | 端口连接的器件名称<br>Port device name for the connection |
|---|---|
| **1** | **373D 钉扣机 LED 机头灯插孔 373D button sewing machine head LED socket** |
| **2** | **抬压脚控制端口，连接压脚电磁铁或电磁阀（30V）**<br>**Presser foot control port, connect the presser foot solenoid or solenoid valve (30V)** |
| **3** | **14P 多功能端口 （机针保护开关与机器启动位置传感器插口）**<br>**14P multifunction port (Needle-protect switch and start the machine position sensor socket )** |
| **4** | **脚踏板端口，连接调速器 Foot pedals port , connection governor** |
| **5** | **连接 373D 显示控制面板 connecting 373D the control panel display** |
| **6** | **连接电机相位信号线 Connect the motor phase signal line** |
| **7** | **连接电机 4 线驱动线 connection motor No.4 drive line** |

**3 号 14P 多功能端口 No.3 14p multifunction port**

| **3 号多功能端口标号 The 3rd multifunction port label** | **功 能 Function** |
|---|---|
| **1，8，11** | **1：GND 8：信号 Signal 1 11:5V** |
| **2，9，12** | **2：GND 9：信号 Signal 2 12:5V** |
| **3，10** | **3：压脚输出 Presser foot output 10:30V** |
| **4，2** | **4：保护信号输入 Protection signal input 2：GND** |
| **5** | **5：大地 Ground** |
| **6，13** | **6：拨线输出 wiper output 13:30V** |
| **7，14** | **7：剪刀输出 Scissors output 14:30V** |

# 5：错误代码解析 Error code analysis

| 显示的错误码<br>Display error code | 错误码意思<br>Error code meaning | 错误的产生 Various possible for the erro | 解决错误<br>Solution |
|---|---|---|---|
| **ER-01** | **找不到停针位**<br>**No find needle position** | **1:手轮和电机靠的不够进**<br>**2：手轮上磁钢脱落**<br>**3：手轮磁铁极性装反**<br>**4：九针端子头接触不良**<br>**5：电机霍尔损坏，跟换电机**<br>**1：Hand wheel and motor**<br>**2：Hand wheel magnet off**<br>**3: Hand wheel magnet polarity reversal**<br>**4: Nine-pin terminal head Poor contact**<br>**5： Motor hall damaged, with the change motor** | |
| **ER-02** | **脚踏板信号错误**<br>**Pedals velometer signal wrong** | **1：开机时没插调速器**<br>**2：调速器插反**<br>**3：调速器线断开**<br>**4：调速器损坏**<br>**1：Not plugged velometer into box**<br>**2: velometer Inserted upside**<br>**3: velometer line broken**<br>**4: velometer damage** | |
| **ER-03** | **电机相位信号错误**<br>**Motor phase error signal** | **1：九针插头接触不良**<br>**2：电机安装时霍尔和转子存在大偏差**<br>**3：电机霍尔坏**<br>**1: Nine-pin terminal head Poor contact**<br>**2: Hall and rotor has large deviations when the motor is mounted**<br>**3: Motor hall damage** | |
| **ER-04** | **电机堵转保护**<br>**Motor stall protection** | **1：缝纫机过重或堵死**<br>**2：电机过载**<br>**3：电机 4 线驱动线没连接好或插反**<br>**1: Sewing overweight or blocked**<br>**2: Motor overload**<br>**3: 4-wire motor drive cable is not connected or inserted upside** | |

| | | | |
|---|---|---|---|
| **ER-05** | **硬件过流保护**<br>**Hardware over current** | **1：缝纫机过重或堵死**<br>**2：电机过载**<br>**3：电机相位信号线没连接好**<br>**1: Sewing overweight or blocked**<br>**2: Motor overload**<br>**3: Motor phase signal line is not connected** | |
| **ER-07** | **串口通讯超时**<br>**Serial communication timeout** | **1：显示屏连接主板线连接不良**<br>**2：主板芯片损坏**<br>**1: Display bad cable connection Motherboard**<br>**2: Motherboard chip damage** | |
| **ER-09** | **存储器不良**<br>**Poor memory** | **1:主板存储器损坏或不良**<br>**1: Motherboard memory corruption or bad** | |
| **ER-13** | **压脚传感器无信号**<br>**Presser foot sensor no signal** | **1：压脚传感器安装距离过远**<br>**2：压脚传感器损坏**<br>**3：压脚连杆上的磁铁脱落或装反**<br>**1: Presser foot sensor is mounted too far away**<br>**2: Presser foot sensor damage**<br>**3: Magnet on press foot connecting bar Falling or installed backwards** | |
| **ER - 14** | **复位传感器找不到针位**<br>**Reset sensor can not find the needle position** | **1：左侧感应铝轮的传感器损坏**<br>**2：铝轮上磁铁脱落或装反**<br>**1: The sensor on left induction aluminum wheel is damaged**<br>**2: Magnet on aluminum wheel Fall or installed backwards** | |
| **ER - 15** | **9700 错误信号**<br>**9700 error signal** | **1：9700 编码器损坏**<br>**1: 9700 encoder is damaged** | |

# 6：装箱单 PACKING LIST

| 名称 NAME | 数量 Quantity |
|---|---|
| **电机 MOTOR** | **1** |
| **电控箱 COMPUTER BOX** | **1** |
| **脚踏板 PEDAL velometer** | **1** |
| **拉杆 DRAWBARS** | **1** |
| **电磁铁 electromagnet** | **1** |
| **螺丝包 Screw packet** | **1** |
| **说明书 User manual** | **1** |
| **安装法兰（比较大的铁块）<br>Mounting flange (large iron)** | **1** |
| **塑料壳带显示屏操作面板<br>Plastic case with a operation display panel** | **1** |