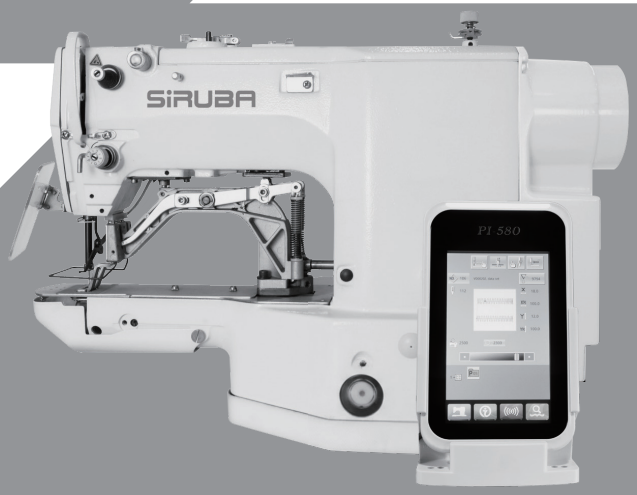
SiRUBA

# 電控參數說明書

# ELECTRONIC CONTROL PARAMETER MANUAL

## BT430E/438E/530E

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# Forewords

Thank you for using our Computerized Control System for Special Sewing Machine.

It is appreciated that you do read this manual carefully, so that you can operate the machine correctly and effectively. If the user operates the machine contrary to regulations herein, thus causes loss to user or third party, we will not take any responsibility. Besides that, you should keep this manual for future use. For any fault or problem of machine, please ask the professionals or the technicians authorized by us for repair service.

# 安全注意事项

## 1. 安全操作的标志及含义

本使用说明书及产品所使用的安全标志是为了让您正确安全的使用产品，防止您及其他人受到伤害。标志的图案和含义如下：

| | |
|---|---|
| ⚠ 危险 | 如果忽视此标记而进行错误的操作，会导致人员的重伤或死亡。 |
| ⚠ 注意 | 如果忽视此标记而进行错误的操作，会导致人员的受伤和设备的损坏。 |
|  | 该符号表示“应注意事项”。三角中的图案表示必须要注意的内容。（例如左边的图案表示：“当心受伤”） |
|  | 该符号表示“禁止” |
|  | 该符号表示“必须”。圆圈中的图案表示必须要做的内容。（例如左边的图案表示“必须接地”） |

## 2. 安全注意事项

| | |
|---|---|
| ⚠ 危险 | |
|  | 打开控制箱时，先关闭电源开关并将电源插头从插座上拔下后，等待至少 5 分钟后，再打开控制箱盖。触摸带有高电压的区域会造成人员受伤。 |
| ⚠ 注意 | |
| **使用环境** | |
|  | 应避免在强电气干扰源（如高频焊机）的附近使用本缝纫机。<br>强电气干扰源可能会影响缝纫机的正常操作。 |
|  | 电源电压的波动应该在额定电压的±10%以内的环境下使用。<br>电压大幅度的波动会影响缝纫机的正常操作，需配备稳压器。 |
|  | 环境温度应在 0℃～45℃的范围内使用。<br>低温或高温会影响缝纫机的正常操作。 |
|  | 相对湿度应在 35%～85%的范围内，并且设备内不会形成结露的环境下使用。干燥、潮湿或结露的环境会影响缝纫机的正确操作。 |
|  | 压缩空气的供气量应大于缝纫机所要求的总耗气量。压缩空气的供气量不足会导致缝纫机的动作不正常。 |
|  | 万一发生雷电暴风雨时，关闭电源开关，并将电源插头从插座上拔下。雷电可能会影响缝纫机的正确操作。 |
| **安装** | |
|  | 请让受过培训的技术人员来安装缝纫机。 |
|  | 安装完成前，请不要连接电源。<br>如果误按启动开关，缝纫机动作会导致受伤。 |

| | |
|---|---|
|  | 缝纫机头倒下或竖起时，请用双手操作。不要用力压缝纫机。<br>如缝纫机失去平衡，缝纫机滑落到地上会造成受伤或机器损坏。 |
|  | 必须接地。<br>接驳地线不牢固，是造成触电或误动作的原因。 |
|  | 所有电缆应固定在离活动部件至少 25mm 以外处。另外，不要过度弯曲或用卡钉固定得过紧。会引起火灾或触电的危险。 |
|  | 请在机头上安装安全罩壳。 |
| **缝纫** | |
|  | 本缝纫机仅限于接受过安全操作培训的人员使用。 |
|  | 本缝纫机不能用于除缝纫外的任何用途。 |
|  | 使用缝纫机时必须戴上保护眼镜。<br>如果不戴保护眼镜，断针时机针折断部分可能会弹入眼睛造成伤害。 |
|  | 发生下列情况时，请立即切断电源。否则误按下启动开关时，会导致受伤。<br>1.机针穿线时　　2.更换机针时　　3.缝纫机不使用或人离开缝纫机时 |
|  | 缝纫过程中，不要触摸任何运动部件或将物件靠在运动部件上，因为这会导致人员受伤或缝纫机损坏。 |
|  | 如果缝纫机操作中发生误动作，或听到异常的噪声或闻到异常的气味，应立即切断电源。然后请与购买商店或受过培训的技术人员联系。 |
|  | 如果缝纫机出现故障，请与购买商店或受过培训的技术人员联系。 |
| **维护和检查** | |
|  | 只有经过训练的技术人员才能进行缝纫机的维修、保养和检查。 |
|  | 与电气有关的维修、保养和检查请及时与电控厂家的专业人员进行联系。 |
|  | 发生下列情况时，请关闭电源并拔下电源插头。否则误按启动开关时，会导致受伤。<br>1. 检查、调整和维修　　2. 更换弯针、切刀等易损零部件 |
|  | 在检查、调整和修理任何使用气动设备之前，请先断开气源，并等压力表指针下降到“0”为止。 |
|  | 在必须接上电源开关和气源开关进行调整时，务必十分小心遵守所有的安全注意事项。 |
|  | 未经授权而对缝纫机进行改装而引起的缝纫机损坏不在保修范围内。 |

# Safety Matters for Attention

## 1. Signs and Definitions

This User's Manual and the Safety Marks printed on the products are to enable you to use this product correctly so as to be away from personal injuring. The signs and definitions of Marks are shown in below：

| | |
|---|---|
| Danger | The incorrect operation due to negligence will cause the serious personal injury or even death. |
| Caution | The incorrect operation due to negligence will cause the personal injury and the damage of mechanism. |
|  | This kind of marks is "Matters for Attention", and the figure inside the triangle is the content for attention. (Exp. The left figure is "Watch Your Hand!") |
|  | This kind of mark is "Forbidden". |
|  | This kind of mark means "Must". The figure in the circle is the contents that have to be done. (Exp. The left figure is "Ground!") |

## 2. Safety Matters for Attention

| | |
|---|---|
| Danger | |
|  | For opening the control box, please turn off the power and take away the plug from socket firstly, then wait for at least 5 minutes before opening the control box. Touching the part with high voltage will cause the person injury. |
| Caution | |
| **Using Environment** | |
|  | Try not to use this sewing machine near the sources of strong disturbance like power cable disturbance and static disturbance.<br>The source of strong disturbance will affect the normal operation of the sewing machine. |
|  | The voltage fluctuation shall be within ±10% of the rated voltage. The large fluctuation of voltage will affect the normal operations of sewing machine, and the regulator will be needed in that circumstance |
|  | Working temperature: 0℃~45℃. The operation of the sewing machine will be affected by environment with temperature beyond the above range. |
|  | Relative Humidity: 35%~85 %( No dew inside the machine), or the operation of sewing machine will be affected. |
|  | The supply of the compressed gas should be over the consumption of the sewing machine. The insufficient supply will be cause the abnormal operation of the machine. |
|  | In case of thunder, lightning or storm, please turn off the power and pull plug out off the socket. Because these will have the influence on the operation of sewing machine |
| **Installtion** | |
|  | Please ask the trained technicians to install the sewing machine. |
|  | Don't connect machine to power supply until the installation is finished.<br>Otherwise the action of sewing machine may cause personal injury once the start switch is pressed at that situation by mistake. |
|  | When you tilt or erect the head of sewing machine, please use both of your hands in that operation. And never press the sewing machine with strength.<br>If the sewing machine loses its balance, it will fall into floor thus causes the personal injury or mechanical damage. |
|  | Grounding is a must.<br>If the grounding cable is not fixed, it may cause the electric-shock and mistake-operation of machine |

| | |
|---|---|
|  | The entire cables shall be fixed with a distance at 25mm away from the moving component at least. By the way, don't excessively bend or tightly fixed the cable with nails or clamps, or it may cause the fire or electric shock. |
|  | Please add security cover on the machine head. |
| **Sewing** | |
|  | This sewing machine can only be used by the trained staff. |
|  | This sewing machine has no other usages but the sewing. |
|  | When operating the sewing machine, please remember to put on the glasses. Otherwise, the broken needle will cause the personal injury in case the needle is broken. |
|  | At following circumstances, please cut off the power at once so as to avoid the personal injury caused by the mistake operation of start switch:<br>1.Threading on needles; 2. Replacement of needles; 3. The sewing machine is left unused or beyond supervision |
|  | At working, don't touch or lean anything on the moving components, because both of the above behaviors will cause the personal injury or the damage of the sewing machine. |
|  | During working, if the mistake operation happens or the abnormal noise or smell is found at the sewing machine, user shall cut off the power at once, and then contact the trained technicians or the supplier of that machine for solution. |
|  | For any trouble, please contact the trained technicians or the supplier of that machine. |
| **Maintenance & Inspection** | |
|  | Only the trained technician can perform the maintenance and the inspection of the sewing machine |
|  | For the repair, maintenance and inspection, user should contact the professionals at manufacturer on time |
|  | At following circumstances, please cut off the power and pull off the plug at once so as to avoid the personal injury caused by the mis-operation of start switch:.<br>1.Repair, adjustment and inspection ;<br>2.Replacement of the component like curve needle, knife and so on |
|  | Before the inspection, adjustment or repair of any gas-driven devices, user shall cut off the gas supply till the pressure indicator falls to 0. |
|  | When adjusting the devices needing the power supply and gas supply, users can' t be too careful to follow this Safety Matters for Attention. |
|  | If the sewing machine damages due to the unauthorized modification, our company will not be responsible for it. |

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# 1 概要说明

## 1.1 概述

本系列工业缝纫机电脑控制系统，主轴电机采用具有世界先进水平的交流伺服控制技术驱动，具有力矩大、效率高、车速稳定和噪音低等特点。操作面板设计多样化可满足不同客户的配套要求；系统采用德国式结构设计，安装和维修方便快捷，系统控制软件可通过远程通讯升级，方便用户不断提高产品性能。

## 1.2 技术参数表

| 序号 | 机型 / 项目 | 430E/438E |
|---|---|---|
| 1 | 用途 | 套结、钉扣 |
| 2 | 缝制范围 | 210　X(左右) 方向 40mm×　Y(前后) 方向 30mm<br>212　X(左右) 方向 80mm×　Y(前后) 方向 60mm |
| 3 | 最高缝纫速度 | 最高 3200rpm |
| 4 | 最小缝制精度 | 0.1mm |
| 5 | 送布 | Y-θ 间歇送布（脉冲马达驱动） |
| 6 | 针杆行程 | mm |
| 7 | 机针 | |
| 8 | 抬压脚方式 | 脉冲马达 |
| 9 | 压脚上升量 | 默认 14mm, 范围 10mm~17mm |
| 10 | 标准花样数 | 套结机标准花样 89 个/钉扣机标准花样 69 个 |
| 11 | 拨线方式 | 210 是脉冲马达抬压脚连动<br>212 是电磁铁拨线 |
| 12 | 面线张力 | 手动夹线器 |
| 13 | 旋梭 | 半旋转标准旋梭或半旋转倍旋梭 |
| 14 | 加油方式 | 旋转部：微量加油 |
| 15 | 机油 | 缝纫机油 |
| 16 | 润滑脂 | 缝纫机用润滑脂 |
| 17 | 数据记忆 | U 盘 |
| 18 | 放大缩小功能 | X 方向、Y 方向各自独立缩放 20%~200%（1%单位） |
| 19 | 放大缩小方式 | 线迹长度和针间距增减方式 |
| 20 | 缝制速度限制 | 200-3200rpm(100rpm 单位) |
| 21 | 花样选择功能 | 花样号码指定方式(1-200) |
| 22 | 底线记数 | 上转/下转方式(0 – 9999) |
| 23 | 机械马达 | 小型 AC 伺服马达(直接驱动方式) |
| 24 | 外形尺寸 | 263mm×153mm×212mm |
| 25 | 额定功率 | 600W |
| 26 | 使用温度范围 | 0℃～45℃ |
| 27 | 使用湿度范围 | 35%～85% （无结露） |
| 28 | 电源电压 | AC 220V ± 10%；50/60Hz |

⍉最高缝制速度请根据缝制条件降低速度使用

⍉产品执行标准：QCYXDK0004—2022《工业缝纫机计算机控制系统》。

## 1.3 安全使用注意事项

- **安装**
  - 控制箱
    - 请遵照说明正确装好
  - 附件
    - 如要安装其它附件时，请先关掉电源并拔掉电源插头。
  - 电源线
    - 请不要用重力去压住电源线或过度的扭曲电源线。
    - 请不要将电源线靠近转动的部位，最少要离开 25mm 以上。
    - 控制箱要接入电源前，请必再查看要接入的电源电压是否与控制箱上标示的电压相同及确定位置后，才可供应电源。如有接用电源变压装置的话，同样的要检查一下后才可供应电源。这时缝纫机上的按钮式电源开关一定要放在 [OFF]。
  - 接地
    - 为防止噪声干扰及漏电而发生电击事件，电源线上的接地线定要确实做好接地。
  - 附属装置
    - 如要接用电气方面的附属装置的话，请遵照指示的位置接好。
  - 拆卸
    - 要卸下控制箱时，必须要先关掉电源并拔掉电源插头。
    - 在拔离电源插头时不可只拉电源线，必须用手拿住电源插头拔出。
    - 控制箱里面有危险的高压电，所以要打开控制箱盖的话，需要先关掉电源后等候 5 分钟以上才可打开控制箱盖。
- **保养、检查和修理**
  - 修理和保养的作业，要请经过训练的技术人员执行。
  - 更换机针和梭子时，请务必要关电。
  - 请使用正厂的零件。
- **其它的安全对策**
  - 缝纫机运转中请不要去触摸会转动和会移动的部位 (特别是机针和皮带附件)等，并注意头发不要靠近它们，以免发生危险。
  - 控制装置不可摔落地，更不可在空隙间塞入其它物品。
  - 请不要在拆掉各护盖的情形下运作。
  - 如本控制装置有损伤或无法正常运作时，必要请有经验的技术人员调整，或检查修理，在故障还没排除前请不要再去运转它。
  - 敬请各客户们不要自行改造或变更本控制装置。
- **废弃处理**
  - 请以一般产业废弃物处理。
- **警告示意和危险示意**
  - 错误的行为可能会发生危险，其程度如后述的标示区别说明。

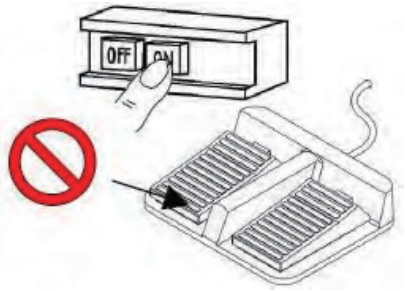
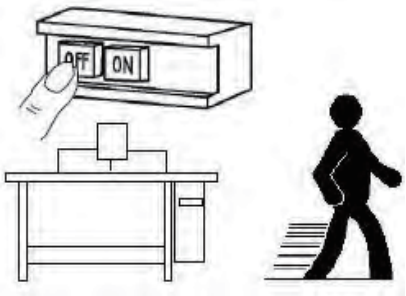
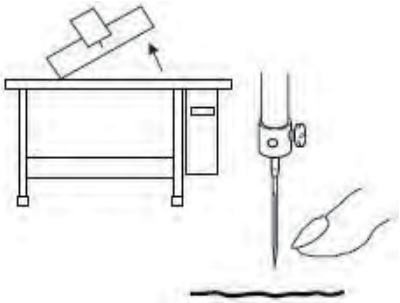
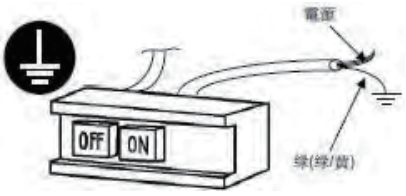
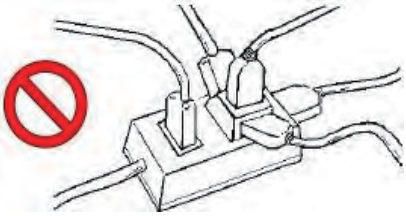
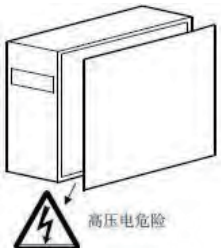
| | | | |
|---|---|---|---|
| ⚠警告 | 错误的行动可能会发生重伤或死亡 | ⚠注意 | 错误的行为可能会发生伤害或房屋或财产的损害 |

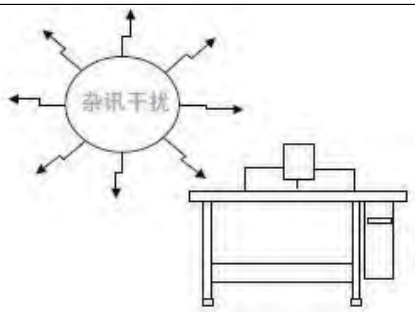
  - 标示符号的表示如下说明。

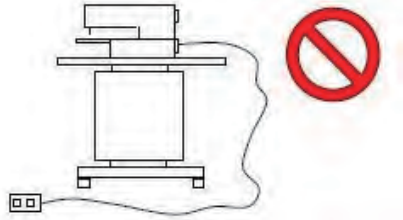
| | | | |
|---|---|---|---|
| | 请遵照指示内容作业 | | 注意高压电（电击）的危险 |
| | 注意高温 | | 务必接上接地线 |
| | 绝对不要执行 | | |

## 1.4 使用上的预防措施

警告

| | |
|---|---|
| 1、当手要按开关 [ON] 时，脚定要离开脚踏板。<br> | 2、要离开工作岗位时，请务必关掉电源。<br> |
| 3、如要横倒头部或更换机针或穿面线时，请务必要关掉电源。<br> | 4、接地线要做好接地。<br> |
| 5、不要用家庭用多插孔式延长线。<br> | 6、控制箱内部存有危险的高压电，所以关掉电源后等候 5 分钟才可打开控制箱盖。<br> |
| 7、更换电机后，请务必参照本资料所示设置主轴电机安装角度。 | |
| 8、请远离会产生高周波噪声干扰的机器。 | 9、如利用外接信号插座接应用附属装置时，其连接线长度请尽量越短越好，长线可能会导致误动作，连接线请用隔离线缆。 |



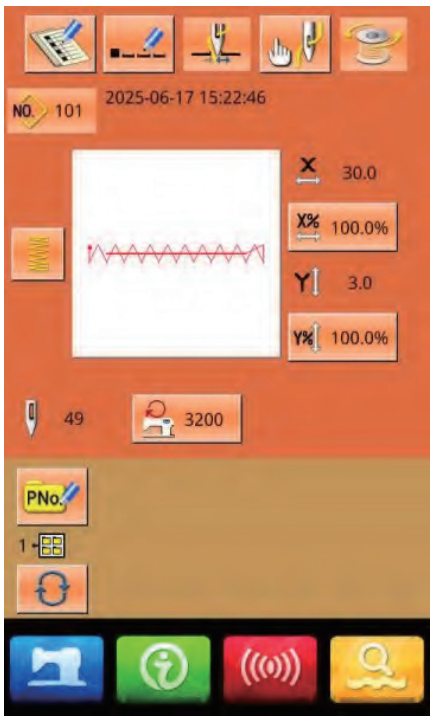



10、如保险丝烧断时，请先把原因排除后再换相同容量的保险丝。

## 1.5 支持语言种类

功能按键采用业界公认的图形标识，图形是国际化语言，并支持 18 种语言切换，包含：中文、英语、意大利语、俄语、葡萄牙语、土耳其语、韩语、越南语、日语、西班牙语、印尼语、德语、法语、波兰语、波斯、阿拉伯语、泰语、柬埔寨语。

**语言切换方式：**数据输入界面按下模式按键进入详细设定界面，选择进入一级参数设置，按切换键选择 U900 参数修改显示语言。







## 1.6 操作方式

本系统触摸屏操作面板采用了业界先进的触摸操作技术，友好的界面以及便捷的操控都给用户的日常使用带来革新性的变化。用户可以使用手指或者其他物体点触屏幕，完成相应的操作。用户在使用过程中应该注意避免使用尖锐的物体触碰屏幕，以免对触摸屏造成永久性损伤。

功能键包括准备键，信息键，模式键以及通信键等。具体操作方法参照后面章节的说明。




**用户在使用过程中应该注意避免使用尖锐的物体触碰屏幕，以免对触摸屏造成永久性损伤。**

# 2 操作说明

## 2.1 通用按键

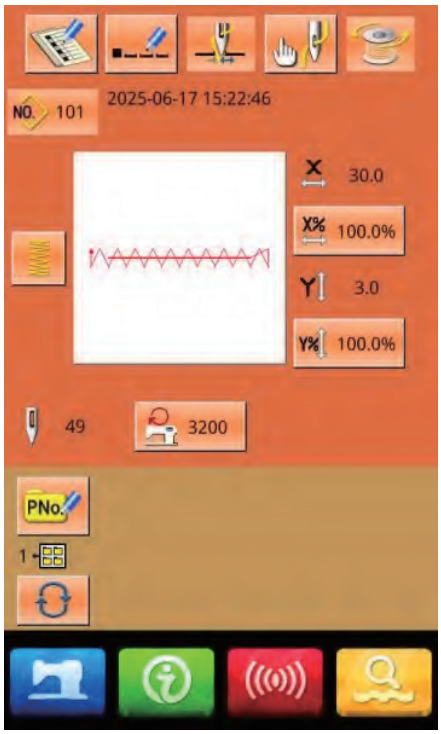
在本系统的各界面上进行通用操作的按键如下：

| 序号 | 图标 | 功能 |
|---|---|---|
| 1 |  | 取消键→退出当前设定界面。数据变更界面时，取消变更中的数据。 |
| 2 |  | 确定键→确定变更了的数据。 |
| 3 |  | 加键→向上增加数值按键。 |
| 4 |  | 减键→向下减小数值按键。 |
| 5 |  | 复位键→解除异常。 |
| 6 |   | 输入键→显示数字键盘，可以进行数字的输入。 |
| 7 |  | 准备键→进行数据输入界面和缝制界面的切换。 |
| 8 |  | 信息键→进行数据输入界面和信息界面的切换。 |
| 9 |  | 通信键→进行数据输入界面和通信界面的切换。 |
| 10 |  | 模式键→进行数据输入界面和各种详细设定变换界面的切换。 |

## 2.2 基本操作

**①打开电源开关**

打开电源之后，显示出数据输入界面。

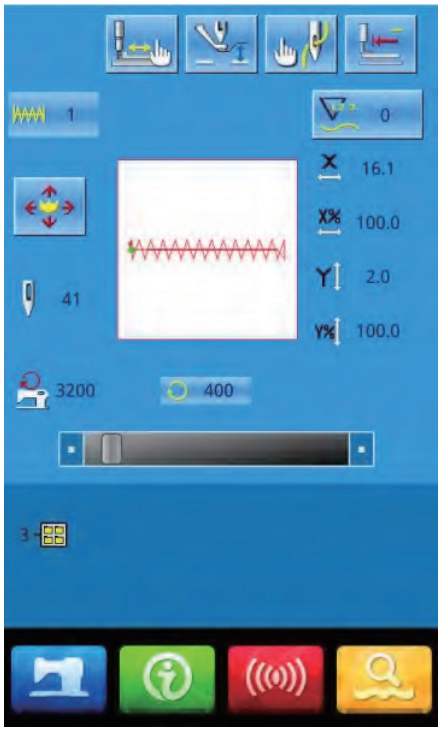



**②选择想缝制的图案 No.**

当前界面下会显示出已选择的图案No.，按下花样显示按键  之后可以选择图案No.。
有关花样选择的操作，详见【2.7花样选择】一节。

**③设定成可以缝制的状态**

按准备键之后，液晶显示的背景颜色变为蓝色，变成可以缝制的状态。



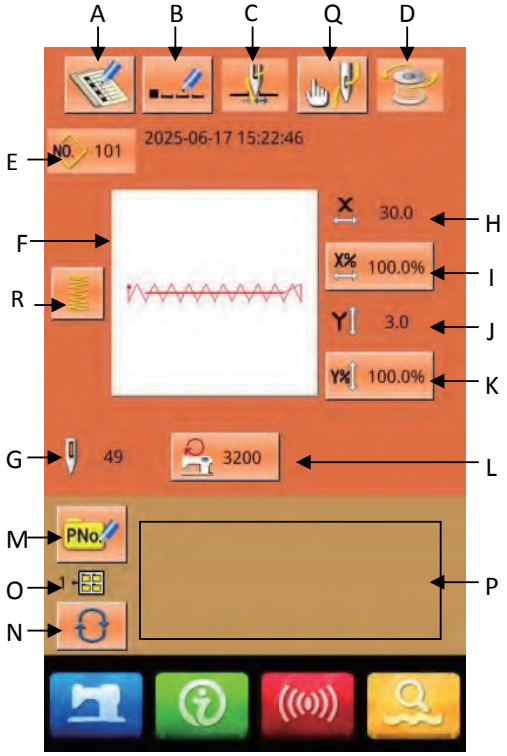

**④开始缝制**

把缝制品安放到压脚部，踩踏板落下压脚，缝纫机启动，开始进行缝制。

## 2.3 普通花样操作

### ①缝制数据输入界面

数据输入界面如右图所示，详细功能说明请见功能键说明表。



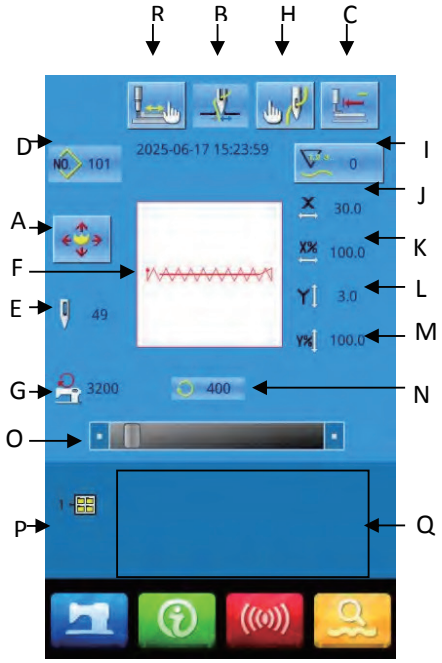

## 功能说明：

| 序号 | 功能 | 内容 |
|---|---|---|
| A | 花样登记 | 可以登记 999 个普通花样。 |
| B | 花样命名 | 最多可以输入 14 个字符。 |
| Q | 穿线功能键 | 可以进入穿线功能界面，功能中可以设定压脚高度。 |
| C | 抓线按键 | 选择抓线有效/无效 |
| D | 绕线 | 按下一次准备键 之后方可绕线。 |
| E | 花样号码显示 | 显示当前选择花样号码。 |
| F | 缝制形状选择 | 按键上显示为当前花样缝制形状，按下之后进入花样选择界面。 |
| G | 花样针数显示 | 显示当前选择花样缝纫针数。 |
| H | X 实际尺寸值显示 | 显示当前选择花样的 X 方向实际尺寸值。<br>通过参数 U64 可以选择输入实际尺寸，此时显示出 X 实际尺寸值按键。 |
| I | X 放大缩小率设定 | 按键上显示当前选择花样的 X 方向放大缩小率，按下之后进入设置界面。<br>受参数 U64 和 U88 影响。 |
| J | Y 实际尺寸值显示 | 显示当前选择花样的 Y 方向实际尺寸值。<br>通过参数 U64 可以选择输入实际尺寸，此时显示出 Y 实际尺寸值按键。 |
| K | Y 放大缩小率设定 | 按键上显示当前选择花样的 Y 方向放大缩小率，按下之后进入设置界面。 |

| | | |
|---|---|---|
| | | 受参数 U64 和 U88 影响。 |
| L | 最高转速限制 | 显示最高转速限制值，按下之后可进行设置。 |
| M | 快捷花样（简称 P 花样）登记 | 用于登记 P 花样，最多登记 50 个。 |
| O | P 花样语件夹号码显示 | 显示当前 P 花样语件夹号码。 |
| N | P 花样语件夹选择 | 顺序切换 P 花样语件夹号码。 |
| P | P 花样选择 | 显示出已登记的 P 花样，按下之后进入 P 花样数据输入界面。<br>初期状态不显示该按键。 |
| R | 参数模板设置 | 利用参数设置快速生成模板花样 |

**②缝制界面**

按下进入缝制界面如右图所示。详细功能说明请见功能键说明表。




## 功能说明：

| 序号 | 功能 | 内容 |
|---|---|---|
| A | 移框键 | 按下后进入移框界面，可以确定起缝点。 |
| H | 穿线按键 | 下降压脚，显示出下降压脚画面。 |
| B | 抓线按键 | 选择抓线有效/无效 |
| C | 返回起缝点 | 按下后压脚返回起缝点，上升压脚 |
| D | 花样号码显示 | 显示当前选择花样号码。 |
| E | 花样针数显示 | 显示当前选择花样缝纫针数。 |

| | | |
|---|---|---|
| F | 花样形状显示 | 显示当前选择花样形状。 |
| G | 最高转速限制显示 | 显示最高转速限制值。 |
| I | 计数器设置 | 按下后可以选择计数器类型和设置当前计数值。<br>：缝制计数器<br>：计件计数器 |
| J | X 实际尺寸值显示 | 显示当前选择花样的 X 方向实际尺寸值。 |
| K | X 放大缩小率设定 | 显示当前选择花样的 X 方向放大缩小率。 |
| L | Y 实际尺寸值显示 | 显示当前选择花样的 Y 方向实际尺寸值。 |
| M | Y 放大缩小率设定 | 显示当前选择花样的 Y 方向放大缩小率。 |
| N | 缝纫速度显示 | 显示当前缝纫速度。 |
| O | 缝纫速度设置 | 可以变更缝纫速度。 |
| P | P 花样语件夹号码显示 | 显示当前 P 花样语件夹号码。 |
| Q | P 花样选择 | 显示出已登记的 P 花样，按下之后进入 P 花样缝制界面。初期状态不显示该按键。 |
| R | 试缝 | 按下后进入试缝界面，可以确定花样形状。 |

## 2.4 花样登记

最多可以登记普通花样 999 个。按下进入花样登记界面（如右图所示）：




**①输入花样号**

通过数字键可以选择想要输入的花样号码，如果输入了已经存在的花样号码，界面上方会显示出被登记的缝制形状及相关数据。通过、键可以检索未登记的花样号码。

**②登记新花样**

确定花样号码后按下，之前显示花样数据会复制到新登记花样中，操作结束后返回到新登记花样数据输入界面。

如果输入了已经存在的花样号码会提示是否覆盖已存花样。

**注：基础花样不能被覆盖。**

## 2.5 花样命名

按下进入花样命名界面（如右图所示），最多可以输入 14 个字符。

：光标右移键

：光标左移键

：字母大小写切换键

：清除键

选择想要输入的字符，按下结束花样命名操作。

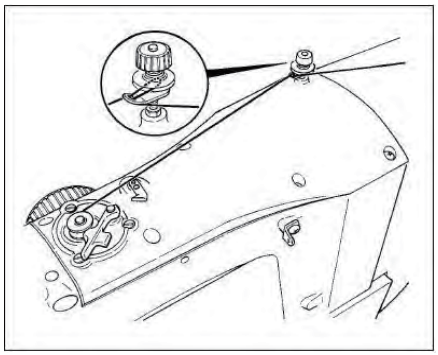
通过移动光标可以确定该字符位置，消除键可以消除该位置字符。




## 2.6 绕线

**①安装梭芯**

把梭芯插进绕线轴。如右图所示。



**②显示底线绕线界面**

在数据输入界面上，按了绕线按键之后，绕线界面被显示出来（如右图所示）。



**③开始绕线**

踩踏启动踏板之后，缝纫机转动，开始卷绕底线。

**④停止缝纫机**

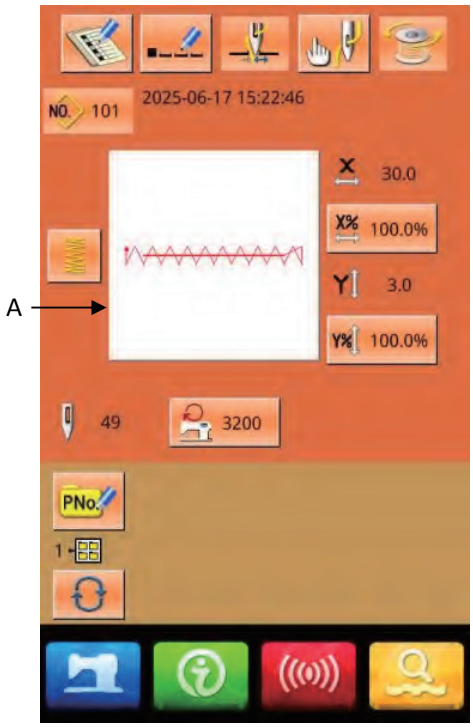
按了停止按键之后，缝纫机停止转动，返回通常模式。另外，在卷绕底线中再次踩踏踏板之后，缝纫机在绕线模式下停止缝纫机，因此再次踩踏起动踏板，可以继续卷绕底线，在卷绕多个梭芯时可以利用此功能。

**注：刚刚打开电源后，或者刚刚变更为主机输入后，不进行卷线动作。请设定1次图案花样，按准备键之后显示出缝制画面。**

## 2.7 花样选择

**①进入花样选择界面**

数据输入界面（如右图所示），点击缝制形状 A 之后进入花样选择界面。



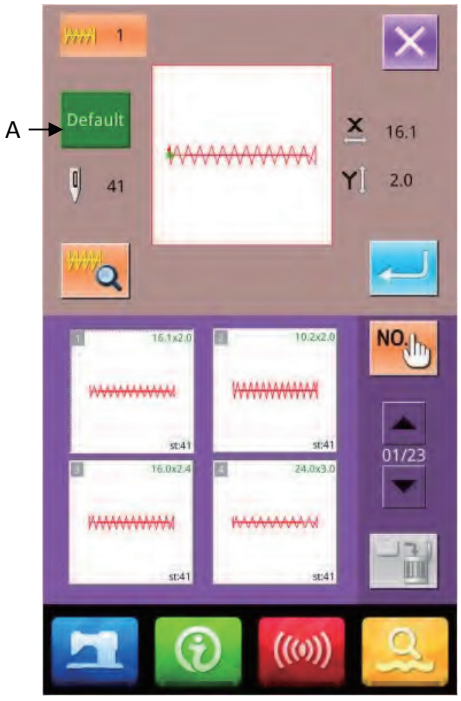
花样选择界面上方为当前选择花样的缝制形状，下方为已登记的花样号码。

：花样预览

：输入号码查询花样

：花样删除

点击 **A** 键，当存在普通花样时，会在基础花样和用户花样之间来回切换。




**②选择花样**

当前为基础花样时，每页可以显示4个花样号码；自编花样时，每页可显示20个花样号码。针对基础花样，每个花样号码上显示出该花样的简图和x、y范围；自编花样只显示花样号码。

选中已登记的花样号码时，上方会显示已选择花样内容，按下完成花样选择操作。

**③花样查询**

按下键会弹出花样查询界面，通过数字键可以直接输入花样号码。



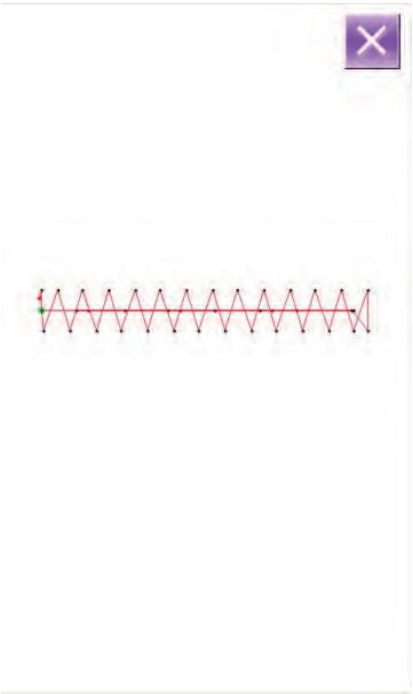

**④花样删除**

选中已登记的花样，按下键就会删除掉该花样，但是被登记到 P 的花样是不能被删除的。

**注：花样分为基础花样和普通花样：基础花样为出厂花样，不能被删除；普通花样为用户打版、复制或 U 盘导入的花样，花样可以被删除和修改。**

**⑤花样预览**

按下键可以全屏预览当前花样形状。（背景色为白色）



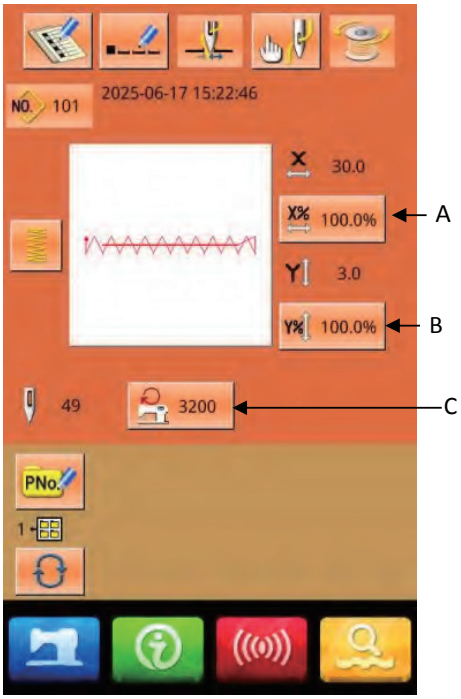
## 2.8 缝纫数据设定

**①进入缝纫数据设定界面**

在数据输入界面下相应按下 A、B、C 可分别进入缩放率设置和速度限制设置界面。

注 1：参数 U64 可以切换选择设置放大缩小率或实际尺寸值。

注 2：最高速度限制的最大输入范围和初始值受参数 U01 影响。




| | 项目 | 输入范围 | 初始值 |
|---|---|---|---|
| A | X 方向放大缩小率 | 1.0~400.0% | 100.0% |
| B | Y 方向放大缩小率 | 1.0~400.0% | 100.0% |

| | | | |
|---|---|---|---|
| C | 最高速度限制 | 400~2700rpm(各机型上限不同) | 2700rpm |

**②缩放率设定**

右图为放大缩小率设定界面，界面上方为X方向设置，下方为Y方向设置。

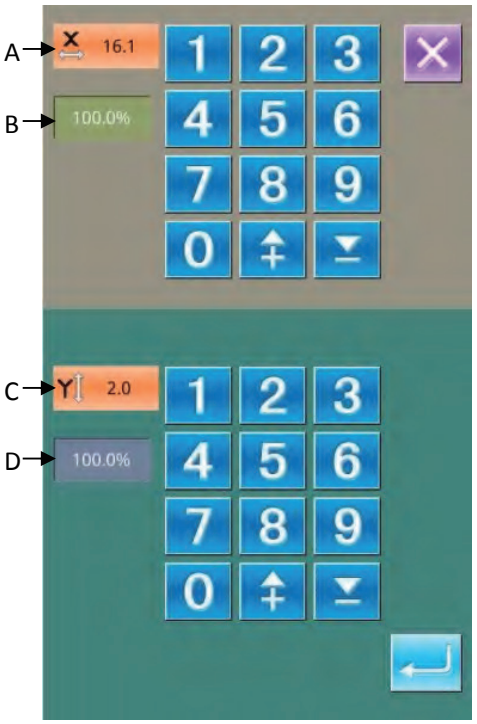
A：X方向实际值显示

B：X方向放大缩小率显示

C：Y方向实际值显示

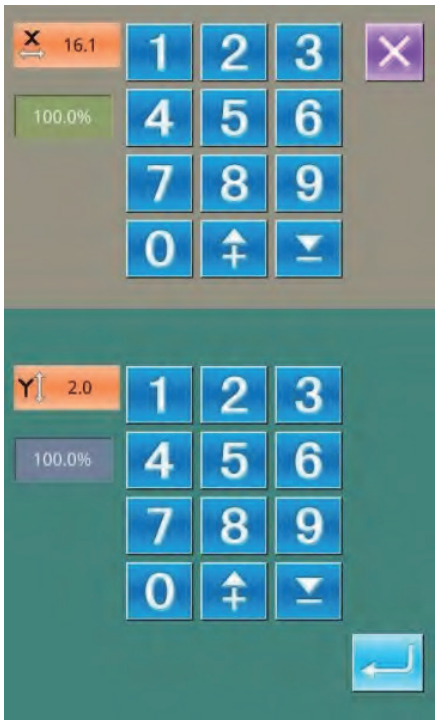
D：Y方向放大缩小率显示

通过 0 ~ 9 十数字键盘或 、 键输入希望值，被输入的数字插入到显示数值的第一位，以前输入的数字一位一位的累进，按下确定键 完成操作返回数据输入界面。




**③最高速度限制设定**

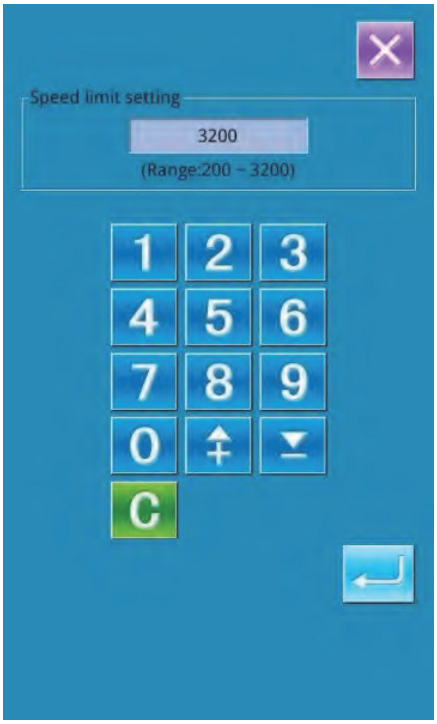
操作同上。



## 2.9 P 花样登记

**①进入 P 花样登记界面**

在数据输入界面下按下进入P花样登记界面，如右图。




**②输入 P 花样号码**

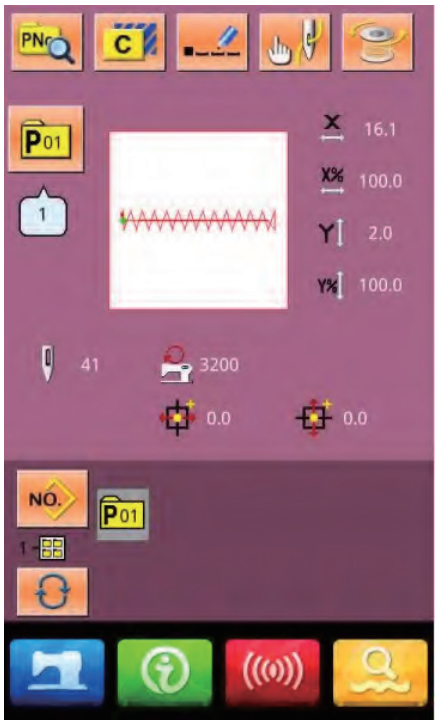
通过~十数字键盘或、键输入想要登记的号码，如果输入了已经登记的花样号码，界面上方会显示出被登记的缝制形状和相关数据，这种情况下是不能登记新花样的。

**③选择语件夹号码**

P 花样号码可以登记到 5 个语件夹里，每个语件夹最多保存 10 个 P 花样。语件夹选择键可以进行顺序选择。

**④确定花样号码**

按下确定键之后完成 P 花样登记操作，返回到 P 花样数据数据输入界面。



## 2.10 试缝操作

**①显示缝制界面**

在数据输入界面，按准备键之后，液晶显示的背景颜色变为蓝色，此时进入缝制界面。

**②显示试缝界面**

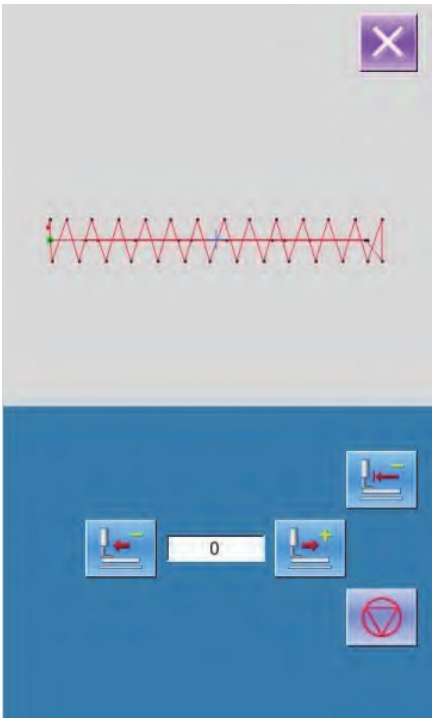
在缝制界面下，按下键后进入试缝界面（如右图所示）：

：返回起缝点

：压脚后退

：压脚前进

：停止




**③开始试缝**

踩下脚踏开关下降压脚，用压脚后退键和压脚前进键确定形状。持续一段时间连续按键后，离开按键后压脚继续移动，想停止时按下键。

按下返回原点键后，机针返回原点且返回到缝制界面。

**④结束试缝**

按了取消键退出试缝界面之后，返回缝制界面。花样形状没有在开始缝制位置或结束缝制位置时，踩脚踏开关后，可以从确认中途进行缝纫。如要退出则按下返回起缝点键之后，关闭凸起试缝画面，显示出缝制画面，返回开始缝制位置。.

## 2.11 计数器操作

**① 显示计数器界面**

在缝制界面中，按了（）键之后，计数器设定界面被显示出来。

：缝制计数器类型

：计件计数器类型

**② 选择计数器类型并设定计数值**

通过选择和可以设置计数器类型，并且设置其当前计数值。




## 2.12 急停

通过设定 K280 参数来选择暂停是否有效：
可通过无效、无效选项来选择。
暂停方式目前采用反踩踏板来选择

**①解除异常**

在缝制中按了暂停键之后，可以停止缝纫机转动。此时异常画面被显示，通知停止开关被按下。此时按下复位键解除异常。



**②进行切线**

按下切线键之后，可以进行切线，进入到步骤设置界面。

**注：参数 K572 设为暂停后自动切线时直接进入步骤设置。**



**③ 进行步骤设置，调整压脚到重新缝纫位置**

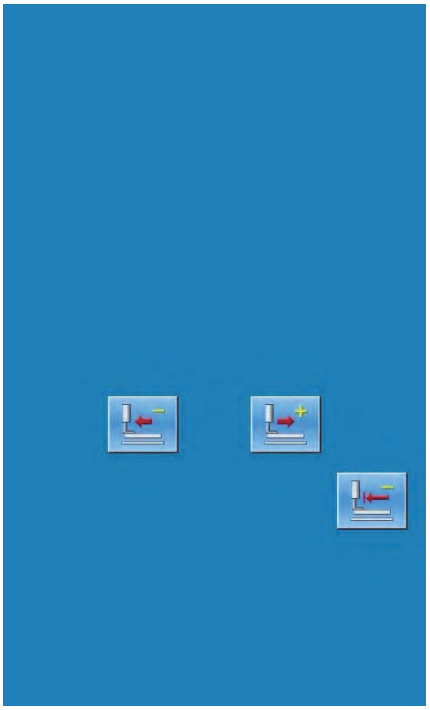
按下切线键进入到步骤设置界面。

：后退送布

：前进送布

：起缝点复位

按下或，移动压脚到重新缝纫位置。



**④ 重新缝纫**

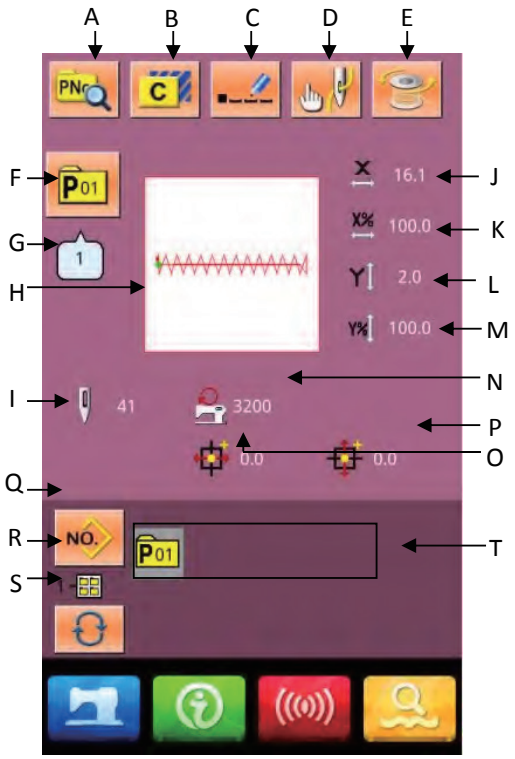
踩下脚踏板之后，重新启动缝纫。

# 3 快捷（P）花样操作

## 3.1 P 花样数据输入

快捷花样简称 P 花样，由一个普通花样和相关花样缝制参数（X 缩放率、Y 缩放率、速度限制等）组成。选用 P 花样不需要每次设置相关参数。

P 花样数据输入界面如右图所示。
最多可以登记 50 个 P 花样。




## 功能说明：

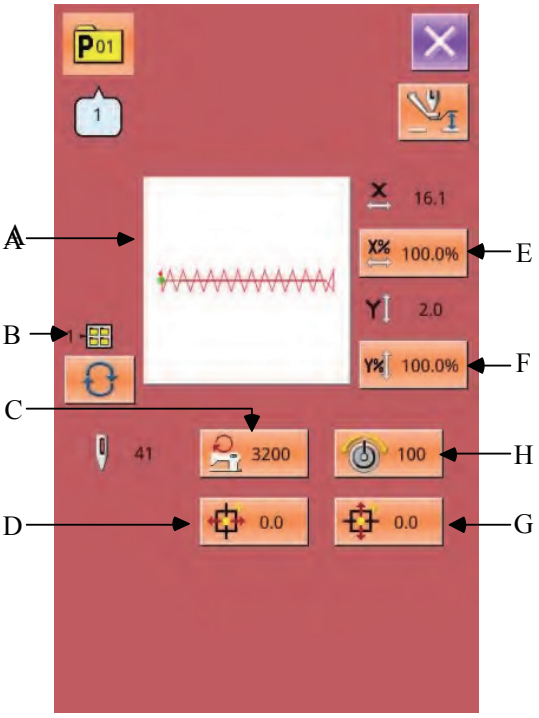
| 序号 | 功能 | 内容 |
|---|---|---|
| A | P 花样编辑 | 可以编辑 P 花样内容。 |
| B | P 花样复制 | 可以复制当前 P 花样内容到一个空花样号码下。 |
| C | 花样命名 | 最多可以输入 14 个字符。 |
| D | 压脚设置 | 按下之后外压脚下降。 |
| E | 绕线 | 按下一次准备键 之后方可绕线。 |
| F | P 花样号码显示 | 显示当前选择花样号码。 |
| G | 缝纫形状号码显示 | 显示当前 P 花样下引用的普通花样号码。 |
| H | 缝制形状选择 | 显示为当前花样缝制形状。 |
| I | 花样针数显示 | 显示当前选择花样缝纫针数。 |
| J | X 实际尺寸值显示 | 显示当前选择花样的 X 方向实际尺寸值。 |
| K | X 放大缩小率设定 | 显示当前选择花样的 X 方向放大缩小率。 |

| 序号 | 功能 | 内容 |
|---|---|---|
| L | Y 实际尺寸值显示 | 显示当前选择花样的 Y 方向实际尺寸值。 |
| M | Y 放大缩小率设定 | 显示当前选择花样的 Y 方向放大缩小率。 |
| N | 最高转速限制 | 显示最高转速限制值。 |
| O | X 方向偏移量显示 | 显示当前选择花样的 X 方向偏移量。 |
| P | Y 方向偏移量显示 | 显示当前选择花样的 Y 方向偏移量。 |
| Q | 返回普通花样数据输入 | 返回到普通花样数据输入界面。 |
| R | P 花样语件夹号码显示 | 显示当前 P 花样语件夹号码。 |
| S | P 花样语件夹选择 | 顺序切换 P 花样语件夹号码。 |
| T | P 花样选择 | 显示出已登记的 P 花样。 |

## 3.2 P 花样编辑

**①进入 P 花样编辑界面**

按下进入P花样编辑界面（如右图所示）。



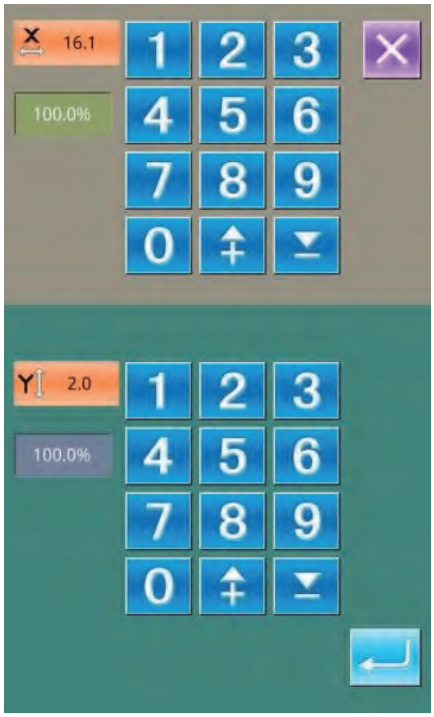

**②编辑项目数据变更**

选择想要变更的项目，设置数值。

| | 项目 | 输入范围 | 初始值 |
|---|---|---|---|
| A | 缝制形状 | | |
| B | 语件夹号码 | 1~5 | |
| C | 最高速度限制 | 400~3200rpm | 3000rpm |
| D | X方向偏移量 | -30.0~30.0mm | 0 |
| E | X方向放大缩小率 | 1.0~400.0% | 100.0% |
| F | Y方向放大缩小率 | 1.0~400.0% | 100.0% |
| G | Y方向偏移量 | -30.0~30.0mm | 0 |
| H | 线张力值 | 0~200 | 100 |

**③确定数据变更**

以设置X方向偏移量为例，通过 0 ~ 9 十数字键盘或 、 键输入数值，按下确定键 完成操作。



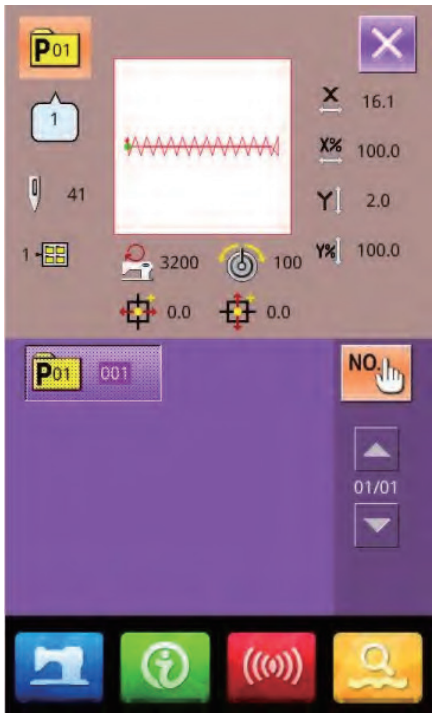

**④退出编辑**

按下退出键 关闭P花样编辑界面，返回数据输入界面。

## 3.3 P 花样复制

**①选择被复制花样**

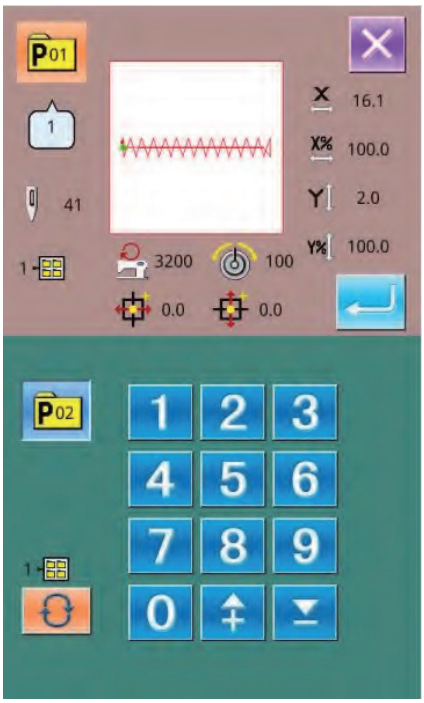
按下 进入P花样复制界面（如右图所示）。在已登记的花样中选择被复制花样号码并按下 。



**②输入新登记的花样号码**

界面上方显示为被复制花样，通过数字键选择未登记的花样号码，已经登记的花样号码不能重复登记。

语件夹选择键可以选择保存的语件夹。按下确定键则完成花样复制操作，返回到P花样复制界面。



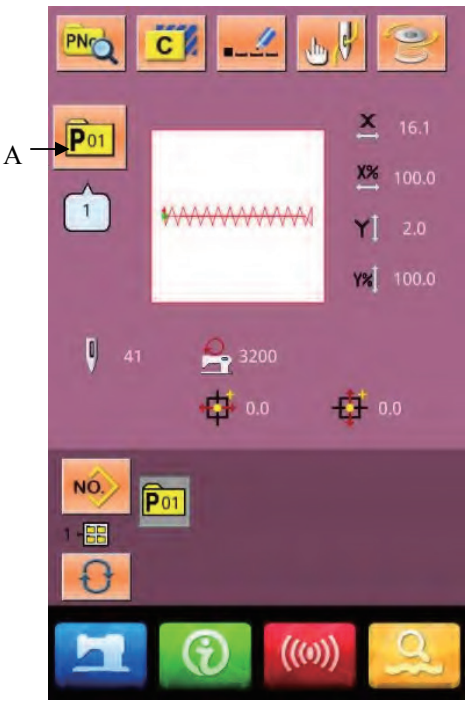

## 3.4 P 花样选择

**①进入 P 花样选择界面**

如右图所示，按下图标 A，可以进入 P 花样选择界面。

**②选择花样号码**

界面上方为当前选择花样信息，当按下语件夹选择键切换到语件夹号码不显示时，可以把已登记的P花样全部显示出来。



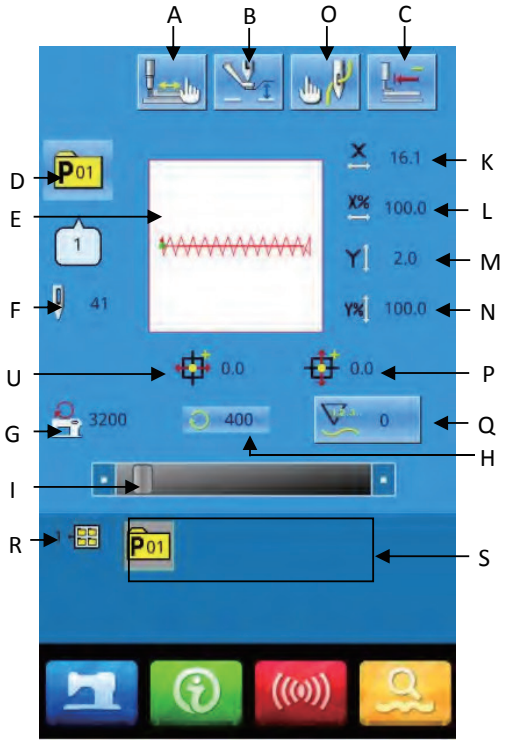
**③确定花样选择**

操作同普通花样选择，按下确定键结束选择。




## 3.5 P 花样缝制

在 P 花样数据输入界面下，按下进入缝制界面（如右图所示）。




## 功能说明：

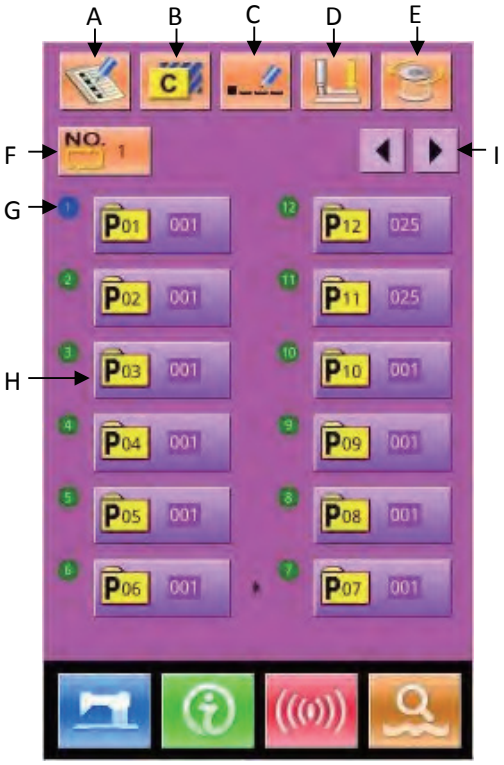
| 序号 | 功能 | 内容 |
|---|---|---|
| A | 试缝 | 按下后进入试缝界面，可以确定花样形状。 |
| B | 穿线 | 按下之后外压脚下降。 |
| C | 原点复位 | 按下后压脚返回始缝点。 |
| D | P 花样号码显示 | 显示当前选择花样号码。 |
| E | 缝纫形状号码显示 | 显示当前 P 花样下引用的普通花样号码。 |
| F | 花样针数显示 | 显示当前选择花样缝纫针数。 |
| G | 最高转速限制显示 | 显示最高转速限制值。 |
| H | 缝纫速度显示 | 显示当前缝纫速度。 |
| I | 缝纫速度设置 | 可以变更缝纫速度。 |
| K | X 实际尺寸值显示 | 显示当前选择花样的 X 方向实际尺寸值。 |
| L | X 放大缩小率设定 | 显示当前选择花样的 X 方向放大缩小率。 |
| M | Y 实际尺寸值显示 | 显示当前选择花样的 Y 方向实际尺寸值。 |
| N | Y 放大缩小率设定 | 显示当前选择花样的 Y 方向放大缩小率。 |
| O | 压脚设置 | 按下之后外压脚下降。 |
| P | Y 方向偏移量显示 | 显示当前选择花样的 Y 方向偏移量。 |
| Q | 计数器设置 | 按下后可以选择计数器类型和设置当前计数值。<br>：缝制计数器<br>：计件计数器 |
| R | P 花样语件夹号码显示 | 显示当前 P 花样语件夹号码。 |
| S | P 花样选择 | 显示出已登记的 P 花样。 |

# 4 组合（C）花样操作

## 4.1 C 花样数据输入

组合花样简称 C 花样，由一组 P 花样组成，每组 C 花样可以输入最多 50 个子花样。一共可以登记最多 50 组 C 花样。

参照【8.5 变换缝制类型】一节内容进入组合花样数据输入界面，如右图所示。



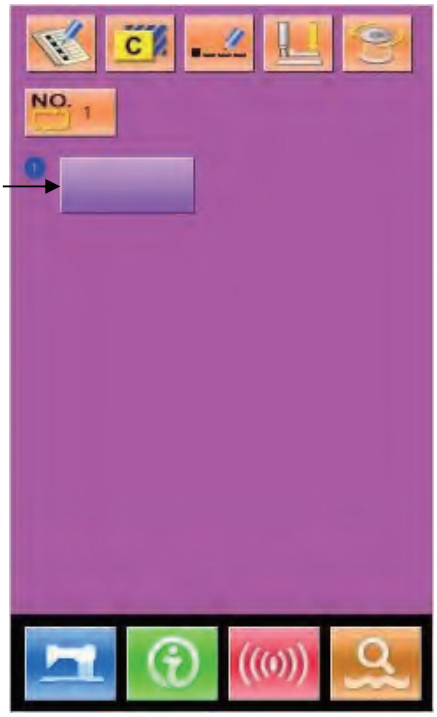

### 功能说明：

| 序号 | 功能 | 内容 |
|---|---|---|
| A | C 花样登记 | 登记一个新组合花样。 |
| B | C 花样复制 | 可以复制当前 C 花样内容到一个空花样号码下。 |
| C | 花样命名 | 最多可以输入 14 个字符。 |
| D | 压脚设置 | 按下之后外压脚下降。 |
| E | 绕线 | 按下一次准备键之后方可绕线。 |
| F | C 花样号码选择 | 按键上显示当前选择花样号码，按下后进入 C 花样选择界面。 |
| G | 缝制顺序显示 | 显示当前选择花样的缝制顺序，蓝色显示为起始缝制图案。 |
| H | C 花样图案选择 | 按下后进入 C 花样编辑界面，可以选择输入一个 P 花样。 |
| I | 翻页键 | C 花样图案最多可以登记 30 个，每页最多显示 6 个图案。 |

## 4.2 C 花样编辑

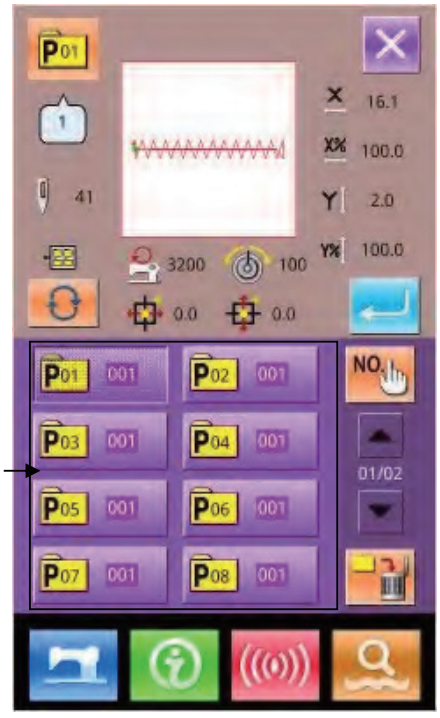
### ①进入 C 花样编辑界面

在 C 花样数据输入界面下，按下 A 可以进入 C 花样编辑界面。
在初期状态下，没有登记到 P 花样做为缝制图案，因为第一个图案以空白状态显示。



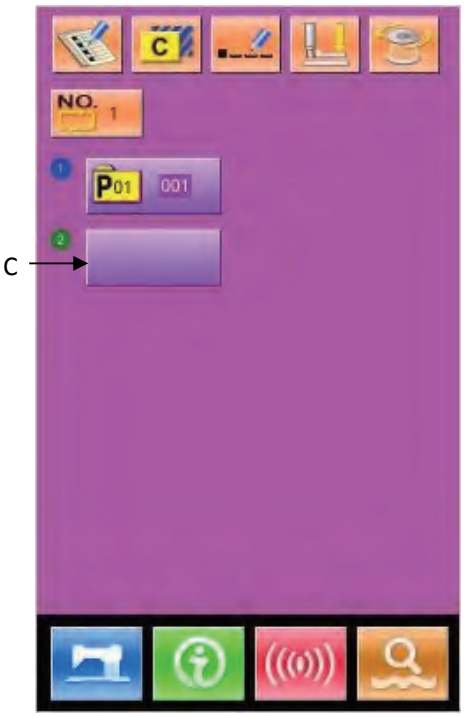

### ②选择图案

右图为 C 花样编辑界面，选择想要登记的 P 花样图案 B，按下确定键 之后结束选择。



### ③反复登记剩余图案

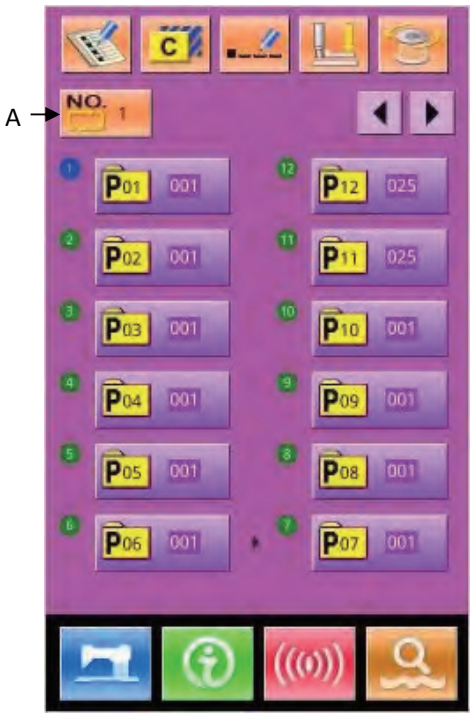
第一个图案登记确定之后，第二个图案选择键 C 被显示出来，操作同上，可以反复登记其它剩余图案。




## 4.3 C 花样选择

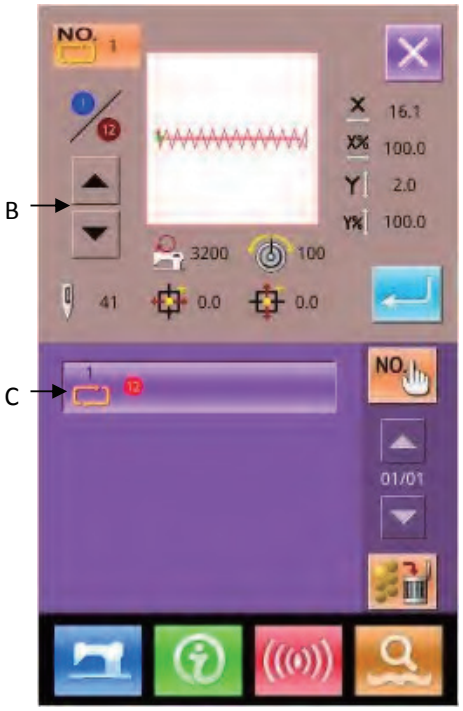
### ①进入 C 花样选择界面

如右图所示，按下图标 A，可以进入 C 花样选择界面。



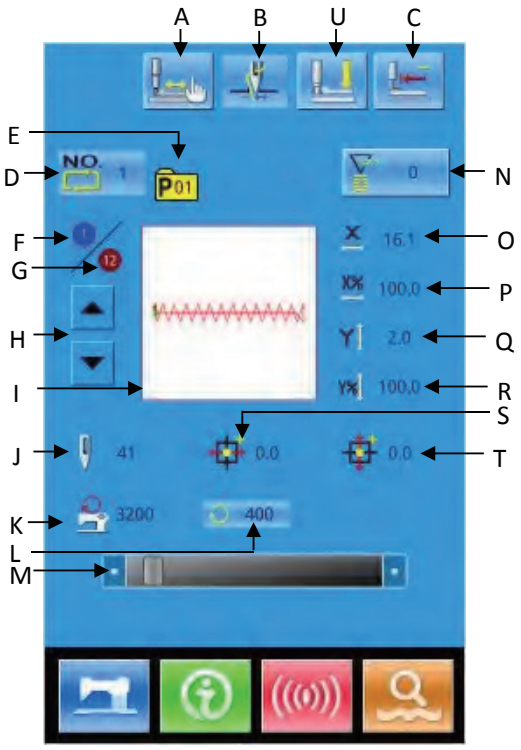
**②选择 C 花样号码**

右图为 C 花样选择界面，按下 B 键之后，可以顺序变换当前 C 花样下输入的 P 子花样数据信息。确定要想要选择的 C 花样号码键 C，按下确定键 之后结束选择。




## 4.4 C 花样缝制

在 C 花样数据输入界面下，按下 进入缝制界面（如右图所示）。




**功能说明：**

| 序号 | 功能 | 内容 |
| --- | --- | --- |
| A | 试缝 | 按下后进入试缝界面，可以确定花样形状。 |
| B | 穿线 | 按下之后外压脚下降。 |
| C | 原点复位 | 按下后压脚返回始缝点。 |
| D | C 花样号码显示 | 显示当前选择 C 花样号码。 |
| E | 缝纫形状号码显示 | 显示当前 C 花样下登记的子花样号码。 |
| F | 缝制顺序显示 | 显示当前缝制花样中的缝制顺序号 |
| G | 登记总数显示 | 显示当前 C 花样所登记的子花样总数 |
| H | 缝制顺序前进/后退键 | 可以把缝制图案选择到后一个/前一个。 |
| I | 花样形状显示 | 显示当前缝制所登记的形状。 |
| J | 花样针数显示 | 显示当前缝纫登记形状针数。 |
| K | 最高转速限制显示 | 显示当前缝纫登记形状最高转速限制值。 |
| L | 缝纫速度显示 | 显示当前缝纫速度。 |
| M | 缝纫速度设置 | 可以滑动变更缝纫速度。 |
| N | 计数器设置 | 按下后可以选择计数器类型和设置当前计数值。<br>：缝制计数器<br>：计件计数器 |
| O | X 实际尺寸值显示 | 显示当前缝纫登记形状的 X 方向实际尺寸值。 |
| P | X 放大缩小率设定 | 显示当前缝纫登记形状的 X 方向放大缩小率。 |
| Q | Y 实际尺寸值显示 | 显示当前缝纫登记形状的 Y 方向实际尺寸值。 |
| R | Y 放大缩小率设定 | 显示当前缝纫登记形状的 Y 方向放大缩小率。 |
| S | X 方向偏移量显示 | 显示当前缝纫登记形状的 X 方向偏移量。 |
| T | Y 方向偏移量显示 | 显示当前缝纫登记形状的 Y 方向偏移量。 |
| U | 穿线功能 | 按下后可以进入穿线功能 |

# 5 花样图案编辑

## 5.1 进入花样编辑模式

按下可以切换数据输入界面和模式选择界面（如右图所示），在该界面下可以进行一些详细的设置和编辑操作。




有关模式选择界面下的详细操作和设置详见【8 模式和参数设置】。

按下，会与互相切换。

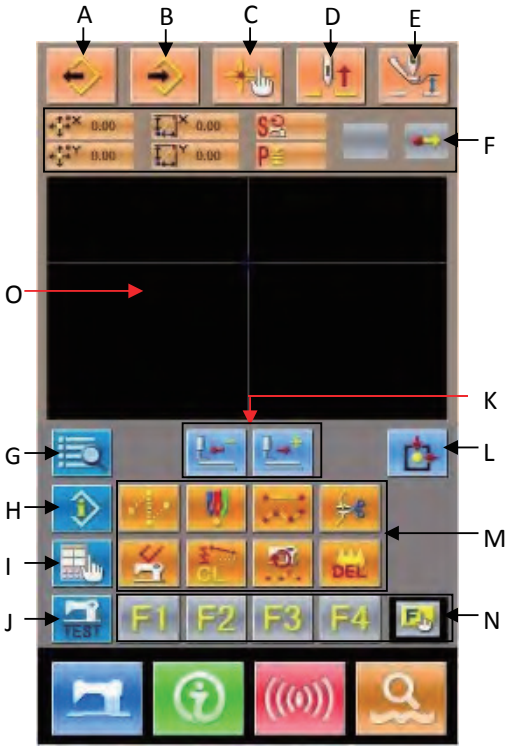
：缝纫模式

：编辑模式

选择编辑模式图标，再次按下键后，退出模式选择界面，系统提示是否进入花样编辑界面。



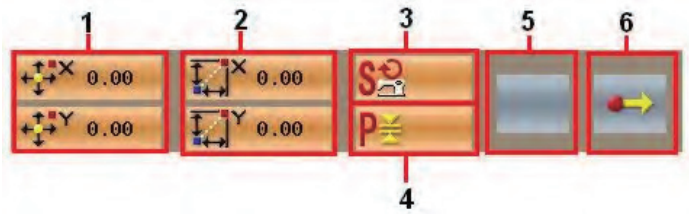
按下后，进入花样编辑标准界面，如右图所示：




## 功能说明：

| 序号 | 功能 | 内容 |
|---|---|---|
| A | 读取图案 | 显示图案读取界面 |
| B | 写入图案 | 显示图案写入界面 |
| C | 落针点查询 | 可以快速查询落针点；在编辑花样时可以直接输入缝制点坐标 |
| D | 提针 | 让机针返回到停车位置 |
| E | 中压脚抬升下降 | 抬升或下降中压脚 |
| F | 当前机针位置信息 | 这是显示现在的机针位置信息的部分 |
| G | 编辑功能代码一览表 | 显示所有可操作的编辑功能，详见【编辑功能一览表】 |
| H | 信息显示 | 显示当前编辑花样的详细信息 |
| I | 显示设定 | 可以进行广角设定以及落针点显示设定等 |
| J | 试缝 | 可以对当前编辑的花样进行试缝 |
| K | 前进・后退送布 | 从现在的针位置移动一针（前进；后退） |
| L | 原点复位 | 将现在的机针位置返回到原点。 |
| M | 功能按钮 | 可以直接调用各个按钮上的功能 |
| | | 1：空送 |

| 序号 | 功能 | 内容 |
|---|---|---|
| | | 2  ：点缝 |
| | | 3  ：普通缝 |
| | | 4  ：切线 |
| | | 5  ：消除机械控制命令 |
| | | 6  ：要素删除 |
| | | 7  ：缝制速度区间修改 |
| | | 8  ：删除当前编辑的花样图案 |
| N | 功能快捷键 | 通过功能选择 • 设定（功能代码 112），可以把需要的功能分配到各按钮，作为功能快捷键使用。功能被分配后，表示功能的图标被显示到相应的按键上。 |
| O | 花样图案显示区域 | 显示花样图案。 |

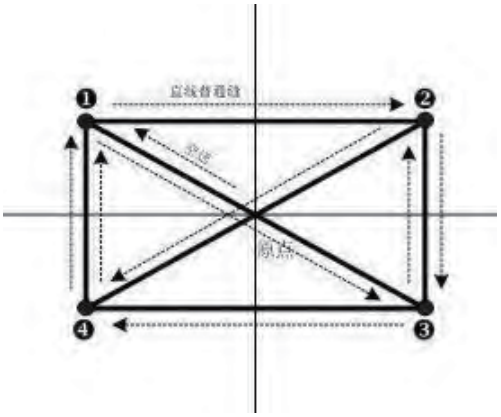



| 序号 | 项目 | 内容 |
|---|---|---|
| 1 | 绝对坐标 | 表示从现在的机针位置的原点的绝对坐标。 |
| 2 | 相对坐标 | 表示现在的机针位置的相对坐标。 |
| 3 | 速度 | 表示当前点的缝制速度或空送速度。 |
| 4 | 间隔 | 表示现在的要素缝制针迹长度。(扩大 • 缩小读取后，扩大缩小前的数值被显示。) |
| 5 | 要素种类 | 表示当前的要素种类。缝制数据时，显示该要素种类(空送  、折线  、自由曲线  等)的图标。机械控制命令时，显示该机械控制命令的种类(切线等)的图标。 |
| 6 | 落针种类 | 表示有关落针位置的种类。 |
| | |  图案起点，表示是图案的起点位置(原点)。 |
| | |  要素中途，表示是要素内的中途点 (即不是顶点也不是要素终端) |
| | |  顶点，表示是折线的顶点。 |

| 序号 | 项目 | 内容 |
| --- | --- | --- |
| | | 要素终端，表示是要素的终端位置。 |
| | | 图案终端，表示是图案的最终位置。 |

## 5.2 花样编辑

使用花样编辑功能，输入如下花样图案。




输入点：

| | X (mm) | Y (mm) |
| --- | --- | --- |
| ◆ | -40.00 | 25.00 |
| ❖ | 40.00 | 25.00 |
| ◆ | 40.00 | -25.00 |
| ☒ | -4000 | -25.00 |

输入次序：如左图中虚线箭头所示。

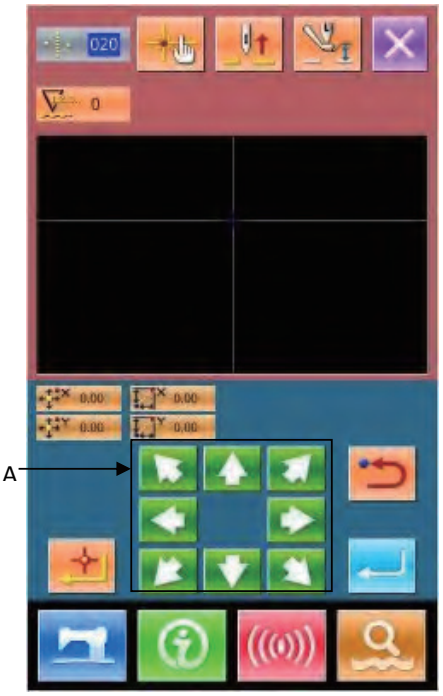
### 空送的输入

在花样编辑标准界面，按空送按钮，显示出空送设定界面：

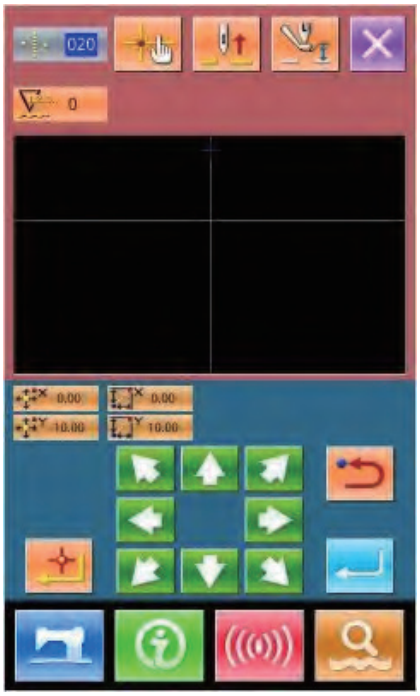
注：也可以从功能代码一览表里直接选择 020：空送，进入该界面。



按确认键后，显示出空送位置指定界面：




在空送位置指定界面，使用方向移动键——>A，移动光标（机针位置）到（0，10）处，按按钮确定后，再按键保存设置，退回到花样编辑标准界面并显示出空送针迹：

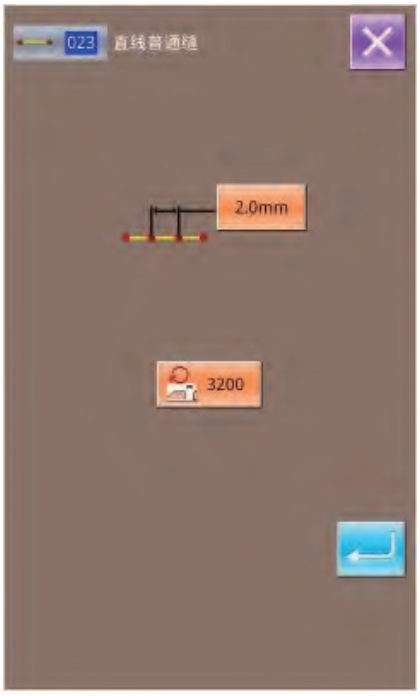




### &直线普通缝的输入

在功能代码一览表里，选择“023 直线普通缝”，然后按确认键后，进入直线普通缝设置界面：




在直线普通缝设置界面下，按缝迹长度设定按钮 2.0mm，进入缝迹长度设定界面，如右图所示。

依次按 3 、 0 数字键，将缝迹长度变更为“3.0”，按确认键保存并退回到直线普通缝设置界面。

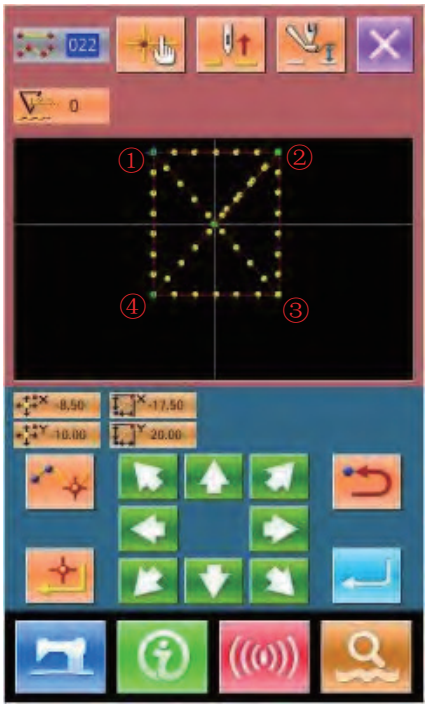
注：按 C 键，数值清零。



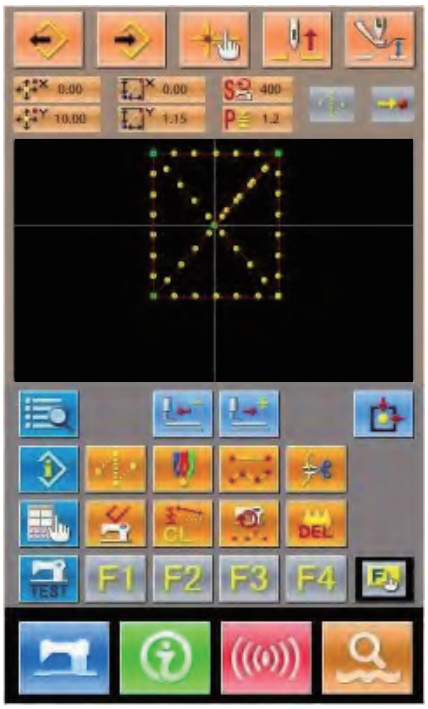
确认缝迹长度设定按钮的显示值为“3.0mm”之后，按确认键，进入直线普通缝位置设定界面。

在此界面下，通过方向移动键，将光标（机针位置）从◆处移动到❖处，然后按确定按钮。反复进行上述移动操作，将光标按照

❖∀⬥∀☒∀◆∀⬥∀❖∀☒∀◆的顺序依次移动，如右图所示。




确认花样图案后，按键生成花样数据并返回到花样编辑标准界面，显示出花样图案。



## ●保存花样

按按钮，进入图案花样保存界面，保存编辑好的花样图案，如右图所示。




系统自动设定好样号码，用户也可以通过~十数字键盘或、键输入希望值。 通过和按键，可以选择花样图案的存储位置。用户可以选择将其存储在操作面板存储媒介上，也可以选择存储在 U 盘上。

按键后保存花样图案，系统提示，是否自动插入切线，如右图所示。




按键自动加入切线；

按键取消自动加入切线。

操作完成后，退回到花样编辑标准界面。

**有关花样编辑的具体操作和说明请参照《SP-510 花样打版使用说明书》。**

## 5.3 退出花样编辑模式

在花样编辑标准界面下，按进入模式选择界面，如右图所示。




按下，会与之间相互切换。其中：

：编辑模式

：缝纫模式

再次按下键后，退出模式选择界面，系统提示是否返回到缝制模式。

按键后，退出花样编辑模式，返回到缝纫模式。



# 6 信息功能

信息功能，有下列3 种功能。

1）可以指定机油更换时期，机针更换时期，清扫时期等，超过了指定事件之后，进行警告通知。

2）利用显示目标值和实际值功能，可以提高生产小组完成目标的意识，可以一目了然地确认进度。

3）显示穿线示意图。

## 6.1 查看维修保养信息

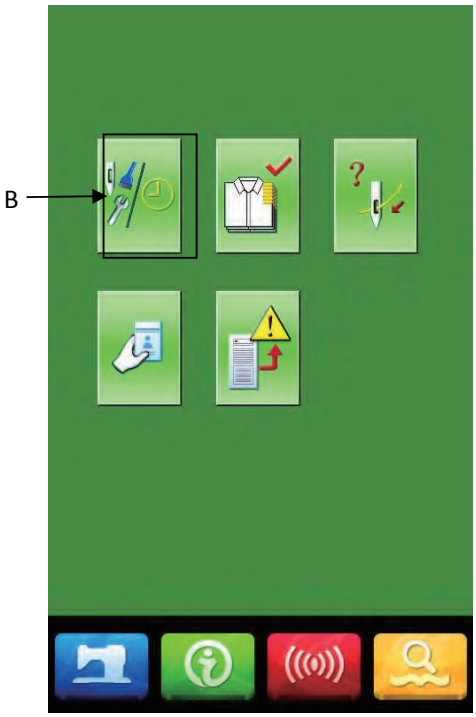
**①显示信息界面**

在数据输入界面，按开关密封部的信息按键（A）之后，信息界面被显示出来。




**②显示保养维修界面。**

请按信息界面的保养维修信息界面显示按键  （B）。



在保养维修信息界面上，有以下3 个项目的信息被显示出来。

：更换机针(千针)

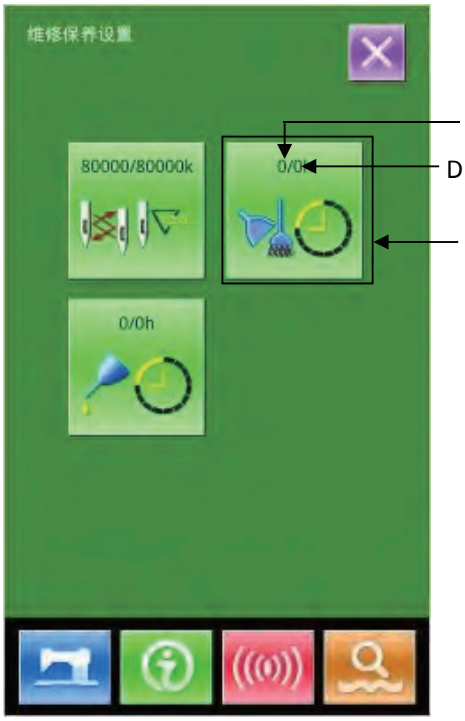
：清扫时间(小时)

：机油更换时间(小时)

各项目显示在按键(C)，通知检修的间隔显示在D，至更换的剩余时间显示在E。

点按相应的按键，可以清除至更换的剩余时间。

按退出键直接退回到信息界面。




## 6.2 维修保养时间设置

### ① 显示信息界面（维修人员等级）

在数据输入界面，按信息按键（A）约3 秒钟之后，信息界面（维修人员等级）被显示出来。维修人员等级时，有6个按键被显示出来。



### ② 信息界面功能

维修人员等级时，有八项功能显示：

：维修保养

：生产管理

：穿线示意

：报警记录

：运转记录

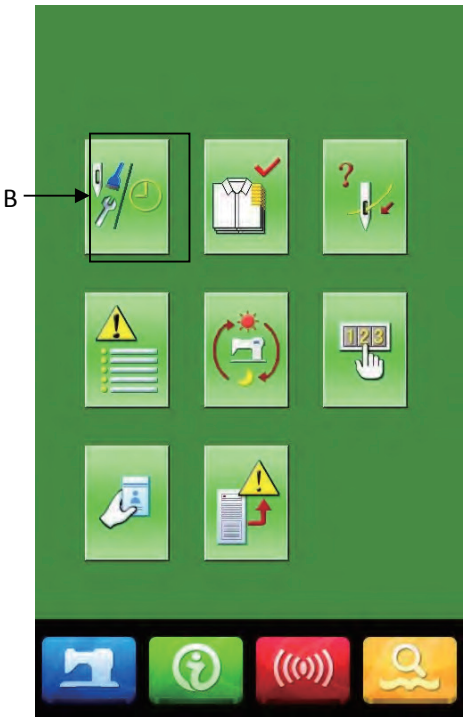
：分期密码

：联网打卡

：联网上报错误

请按信息界面的保养维修信息界面显示按键

（B），进入维修保养界面。

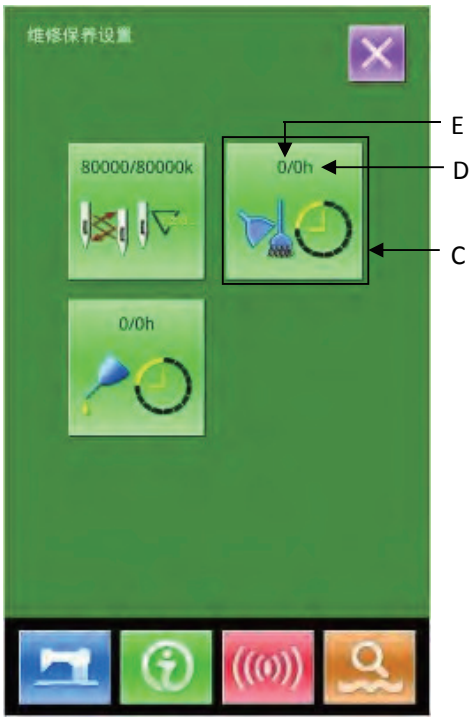



### ③ 维修保养设置

在保养维修信息界面上，显示出与通常的维修保养信息界面一样的信息。按了想变更维修保养时间的项目按键(C)之后，相关输入界面被显示出来。

比如按下键，则可以设置清扫时间。

按退出键直接退回到信息界面。



④ **设置维修保养项**

把维修保养项设定值设定为0 之后，则停止维修保养功能。

维修保养设置项包括：

- ◆ 机针更换时间设定
- ◆ 清扫时间设定
- ◆ 机油更换时间设定

按相应的图标，进入设置界面：

A、通过数字键盘输入维修保养项的设定值。

B、按回车键之后确定输入。

C、按退出键直接退回到维修保养界面。




## 6.3 警告的解除方法

到了指定的维修保养时间之后，信息提示界面被显示出来。要清除维修保养时间时，请按回车键。
在清除维修保养时间之前，每次缝制结束后显示信息提示界面。
各项目的信息提示号码如下。

- •机针更换：M-052
- •机油更换时间：M-053
- •清扫时间：M-054

## 6.4 生产管理信息

在生产管理界面上，指定开始，可以进行从开始到现在的生产件数，生产目标件数的显示等。
生产管理界面的显示方法有以下2 种：

① 从信息界面显示
② 从缝制界面显示

### 6.4.1 从信息界面显示

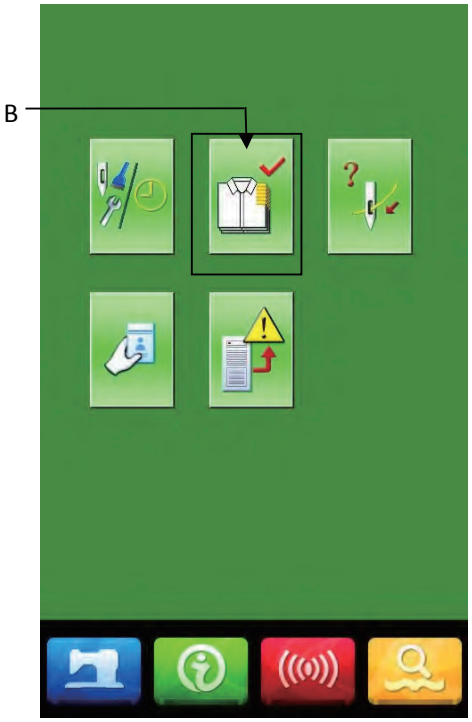
**①显示信息界面。**

在数据输入界面按了开关部的信息键（A）之后，信息界面被显示出来。



**②显示生产管理界面。**

请按信息界面的生产管理界面显示按键（B）。
生产管理界面被显示出来（如右图所示）。




生产管理界面上显示有下列5个项目的信息。

**A：目标值**

依照间隔时间自动地显示出截止现在的目标缝制件数。

**B：实际值**

自动地显示已经缝制的件数。

**C：最终目标值**

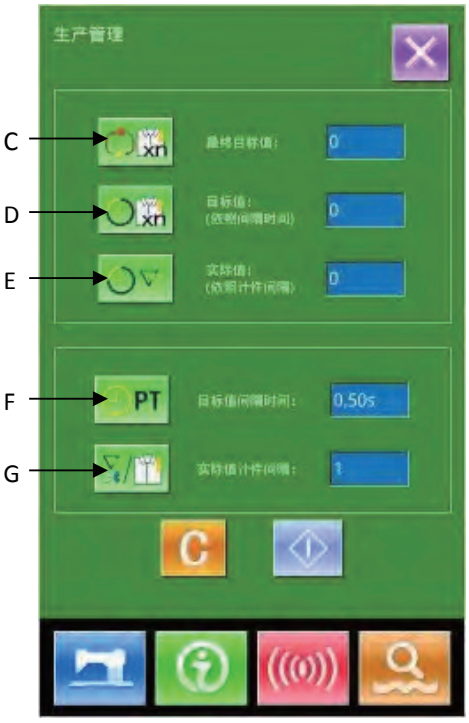
设置最终目标的缝制件数。

**D：目标值间隔时间**

设置完成一个工序需要的时间（秒）。

**E：实际计件间隔**

设置实际完成一个工序的间隔。




## 6.4.2 从缝制界面显示

**①显示缝制界面。**

在数据输入界面按了准备键之后，缝制界面被显示出来。

**②显示生产管理界面。**

在缝制界面，按了信息按键（A ）之后生产管理界面被显示出来。

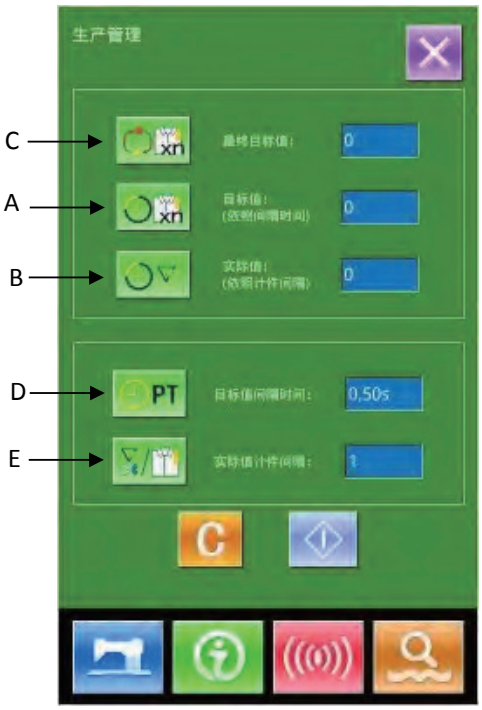
显示内容和功能与上述6.4.1节相同。




### 6.4.3 生产管理信息设定

**①显示生产管理界面。**

按下，显示出生产管理界面。




**②输入最终目标值。**

首先，请输入从现在开始进行缝制工序的生产目标件数。按了最终目标值按键（C）之后，最终目标值输入界面被显示出来。

请用数字键或加减按键输入希望的数值。输入后，请按确定按键，按下退出键退出。



**③输入间隔时间。**

然后，请输入1 工序需要的间隔时间。按了前页的间隔时间按键

（D）之后，间隔时间输入界面被显示出来。

请用数字键或加减按键输入希望的数值。输入后，请按确定按键，按下退出键直接退出。




**④输入计件间隔。**

然后，请输入平均1 工序的间隔。按了前页的计件间隔按键（E）之后，计件间隔的输入界面被显示出来。

请用数字键或加减按键输入希望的数值。输入后，请按确定按键，按下退出键直接退出。



**⑤开始车生产件数的计数。**

按键（Ⅰ）之后，【最终目标值】【目标值】【实际值】变灰，并开始生产件数的计数。




**最终目标值：**可以作为参考时间

**目标值：**目标值按照【目标值间隔】设定的时长，开始计时，每过一个时间间隔增1。

**实际值：**当通过“6.4.2从缝制界面显示”进入时，实际值按照【实际值计件间隔】设定的值，开始计件，每缝完一件增1。

**通过设置目标值和实际值可以对比每缝一件的生产效率是提高了还是降低了。**

**⑥停止计数。**

计数状态下，停止键被显示出来。按了停止按键之后，停止计数。停止后，在停止按键的位置显示出计数按键。需要继续进行计数时，请再次按计数按键。在按了清除按键之前，计数的数值不被清除。

按下退出键直接退出返回。

**⑦清除计数值。**

清除计数的值时，让计数器为停止计数状态，按下清除按键。

可以被清除的值为现在的目标值和实际值。

（注：仅在停止计数状态时清除按键可以显示。）

按下清除按键之后，显示出清除确认界面。

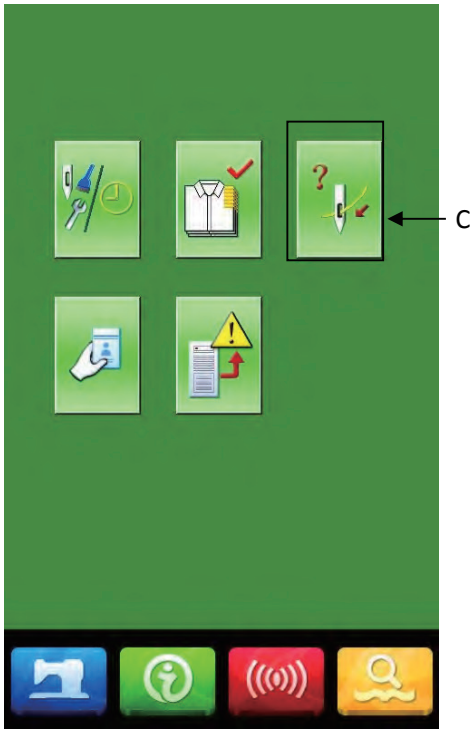
在清除确认界面，按下确定按键确认清除，

按下退出键直接退出。

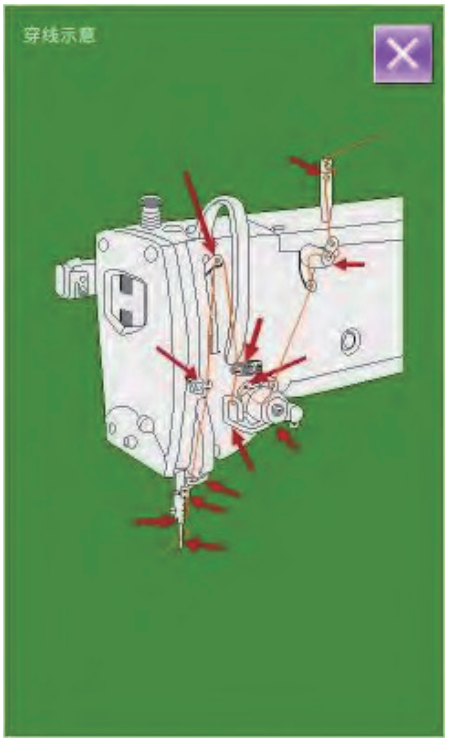



## 6.5 显示穿线图

信息界面按下穿线按键（C）之后，上穿线图被显示出来。

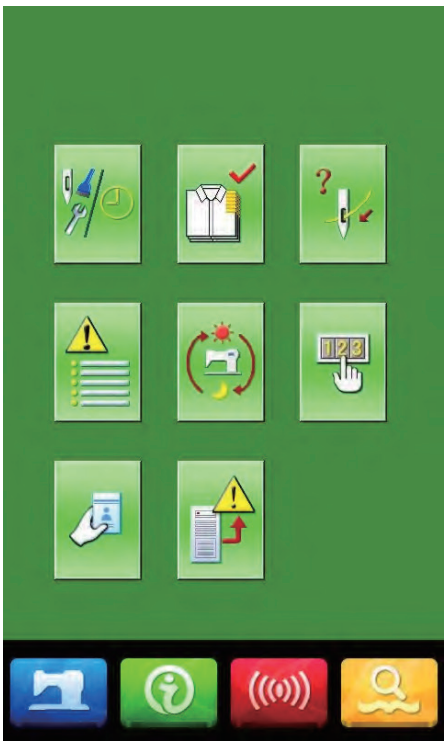


穿线时，请参阅。




## 6.6 报警记录

① 维修人员等级时，按下可以查询机器的报警记录信息。



② **按查询记录**

如图，显示报警信息和出现的次数




操作键功能：

A、按下、进行翻页

B、按下退出键退出查询操作。

C、按下清除键清除保留的报警记录

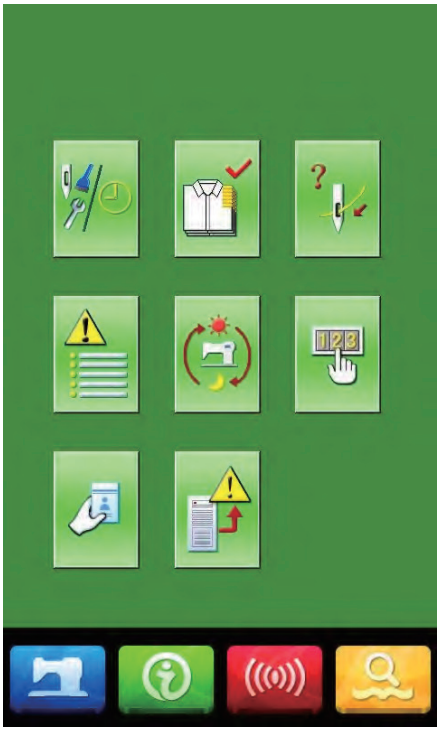
③ **按报警提示栏左边的序号键，显示报警记录的详细信息**




按退出。

## 6.7 运转记录

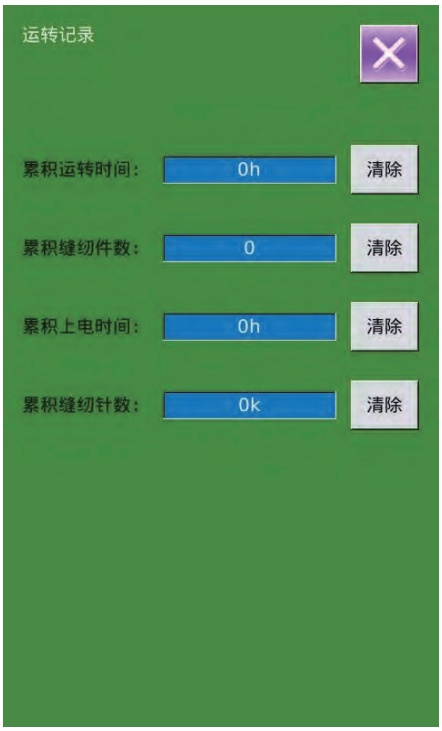
① **维修人员等级时，按下可以查询机器的运转信息。**



② **运转记录包括：**

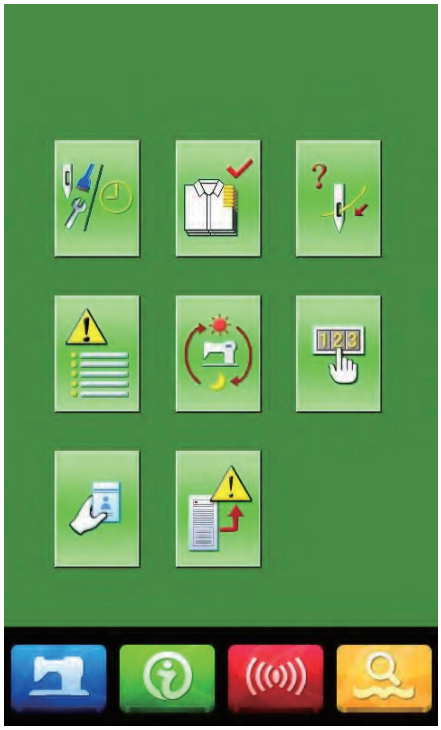
a) ：机器累积运转时间（小时单位）
b) ：机器累积切线次数
c) ：机器累积上电时间（小时单位）
d) ：机器累积针数（1000 针单位）

A、按退出键退出
B、按清除键清除记录



## 6.8 分期密码设置

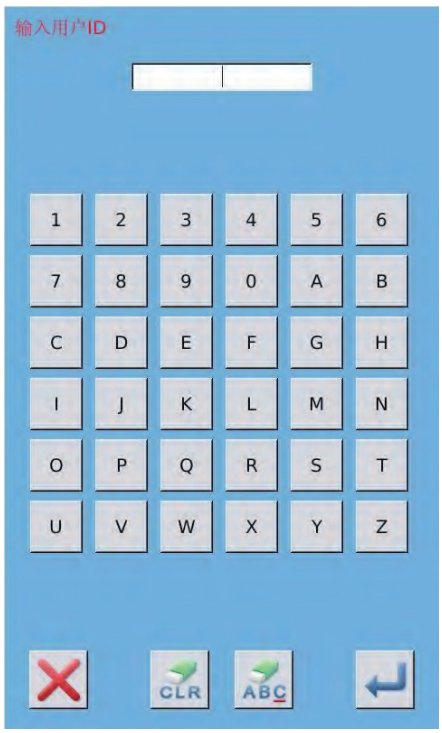
① **维修人员等级时，按下可以设置分期密码**



该界面下会显示输入用户 ID 界面，输入正确的厂家 ID 后即进入密码管理模式，主要用于用户分期密码的设置和管理。

- 可以最多设置 10 个不同的密码发作日期。
- 系统可以显示厂家设置的密码信息。

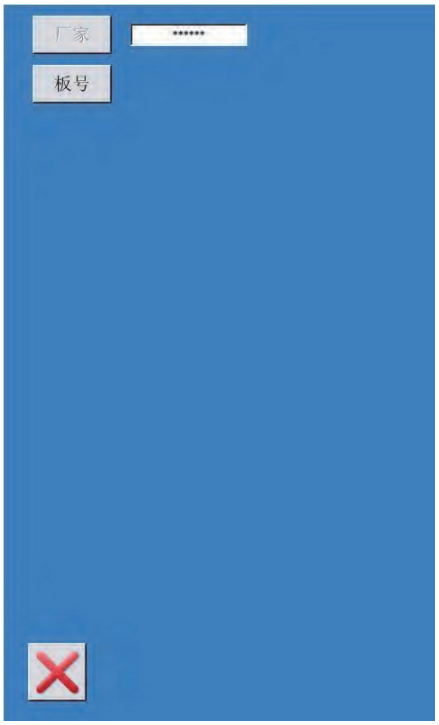
② **按下后要求输入厂家 ID**



③ **输入正确的厂家 ID 后，进入密码设置界面**

分期密码设置步骤：

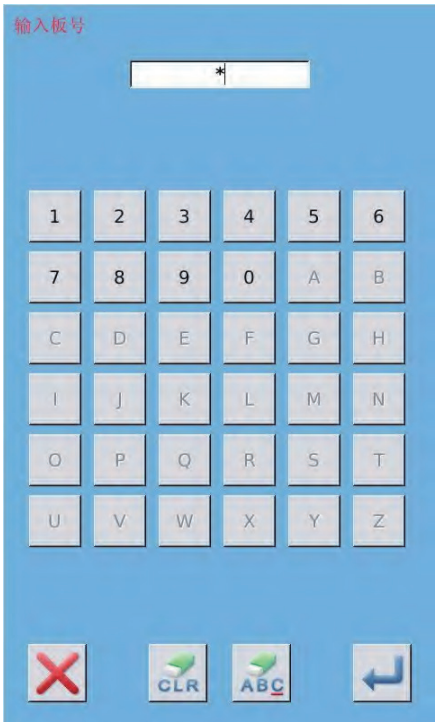
A、 继续输入其他的分期密码




④ **输入板号**

按下【板号】键，进入板号输入界面，输入板号后，按下完成板号输入界面

**※板号为四位，范围 0~9999**



⑤ **输入系统时钟**

按下【时钟】键，进入系统时钟设置界面，确定系统时钟

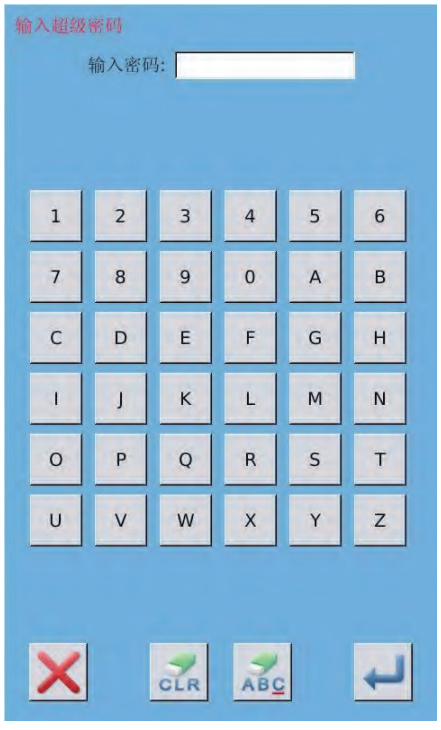



⑥ **输入超级密码**

按下【超级密码】键，进入超级密码设置界面，输入超级密码

※ **最多可输入 9 位总密码**

※ **密码输入要求确认，两次密码必须一致**



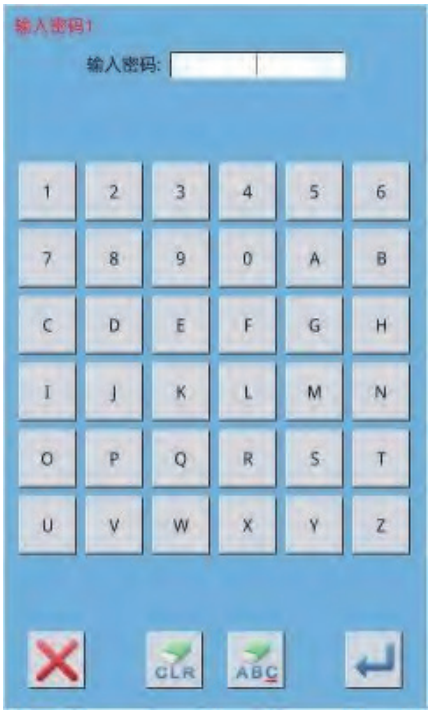
⑦ **输入分期密码**

按下【密码-1】键，进入第一次密码到期界面，要求输入第一个有效日期，选择合适的日期后，按确认，然后进入密码设置界面，输入密码

※ **日期不能小于系统日期**

※ **密码输入要求确认，两次密码必须一致**



⑧ **输入其他的分期密码**

其他分期密码的设置和⑦相同，参考⑦的设置

※ **下一个有效日期必须大于上一个有效日期**




⑨ **保存密码**

A、密码输入完成后，按完成密码保存

B、密码保存成功，显示【密码保存成功】界面，按完成密码保存并退回到【信息主界面】



### ⑩ 主动清除密码

主动清除密码是指在分期密码发作前主动清除密码的设置

A、进入密码的方法同密码设置

B、输入正确的厂家 ID 后，显示右边的界面

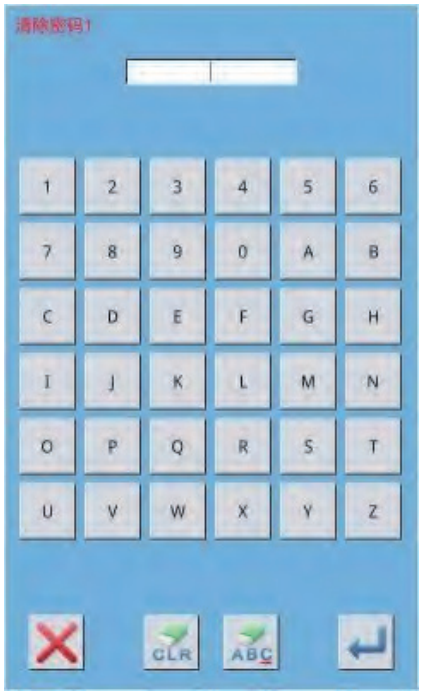
C、系统显示当前时钟和各个分期密码发作日期

D、按下，从前向后依次删除分期密码




连续输入正确的分期密码后清除当前期的密码，当输入是超级密码时，则全部清除；

密码清除后会以红色显示清除的分期日期；如果全部密码清除完毕，则自动退出，返回到信息主界面。




### ⑪ 密码发作时清除

如果系统设置了密码，并且没有清除，则使用至密码发作日期时，会遇到密码发作。

此时若继续使用，必须输入密码才能继续正常使用。

A、有效密码包括当期提示的密码和超级密码。

B、若输入的是当期密码，则清除当期密码。清除当前密码后，若后面没有密码，则机器不再会出现密码发作的问题。

C、若输入的是超级密码，则全部清除分期密码。

# 7 USB 通讯功能

通信功能完成以下几项功能：

- 把其它缝纫机编制的缝制数据或打版软件编制后的缝制数据下载到缝纫机；
- 向U盘或计算机里加载缝制数据。
- 从U盘加载参数
- 将操作头中保存的参数导入到U盘中
- 操作头软件升级

## 7.1 关于可以处理的数据

可以处理的缝制数据如下：

| 数据类型 | 标准格式 |
|---|---|
| VDT | [0-9][0-9][1-9].vdt |
| DXF | [0-9][0-9][1-9].dxf |
| DST/DSB | [0-9][0-9][1-9].dst/<br>[0-9][0-9][1-9].dsb |
| B/BA | [0-9][0-9][1-9].(1-599)/<br>[0-9][0-9][1-9].(600-999) |
| PAT | [0-9][0-9][1-9].pat |

往U盘保存数据时，请保存到DH_PAT语件夹里，否则就不能读取语件。

## 7.2 USB 功能操作

**① 显示通信界面**

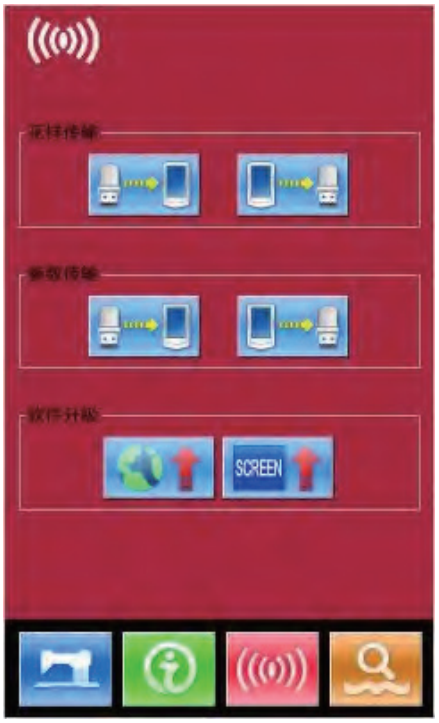
在数据输入界面，按通信键之后，显示出通信界面。

**② 选择相应操作**

该界面下可选择的功能，分为三类：

- 花样传输
- 参数传输
- 软件升级

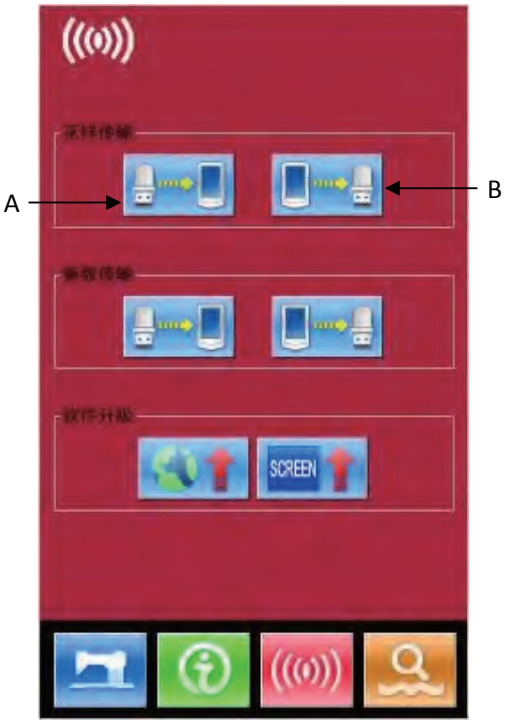
点按相应的图标，进行功能操作。




**③ 按通讯键退出通讯功能**

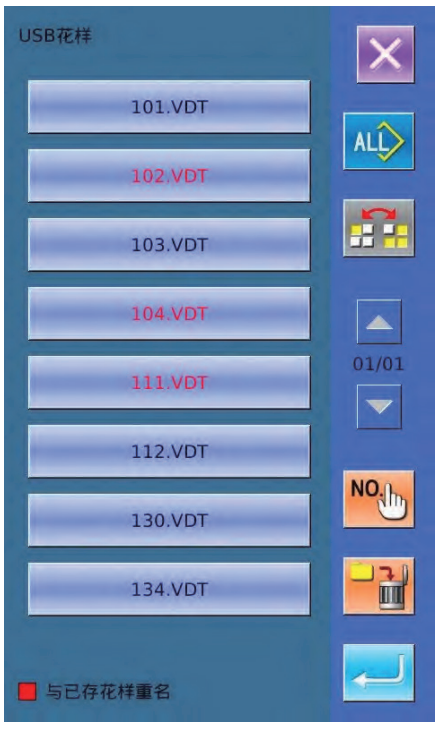
## 7.3 花样传输

**① 显示通信界面**




在通讯界面下，按:
A: 从U盘中向操作头导入花样
B：将操作头中保存的花样导出到U盘中
**U盘的路径：DH_PAT**
**※ 从U盘导入花样时，请将花样语件保存在U盘的DH_PAT目录中**
**※ 从操作头导出花样时，导出的花样语件保存在U盘的DH_PAT中**
**※ U盘中的花样命名方式**
从U盘导入花样时，请遵守下面的规则命名：
语件名：三位数字，001~999
后缀名：vdt（大小写无关）
举例：
正确的语件命名： 100.vdt、102.VDT
其他的命名方式不正确，系统不能识别。

**② 按A指示键，进入从U盘向操作头导入花样界面**




**注：如果 U 盘中花样与操作头中花样存在同名的情况，花样号码会显示出红色，此时红色号码的花样就需要利用 F 键操作才能导入操作头。如图 1 所示。**

A、利用【上箭头】、【下箭头】键进行翻页
B、利用下面三种操作，选择花样

- 按选择全部花样，
- 按反向选择
- 点击花样号码按键

C、按完成导入花样功能，此时导入操作头的花样号与选择的花样号保持一致。如图 2 所示。

D、按完成选中花样的删除功能

E、按退出键退出到通讯界面。

F、当选中某个花样后，按

键，出现图3所示界面，输入要存入的

花样号；

G、如果选中好几个花样，则不能进行上一步操作。按退出键退出到上一界面。

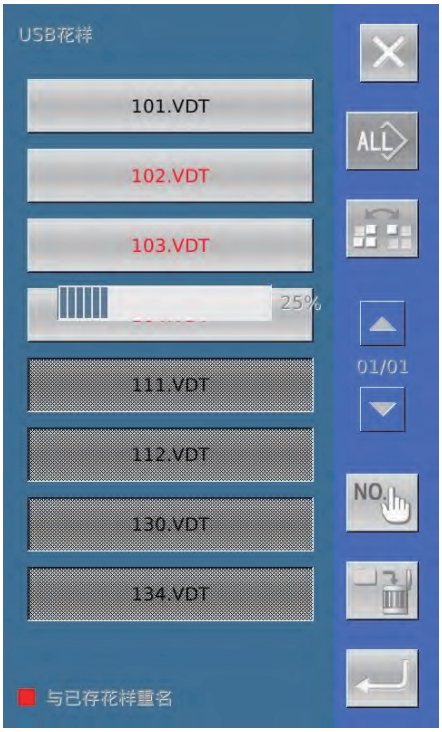



图 2

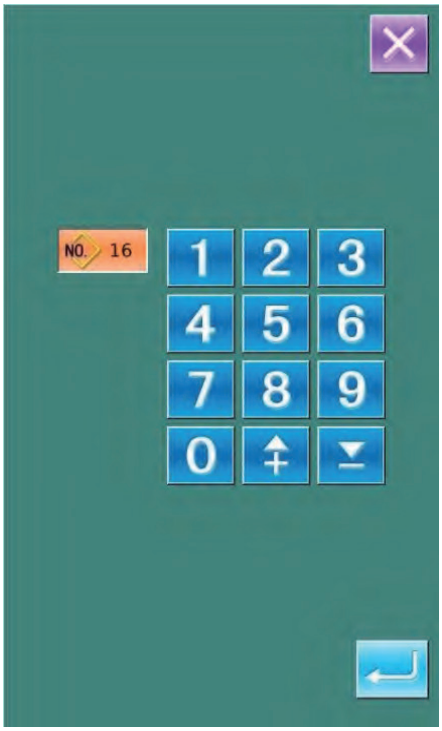



图 3

③ **注意：如果选择花样号在操作头中已存在，会出现如图4所示。如果是其他格式的数据，操作头会自动将其转换成vdt格式数据，存入内存。**




图 4

④ **按B指示键，完成操作头的花样导出到U盘中**

A、利用【上箭头】、【下箭头】键进行翻页

B、利用下面三种操作，选择花样

- 按选择全部花样，
- 按反向选择
- 点击花样号码按键

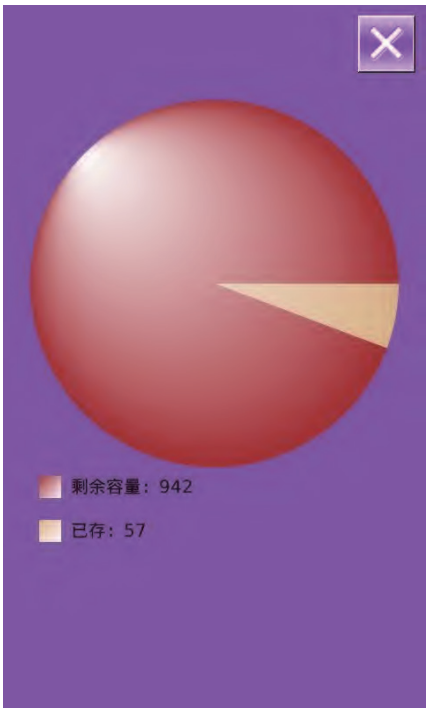
C、按完成选中花样的删除功能

D、按完成导出花样功能

⑤ E、按退出键退出花样导出功能界面



⑥ F、在该界面下，按键，显示当前内存中花样占用的空间，及花样的个数




## 7.4 参数传输

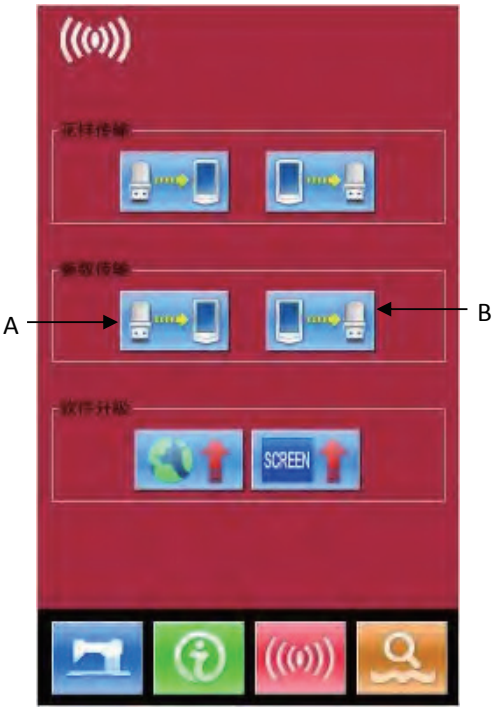
① **显示通信界面**

在通讯界面下，按:
A：从U盘中向操作头导入参数
B：将操作头中保存的参数导出到U盘中

※ **从U盘导入参数时，请将参数语件保存在U盘的DH_PARA目录中，并命名为：ukParam**

※ **从操作头导出参数时，导出的参数语件保存在U盘的DH_PARA中，参数语件：ukParam**

※ **参数语件是二进制语件，对语件的操作在操作头上完成，不要手动修改语件，以免影响使用。**



② **按A指示键，完成从U盘向操作头导入参数**

A、按回车键完成从 U 盘向操作头导入参数并退出

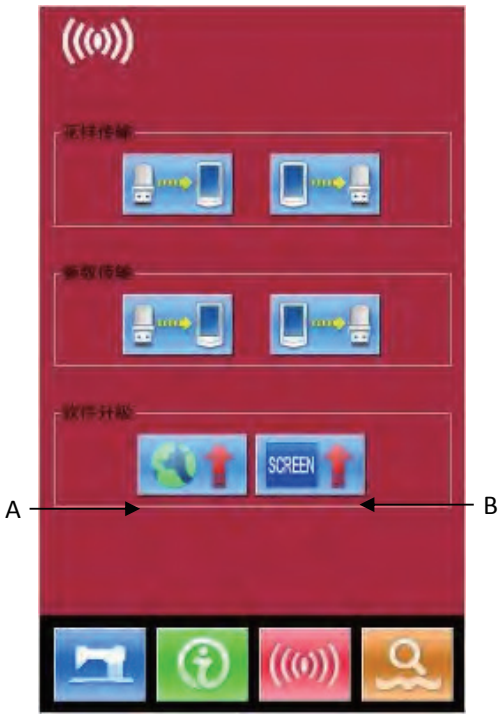
B、按退出键直接退出



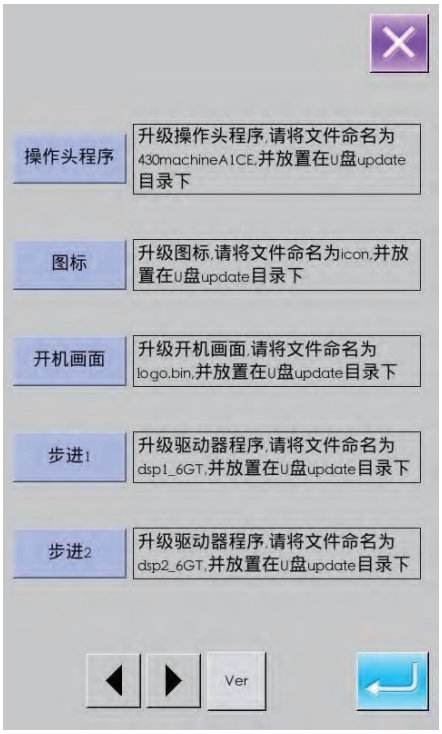

## 7.5 软件升级

**①显示通信界面**

在通讯界面下，按A键进入软件升级界面。



**②升级类型选择**




软件升级包括：

- 操作头程序
- 图标
- 字库
- 开机画面

按和键进行翻页

A、按回车键完成选中功能的升级，并退出

B、按退出键直接退出

C、各个功能键能同时多选，系统顺序执行相应的升级功能

D、升级完成后，关机重启即可

**③按B进入开机画面升级界面**



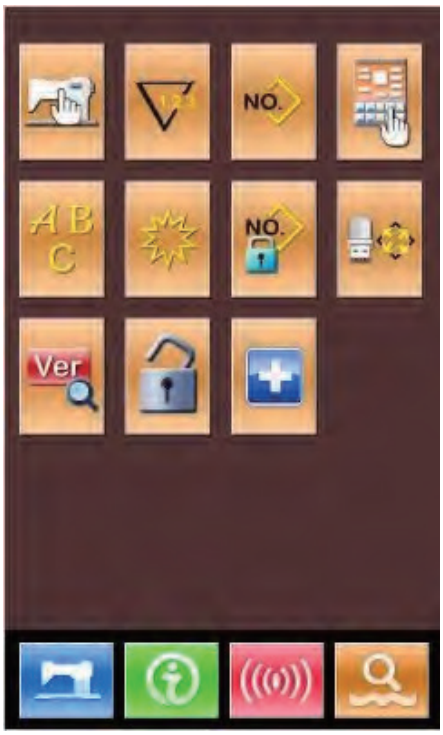

将开机画面生成的bin语件放入U盘的update目录下，选择bin语件后，按回车键完成开机画面的升级。

# 8 模式和参数设置

按下可以切换数据输入界面和模式界面（如右图所示），在该界面下可以进行一些详细的设置和编辑操作。

长按键 3 秒可以进入设置模式等级 2 状态，常按 6 秒可以进入设置模式等级 3 状态。




设置模式等级 2




设置模式等级 3

## 8.1 功能说明

| 序号 | 图标 | 功能 | 内容 |
|---|---|---|---|
| 1 |  | 一级参数设置 | 进行一级（U）参数设置。 |
| 2 |  | 计数器设置 | 可以设置计数器类型、计数值和设定值。 |
| 3 |  | 缝制类型设置 | 切换普通花样缝纫和组合花样缝纫。 |
| 4 |  | 花样锁定 | 可以进入花样锁定设置界面。 |
| 5 |  | 花样编辑 | 可以进入花样编辑。 |
| 6 |  | 格式化 U 盘 | 格式化 U 盘。 |
| 7 |  | 软件版本查询 | 查询当前面板、主控、电机软件版本。 |
| 8 |  | 键盘锁定 | 可以锁定一些可设定项功能。 |
| 9 |  | 检测模式 | 针对机器外设和液晶进行检测。 |
| 10 |  | 参数备份 | 可以对当前参数进行备份和恢复。 |
| 11 |  | 编辑参数开关 | 可以对编辑下参数进行打开或关闭操作。 |
| 12 |  | 二级参数设置 | 进行二级（K）参数设置。 |
| 13 |  | 视频播放 | 可播放视频语件 |
| 14 |  | 花样模板 | 编辑花样用 |
| 15 |  | 字母绣 | 编辑字母花样用 |

## 8.2 一级参数设置

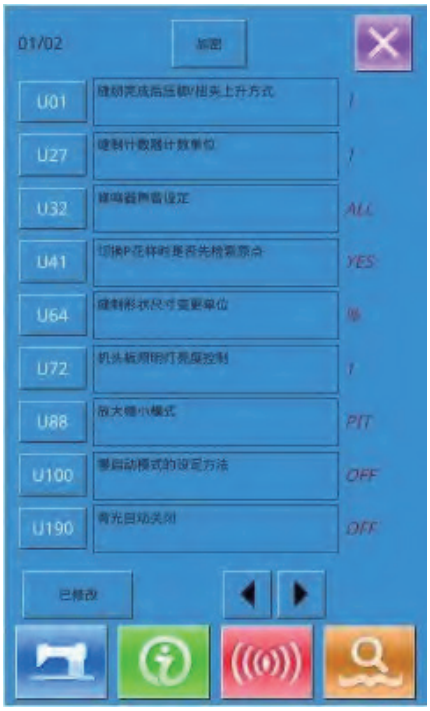
**① 参数设置操作**

选择进入一级参数设置界面（如右图所示）。

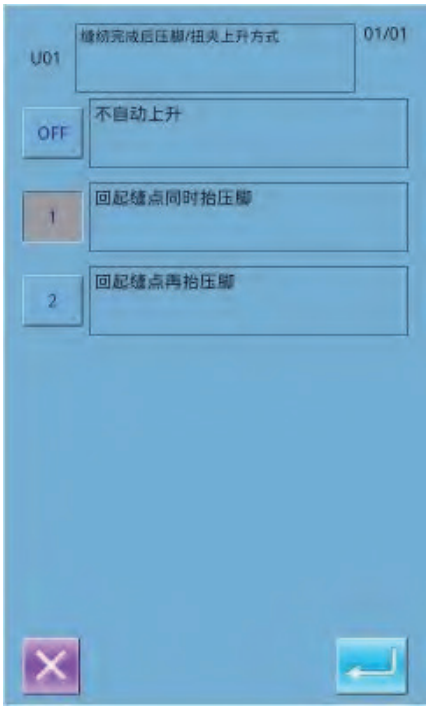
按键退出参数设置界面。

当有参数修改时，在参数设置界面显示【已修改】按键，

选择想要修改的参数后进入设置状态，参数设置分为数据输入类型和选择类型。举例如下：




选择 U01，进入界面




选择 U27，进入界面



② **参数加密**

A、按“加密”键后，进入密码输入界面。

按 CLR 全部清除输入内容

按 ABC 每按一次删除一个字符

B、输入正确的密码后，进入参数加密界面

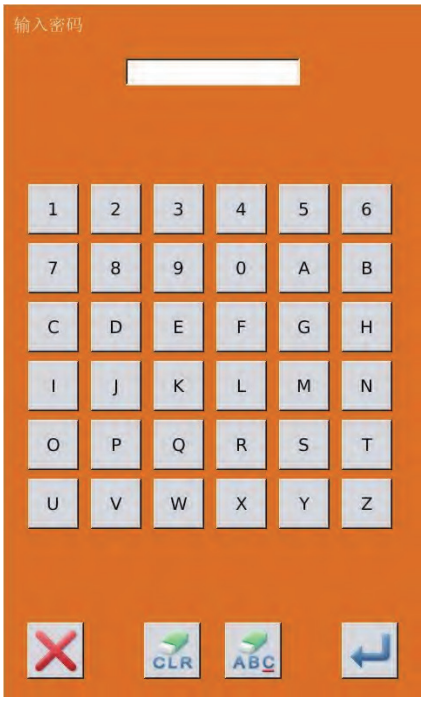
选择要加密的参数

按【全选】，全部参数加密

按【反选】，反向选择参数加密

按【改密】，修改加密密码，默认是厂家 ID

按退出键 退出加密功能






③ **查询已修改参数**

A、 当有参数修改时，在参数设置界面显示【已修改】按键

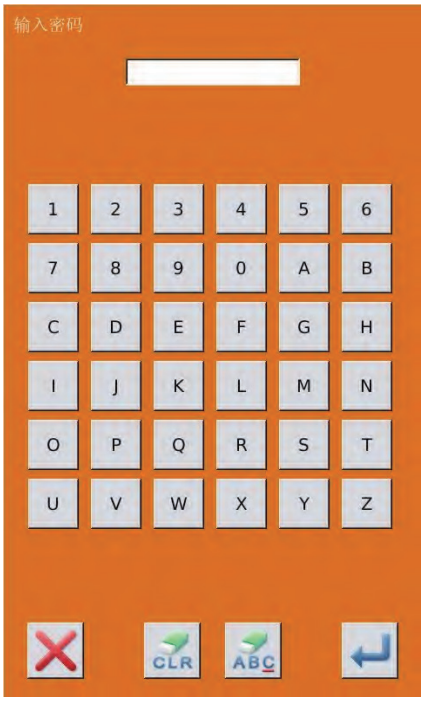
B、 在参数设置界面，按下【已修改】按键，可以查询已修改过的参数。

首先要求输入密码，输入密码界面的操作参考②的 A 项，输入正确的密码后进入到已修改参数查询界面

C、 在已修改参数查询界面下，可以查询到所有修改过的参数列表，在该列表中显示修改的当前值和复位值。

在该界面下：

- 按【还原所有】按键，将修改的参数恢复为复位值
- 点按参数名称键，例如【压脚类型】，再点按【选择还原】将选中的参数恢复为复位值。参数键可以多选。
- 按参数号码键，例如【U41】，能够进入参数设置界面，可以重新设置参数数值。
- 存在多于 1 个页面时，通过箭头按键可以翻页操作。
- 点按，退出该界面







**一级参数表**

| 序号 | 参数 | 设定范围 | 编辑单位 | 出厂设置 |
|---|---|---|---|---|
| U01 | 缝制完成后压脚/扭夹上升方式 | off/1/2 | | 1 |
| U27 | 缝制计数器计数单位 | 1~30 | 1 | 1 |

| 序号 | 参数 | 设定范围 | 编辑单位 | 出厂设置 |
|---|---|---|---|---|
| U32 | 蜂鸣器声音设定 | OFF：无蜂鸣音<br>PAN：操作盘音<br>ALL：操作盘+报警音 | | ALL |
| U41 | 切换 P 花样时是否先检索原点 | Yes：检索<br>No：不检索 | | No |
| U55 | 花样是否带起缝加固 | ON:有<br>OFF:无 | | ON |
| U64 | 缝制形状尺寸变更单位 | %：输入百分比<br>SIZ：实际尺寸 | | % |
| U72 | 机头板照明灯亮度控制 | 0~6<br>0：照明灯关闭<br>1~6：数值越大，亮度越高 | 1 | 1 |
| U88 | 放大缩小模式 | OFF：禁止<br>PIT：间隔增减<br>STI：针数增减 | | PIT |
| U100 | 慢启动模式的设定方法 | OFF：1-5 针的启动速度按照 K151-155 存储开关的设定<br>ON：按照各程序的慢启动设定 | | OFF |
| U190 | 背光自动关闭 | OFF：不能自动关闭<br>ON：自动关闭 | | OFF |
| U191 | 背光自动关闭等待时间 | 1~9 | 1m | 3m |
| U192 | 液晶背光亮度调节 | 20~100 | 1 | 100 |
| U193 | 禁止计数器被修改 | OFF：允许修改<br>ON：禁止修改 | | OFF |
| U194 | 计数器达到设定值时缝纫机的操作 | OFF：停止缝纫<br>ON：可继续缝纫 | | OFF |
| U195 | 音量大小 | 30~63 | 1 | 50 |
| U204 | 主控烧录地址 | 655360~917504 | | 851968 |
| U900 | 语言选择 | ZH：中语<br>EN：English<br>Tu： | | ZH |
| U901 | 开机是否进入语言选择 | OFF：否<br>ON：是 | | OFF |

## 8.3 二级参数设置

### ① 参数设置操作

在设置模式等级 3 下，选择进入二级参数设置界面（如右图所示）。操作方法参照“8.2 一级参数设置”。

当有参数修改时，在参数设置界面显示【已修改】按键，

按键退出参数设置界面




### ② 参数加密

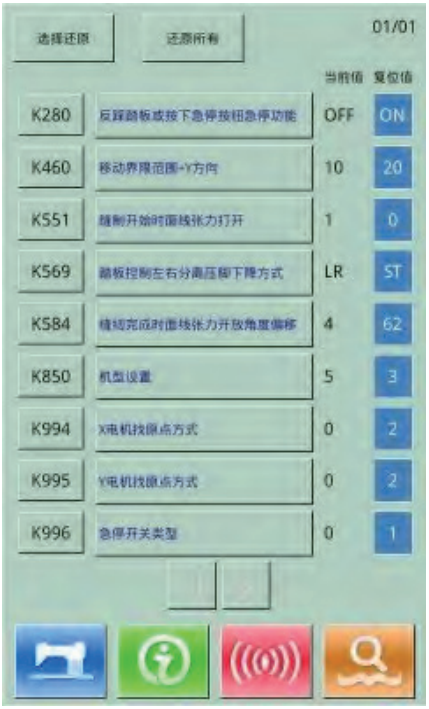
参数加密的操作步骤，请参考“8.2 一级参数设置”

按键退出参数加密界面



### ③ 已修改参数查询

当有参数修改时，在参数设置界面显示【已修改】按键，
点按【已修改】按键可以查询已修改过的参数，并且可以进行参数的复位。
具体操作可参考“8.2 一级参数设置”




### ④ 二级参数表

| 序号 | 参数 | 设定范围 | 编辑单位 | 出厂设置 |
|---|---|---|---|---|
| K60 | 压脚下降后主轴启动的延时（单踏板时有效） | 0~3000ms | 1 | 10 |
| K70 | 踏板类型 | 1：单踏板<br>2：双踏板<br>3：双踏板直接启动 | 1 | 1 |
| K71 | 单踏板动作模式（70 号参数处于 1 时有效） | 1：1 档放压脚，2 档缝纫<br>2：1 档降一半，2 档降到最低并开始缝纫 | | 1 |
| K73 | 踏板行程回差微调 | 0~15 | 1 | 0 |
| K125 | OC 长度 | 202.5~262.5 | 0.1 | 232.5 |
| K126 | OD 长度 | 177.8~2377.8 | 0.1 | 207.8 |
| K127 | BD 长度 | 72.0~92.0 | 0.1 | 82.0 |
| K128 | 步进控制方式 | 0~63 | 1 | 0 |
| K129 | 步进驱动模式设定 | 0~15 | 1 | 12 |
| K130 | XY 送布同步模式 | OFF:关闭<br>ON：打开 | | ON |
| K136 | XY 送布起始角度微调 | 0~200 | 1 | 0 |
| K139 | 机针冷却 | -1~30 | 1 | 0 |
| K141 | 支线电磁铁吸合力度微调 | -20~20 | 1 | 0 |

| 序号 | 参数 | 设定范围 | 编辑单位 | 出厂设置 |
|---|---|---|---|---|
| K142 | 支线电磁铁保持力度微调 | -40~40 | 1 | 0 |
| K150 | 主轴停止时反转抬针设置 | OFF：主轴停止时不反转抬针<br>ON1：主轴停止时反转抬针<br>ON2：主轴停止时反转抬针并返回 | | OFF |
| K151 | 第一针启动速度 | 200~3000rpm | 100 | 800 |
| K152 | 第二针启动速度 | 200~3000rpm | 100 | 1200 |
| K153 | 第三针启动速度 | 200~3000rpm | 100 | 2500 |
| K154 | 第四针启动速度 | 200~3000rpm | 100 | 2700 |
| K155 | 第五针启动速度 | 200~3000rpm | 100 | 2700 |
| K156 | 缝纫结束前第五针的速度 | 400~3000rpm | 100 | 2700 |
| K157 | 缝纫结束前第四针的速度 | 400~3000rpm | 100 | 2700 |
| K158 | 缝纫结束前第三针的速度 | 400~3000rpm | 100 | 2700 |
| K159 | 缝纫结束前第二针的速度 | 400~3000rpm | 100 | 2400 |
| k163 | 最高缝制速度 | 1200~3000 | 100 | 3200 |
| k164 | 是否停止剪线 | ON：否<br>OFF：是 | | ON |
| k171 | 主轴电机停车后是否锁定 | OFF：不锁定<br>ON：锁定 | | OFF |
| k182 | （C）电机找原点方式 | 0：步进编码器反向<br>1：步进编码器正向<br>2：不找原点<br>3：外置传感器正向<br>4：外置传感器反向 | | 2 |
| k227 | 主轴电机类型设定 | 0~6 | 1 | 0 |
| k229 | 主轴穿透模式 | OFF：关<br>ON：开 | | OFF |
| K250 | 缝纫结束后原点检索 | ON：有原点检测<br>OFF：无原点检测 | | OFF |
| K251 | 组合缝原点检索 | OFF：无原点检索<br>PAT：每一图案结束后<br>CLC：每一循环结束后 | | OFF |
| K252 | 剪线停车转速调整 | 50~400 | 10 | 200 |
| K258 | XY 送布起始角度微调 | -30~30 | 1 | 0 |
| K259 | XY 送布结束角度微调 | -30~30 | 1 | 0 |
| K260 | 改变全部送布时间<br>-：送布时间提前 | -30~30 | 1 | 0 |

| 序号 | 参数 | 设定范围 | 编辑单位 | 出厂设置 |
|---|---|---|---|---|
| | +：送布时间延迟 | | | |
| K261 | 改变开始缝纫第 1 针时送布时间<br>-：送布时间提前<br>+：送布时间延迟 | -30~30 | 1 | 0 |
| K262 | 改变开始缝纫第 2 针时送布时间<br>-：送布时间提前<br>+：送布时间延迟 | -30~30 | 1 | 0 |
| K263 | 改变开始缝纫第 3 针时的送布时间<br>-：送布时间提前<br>+：送布时间延迟 | -30~30 | 1 | 0 |
| K264 | 缝纫结束前第 3 针的送布角度偏移 | -30~30 | 1 | 0 |
| K265 | 改变缝纫结束前第 2 针时送布时间<br>-：送布时间提前<br>+：送布时间延迟 | -30~30 | 1 | 0 |
| K266 | 改变缝纫结束前第 1 针时送布时间<br>-：送布时间提前<br>+：送布时间延迟 | -30~30 | 1 | 0 |
| K269 | 气阀压脚的延迟 | -80~80 | 1 | 0 |
| K270 | 断线检测是否有效 | OFF：无效<br>ON：有效 | 1 | 0 |
| K271 | 压脚/纽夹的待机位置 | OFF：缝纫开始位置<br>ON：区域中心 | | OFF |
| k274 | 压脚下降速度 | -4~2 | 1 | 0 |
| K275 | 压脚上升速度 | -4~2 | 1 | 0 |
| K276 | 缝制结束时压脚上升速度 | -4~2 | 1 | 0 |
| K277 | 拔线方式选择 | 0：电磁铁<br>1：电机 | | 0 |
| K278 | 压脚联动拨线操作的脉冲数 | -20~20 | 1 | 0 |
| K279 | 压脚控制方式 | MOT：电机压脚<br>AIR1：气动压脚常开<br>PART1：气阀左右分离常开<br>AIR2：气动压脚常闭<br>PART2:气阀左右分离常闭 | 1 | AIR1 |
| K280 | 反踩踏板或者按下急停按钮急停功能： | OFF：无效<br>ON：有效 | 1 | ON |

| 序号 | 参数 | 设定范围 | 编辑单位 | 出厂设置 |
|---|---|---|---|---|
| K281 | XY 原点检索速度 | 0~100 | 1 | 0 |
| K282 | 缝纫结束动作角度微调 | 0~30 | 1 | 0 |
| K398 | 转速设置 | 1000~3200 | 100 | 3200 |
| K399 | 转速开启 | OFF：关闭<br>ON：开启 | | OFF |
| K458 | 移动界面范围+X 方向 | 0~50 | 1 | 30 |
| K459 | 移动界面范围-X 方向 | 0~50 | 1 | 30 |
| K460 | 移动界面范围+Y 方向 | 0~30 | 1 | 30 |
| K461 | 移动界面范围-Y 方向 | 0~30 | 1 | 30 |
| K462 | 剪线电磁铁吸合电流档位设定 | 0~45 | 1 | 10 |
| K469 | 张力的设定 | OFF：关闭<br>ON：设定 | | OFF |
| K472 | 两段压脚的设定 | -30~30 | 1 | 0 |
| K551 | 缝纫开始时面线张力的打开 | 0~3<br>0：关闭<br>1~3：在指定的针数内打开 | 1 | 0 |
| K560 | 张力夹线器控制方式 | 0：夹线方式<br>1：支线方式 | | 1 |
| K568 | 剪线电磁铁吸合力度微调 | 10~60 | 1 | 16 |
| K569 | 踏板控制左右分离压脚下降方式 | ST：同时下降<br>LR：先降左后降右<br>RL：先降右后降左 | | ST |
| K570 | 外压脚电机是否安装 | ON：未安装<br>YES：安装 | | NO |
| K571 | 中压脚控制方式 | 0~4<br>0：无中压脚控制<br>1：气阀控制<br>2：电机 AP<br>3：电机随动<br>4：电机 MJ | 1 | 1 |
| K572 | 暂停时切线方式 | OFF：禁止剪线<br>MAN：手动剪线<br>AUT：自动剪线 | | MAN |
| K573 | 空送速度 | 0~5 | 1 | 3 |
| K582 | 缝纫开始时坚固面线张力 | ON：有效<br>OFF：无效 | | OFF |
| K583 | 缝纫开始时面线张力紧固角度偏移 | -150~150 | 1 | 0 |

| 序号 | 参数 | 设定范围 | 编辑单位 | 出厂设置 |
|---|---|---|---|---|
| K584 | 缝纫完成时面线张力开放角度偏移 | 0~80 | 1 | 40 |
| K585 | 第 1 针线张力 | 0~200 | 1 | 75 |
| K587 | 缝纫开始时的打开面线张力值 | 0~300 | 1 | 0 |
| K588 | 停止后主夹线器的开放时间点 | 0~50 | 1 | 0 |
| K590 | 切线时的线张力设定 | 0~200 | 1 | 75 |
| K591 | 切线速度 | -10~10 | 1 | 0 |
| K592 | 剪线速度（K43） | 200~700 | 100 | 400 |
| K593 | 拨线速度变化 | -3~3 | 1 | 0 |
| K594 | 机针停止位置 | -10~10 | 1 | 0 |
| K595 | 剪线时的松线时间 | -40~40 | 1 | 0 |
| K596 | 机头翻倒开关是否有效 | OFF：无效<br>ON1：有效 1<br>ON2：有效 2 | | OFF |
| K597 | 剪线电磁铁电流挡位开始下降的时间 | -30~30 | 1 | 0 |
| K598 | 剪线后的出销方式 | 10~0 | 1 | -4 |
| K756 | 绕线速度设置 | OFF：无限制<br>ON：最高 2000sti/min | | ON |
| K850 | 机型设置 | 15：唐装纽扣<br>17：9060 幅面 | | 17 |
| K890 | 扩展机型 ID | 0~255 | 1 | 0 |
| K900 | 恢复出厂设置 | | | |
| K991 | 中压脚随动幅度 | -10~10 | 1 | 0 |
| K992 | 备用 | | | 0 |
| K993 | 备用 | | | 0 |
| K994 | X 电机找原点方式 | 0：步进编码器反向<br>1：步进编码器正向<br>2：不找原点<br>3：外置传感器正向<br>4：外置传感器反向 | | 3 |
| K995 | Y 电机找原点方式 | 0：步进编码器反向<br>1：步进编码器正向<br>2：不找原点<br>3：外置传感器正向<br>4：外置传感器反向 | | 4 |

| 序号 | 参数 | 设定范围 | 编辑单位 | 出厂设置 |
|---|---|---|---|---|
| K996 | 急停开关类型 | 0：常开<br>1：常闭 | | 0 |
| K997 | 断线检测针数设定 | 0~5 | 1 | 0 |
| K998 | 电磁铁拨线延时 | -127~128 | 1 | 0 |
| K999 | 备用 | -127~128 | 1 | 0 |

## 8.4 计数器设置

按下进入计数器设置界面（如右图所示）。

操作步骤：

**① 缝制计数器类型选择**

选择缝制计数、计件计数功能

**② 设定当前值、设定值**

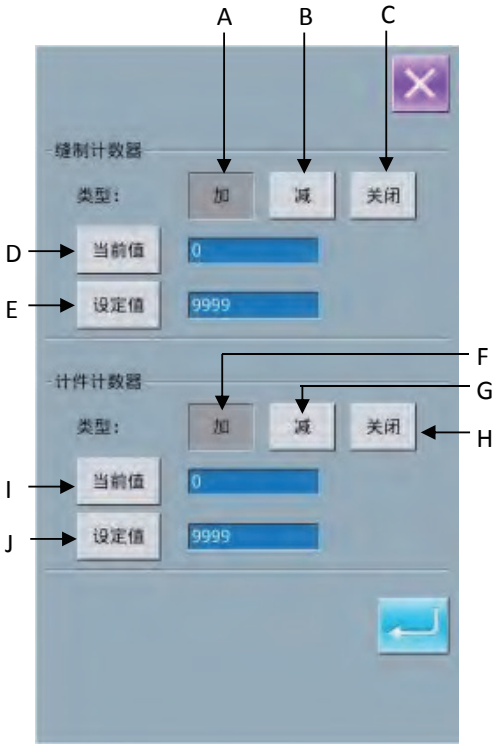
在选定的类型中按“当前值”、“设定值”按键，进行有关操作

**③ 选择加计数还是减计数**

在选定的类型中，按“加”、“减”按键，进行有关操作。

按键退出计数器设置界面。

按完成设置，并退出。




**缝制加计数：**

每缝制 1 形状的缝制物之后，在当前值上加数。当当前值与设定值相等时，显示出计数器溢出报警界面。按下键，计数器当前值恢复为 0。

**缝制减计数：**

每缝制 1 形状的缝制物之后，从当前值减 1。当当前值等于 0 之后，显示出计数器溢出报警界面。按下键，计数器当前值恢复为设定值。

**计件加计数：**

每缝制 1 循环或 1 连续缝，在当前值上进行加数。当当前值与设定值相等时，显示出计数器溢出报警

界面。按下键，计数器当前值恢复为 0。

**计件减计数：**

每缝制 1 循环或 1 连续缝，从当前值减 1。当当前值等于 0 之后，显示出计数器溢出报警界面。按下键,计数器当前值恢复为设定值。

**④ 关闭计数器**

在选定的类型中，按“关闭”按键，关闭计数器。

### 8.4.1 功能介绍

| 序号 | 功能 |
|---|---|
| A | 缝制计数器加计数 |
| B | 缝制计数器减计数 |
| C | 关闭缝制计数器 |
| D | 设定缝制计数器当前值 |
| E | 设定缝制计数器设定值 |
| F | 计件计数器加计数 |
| G | 计件计数器减计数 |
| H | 关闭计件计数器 |
| I | 设定计件计数器当前值 |
| J | 设定计件计数器设定值 |

## 8.5 变换缝制类型

按下进入缝制类型选择界面。

：普通缝

：循环缝

确定缝制类型之后，按下结束。按之后，显示出选择的缝制类型的数据输入界面。

按键退出变换缝制类型界面，原来的缝制类型不变。



## 8.6 进入花样编辑

按下，如下两种图标会互相切换，选择对应的模式，再按即可进入花样编辑模式。（参照 5.1 节描述）

：缝纫模式

：编辑模式



## 8.7 花样锁定设置

在设置模式等级 1 下，按下进入花样锁定设置界面，该界面会显示所有花样号，每页显示 32 个。如果要锁定某花样，按与花样号对应的按键即可，选中花样号凹下显示。




按下，将会保存设置，所有选中的花样将全部锁定。

## 8.8 格式化操作

按下进入锁键盘设置界面。

在该界面下，可以完成：

- U 盘格式化
- 内存花样格式化
- 自定义格式化
- P、C 花样格式化




按下相应的功能键，进入相关界面。

按退出键退出格式化 U 盘

② **按“USB”键，进入 U 盘格式化**

按回车键 全部格式化 U 盘语件

按退出键 退出格式化 U 盘




③ **按“内存”按键，格式化内存花样**

格式花样花样包括：

- 普通花样，包括基础花样和用户花样
- 循环缝 C 花样
- 登记的 P 花样

按回车键 全部格式化

按退出键 退出格式化




**※格式化内存花样会将内存中存在的全部花样语件删除，请谨慎操作！**

**④ 按“自定义”键，进入批量删除功能**

在该界面下，会显示当前内存中存在的所有花样语件，点按相应的按键完成批量删除功能。

自定义功能的操作：

A．利用“上箭头”、“下箭头”键进行翻页

B、利用下面三种操作，选择花样

- 按选择全部花样，
- 按反向选择
- 点击花样号码按键

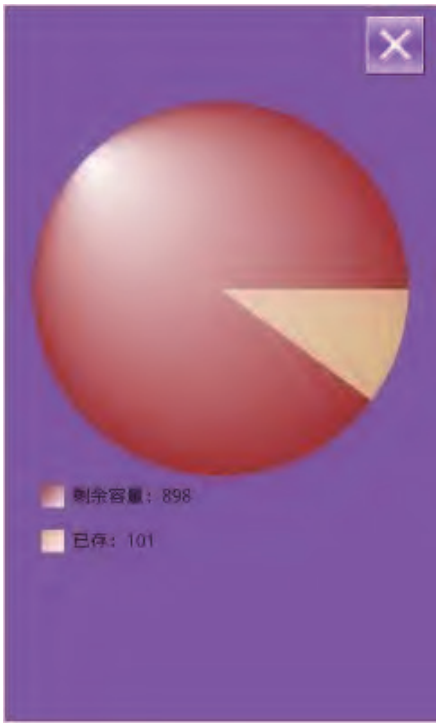
C、按完成批量删除功能

D、按退出键退出到格式化操作界面。




**⑤ 在自定义格式化界面下，按键，显示当前内存中花样占用的空间，及剩余空间的大小**

按退出键退出到上一界面。



## 8.9 软件版本查询

在设置模式等级 2 下，按下可以查询系统软件版本

:可以将当前版本信息保存至 U 盘根目录下。



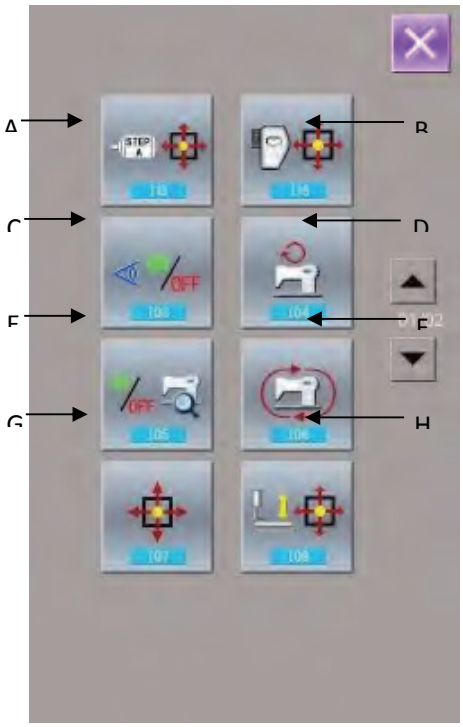

## 8.10 检测模式

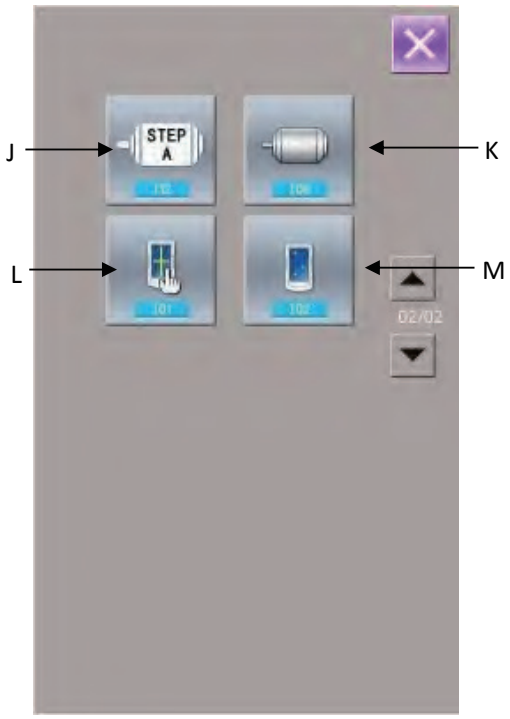
在设置模式等级 2 下，按下键可以进入检测模式界面（如右图所示）。

各图标功能说明详见下表：

| 序号 | 名称 |
|---|---|
| A | 步进原点微调 |
| B | 所有电机去原点 |
| C | I03 输入检测 |
| D | I04 转速测定 |
| E | I05 输出检测 |
| F | I06 连续运转 |
| G | I07XY 马达原点检测 |
| H | 09 压脚马达/原点传感器检测 |
| J | 机头板数据配置 |
| K | 主轴电机原点检测 |
| L | I01 触摸屏校正 |
| M | I02 液晶显示检测 |

按键退出检测模式界面。






## （1）步进原点微调

A、在检测模式界面按下键，进入步进原点微调界面（如右图所示），按可以退出。

B、在该界面下可以对步进电机的原点进行调整：

- X 步进电机
- Y 步进电机、
- 压脚步进电机




原点调整步骤说明：

- 系统进入时，输入灯闪烁
- 踩下踏板到 2 档，按左右箭头输入数值，同时字体闪烁，设置灯点亮
- 踏下踏板，确认原点，设置等熄灭
- 按回车键，保存数值
- 按回原点键，归零

## （2）输入信号检测方法




在检测模式界面按下（I03 输入检测）键进入输入检测界面（如右图所示），在该界面下可以确认各种开关和传感器的输入状况。

**ON**：表示开启

**OFF**：表示关闭

01：双踏板启动开关

02：双踏板压脚开关

03：急停开关

04：X 马达原点传感器

05：Y 马达原点传感器

06：外压脚马达原点传感器

07：中压脚马达原点传感器

08：机头翻转传感器

09：模拟(单)踏板传感器

## （3）转速测定




### ①显示转速测定界面

在检测模式界面按下键进入转速测定界面（如右图所示），在该界面下可以检测主轴马达转速。按退出转速测定界面。

### ②转速测定设置

通过按加键“+”和按减键“-”可以设置主轴马达转速，按下后，主轴马达会以已设定的转速旋转。此时，实际测得的转速在界面中的实际转速栏中显示。按下则机器停止运转。

## （4）输出检测




在检测模式界面按下键进入输出检测界面（如右图所示），

在该界面下可以检测的输出状态包括：

01：剪线电磁铁检测

02：松线电磁铁检测

03：拨线电磁铁检测

按退出输出检测界面

※ **注意缝纫机会有相应的动作**

※ **210 机型没有 03 检测项**

## （5）连续运转




### ①显示连续运转界面

在检测模式界面按下键进入连续运转界面（如右图所示）。

A：动作间隔

按退出连续运转界面。

### ②连续运转设置

点击连续运转状态下的“动作间隔”输入框，通过数字键盘输入设置值，可设定动作间隔时间。

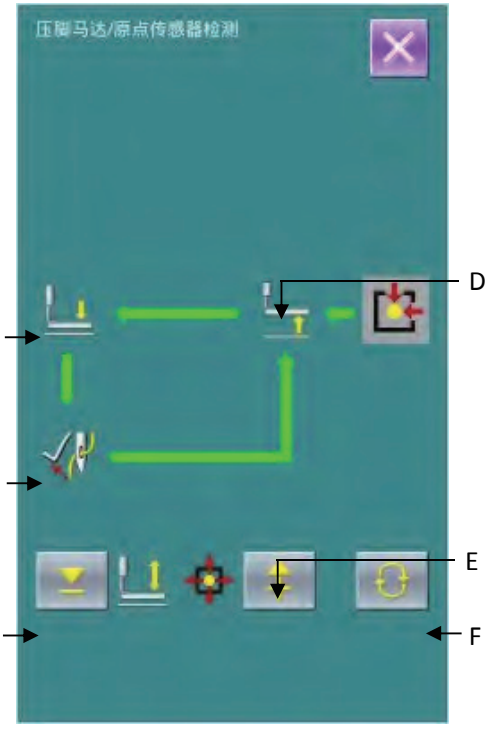
按键，踩下脚踏板即开始连续运转。连续运转过程中可以通过暂停开关暂停，也可以在动作结束后压脚抬起时踩下脚踏板或按暂停开关停止连续运转。

## （6）XY 马达原点传感器检测




在检测模式界面按下键进入 XY 马达、传感器输出检测界面（如右图所示）。若上电后不进入准备状态且在该界面下不按进行原点检索，可以直接通过方向键驱动马达移动，并显示出 XY 两传感器的 ON/OFF 状态，以检测 XY 马达驱动和传感器是否正常工作；若上电后进入过准备状态，或在该界面按下过进行原点检索，则每次进入该 I07 模式后，都需要先按键进行原点检索，才可以通过按方向键驱动 XY 马达移动，这种情况下表示对 XY 原点进行微调功能。左侧 X、Y 坐标显示的是原点偏移值，右侧 X、Y 坐标显示的是压脚框当前所处位置，按下可将当前位置设置为原点参考值。

## （7）压脚马达/原点传感器检测




根据压脚原点传感器状态，A 位置显示压脚原点传感器的 ON/OFF 状态。

通过和，压脚电机以 1 个脉冲 1 个脉冲进行驱动。

另外，按下可驱动压脚电机到下述的定位置，显示该位置的图形为阴影。

A：压脚放下位置

B：拨线完成位置

C：正向运动一步

D：压脚抬起位置

E：反向运动一步

F：运动到下一位置

**注：用启动开关进行压脚・切线电机原点检索之后，变为有效。**

## （8）主轴电机校准

在检测模式界面按下键进入主轴电机校准检测界面（如右图所示）。

在该状态下，转动主轴显示主轴的角度，进行主轴角度校准。

按下可将当前位置设置为原点参考值

按下退出主轴电机校准界面

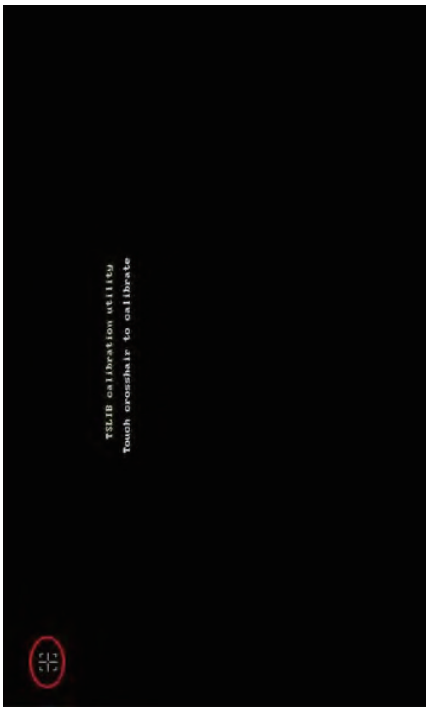



## （9）触摸屏校正

A、在检测模式界面按下（I01 触摸屏校正）键，提示【确定进入触摸屏校正模式】，按进入触摸屏校正界面（如右图所示），按可以退出触摸屏校正状态。

B、需要进行 5 点校正，最好采用触摸笔一类的工具点击画面中的十字光标，校正结束后，会显示本次操作是否成功

**※校正过程中，请务必按照十字光标标识的位置进行，否则会导致校正结束后无法正常使用触摸屏的情况**



### （10）液晶检测



在检测模式界面按下（I02 液晶检测）键进入液晶检测界面（如右图所示），在该状态下检测液晶是否失色。

在界面下点按，在“蓝色 — 黑色 — 红色 — 绿色 — 白色”间循环显示

按退出键退出液晶检测界面。

## 8.11 锁键盘操作

在设置模式等级 2 下，按下进入锁键盘设置界面。



**①锁键盘操作**

：未设定锁键盘状态

：已设定锁键盘状态

选择，按下完成锁键盘操作。按退出键退出锁键盘操作。

**②锁键盘状态显示**

关闭参数设置模式界面，返回数据输入界面，如右图，可以看到花样号码下方有一个显示锁键盘状态的图标。在锁键盘状态下仅显示可使用图标。

**③键盘锁定范围**

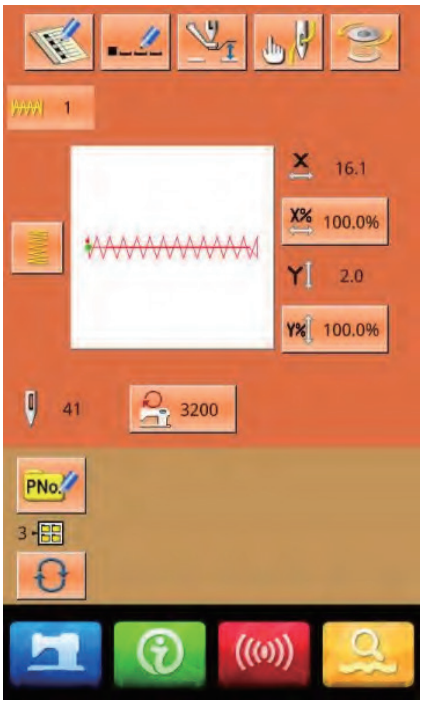
1、普通缝数据输入界面：

1） 花样登记

2） 花样命名

3） 放大缩小率设置

4） 最高转速限制
5） P 花样登记
6） 花样删除
2、普通缝缝制界面：
1） 移框
2） 计数器设置
3、P 花样输入界面：
1） P 花样编辑
2）P 花样复制
3）P 花样命名
4）花样删除
4、P 花样缝制界面：
1）计数器设置
5、C 花样数据输入界面：
1） C 花样登记
2） C 花样复制
3） C 花样命名
4） C 花样编辑
5） 花样删除
6、 C 花样缝制界面：
1）计数器设置
7、参数设置模式：
1） 参数 1 级
2） 参数 2 级
3）计数器编辑
4）检测模式
5）花样锁定设置




## 8.12 参数备份设置

在设置模式等级 3 下，按键进入参数还原备份界面，如右图所示：

清除键：清除全部已经保存的自定参数
保存键：保存当前参数
恢复键：恢复当前参数

①点击~其中任意一键，以确定参数保存位置，然后点击「保存」键进行保存。

②观察「自定参数 xx（有/无）」键显示内容，如果括号内显示为「有」的则表示该位置上存储了用户参数。例如。

③选择已经存储参数的自定参数键，按下「恢复」键就会重新加载相应的参数设定值。

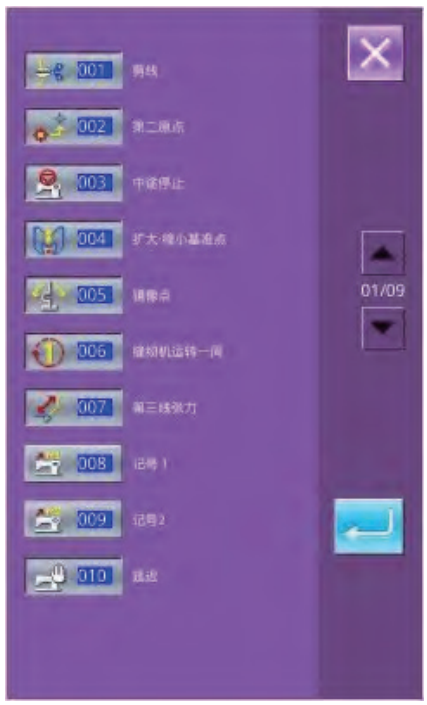
④按下「清除」键会清除全部已存参数。




## 8.13 花样编辑参数设置

在设置模式等级 3 下，按下可以进入花样编辑参数设置界面。
带有阴影效果的凹下图标表示该功能被打开，不带有阴影效果的凸起图标表示该功能被禁止。

根据需要设置编辑参数，按下确定键完成设置。



## 8.14 字母绣编辑

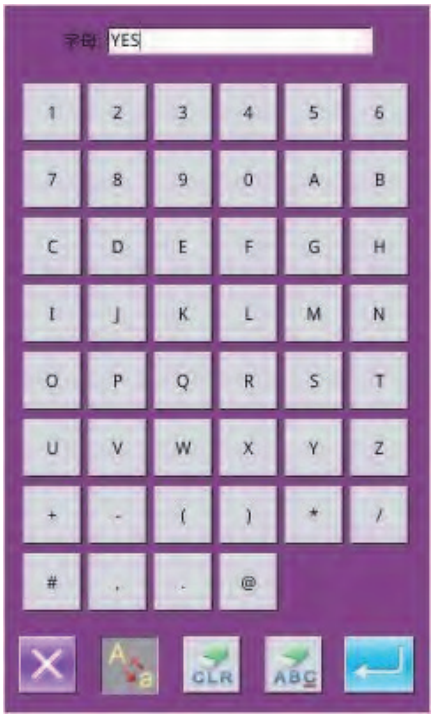
### 8.14.1 字母绣参数设置

选择进入字母绣参数设置界面，如图所示。




**1、字符输入**

按下「输入」键，进入字符输入界面，需要至少输入一个字符，最多可输入 20 个字符，按下键保存并退出。



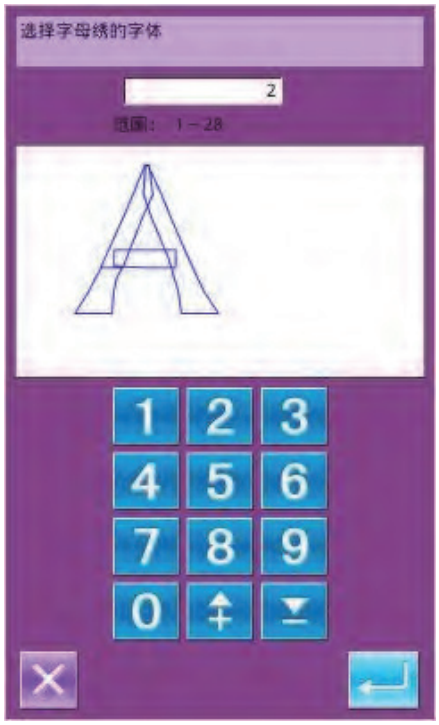
**功能说明：**

| 按键名称 | 功能 | 内容 |
|---|---|---|
| 输入 | 字符输入 | 输入字符，最多可以输入 20 个字符。 |
| 字体 | 选择字体 | 支持 28 种字体。 |
| 排列 | 排列方式 | 提供水平、垂直、上玄弧和下玄弧排列方式。 |
| 间距 | 字符间距 | 设置相邻字符间距。 |
| 密度 | 平包针密度 | 设置平包针密度，设定值越大平包针越密。 |
| 高度 | 高度缩放 | 设置字符的高度缩放，范围为 50~200。 |
| 宽度 | 宽度缩放 | 设置字符的宽度缩放，范围为 50~200。 |
| 旋转 | 旋转/跟随（不跟随） | 排列方式为直线（水平、垂直）时，该按键显示内容为旋转，用于设置字符旋转角度；<br>排列方式为圆弧（上玄弧、下玄弧）时，该按键显示内容为跟随（不跟随），用于设置字符是否跟随圆弧旋转。 |
| 剪线 | 剪线/不剪线 | 确定是否自动插入剪线。 |

**2、选择字体**

按下「字体」键，进入字体选择界面，提供 28 种不同的字体，直接输入 1-28 之间的数字进行选择，按下键保存并退出。

该界面下提供每种字体的形状显示。



### 3、排列方式

按下「排列」键，进入排列方式设置界面，提供水平直线、竖直直线、上玄弧、下玄弧 4 种字符排列方式，按下键保存并退出。




### 4、字符间距

按下「间距」键，进入字符间距设置界面，水平排列时，表示相邻字符轮廓之间的水平间距。

竖直排列时，表示相邻字符轮廓之间的垂直间距。

圆弧排列时，表示相邻字符轮廓之间在圆弧上的距离。

范围为 0~99.9mm。



**5、平包针密度**

按下「密度」键，进入平包针密度设置界面，设置的平包针密度在 50~200 之间。




**6、高度缩放**

按下「高度」键，进入字母高度设置界面，设置字符的高度缩放，范围为 50~200。



**7、宽度缩放**

按下「宽度」键，进入字母宽度设置界面，设置字符的宽度缩放，范围为 50~200。




**8、旋转角度设定**

排列方式为水平排列或者竖直排列时，可以设置字母旋转角度，按下「旋转」键，进入旋转角度设置界面。

旋转方向为逆时针旋转，范围为 0°~359°。

**注：排列方式为上玄弧或下玄弧时，该按键功能为设置是否跟随圆弧旋转。**



**9、跟随/不跟随设定**

排列方式为上玄弧或下玄弧时，可以设置字母的角度是否跟随圆弧旋转。按下「跟随」键，可以切换到「不跟随」，反之亦然。

**【注】排列方式为水平排列或者竖直排列时，该按键功能为设置旋转角度。**




**10、是否自动添加剪线**

默认情况下是自动添加剪线，也就是在字母绣花样的车缝和空送连接处，以及缝纫最后添加剪线。

按下「剪线」键，可以切换该按键显示为「不剪线」，也同时取消了自动添加剪线的功能。



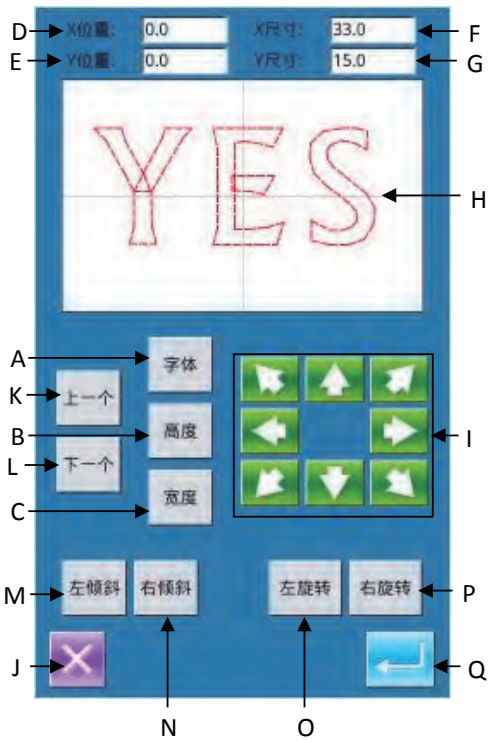
**11、确定字母绣花样**

设置好要生成的字母绣花样后，按下键，会进入到字母绣花样调整界面。




## 8.14.2 字母绣花样调整

字母绣参数设置界面完成了各项参数的设置后，按键进入字母绣花样调整界面，该界面下可以对花样做进一步的调整。



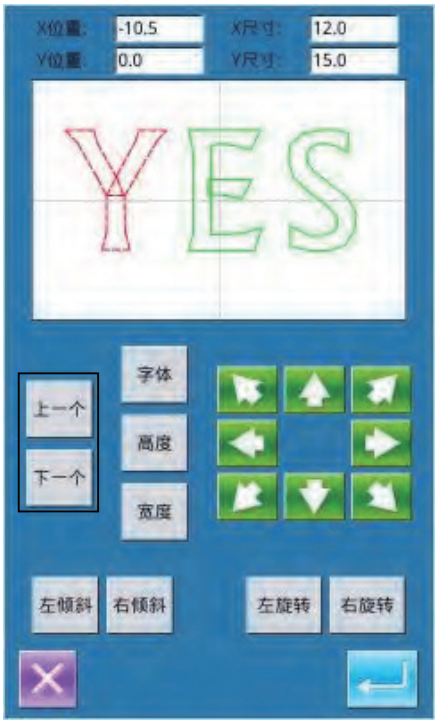

**功能说明：**

| 序号 | 功能 | 内容 |
| --- | --- | --- |
| A | 字体选择 | 更改选中字母的字体，设置的方法与参数设置时相同。 |
| B | 高度缩放 | 更改选中字母的高度缩放，设置的方法与参数设置时相同。 |
| C | 宽度缩放 | 更改选中字母的宽度缩放，设置的方法与参数设置时相同。 |
| D | X 位置显示 | 显示选中字母的中心点 X 坐标。 |
| E | Y 位置显示 | 显示选中字母的中心点 Y 坐标。 |
| F | X 尺寸显示 | 显示选中字母的宽度。 |
| G | Y 尺寸显示 | 显示选中字母的高度。 |
| H | 花样显示 | 显示当前字母绣花样，选中字母颜色为红色，未选中字母颜色为绿色。 |
| I | 方向键 | 选中字母的位置调整。 |
| J | 退出键 | 返回上一级画面。 |
| K | 字符选择（从右到左的方向） | 向左选择想要调整的字符，选中字符显示为红色。<br>在选中最后一个字符时向左，会选中全部字符。 |
| L | 字符选择（从左到右的方向） | 向右选择想要调整的字符，选中字符显示为红色。<br>在选中最后一个字符时向右，会选中全部字符。 |
| M | 左倾斜/小弧度 | 排列方式为水平排列或竖直排列时，显示为「左倾斜」，按下后会逆时针方向旋转整个花样，旋转以原点为圆心。<br>排列方式为上玄弧或下玄弧时，显示为「小弧度」，按下后减小整个花样的弧度。<br>【注】该操作是针对整个花样的。 |
| N | 右倾斜/大弧度 | 排列方式为水平排列或竖直排列时，显示为「右倾斜」，按下后会顺时针方向旋转整个花样，旋转以原点为圆心。<br>排列方式为上玄弧或下玄弧时，显示为「大弧度」，按下后增加整个花样的弧度。<br>【注】该操作是针对整个花样的。 |
| O | 左旋转 | 逆时针方向调整选中字符的旋转角度，旋转以各个字符的中心为中心。 |
| P | 右旋转 | 顺时针方向调整选中字符的旋转角度，旋转以各个字符的中心为中心。 |
| Q | 确定 | 按下后会进入花样保存界面。 |

## 实例说明：

**1、 选择单个字母进行调整**

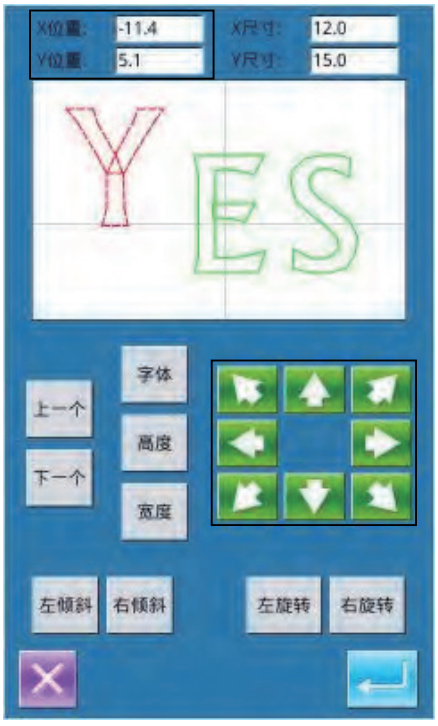
按下「上一个」键或「下一个」键，可以选择单个字母进行编辑，选中字母颜色为红色，未选中为绿色。




**2、 字母位置调整**

按下方向键可以调整选中字母的位置，可以通过「X 位置」和「Y 位置」显示区域观察坐标。

同上操作，继续调整其它字母的位置。

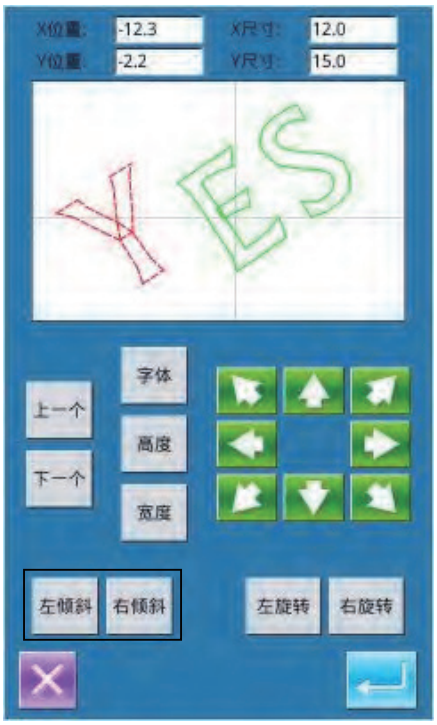


**3、 整个花样的旋转角度调整**

按下「左倾斜」键或「右倾斜」键，可以调整整个花样的旋转角度。

「左倾斜」：逆时针方向旋转

「右倾斜」：顺时针方向旋转




**【注】排列方式为上玄弧或下玄弧时，该操作为「小弧度」/「大弧度」，用于调整整个花样的弧度。**

**4、 单个字母旋转角度调整**

选择一个字母，然后按下「左旋转」键或「右旋转」键，可以调整选中字母的旋转角度。




**【注】需要调整旋转角度时，最好先执行整个花样的旋转角度调整，然后再执行单个字母的旋转角度调整。如果先执行了单个字母的旋转角度调整，再执行整个花样的旋转角度调整时会取消之前单个字母的旋转角度。**

**5、 保存花样**

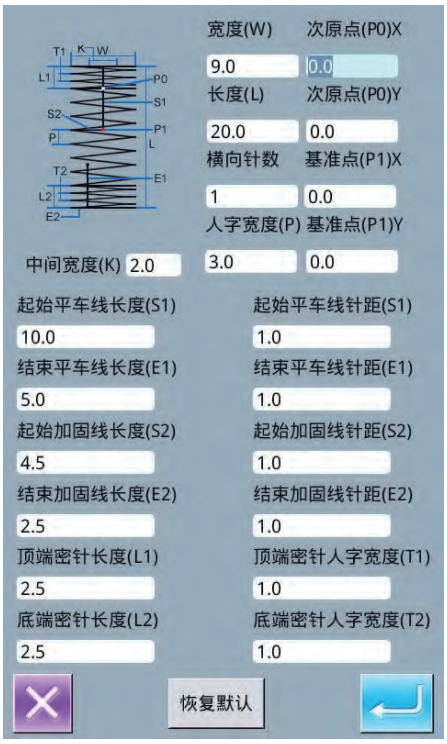
调整完毕后，按下键进入保存界面，输入号码后保存花样。




## 8.15 模板输入

在设置模式等级 1 下，按下进入参数设置功能界面，该界面可以利用参数设置快速生成模板花样






橡筋花样模板




套结花样模板




菊花眼模板

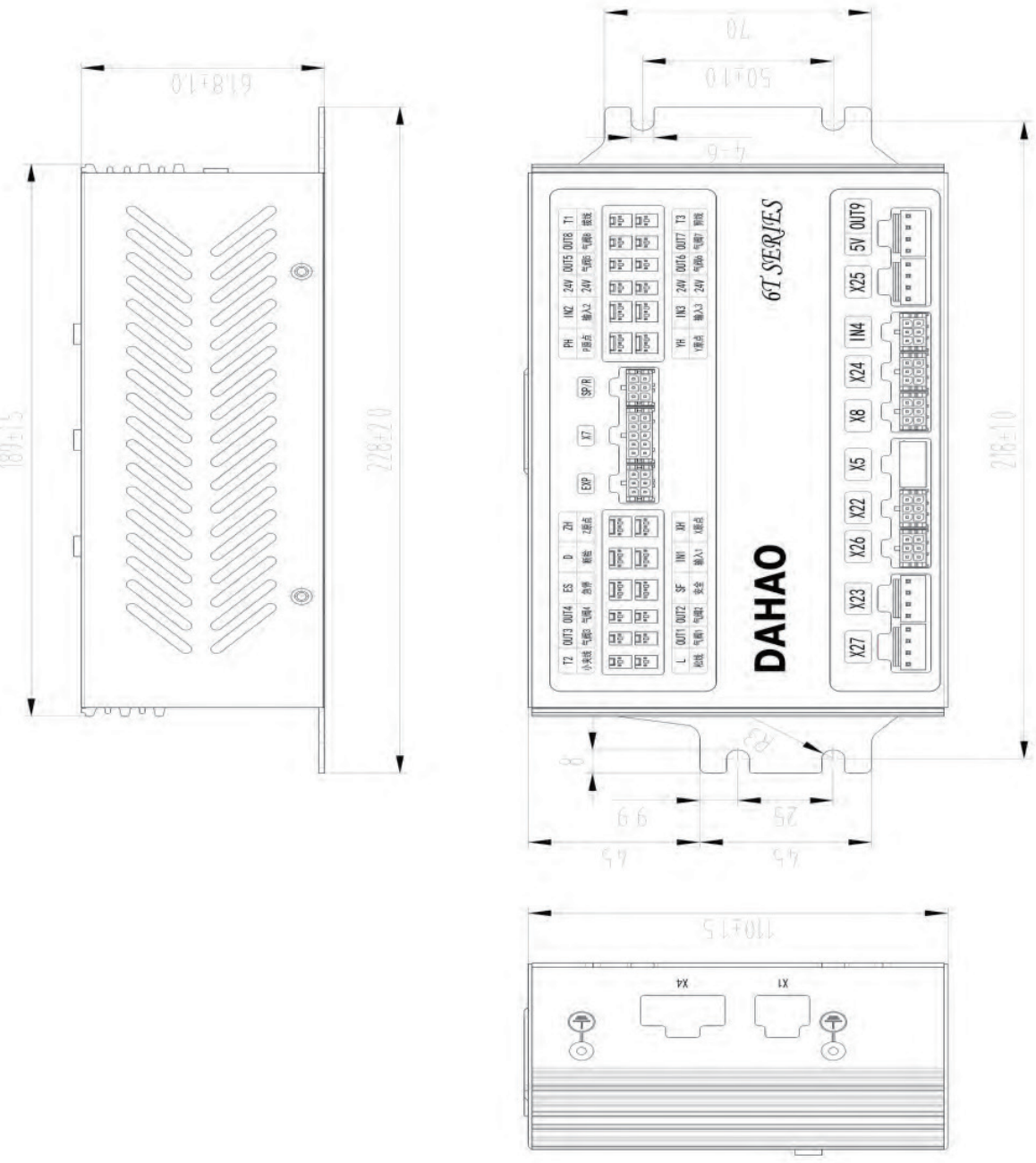



方框花样模板

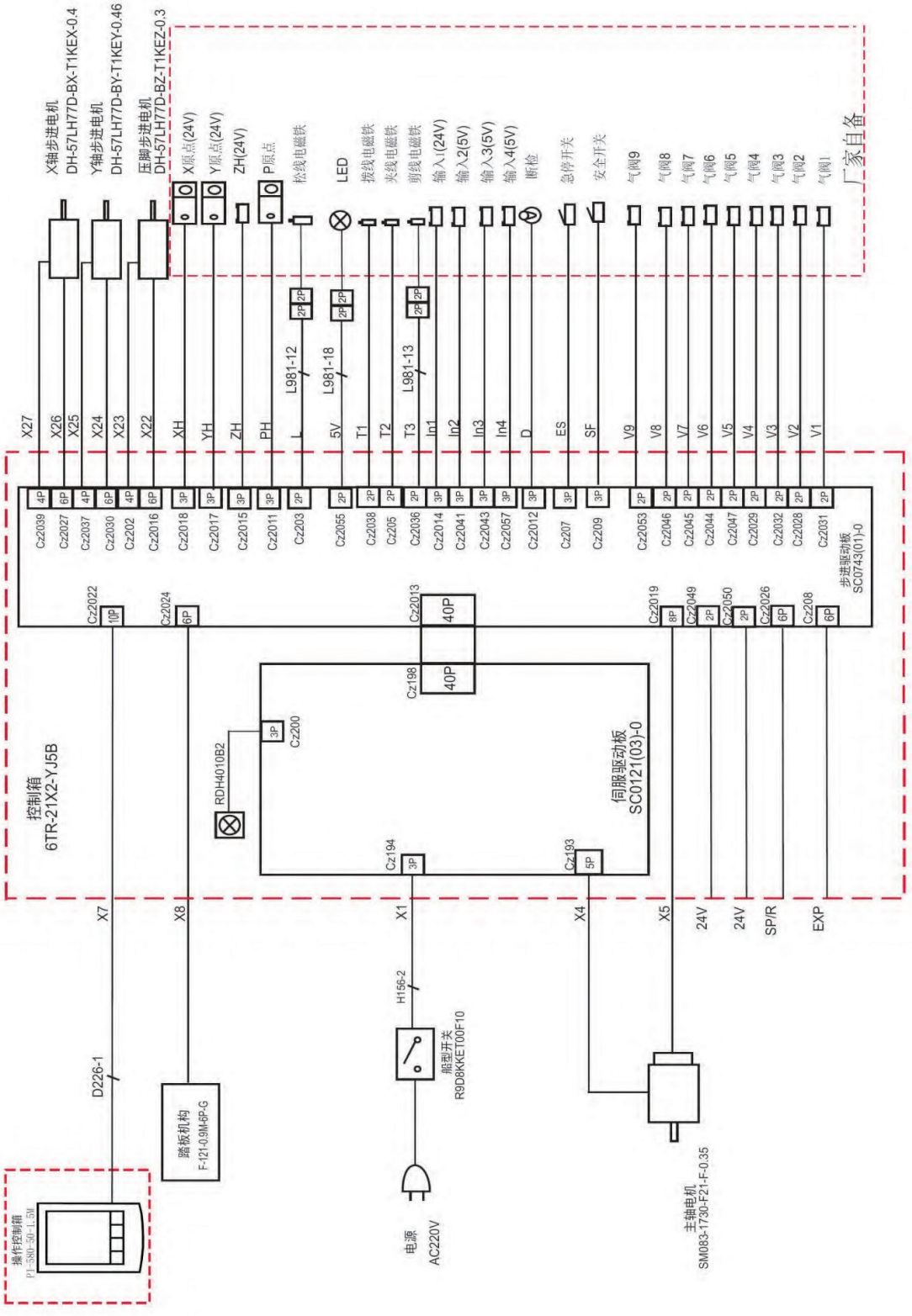
# 9 附录 1 电控系统原理

## 9.1 操作箱安装尺寸

## 9.2 电控箱安装尺寸



## 9.3 系统框图

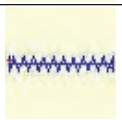
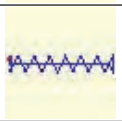
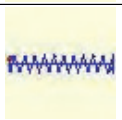
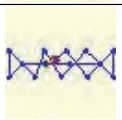
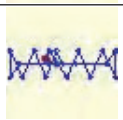
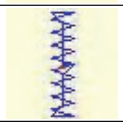
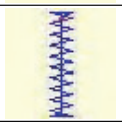

X轴步进电机
DH-57LH77D-BX-T1KEX-0.4
Y轴步进电机
DH-57LH77D-BY-T1KEY-0.46
压脚步进电机
DH-57LH77D-BZ-T1KEZ-0.3
X原点(24V)
Y原点(24V)
ZH(24V)
P原点
松线电磁铁
LED
拨线电磁铁
夹线电磁铁
剪线电磁铁
输入1(24V)
输入2(5V)
输入3(5V)
输入4(5V)
断检
急停开关
安全开关
气阀9
气阀8
气阀7
气阀6
气阀5
气阀4
气阀3
气阀2
气阀1
厂家自备
X27
X26
X25
X24
X23
X22
XH
YH
ZH
PH
L
5V
T1
T2
T3
In1
In2
In3
In4
D
ES
SF
V9
V8
V7
V6
V5
V4
V3
V2
V1
L981-12
L981-18
L981-13
Cz2039
Cz2027
Cz2037
Cz2030
Cz202
Cz2016
Cz2018
Cz2017
Cz2015
Cz2011
Cz203
Cz2055
Cz2038
Cz205
Cz2036
Cz2014
Cz2041
Cz2043
Cz2057
Cz2012
Cz207
Cz2209
Cz2053
Cz2046
Cz2045
Cz2044
Cz2047
Cz2029
Cz2032
Cz2028
Cz2031
步进驱动板
SC0743(01)-0
Cz2022
Cz2024
Cz2013
Cz2019
Cz2049
Cz2050
Cz2026
Cz2208
Cz198
Cz200
RDH4010B2
伺服驱动板
SC0121(03)-0
Cz194
Cz193
控制箱
6TR-21X2-YJ5B
X7
X8
X1
X4
X5
24V
24V
SP/R
EXP
D226-1
H156-2
船型开关
R9D8KKET00F10
踏板机构
F-121-0,9M-6P-G
电源
AC220V
主轴电机
SM083-1730-F21-F-0.35
操作控制箱

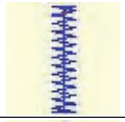
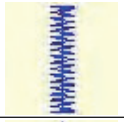
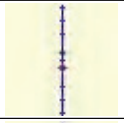
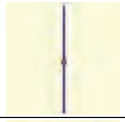
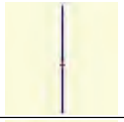
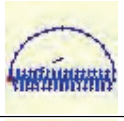
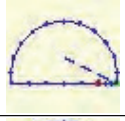
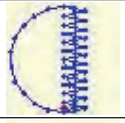
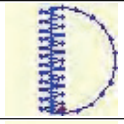
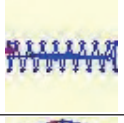
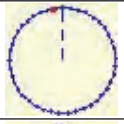
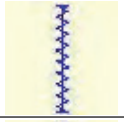
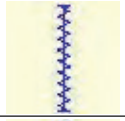
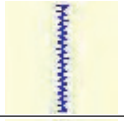
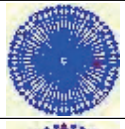
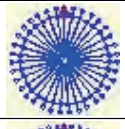
# 10 附录 2 基础花样一览表

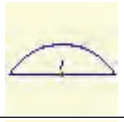
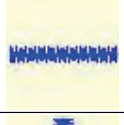
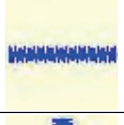
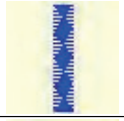
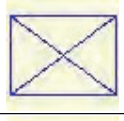
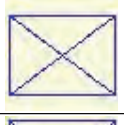
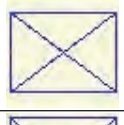
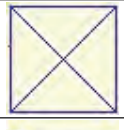
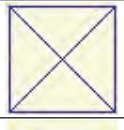
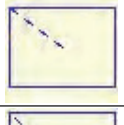
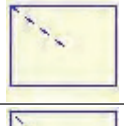
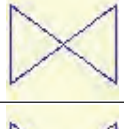
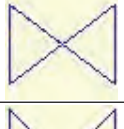
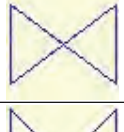
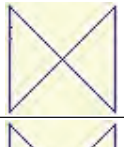
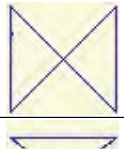
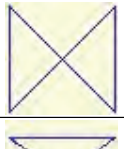
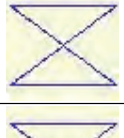
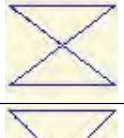
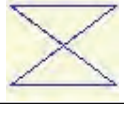
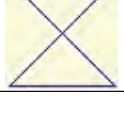
下面所示的缝纫花样已预先设置好，可以根据规格予以选择使用。（只要能够确认是在压脚、送布板的工作范围内，就可以选择使用任一种缝纫花样）

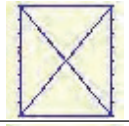
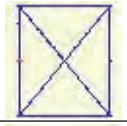
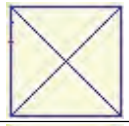
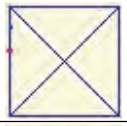
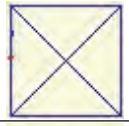
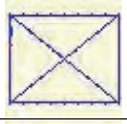
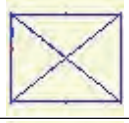
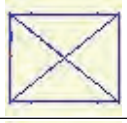
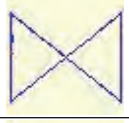
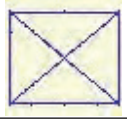
请使用符合各种缝纫花样要求的压脚和送布板。缝纫尺寸为 100%缩放率时的长度。

- **机型为 SC212（468G）时的基础花样**

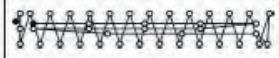
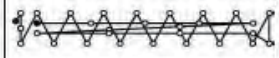
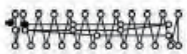
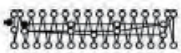
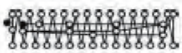
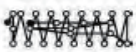
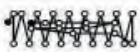
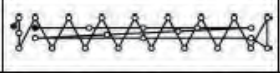
| NO. | 缝纫图案 | 针数 | 长×宽 (mm) | NO. | 缝纫图案 | 针数 | 长×宽 (mm) |
|---|---|---|---|---|---|---|---|
| 1 |  | 41 | 16.1×2 | 2 |  | 41 | 10.2×2 |
| 3 |  | 41 | 16×2.4 | 4 |  | 41 | 24×3 |
| 5 |  | 27 | 10.1×2 | 6 |  | 27 | 16×2.4 |
| 7 |  | 35 | 10.1×2 | 8 |  | 35 | 16×2.4 |
| 9 |  | 55 | 24×3 | 10 |  | 63 | 24×3 |
| 11 |  | 20 | 6.1×2.4 | 12 |  | 27 | 6.2×2.4 |
| 13 |  | 35 | 6.1×2.4 | 14 |  | 14 | 8×2 |
| 15 |  | 20 | 8×2 | 16 |  | 27 | 8×2 |
| 17 |  | 20 | 10×0 | 18 |  | 27 | 10×0 |
| 19 |  | 27 | 25.2×0 | 20 |  | 35 | 24.8×0 |
| 21 |  | 40 | 25.2×0 | 22 |  | 43 | 35×0 |
| 23 |  | 27 | 4×20 | 24 |  | 35 | 4×20 |

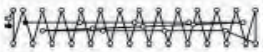
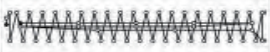
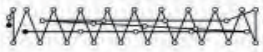
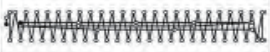
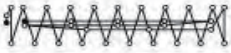
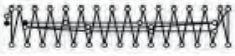
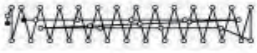
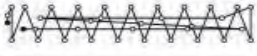
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25 |  | 41 | 4×20 | 26 |  | 55 | 4×20 |
| 27 |  | 17 | 0×20 | 28 |  | 20 | 0×10 |
| 29 |  | 20 | 0×20 | 30 |  | 27 | 0×20 |
| 31 |  | 51 | 10.1×7 | 32 |  | 62 | 12.1×7 |
| 33 |  | 23 | 10.2×6 | 34 |  | 30 | 12×6 |
| 35 |  | 47 | 7×10 | 36 |  | 47 | 7×10 |
| 37 |  | 89 | 24×3 | 38 |  | 27 | 8×2 |
| 39 |  | 25 | 11.8×12 | 40 |  | 45 | 12×12 |
| 41 |  | 28 | 2.4×20 | 42 |  | 38 | 2.4×25 |
| 43 |  | 38 | 2.4×25 | 44 |  | 57 | 2.4×30 |
| 45 |  | 75 | 2.4×30 | 46 |  | 41 | 2.4×30 |
| 47 |  | 89 | 8×8 | 48 |  | 98 | 8×8 |
| 49 |  | 147 | 8×8 | 50 |  | 163 | 8×8 |
| 51 |  | 110 | 7.9×7.9 | 52 |  | 120 | 7.9×7.9 |
| 53 |  | 130 | 7.9×7.9 | 54 |  | 51 | 12.4×10.2 |

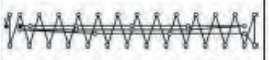
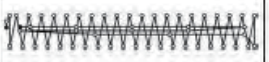
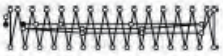
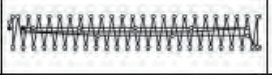
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 55 |  | 50 | 12.4×10.2 | 56 |  | 52 | 21×6 |
| 57 |  | 57 | 21×6 | 58 |  | 102 | 19×3 |
| 59 |  | 115 | 40×5 | 60 |  | 115 | 40×5 |
| 61 |  | 93 | 5×30 | 62 |  | 109 | 5×30 |
| 63 |  | 108 | 40×30 | 64 |  | 80 | 40×30 |
| 65 |  | 64 | 40×30 | 66 |  | 96 | 30×30 |
| 67 |  | 76 | 30×30 | 68 |  | 60 | 30×30 |
| 69 |  | 52 | 40×30 | 70 |  | 40 | 40×30 |
| 71 |  | 32 | 40×30 | 72 |  | 44 | 30×30 |
| 73 |  | 36 | 30×30 | 74 |  | 28 | 30×30 |
| 75 |  | 60 | 40×30 | 76 |  | 48 | 40×30 |
| 77 |  | 36 | 40×30 | 78 |  | 56 | 30×30 |
| 79 |  | 44 | 30×30 | 80 |  | 36 | 30×30 |
| 81 |  | 67 | 40×30 | 82 |  | 51 | 40×30 |
| 83 |  | 39 | 40×30 | 84 |  | 55 | 30×30 |

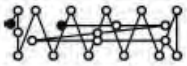
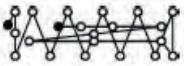
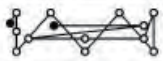
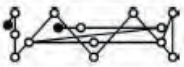
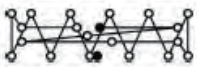
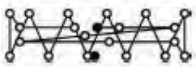
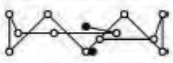
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 85 |  | 35 | 30×30 | | 86 |  | 42 | 30×30 |
| 87 |  | 32 | 30.1×30 | | 88 |  | 26 | 30×30 |
| 89 |  | 74 | 20×24 | | 90 |  | 54 | 20×24 |
| 91 |  | 65 | 20×20 | | 92 |  | 49 | 20×20 |
| 93 |  | 39 | 20×20 | | 94 |  | 63 | 25×20 |
| 95 |  | 51 | 25×20 | | 96 |  | 45 | 25×20 |
| 97 |  | 42 | 25×20 | | 98 |  | 33 | 25×20 |
| 99 |  | 27 | 25×20 | | 100 |  | 88 | 30×25 |

- 机型为 210，当 K[850]机型设置参数设为 3、5、K、F 时

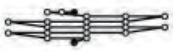
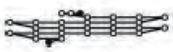
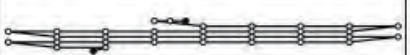
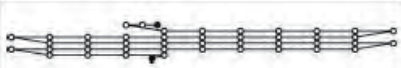
| 适用于一般重量的布料（-03） | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 1 |  | 42 | 16 | 2 | 65 |  | 43 | 16 | 2 |
| 4 |  | 31 | 16 | 2 | 66 |  | 32 | 16 | 2 |
| 5 |  | 29 | 10 | 2 | 67 |  | 30 | 10 | 2 |
| 8 |  | 21 | 7 | 2 | 68 |  | 22 | 7 | 2 |
| 13 |  | 35 | 10 | 2 | 69 |  | 36 | 10 | 2 |
| 15 |  | 42 | 10 | 2 | 70 |  | 43 | 10 | 2 |
| 20 |  | 28 | 7 | 2 | 71 |  | 29 | 7 | 2 |
| 21 |  | 35 | 7 | 2 | 72 |  | 36 | 7 | 2 |
| 64 |  | 30 | 16 | 2 | 89 |  | 90 | 24 | 3 |

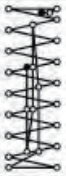
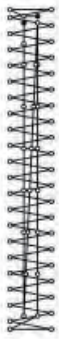
| 适用于厚重的布料（-05） | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 2 |  | 42 | 20 | 3 | 18 |  | 56 | 24 | 3 |
| 3 |  | 35 | 20 | 3 | 19 |  | 64 | 24 | 3 |
| 6 |  | 30 | 16 | 3 | 62 |  | 42 | 20 | 3 |
| 14 |  | 35 | 16 | 3 | 63 |  | 35 | 20 | 3 |
| 16 |  | 43 | 16 | 3 | 78 |  | 43 | 20 | 3 |
| 17 |  | 42 | 24 | 3 | 79 |  | 36 | 20 | 3 |

| 适用于厚重的布料（-05） | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 80 |  | 31 | 16 | 3 | 83 |  | 43 | 24 | 3 |
| 81 |  | 36 | 16 | 3 | 84 |  | 57 | 24 | 3 |
| 82 |  | 44 | 16 | 3 | 85 |  | 65 | 24 | 3 |

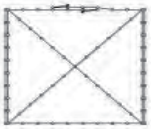
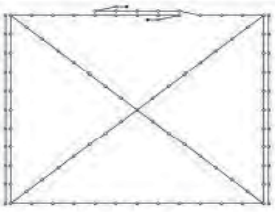
| 适用于针织布料（-0K）和女性内衣(-0F) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 7 |  | 28 | 8 | 2 | 73 |  | 29 | 8 | 2 |
| 9 |  | 21 | 7 | 2 | 74 |  | 22 | 7 | 2 |
| 22 |  | 14 | 7 | 2 | 75 |  | 15 | 7 | 2 |
| 31※ |  | 28 | 8 | 2 | 76※ |  | 29 | 8 | 2 |
| 32※ |  | 22 | 8 | 2 | 77※ |  | 23 | 8 | 2 |
| 33※ |  | 15 | 8 | 2 | | | | | |

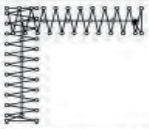
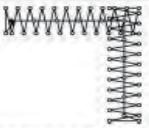
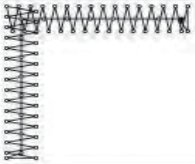
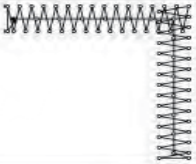
*始针和终结针的位置在图案的中间

| 直线结 | | | | | 垂直曲折缝 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 10 |  | 21 | 10 | 0.3 | 44 |  | 46 | 9 | 15 |
| 11 |  | 28 | 10 | 0.3 | | | | | |
| 12 |  | 28 | 20 | 0.3 | 45 |  | 70 | 9 | 25 |
| 23 |  | 35 | 25 | 0.3 | | | | | |
| 24 |  | 42 | 25 | 0.3 | | | | | |
| 25 |  | 45 | 25 | 0.3 | | | | | |

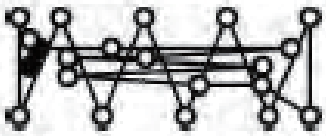
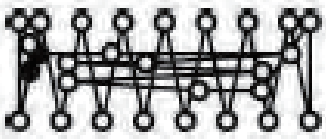
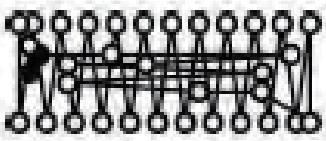
| 垂直结 | | | | | 垂直直线结 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 26 |  | 28 | 3 | 10 | 28 |  | 19 | 0.3 | 10 |
| 27 |  | 35 | 3 | 10 | 29 |  | 21 | 0.3 | 10 |
| 40 |  | 32 | 3 | 16 | 30 |  | 28 | 0.3 | 10 |
| 41 |  | 36 | 3 | 16 | 46 |  | 27 | 0.3 | 20 |
| 42 |  | 44 | 3 | 20 | 47 |  | 44 | 0.3 | 25 |
| 43 |  | 68 | 3 | 24 | | | | | |

| 月牙结 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 34 |  | 35 | 12 | 7 | 37 |  | 57 | 7 | 12 |
| 35 |  | 58 | 12 | 7 | 38 |  | 53 | 7 | 10 |
| 36 |  | 57 | 7 | 12 | 39 |  | 53 | 7 | 10 |

| X 形结 | | | | | 交叉结 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 48 |  | 70 | 10 | 10 | 50 |  | 84 | 16 | 16 |
| 49 |  | 93 | 9.6 | 9.6 | 51 |  | 105 | 30 | 26 |

| L 形结 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 52 |  | 60 | 11.3 | 11.2 | 53 |  | 60 | 11.3 | 11.2 |
| 54 |  | 78 | 15.3 | 15.2 | 55 |  | 78 | 15.3 | 15.2 |

| 菊形缝 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 56 |  | 106 | 9 | 9 | 59 |  | 104 | 10 | 10 |
| 57 |  | 116 | 9 | 9 | 60 |  | 114 | 10 | 10 |
| 58 |  | 127 | 9 | 9 | 61 |  | 124 | 10 | 10 |

| 圆眼钮孔 | | | | |
|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 |
| 86 |  | 21 | 6 | 2 |
| 87 |  | 28 | 6 | 2 |
| 88 |  | 35 | 6 | 2 |

- **机型为 210，当 K[850]机型设置参数设为 BUTN 时**

下面所示的缝纫花样已预先设置好。只要针可以穿过纽孔，就可以选择任何缝纫花样。对于没有包缝线的缝纫花样，在完成一边缝纫后就进行剪线，然后再进行另一边的缝纫。

| 号码 | 纽孔数 | 花样 | 线数 | 包缝线 | 针数 | 尺寸（mm） | |
|---|---|---|---|---|---|---|---|
| | | | | | | X | Y |
| 1 | 2 |  | 6 | - | 12 | 3.4 | 0 |
| ※1<br>54 | | | 6 | - | 12 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2 | | | 8 | – | 14 | | |
| ※2<br>55 | | | 8 | – | 14 | | |
| 3 | | | 10 | – | 16 | | |
| 4 | | | 12 | – | 18 | | |
| ※2<br>5 | | | 16 | – | 22 | | |
| ※2<br>6 | | | 20 | – | 26 | | |
| ※1<br>56 | | | 6 | – | 11 | 0 | 3.4 |
| ※3<br>7 | |  | 6 | – | 12 | | |
| ※3<br>23 | | | 10 | – | 16 | | |
| ※3<br>8 | | | 12 | – | 18 | | |
| ※3<br>9 | 3 |  | 5-5-5 | – | 21 | 2.6 | 2.4 |
| ※3<br>24 | | | 7-7-7 | – | 27 | | |
| ※3<br>25 | |  | 5-5-5 | – | 21 | | |
| ※3<br>26 | | | 7-7-7 | – | 27 | | |
| ※1<br>57 | 4 |  | 6-6 | 1 | 18 | 3.4 | 3.4 |
| 10 | | | 6-6 | 1 | 19 | | |
| ※1<br>58 | | | 8-8 | 1 | 22 | | |
| 11 | | | 8-8 | 1 | 23 | | |
| 12 | | | 8-8 | 3 | 25 | | |
| 13 | | | 10-10 | 1 | 27 | | |
| 27 | | | 12-12 | 1 | 31 | | |
| ※4<br>14 | | | 6-6 | 0 | 24 | | |
| ※5<br>36 | | | 6-6 | 0 | 24 | | |
| ※4<br>28 | |  | 8-8 | 0 | 28 | 3.4 | 3.4 |
| ※5<br>37 | | | 8-8 | 0 | 28 | | |
| ※4<br>15 | | | 10-10 | 0 | 32 | | |
| ※5 | | | 10-10 | 0 | 32 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 38 | | | | | | | |
| ※4<br>29 | | | 12-12 | 0 | 36 | | |
| ※5<br>39 | | | 12-12 | 0 | 36 | | |
| ※1<br>59 | | | 6-5 | 1 | 17 | | |
| 16 | |  | 6-5 | 1 | 18 | | |
| ※1<br>60 | | | 8-7 | 1 | 21 | | |
| 17 | | | 8-7 | 1 | 22 | | |
| 30 | | | 10-9 | 1 | 26 | | |
| ※1<br>61 | | | 6-6 | 1 | 18 | | |
| 18 | | | 6-6 | 1 | 19 | | |
| ※1<br>62 | |  | 8-8 | 1 | 22 | | |
| 19 | | | 8-8 | 1 | 23 | | |
| ※1<br>63 | | | 10-10 | 1 | 26 | | |
| 31 | | | 10-10 | 1 | 27 | | |
| 45 | | | 12-12 | 1 | 31 | | |
| ※4<br>20 | | | 6-6 | 0 | 24 | | |
| ※5<br>40 | | | 6-6 | 0 | 24 | | |
| ※4<br>32 | |  | 8-8 | 0 | 28 | | |
| ※5<br>41 | | | 8-8 | 0 | 28 | | |
| ※4<br>33 | | | 10-10 | 0 | 32 | | |
| ※5<br>42 | | | 10-10 | 0 | 32 | | |
| ※1<br>64 | | | 6-6 | 1 | 18 | | |
| ※3<br>21 | |  | 6-6 | 1 | 19 | | |
| ※3<br>34 | | | 10-10 | 1 | 27 | | |
| ※3※4<br>22 | | | 6-6 | 0 | 24 | 2.4 | 3.4 |
| ※3※5<br>43 | |  | 6-6 | 0 | 24 | | |
| ※3※4 | | | 10-10 | 0 | 32 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 35 | | | | | | | |
| ※3※5<br>44 | | | 10-10 | 0 | 32 | | |
| 46 | | | 6-7 | 1 | 19 | 3.4 | 3.4 |
| 47 | | | 8-9 | 1 | 23 | | |
| 48 | | | 10-11 | 1 | 27 | | |
| 49 | | | 12-13 | 1 | 31 | | |
| 65 | 4 | | 6-6 | 1 | 19 | 2.8 | 2.8 |
| 66 | | | 8-8 | 1 | 23 | | |
| 67 | | | 8-8 | 3 | 25 | | |
| 68 | | | 10-10 | 1 | 26 | 2.6 | 2.6 |
| 69 | | | 12-12 | 1 | 31 | | |

※ 1 用于小孔纽扣。

※ 2 不可使用纽扣抬起弹簧。

※ 3 在完成一边缝纫后，纽扣夹就上升并进行拨线动作。为了将缝纫进行到底，在另一边的缝纫开始之前，请继续踩下脚踏开关；或在完成一边缝纫后，请再次踩下脚踏开关。

※ 4 在完成一边缝纫后，纽扣夹不上升而只进行拨线动作，并继续进行另一边的缝纫。

| 用于带柄钮扣 | | | | | |
|---|---|---|---|---|---|
| 号码 | 花样 | 线数 | 针数 | 尺寸（mm） | |
| | | | | X | Y |
| 50 | | 6 | 12 | 3.4 | 0 |
| 51 | | 8 | 14 | | |
| 52 | | 10 | 16 | | |
| 53 | | 12 | 18 | | |

# 11 附录 3 报警信息一览表

| 故障号 | 故障名称 | 复位方法 |
|---|---|---|
| E-010 | 急停开关未在正确位置 | 按 reset 键消除错误 |
| E-002 | 缝制过程中急停 | 按 reset 键消除错误 |
| E-007 | IPM 过压 | |
| E-011 | 机器进入急停 1 | |
| E-014 | 主轴原点检索异常 | 请关闭电源 |
| E-016 | 电源接入时，面板有键处于摁下的状态，或者键接触不良 | 切断电源，确认操作面板键 |
| E-017 | 断线检测异常 | 请按复位按钮 |
| E-025 | 电源接入时或按下准备键时，踏板开关被踩到 2 档位置 | 确认踏板开关在 0 档位置 |
| E-028 | 气阀（风扇）故障 | |
| E-029 | 中压脚原点检测异常 | |
| E-030 | 步进与主控通信异常 | 请关闭电源 |
| E-032 | 主轴电机编码器 Z 信号异常 | |
| E-034 | 供电电源不正常 | 请关闭电源 |
| E-035 | 电源接入时或按下准备键时，踏板开关被踩到 1 档位置 | 确认踏板开关在 0 档位置 |
| E-036 | 电源接入时踏板开关被反踩到 3 档或踏板未连接 | |
| E-045 | 器件异常 | |
| E-046 | 校验错误 | |
| E-047 | 数据校验错误 | |
| E-050 | 电源接入时，缝纫机头翻到 | 切断电源，扶起机头，确认机头翻到开关位置正确 |
| E-051 | 进入缝纫准备状态前机头翻倒 | 切断电源，确认机头翻倒开关位置正确 |
| E-052 | 进入缝纫准备状态时机头翻倒 | 切断电源，扶起机头，确认机头翻倒开关位置正确 |
| E-053 | 进入缝纫准备状态后机头翻倒 | 切断电源，扶起机头，确认机头翻倒开关位置正确 |
| E-054 | 缝纫机缝纫过程中机头翻倒 | 切断电源，扶起机头，确认机头翻倒开关位置正确 |
| E-056 | 主控与第一路步进(X14/X15)通讯错误 | 请关闭电源，检查主控与步进板连接线 |
| E-057 | X 电机过流 | 请关闭电源，更换步进板 |
| E-058 | X 电机超差 | 请关闭电源 |
| E-059 | X 电机超速 | 请关闭电源，更换步进板 |
| E-060 | Y 电机过流 | 请关闭电源，更换步进板 |
| E-061 | Y 电机超差 | 请关闭电源，更换步进板 |
| E-062 | Y 电机超速 | 请关闭电源，更换步进板 |
| E-063 | 主控与第二路步进(X12/X13)通讯错误 | 请关闭电源，检查主控与步进板连接线 |
| E-064 | 步进错误 64 | 请关闭电源 |
| E-065 | 步进错误 65 | 请关闭电源 |
| E-066 | 步进错误 66 | 请关闭电源 |

| 故障号 | 故障名称 | 复位方法 |
|---|---|---|
| E-067 | 压脚电机过流 | 请关闭电源 |
| E-068 | 压脚电机超差 | 请关闭电源 |
| E-069 | 压脚电机超速 | 请关闭电源 |
| E-070 | X 电机找不到原点 | 请关闭电源 |
| E-071 | Y 电机找不到原点 | 请关闭电源 |
| E-072 | 步进错误 72 | 请关闭电源 |
| E-074-089 | 步进驱动升级失败 | |
| E-090 | 升级步进错误：查询步进状态超时 | |
| E-091 | 升级步进错误：查询步进状态超时 | |
| E-093 | 步进闭环 DSP1(X25/27)通信数据包校验错误 | |
| E-094 | 步进闭环 DSP1(X25/27)通信数据包非法命令 | |
| E-095 | 步进闭环 DSP2(X21/23)通信数据包校验错误 | |
| E-096 | 步进闭环 DSP2(X21/23)通信数据包非法命令 | |
| E-100 | 出现加油报警通知后，若不添加润滑脂，继续使用一段时间后此显示会再次出现 | 添加润滑脂之后执行清除计数的操作 |
| E-101 | 缝制针数累积到加油报警通知针数 | |
| E-103 | 扩展设备通信异常 | 请关闭电源 |
| E-104 | 扩展设备运行异常 | 请关闭电源 |
| E-105 | 步进闭环 DSP1(X25/X27)主轴同步模式错误 | |
| E-106 | 步进闭环 DSP2(X21/X23)主轴同步模式错误 | |
| E-110 | 主轴设定转速超速 | 切断电源，确认缝纫机电机是否出现异常 |
| E-111 | 主轴实际转速超速 | 切断电源，确认缝纫机电机是否出现异常 |
| E-121 | 剪刀位置异常 | 切断电源，确认固定刀移动刀的刀刃部分是否受损 |
| E-131 | 编码器故障或编码器未连接 | 切断电源 |
| E-132 | 电机超速 | |
| E-133 | 缝纫完成后缝纫主马达停止位置不正确 | 请关闭电源 |
| E-135 | 电机运行异常 | 请关闭电源 |
| E-136 | IPM 频繁过流 1 | 请关闭电源 |
| E-137 | IPM 频繁过流 2 | 请关闭电源 |
| E-138 | 电机堵转 1 | 请关闭电源 |
| E-139 | 电机堵转 2 | 请关闭电源 |
| E-140 | 停车过流 | 请关闭电源 |
| E-141 | 电机过载 | 请关闭电源 |
| E-142 | 母线电压异常 | 请关闭电源 |
| E-143 | 异常电流 | 请关闭电源 |
| E-146 | 压脚电机找不到原点 | 请关闭电源 |
| E-200 | X 原点检测异常，X 马达不正常或者 X 编 | 请关闭电源 |

| 故障号 | 故障名称 | 复位方法 |
| --- | --- | --- |
| | 码器接触不良 | |
| E-201 | X 校验错误 | 请关闭电源，确认 X 送布方向是否异常 |
| E-210 | Y 原点检测异常，Y 马达不正常或者 Y 编码器接触不良 | 请关闭电源 |
| E-211 | Y 校验错误 | 请关闭电源，确认 Y 送布方向是否异常 |
| E-217 | 步进软件版本异常 | 请关闭电源 |
| E-218 | 主控软件与主板硬件类型不符 | 请关闭电源 |
| E-219 | 步进电机过流 | 请关闭电源 |
| E-220 | MD1 步进过流 | 请关闭电源 |
| E-221 | MD1 X 方向未走完 | 请关闭电源 |
| E-222 | MD1 Y 方向未走完 | 请关闭电源 |
| E-223 | MD2 步进过流 | 请关闭电源 |
| E-224 | MD2 X 方向未走完 | 请关闭电源 |
| E-225 | MD2 Y 方向未走完 | 请关闭电源 |
| E-300 | 压脚原点检测异常 | 请关闭电源 |
| E-301 | 压脚电机失步 | |
| E-302 | 缝纫开始时剪线梢位置不正确 | 请按 reset 按钮恢复 |
| E-310 | 步进原点检索异常 | 请关闭电源 |
| E-400 | 操作头与缝纫机连接错误 | 请关闭电源 |
| E-401 | 步进电机通讯异常 | 请关闭电源 |
| E-410 | 主板和控电板主板通讯异常 | 请关闭电源 |
| E-420 | 主控 u 盘未连接 | 请按 Reset 键排除错误 |
| E-421 | 主控 u 盘数据不正确 | 请按 Reset 键排除错误 |
| E-422 | 主控 u 盘读取时错误 | 请按 Reset 键排除错误 |
| E-424 | 主控 u 盘空间不足 | 请按 Reset 键排除错误 |
| E-425 | 主控 u 盘写时错误 | 请按 Reset 键排除错误 |
| E-427 | 注册在循环缝中的花样被删除 | 请按 Reset 键排除错误 |
| E-428 | 设定在程序中的花样被删除 | 请按 Reset 键排除错误 |
| E-430 | 花样数据无法保存到主板 | 请按 Reset 键排除错误 |
| E-450 | 机头板 EEPROM 读取错误 | 请关闭电源 |
| E-451 | 系统参数版本改变,自动初始化全部默认系统参数 | |
| E-452 | 系统参数范围异常 | |
| E-453 | 步进驱动 DSP1 曲线 CRC 校验错误 | |
| E-454 | 步进驱动 DSP2 曲线 CRC 校验错误 | |
| E-474 | 主控内存已满 | 请按 Reset 键排除错误 |
| E-500 | 缩放后超出缝制范围 | 请按 Reset 键排除错误 |
| E-501 | 超出缝制范围 | 请关闭电源 |
| E-502 | 超过最大针距 | 请按 Reset 键排除错误 |
| E-510 | 数据错误 | 请按 Reset 键排除错误 |
| E-511 | 完成代码无法输入到程序数据中 | 请按 Reset 键排除错误 |
| E-512 | 超过最大针数 | 请按 Reset 键排除错误 |
| E-600 | 发生面线断裂 | 请按 Reset 键排除错误 |
| E-690 | 中压脚电机原点错误 | 请关闭电源 |

| 故障号 | 故障名称 | 复位方法 |
|---|---|---|
| E-692 | 中压脚电机位置异常 | 请关闭电源 |
| E-701 | 300V 过高 | 请关闭电源 |
| E-702 | 300V 过低 | 请关闭电源 |
| E-704 | 24V 过高 | 请关闭电源 |
| E-705 | 24V 过低 | |
| E-706 | 24V 过流 | 请关闭电源 |
| E-707 | 步进板 90V 电源过流 | 请关闭电源 |
| E-710 | IPM 过压 | 请关闭电源 |
| | | |

# 12 附录 4 信息提示一览表

| 信息号 | 信息名称 | 子信息内容 |
|---|---|---|
| M-001 | 花样数据不存在 | 请重新读取或打版输入 |
| M-002 | 设置值太大 | 请输入范围内数值 |
| M-003 | 设置值太小 | 请输入范围内数值 |
| M-004 | 存储参数异常 | 请按下确定键恢复出厂设置 |
| M-005 | 通讯错误 | 操作头与控制箱通讯异常 |
| M-006 | 字母绣字库语件读取失败 | |
| M-007 | 操作头与控制箱类型不符 | 请核对机型和软件版本 |
| M-008 | 超出最大针距 | |
| M-009 | 密码错误 | 请重新输入 |
| M-010 | 硬件时钟故障 | 发现硬件时钟故障，请联系厂家维修 |
| M-011 | 字母绣花样保存成功 | 请进入花样选择界面下选择新生成的字母绣花样 |
| M-012 | SRAM 初始化 | 清除掉 SRAM 中全部数据，请关电并将拨码开关位置还原 |
| M-013 | 关机，再见 | |
| M-014 | USB 盘已拔出 | USB 盘已经拔出 |
| M-015 | U 盘中没有发现花样数据 | |
| M-016 | 至少输入一个字母 | 设置了分期密码，不能修改系统时间 |
| M-017 | 无报警记录 | |
| M-018 | 输入用户 ID 有误 | 请重新输入 |
| M-019 | 确认密码失败 | 请重新输入密码 |
| M-020 | 禁止修改系统时间 | 设置了分期密码，不能修改系统时间 |
| M-021 | 密码语件写入失败 | |
| M-022 | 密码语件读取失败 | |
| M-023 | 密码保存成功 | |
| M-024 | 清除全部密码失败 | 密码语件无法被删除 |
| M-025 | 清除密码失败 | 清除密码后，语件写入异常 |
| M-026 | 密码语件被恶意删除 | 用户设置的分期密码被恶意删除，请关机 |
| M-027 | 用户 ID 语件损坏 | |
| M-028 | 输入不能为空 | 请输入密码 |
| M-029 | 当前密码不符 | 请重新输入当前密码 |
| M-030 | 新密码不一致 | 请重新输入新密码并再次确认 |
| M-031 | 确定进入触摸屏校正模式 | 是否确定？是：enter　否：X |
| M-032 | 触摸屏校正成功 | 校正成功，请关闭电源后重启 |
| M-033 | 触摸屏校正失败 | 请重新校正 |
| M-034 | 确定清除报警记录 | 是否确定？是：enter　否：X |
| M-035 | 分期密码不能和总密码相同 | 请重新输入密码 |

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|---|---|---|
| M-036 | 花样数据错误 | 当前花样数据错误，将由出厂花样替换! |
| M-037 | 花样信息语件打开失败 | 恢复出厂花样配置! |
| M-038 | 花样个数已满 | 请删除不用的花样后再执行操作! |
| M-039 | 是否覆盖花样 | 是否确定？是：enter　否：X |
| M-040 | P 花样打开失败 | 花样语件错误，将会被删除 |
| M-041 | C 花样打开失败 | 花样语件错误，将会被删除 |
| M-042 | 花样已存在 | 不能执行覆盖操作 |
| M-043 | 是否删除花样数据 | 按下确定键执行删除操作，按下取消键退出当前操作。 |
| M-044 | 是否删除选中的语件 | 是否确定？是：enter　否：X |
| M-045 | 花样被引用，不能删除! | 请在 P 花样或 C 花样中解除引用 |
| M-046 | 请至少保留一个花样! | 最后一个花样不能被删除 |
| M-047 | 加载出厂花样 | 内存中没有花样，需要加载出厂花样 |
| M-048 | 内存中没有花样 | 按确定键加载出厂花样 |
| M-049 | 输入号码不存在 | 请重新输入 |
| M-050 | P 花样不存在 | 请先创建 P 花样 |
| M-051 | 保存软件版本成功 | 软件版本已经成功保存到 U 盘根目录下 |
| M-052 | 更换机针 | 更换机针设定值已到达，请更换机针 |
| M-053 | 更换机油 | 更换机油时间设定值已到达，请更换机油 |
| M-054 | 清扫机器 | 清扫机器时间设定值已到达，请清扫机器 |
| M-055 | 确定清除更换机针计数值 | 是否确定？是：enter　否：X |
| M-056 | 确定清除更换机油计数值 | 是否确定？是：enter　否：X |
| M-057 | 确定清除清扫时间计数值 | 是否确定？是：enter　否：X |
| M-058 | 确定清除生产管理计数值 | 是否确定？是：enter　否：X |
| M-059 | 确定清除累积运转时间？ | 是否确定？是：enter　否：X |
| M-060 | 确定清除累积缝纫件数？ | 是否确定？是：enter　否：X |
| M-061 | 确定清除累积上电时间？ | 是否确定？是：enter　否：X |
| M-062 | 确定清除累积缝纫针数？ | 是否确定？是：enter　否：X |
| M-063 | 确定清除累积过流次数？ | 是否确定？是：enter　否：X |
| M-064 | 确定清除累积停车错误次数？ | 是否确定？是：enter　否：X |
| M-065 | 是否编辑新花样？ | 是否确定？是：enter　否：X |
| M-066 | 是否返回缝制模式？ | 是否确定？是：enter　否：X |
| M-067 | 是否还原所有设定 | 是否确定？是：enter　否：X |
| M-068 | 是否还原选择项目 | 是否确定？是：enter　否：X |
| M-069 | 未选择项目 | 请选择一个或几个参数项 |
| M-070 | 缝制计数器达到设定值 | 请按下确定键清除 |
| M-071 | 计件计数器达到设定值 | 请按下确定键清除 |
| M-072 | 成功 | 已成功执行当前操作 |

| | | |
|---|---|---|
| M-073 | 失败 | 当前操作执行失败 |
| M-074 | 拷贝语件失败 | 请检查磁盘空间是否已满 |
| M-075 | 拷贝语件失败 | 请检查是否拔出了 USB 盘 |
| M-076 | 语件读写错误 | 语件读写错误 |
| M-077 | 升级主控程序时校验失败 | |
| M-078 | 花样数据不能删除 | 被选中的缝制数据正在使用 |
| M-079 | 是否执行参数传输操作 | 是否确定？是：enter　否：X |
| M-080 | 转换花样无法打开 | 请确认花样语件 |
| M-081 | 转换花样格式错误 | 请确认花样语件 |
| M-082 | 转换花样数据超长 | 请确认花样语件 |
| M-083 | 升级成功 | 升级成功，请重新启动机器 |
| M-084 | 打开语件失败 | U 盘中打开语件失败 |
| M-085 | 恢复参数成功 | 恢复参数成功，请重新启动机器 |
| M-086 | 没有选中升级条目 | 请选中要升级的条目，至少要选中一个条目 |
| M-087 | 选中的升级条目中有些不存在 | 不存在升级语件的条目返回后将会取消选中，如果要升级剩下的条目，请再次确认 |
| M-088 | 是否格式化 U 盘 | 按下确定键执行格式化操作，按下取消键退出当前操作。格式化后会删除全部 U 盘语件！ |
| M-089 | 是否格式化内存 | 按下确定键执行格式化操作，按下取消键退出当前操作。格式化后会删除全部内存花样数据！ |
| M-090 | 内存空间不足 | |
| M-091 | 不能选择该功能 | |
| M-092 | 指定的形状点重复或存在相同的形状点 | |
| M-093 | 不能执行回退操作 | |
| M-094 | 没有下一针缝制数据 | |
| M-095 | 没有上一针缝制数据 | |
| M-096 | 花样数据太大 | |
| M-097 | 运算异常 | |
| M-098 | 打版通用错误 | |
| M-099 | 花样不存在 | |
| M-100 | 超过移动范围 | |
| M-101 | 超出缝制范围 | 请确保花样数据在缝制范围以内 |
| M-102 | 针数超出范围 | 请减少花样针数 |
| M-103 | 花样语件数据错误 | |
| M-104 | 确认点改变 | |
| M-105 | 确认自动插入剪线 | |
| M-106 | 删除新编辑花样 | 确定键确认，退出键取消 |
| M-107 | 删除要素 | 确定键确认，退出键取消 |
| M-108 | 执行，确认吗？ | 确定键确认，退出键取消 |
| M-109 | 删除机械控制命令？ | 确定键确认，退出键取消 |

| | | |
|---|---|---|
| M-110 | 删除落针点 | 确定键确认，退出键取消 |
| M-111 | 移动压脚，确认吗？ | 确定键确认，退出键取消 |
| M-112 | 删除形状点 | 确定键确认，退出键取消 |
| M-113 | 警告：格式化将删除磁盘上的所有数据！ | 确定键确认，退出键取消 |
| M-114 | 是否更换机型 | 确定键确认，退出键取消 |
| M-115 | 花样被锁定 | 请解锁后再使用 |
| M-116 | 禁止修改基础花样 | |
| M-117 | 请关机 | 当前操作结束，请重新启动机器 |
| M-118 | 禁止修改计数器 | 当修改时，请关闭设定 |
| M-119 | 加载基础花样 | 请按下确认键加载基础花样，不要关机！ |
| M-120 | 是否恢复出厂设置 | 确定键执行操作，取消键退出操作 |
| M-121 | 是否清楚全部自定参数 | 是否确定？是：enter　否：X |
| M-122 | 机头板参数异常 | 按下确定键恢复出厂值 |
| M-123 | 花样计算错误 | |
| M-124 | 是否删除全部 P 花样和 C 花样 | 按下确定键执行格式化操作，按下取消键退出当前操作。 |
| M-125 | 确定恢复机头板参数? | 是否确定？是：enter　否：X |
| M-126 | 超出设定值范围 | |
| M-127 | 自编花样不存在 | 当前操作仅支持自编花样,基础花样不能导出! |
| M-128 | 外压脚在上 | 当前操作需要落下外压脚后执行! |
| M-129 | 不能进行正确操作 | |
| M-130 | USB 盘不存在 | 请插入包含 mp3 语件的 USB 盘 |
| M-131 | 没有视频语件 vid.avi | 请将 vid.avi 语件存放到盘的 pdat 目录，并进入到升级界面升级视频语件 |
| **M-132** | **参数设置异常** | 生成的花样数据超出最大针长，请检查参数设置 |
| M-133 | 长度或半径参数设置异常 | 1、底缝长度超过套结长度<br>2、套结长度和底缝长度相比太长<br>3、内径超过花样的外径<br>4、半月高度低于套结针距或相对套结长度太高<br>请检查参数设置 |
| M-134 | 针距或针数设置异常 | 针距小于最小针距，请检查针距或针数设置 |
| M-135 | 缝制数据超过最大针长 | 请修改参数设置 |
| M-136 | 基础花样错误，需要重新升级基础花样 | |
| M-137 | 升级步进结束校验错误 | |
| M-138 | 二维码显示失败 | |
| M-139 | EMB 花样格式精度错误 | |
| M-140 | 是否切换钉扣起缝加固基础花样 | 切换参数后会删除掉全部花样，然后重新加载基础花样 |

| | | |
|---|---|---|
| M-141 | 确定恢复步进参数 | 是否确定？ 是：Enter 否：X |
| M-150 | 面板与主控不匹配 | 当前系统存在分期密码，需要联系厂家解除锁定 |
| M-151 | 当前面板存在密码，需要同步 | 面板存在密码，主控没有密码 |
| M-152 | 当前主控存在密码，需要同步 | 主控存在密码，面板没有密码 |
| M-153 | 主板 ID 不存在 | |
| M-154 | 面板未加密,主控加密 | 系统会锁机 |
| M-155 | 面板加密,主控未加密 | 确定键同步加密状态 |
| M-156 | 系统已经存在远程分期设置 | 确定键继续操作，取消键退出操作 |
| M-157 | 无线模块 1 联接失败 | 系统转速降至最低，请联系厂家 |
| M-158 | 系统已经设置为不联网模式 | 打开联网功能后可以进行检测 |
| M-159 | 联接失败 | |
| M-160 | 不能执行换机操作 | 参数和花样至少需要选中一个 |
| M-161 | 换机成功 | 参数或者花样已经成功覆盖本机,需要关机重启 |
| M-162 | 是否立即更新花样缩略图 | 花样使用后也会同时生成缩略图 |
| M-163 | 花样不存在，是否从服务器下载 | 是否确定？ 是：Enter 否：X |
| M-164 | 请求花样不是标准 NSP 格式 | |
| M-165 | 服务器不存在请求花样 | |
| M-166 | 服务器更新软件，是否进行升级操作 | 是否立刻升级？ 是：Enter 否：X |
| M-168 | 请求失败 | |
| M-169 | 打卡成功 | |
| M-170 | 打卡失败 | |
| M-171 | 网络已关闭 | |
| M-172 | 请先执行确定键保存 | |
| M-173 | 未选择热点 | |

# 1 General Information

## 1.1 Summary

This computerized control system for sewing machine features the following advantages: 1) Adoption of the world leading AC servo control technology on main shaft motor provides high torque, good efficiency, stable speed and low noise; 2) Diversified design of control panel can meet the special requirement of users on attachment; 3) System adopts German style structure, which offers easy installation and maintenance to users; 4) The system control software can be updated via the remote communication, which is easy for user to improve the performance of machine.

## 1.2 Functions & Specifications

| NO. | Model / Item | 430E/438E |
|---|---|---|
| 1 | Usage | Bar-tacking、Buttoning |
| 2 | Sewing Range | X(lateral) direction 40mm× Y(longitudinal) direction 30mm |
| 3 | Max Speed | Max 3200rpm |
| 4 | Min Sewing Unit | 0.05mm |
| 5 | Cloth-feeding | Y-θ intermittent feeding (pulse motor drive) |
| 6 | Stroke of Needle Rod | mm |
| 7 | Needle | |
| 8 | Presser-lifting Device | Pulse Motor |
| 9 | Presser Height | Standard 14mm, Max 17mm(at Reverse Lifting) |
| 10 | Standard Pattern Number | 100 |
| 11 | Thread-wiping Method | Interaction by lifting presser with pulse motor |
| 12 | Needle Thread Tension | Electronic Thread-holder |
| 13 | Hook | Semi-rotation standard hook or Semi-rotation double hook |
| 14 | Oiling Method | Rotation Part：Slight Oiling |
| 15 | Oil | Sewing machine oil |
| 16 | Lubricating Grease | Lubricating grease for sewing machine |
| 17 | Data memory | U Disk |
| 18 | Scale Function | Independent scaling 20% ~200% at X direction and Y direction respectively（1% for each step） |
| 19 | Scaling Method | Change Stitch form length and stitch interval |
| 20 | Sewing Speed Limits | 200-3200rpm(100rpm per step) |
| 21 | Patten Selection | By selecting the number of pattern (1-200) |
| 22 | Bottom Thread Counter | Up/Down Method（0～9999） |
| 23 | Motor | Small AC Servo Motor (Direct Drive Mode) |
| 24 | Size | 263mm×153mm×212mm |
| 25 | Operation Temperature Range | 0℃～45℃ |
| 26 | Operation Humidity Range | 35%～85% （No Dew Condensation） |
| 27 | Line Voltage | AC 220V ± 10%；50/60Hz |

| | | |
|---|---|---|
| **28** | Power Consumption | 600W |

↘Effective standard for product:QCYXDK0004—2016《Computerized Control System for Industrial Sewing Machine》.

## 1.3 Matters for Safe Using

### ● Installation

- Control box
  - ◆ Please install the control box according to the instruction
- Attachments
  - ◆ For installing any other attachments, user should turn off power and pull off the plug.
- Power Cable
  - ◆ Do not press power cable with force or excessively twist power cable.
  - ◆ The power cables shall be fixed with a distance at 25mm away from the rotating component at least
  - ◆ Before powering the control box, user shall carefully check the voltage of power supply and position of power input on control box. If the power transformer is used, user should also check it before powering the machine. At this moment, the power switch of sewing machine must be set as "Off".
- Grounding
  - ◆ In order to avoid the noise disturbance and shock caused by electrical leakage, user should ground the grounding cable.
- Attachments
  - ◆ If the electrical attachments are needed, please connect them to the proper positions.
- Disassemble
  - ◆ When removing the control box, user should turn off the power and pull off the power plug.
  - ◆ At pulling off the power plug, user should hold the plug and remove it, instead of pulling the power cable only.
  - ◆ The control box contains the dangerous high voltage power. For opening the control box, please turn off the power and take away the plug from socket firstly, and then wait for at least 5 minutes before opening the control box.

### ● Maintenance, Inspection and Repair

- Only can the trained technicians perform the repair and maintenance of this machine.
- When replacing the needles and shuttles, user has to turn off the power.
- Please use the spare parts from the authorized manufacturers

### ● Others

- Do not touch the rotating or moving part of the machine, especially the needle and belt, when the machine is working. User should also keep his/her hair away from those moving parts, so as to avoid the danger.
- Do not drop the control device on the floor, nor insert ant stuff into the slot on the control box.
- Do not run the machine without the cover shells
- If this control device is damaged or unable to work normally, please ask the technicians to adjust or repair it. Do not run the machine when the problem is not solved
- Please do not change or modify the control device without authorization

- **Abandonment**
  - Dispose it as common industrial trash.
- **Warning and Danger**
  - Mistake operations may cause danger. For the severity of danger, please refer to the figures below:

| | | | |
|---|---|---|---|
| ⚠警告 | Mistake operations may cause serious injury or death. | ⚠注意 | Mistake operations may cause injury or damage to the house or properties. |

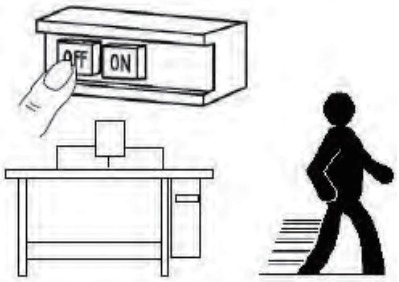
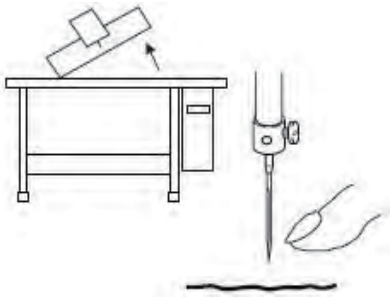
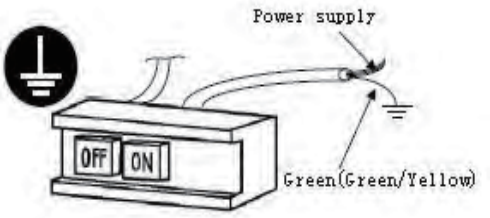
  - The meaning of the following figures are as below:

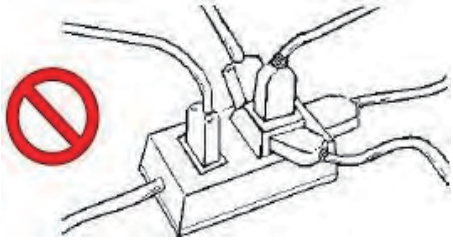
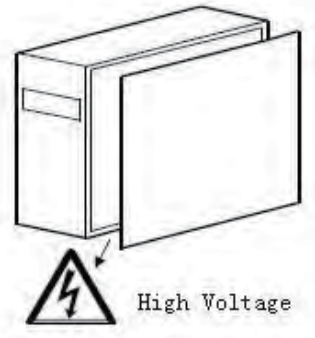
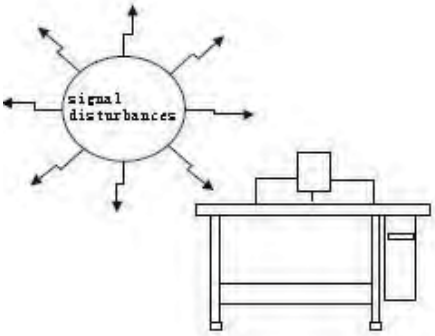
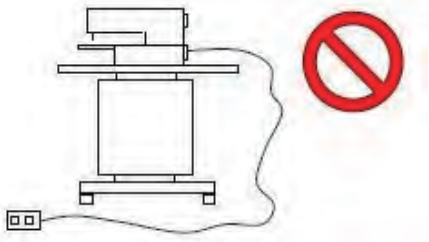
| | | | |
|---|---|---|---|
| ⚠ | Please follow the instructions. | ⚠ | Watch the high voltage! |
| ⚠ | Watch the high temperature! | ⏚ | Grounding is must. |
| ⊘ | Operation is prohibited. | | |

## 1.4 The Preventions on Usage




Warning

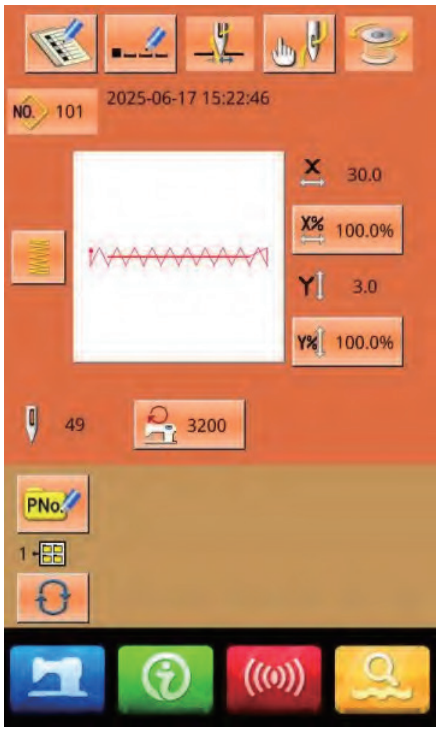
| | |
|---|---|
| 1、When you press [ON], leave the feet from pedal.   | 2、When you leave the machine, please turn it off.   |
| 3、If user needs tilt the head or replace the needle or thread the Needle thread, please turn off the power  | 4、Ground the machine with ground cable   |
| 5、Do not use the household terminal block to let machines to share one power supply | 6、For opening the control box, please turn off the power and take away the plug from socket firstly, and then wait for at least 5 minutes before opening the control box |

<table>
<tr><td></td><td>
</td></tr>
<tr><td colspan="2">7、After replacing the motor, please set the installation angle of main motor according to this document s</td></tr>
<tr><td>8、Please be away from the machine withhigh cy clic disturbance<br>
</td><td>9、If user needs the external signal socket to connect the attachments, the connecting wire shall be as short as possible. The long cable may cause the wrong operation. And the connection cable shall be the isolated cable<br></td></tr>
<tr><td colspan="2">10、If the fuse is burnt, please solve the problem before replacing a new one with same capacity</td></tr>
</table>

## 1.5 Supported language types

The function keys adopt internationally recognized graphic symbols. Graphics are a universal language and support 18 language switches, including: Chinese, English, Italian, Russian, Portuguese, Turkish, Korean, Vietnamese, Japanese, Spanish, Indonesian, German, French, Polish, Persian, Arabic, Thai, and Khmer.

The language switching method: On the data input interface, press the mode key to enter the detailed setting interface, select  to enter the first-level parameter setting, and press the switch key to select the U900 parameter modification display language.







## 1.6 Operation Method

We use the advanced touching operation technique on the operation panel, whose friendly interface and simple operation will bring the big changes to users in their usage. Users can finish the relating operations by using their fingers or other object to touch the screen. **Never use sharp object to touch the screen, otherwise the touching panel will suffer the permanent damage.**

The function keys include Ready Key, Information Key, Mode Key and Communication Key. For the specific operation, please refer to the chapters at below:

**Warning**

**Never use sharp object to touch the screen, otherwise the touching panel will suffer the permanent damage.**

# 2 Operating Instruction

## 2.1 Common Buttons

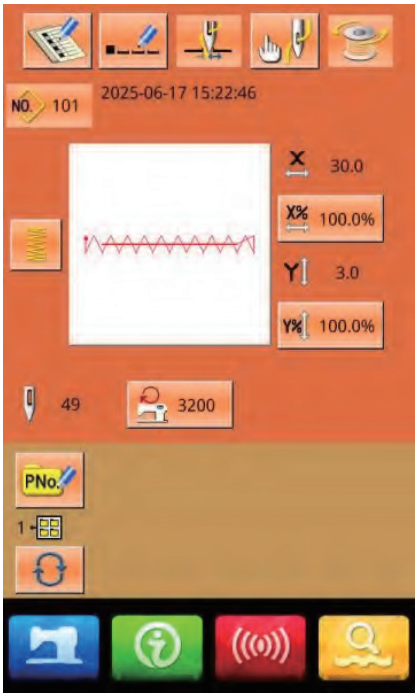
The buttons for the common operation in each interface are shown at below：

| No. | Figure | Functions |
|---|---|---|
| 1 |  | ESC → Quit the current interface. At data change interface, it is for canceling the change of data. |
| 2 |  | Enter → Confirm the changed data. |
| 3 |  | Plus → Increase the value |
| 4 |  | Minus → Decrease the value |
| 5 |  | Reset → Release the Error |
| 6 |   | Number Input → Display the number keyboard and input the number. |
| 7 |  | READY Key → Shift between the data input interface and sewing interface |
| 8 |  | Information Key → Shift between the data input interface and information interface |
| 9 |  | Communication Key → Shift between the data input interface and communication interface |
| 10 |  | Mode Key → Shift between data input interface and detailed setting interfaces. |

## 2.2 Basic Operation

**①Turn on the power**

Turn on the power to display the data input interface.



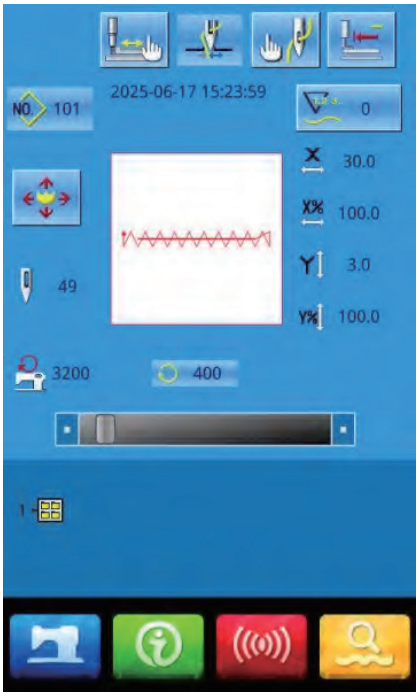

**②Select the wanted pattern No.**

At current interface, the selected pattern No. will be displayed. Press  to select pattern number.

For the operation of pattern selection, please refer to【2.7 Pattern Selection】.

**③Set machine to Ready Sewing Status**

Press READY key . The back-light of LCD displayer changes to blue color and the machine is ready for sewing.



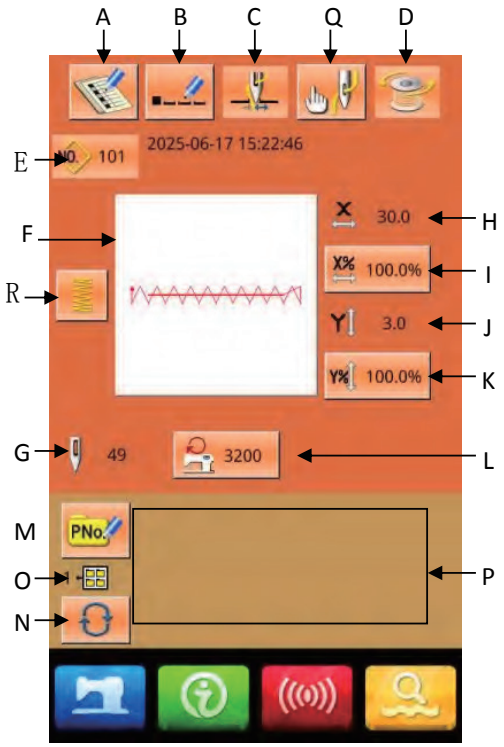

**④Start Sewing**

Set the sewing product to the presser position; operate the pedal to start the sewing machine, and sewing starts

## 2.3 Normal Pattern Operation

**①Sewing Data Input Interface**

The data input interface is shown at right. For the detailed functions, please refer to the Function Key List



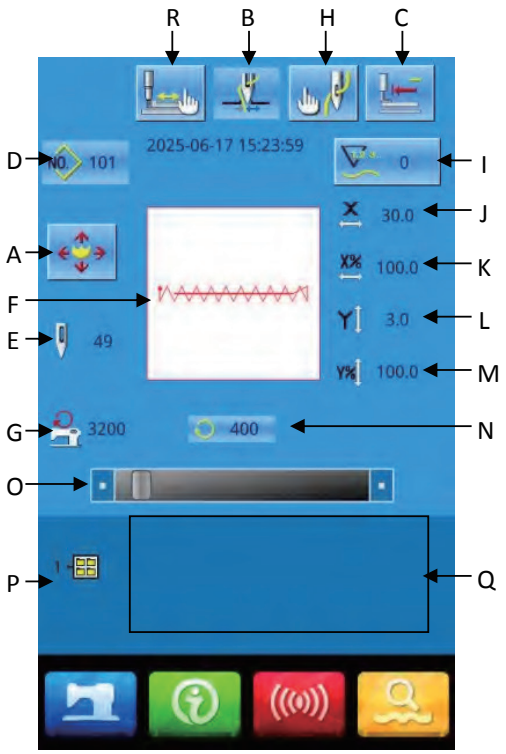

## Function Key List：：

| No. | Function | Content |
|---|---|---|
| A | Pattern Registration | At most, 999 normal patterns can be registered. |
| B | Pattern Naming | At most, 14 figures can be input. |
| Q | Intermediate Presser | Set the height of presser |
| C | Threading | Lower the presser to display the interface. |
| D | Winding | Press  to start winding. |
| E | Pattern No. Display | Display the current pattern number |
| F | Sewing Pattern Selection | The button will display the shape of the current pattern. Press it to enter the interface for selecting patterns |
| G | Pattern Stitch Number | Display stitch number of the current pattern |
| H | X Actual Size | Display the actual size of current pattern at X direction.<br>Use parameter U64 to input the actual size, at this moment the X Actual Size button is displayed. |
| I | X Scale Rate | The button will display the X scale rate of the current pattern. Press it to enter the interface for setting. It is affected by parameters U64 & U88. |
| J | Y Actual Size | Display the actual size of current pattern at Y direction.<br>Use parameter U64 to input the actual size, at this moment the Y Actual Size button is displayed. |
| K | Y Scale Rate | The button will display the Y scale rate of the current pattern. Press it to enter |

| | | |
|---|---|---|
| | | the interface for setting. It is affected by parameters U64 & U88. |
| L | Max Speed | Display the Max Speed. Press this button to set the speed |
| M | Prompt Pattern (P Pattern) Registration | It is used for P pattern registration. At most, 50 P patterns can be registered. |
| O | P Pattern File Folder Number | Display the file folder number of current P pattern |
| N | P Pattern File Folder Selection | Shift P pattern file folder number orderly. |
| P | P Pattern Selection | Display the registered P pattern. Press it to enter the interface for inputting P pattern data.<br>This button is not displayed at initial status. |
| R | Parameter template function, | Using parameter Settings to quickly generate template patterns |

**②Sewing Interface**

Press  to enter the Sewing Interface shown as the figure at right. For detailed functions please take the Function Key List for reference.




## Function Key List:

| No. | Function | Content |
|---|---|---|
| A | Frame-moving | Press it to enter the Interface for moving frame, where user can set start sewing point. |
| T | Intermediate Presser | Set the height of presser |
| B | Threading | Lower the presser and display the interface for lowering the presser. |
| C | Return to Origin | Press it to have presser return to the start sewing point and go up. |

| | | |
|---|---|---|
| D | Pattern Number | Display the number of the current pattern |
| E | Pattern Stitch Number | Display the stitch number of the current pattern |
| F | Pattern Shape | Display the shape of the current pattern |
| G | Max Speed | Display the Max Speed |
| H | Pattern Name | Display the name of the current pattern. |
| I | Counter Setting | Press it to set the counter type and current counter value<br>: Sewing Counter<br>: No. of piece counter |
| J | X Actual Size | Display the X actual size of current pattern |
| K | X Scale Rate | Display the X scale rate of current pattern |
| L | Y Actual Size | Display the Y actual size of current pattern |
| M | Y Scale Rate | Display the Y scale rate of current pattern |
| N | Sewing Speed | Display the current sewing speed |
| O | Set Sewing Speed | Change the sewing speed |
| P | P Pattern File Folder Number | Display the number of the current P pattern file folder |
| Q | P Pattern Selection | Display the registered P pattern. Press it to enter the interface for sewing P pattern. This button is not displayed at initial status. |
| R | Trial Sewing | Press it to enter the trial sewing interface, where the pattern shape can be set. |
| S | Thread Tension Setting (this button is displayed according to the actual condition of machine) | Display the basic value of thread tension. Press button to set the value |

## 2.4 Pattern Registration

999 normal patterns can be registered for the most. press  to enter the interface of Pattern Registration （shown as the right figure）：




① **Input Pattern No.**

Input the pattern No. via keyboard. If the pattern number is already existed in the system, the shape and relevant information of the registered pattern will be shown on the upper interface. by pressing , user can searchthe unregistered number.

②**New Pattern Registration**

After confirming the pattern number, user can press . The displayed pattern data will be copied to the newly registered pattern. Afte the operations, the system will return to the interface for inputtting data of the newly registered pattern

If user inputs the existed pattern number, the system will ask user whether to replace the saved pattern.

**Note：the Basic pattern cannot be replaced**

## 2.5 Pattern Naming

Press  to enter the interface for naming pattern (as shown in the right figure), 14 figures can be inputted at the most.

: Icon Right-moving

: Icon Left-moving

: Caps Locks

: Eraser

Select the figure wanted, press  to end the operation of naming the pattern.

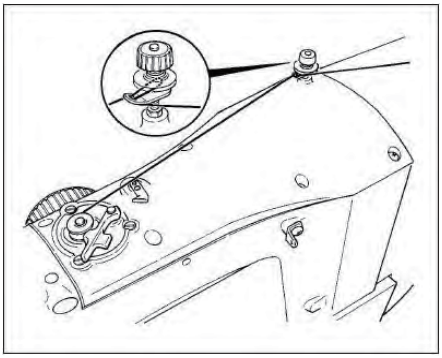
The position of figure can be determined by moving the icon, the Eraser is used to delete the figure




## 2.6 Winding

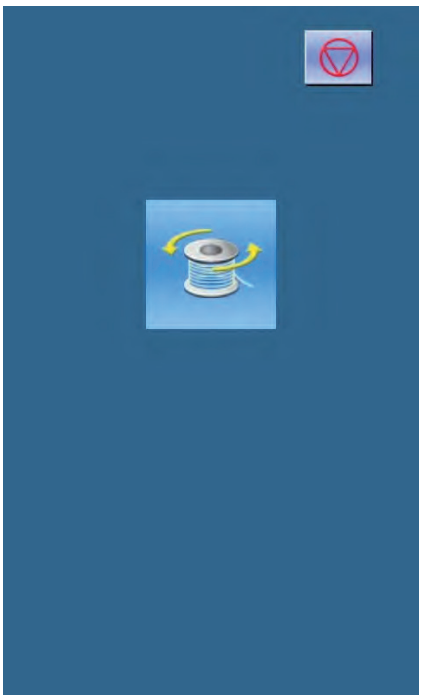
**①Install the shuttle core**

Fit the shuttle core fully onto the winder shaft. (as shown in the figure in right)



**②Display the bottom thread winding screen**

Press  in the data input interface, and then the winding interface will be displayed (as shown in the right figure)



**③Start Winding**

Step the start pedal, and then the sewing machine runs and starts winding bottom thread.

**④Stop the sewing machine**

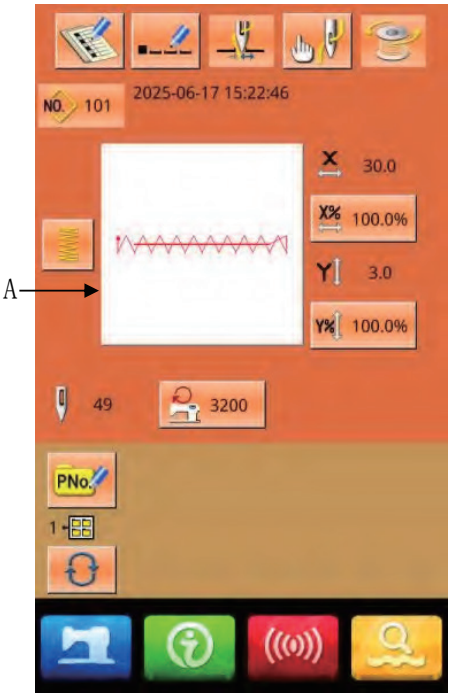
Press STOP button  to stop the sewing machine. The system will return to the normal mode. By the way, in the bottom-thread winding mode, stepping the start pedal will stop the machine at this mode. Step the pedal again to resume winding. This function can be used at winding several shuttle cores.

Note: After user turns on the power, or changes to main controller input, the system will not perform the winding action. Please set the pattern and press the  to display the sewing interface.

## 2.7 Pattern Selection

**①Enter Pattern Selection Interface**

In the data input interface (as shown in right), click Sewing Shape (A) to enter the interface for selecting patterns.



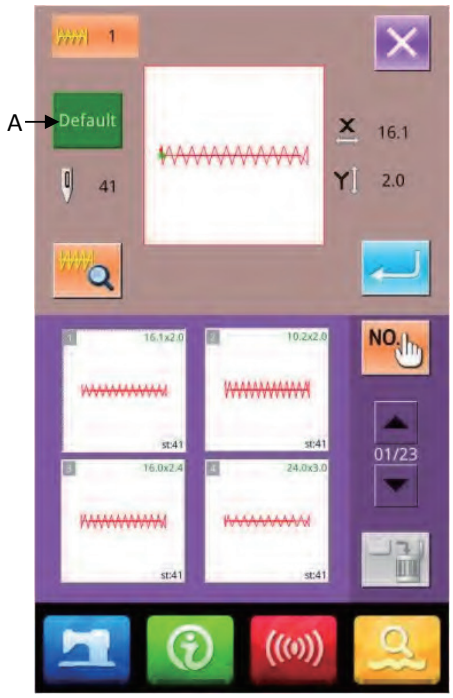
The upper area of the pattern selection interface is the sewing shape of the current pattern. Below that it is the number of the registered pattern.

：Preview the pattern

：Input the number to inquire pattern

：Delete the pattern

Click button A to shift between the basic patterns and user patterns, if the system has the normal patterns




**②Pattern Selection**

If the patterns are the basic patterns, 4 pattern numbers can be displayed in one page; for the user patterns, 20 pattern numbers can be displayed in one page. For the basic pattern, at each pattern number, the system will also display the shape and x/y range of the pattern. For the user patterns, only the pattern number will be displayed.

Select the registered pattern number. Then the system will display the content of that pattern in upper area. At this moment, press  to finsh the selection.

**③Pattern Inquiry**

Press  to activate the interface of Pattern Inquiry, input the number of pattern via the number keys.



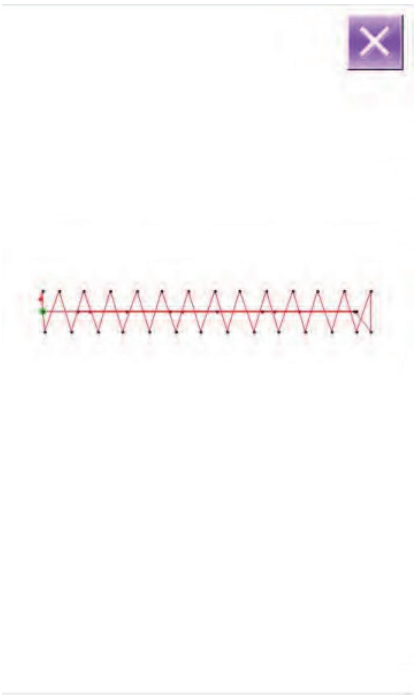

**④Pattern Deletion**

Select the registered pattern and then press , the pattern will be deleted. However, the patterns registered to P pattern can't be deleted.

**Note: Patterns are divided into basic pattern and normal pattern. The basic patterns are the default patterns, which can't be deleted. The normal patterns are the patterns made, copied or input by user, which can be deleted or modified.**

**⑤Pattern Preview**

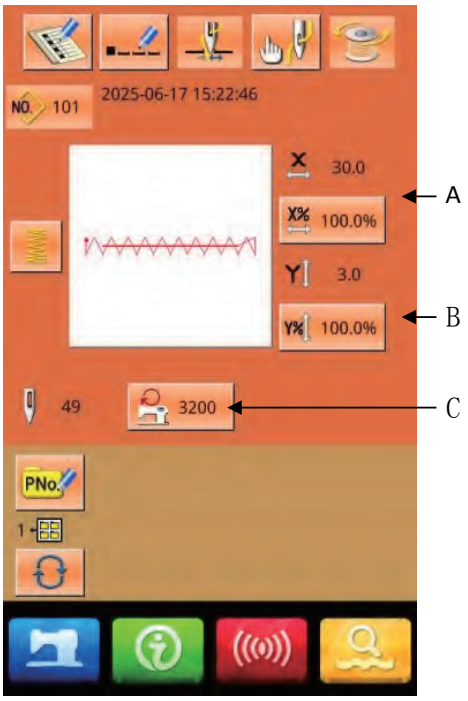
Press  to preview the current pattern in full screen (White Background).



## 2.8 Sewing Data Setting

**①Enter Interface for Setting the Sewing Data**

In data input interface, pressing button A, B or C can enter the scale rate setting interface and speed limitation interface respectively.

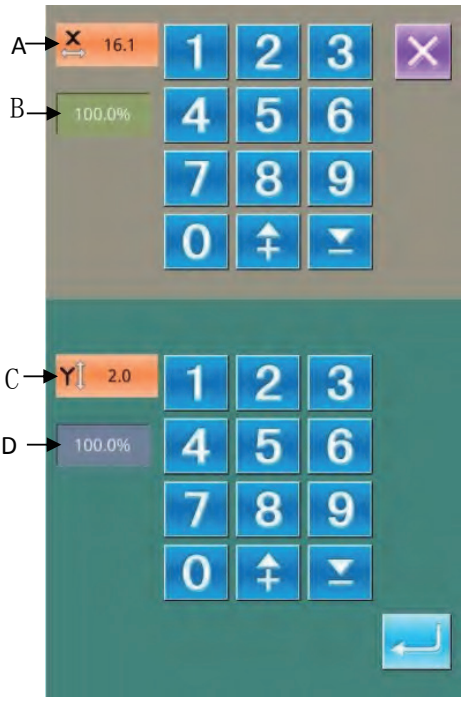



| | Item | Input Range | Default Value |
|---|---|---|---|
| A | X Scale Rate | 1.0~400.0% | 100.0% |
| B | Y Scale Rate | 1.0~400.0% | 100.0% |
| C | Max Speed | 400~2700rpm (Different among different models) | 2700rpm |

Note 1: Parameter U64 can shift between the setting ofscale rate and the setting of actual size.

Note 2: The range and the default value of Max speed are affected by the parameter U01.

**②Set Scale Rate**




The right figure is the interface for setting the scale rate. The upper part is for setting X scale rate, while the lower part is for setting the Y scale rate.

A：X Actual Size

B：X Scale Rate

C：Y Actual Size

D：Y Scale Rate

Use 0 ~ 9 and number keyboard or ↑ & ↓ to input the value. The input value will be inserted to the first place of the figure. The number input at before will be moved forwards.

Press ↵ to finish the operation and return to data input interface.

**③ Set Max Speed**




The operation is same to that in above.

## 2.9 P Pattern Registration

**①Enter P Pattern Registration Interface**

In data input interface, press  to enter the interface of P Pattern Registration（shown as the right figure）



**② Input P Pattern Number**

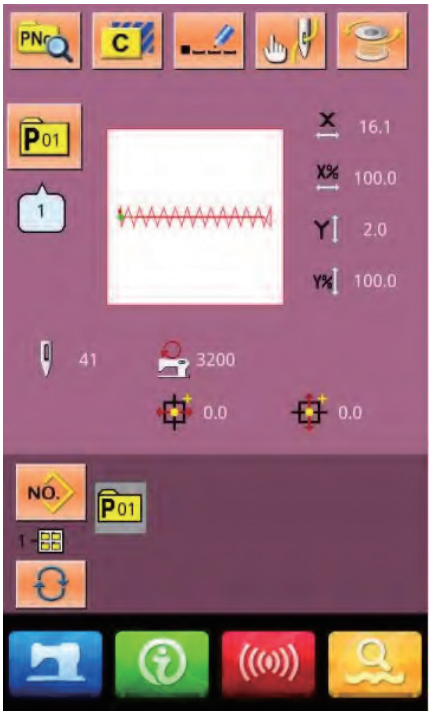
Use  ~  and number keyboard or  &  to input the number for registration. If the input number has been registered in the system before, the interface will display the shape and relating data of that registered pattern. In this situation, the new pattern can not be registered with this number

**③Select File Folder Number**

P pattern number can be registered into 5 file folders, and each folder can contain 10 P patterns at most. Press  to select folder in order.

**④Confirm Pattern Number**

Press  to finish the Rgistration of P Pattern and return to the input interface of P Pattern Data



## 2.10 Trial Sewing

**①Display the interface of sewing**

At data input interface, press , the background of screen will change to blue, and the system enters the interface for sewing

**②Display of Trial Sewing**

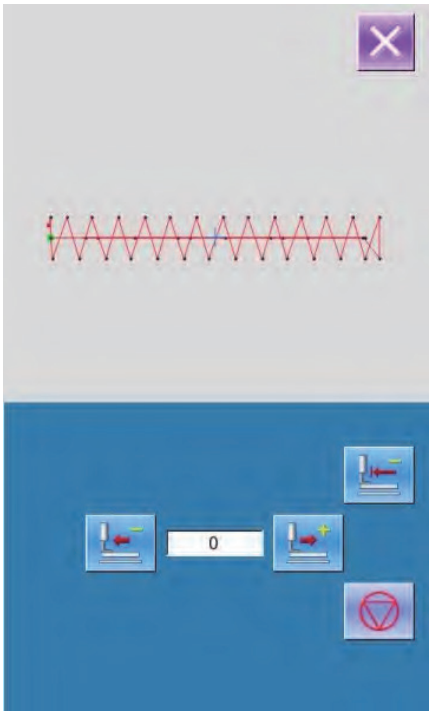
In the sewing interface. Press  to enter the trial sewing interface (As Shown at Right)：

：Return to Origin

：Return

：Forward

：Stop




**③Start Trial Sewing**

Step the pedal to lower the presser. Use  and  to confirm the shape. After user holds that button for a while and then release it, the presser will still keep moving. At this moment, please press  to stop it

Press  to have needle return to origin. And the system will return to the sewing interface.

**④End Trial Sewings**

Press  to quit the trial sewing interface and return to sewing interface. When the pattern is not at the start position or end position, user can carry out sewing in the middle by stepping the pedal. For quit, please press  and turn off the activated interface. Then the sewing interface will displayed and the system returns to the sewing start position..

## 2.11 Counter Operation

① **Display the counter interface**

In the sewing interface, press 
（），the interface of counter setting comes out.

：Sewing Counter

：No. of Pieces Counter

② **Selection and Setting of Counter**

The user can set the type of counter by choosing  and , and set the value of counter



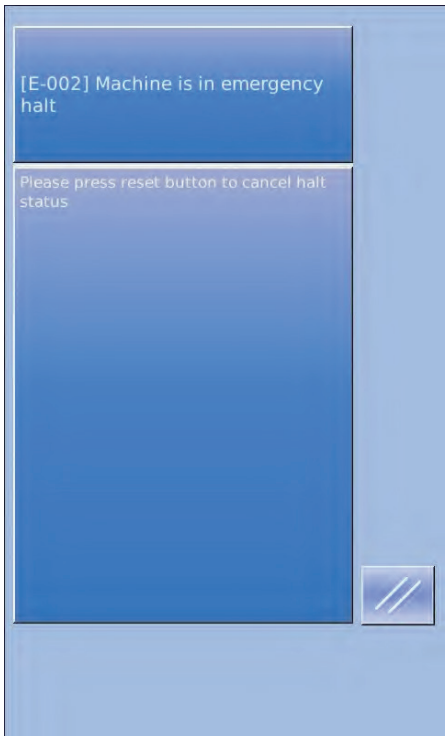

## 2.12 Emergency Stop

By setting parameter K280, user can set whether pause function is valid

At present, the method for pause is to step the pedal in the contrary direction

① **Release the Error**

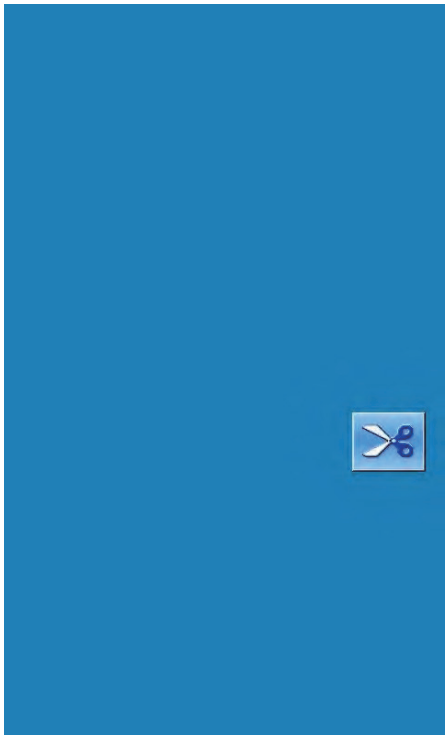
Press Pause button at sewing to stop sewing machine. At this moment, the error interface is displayed, which hints user the pause key is pressed. At this moment, press  to release the error.



② **Trimming**

Press  to cut thread and enter the procedure setting interface.

**Note：When the Parameter K572 is set at Auto Trim at Pause, the system will enter procedure setting directly.**



③ **Set procedure and adjust the presser to re-sewing position**

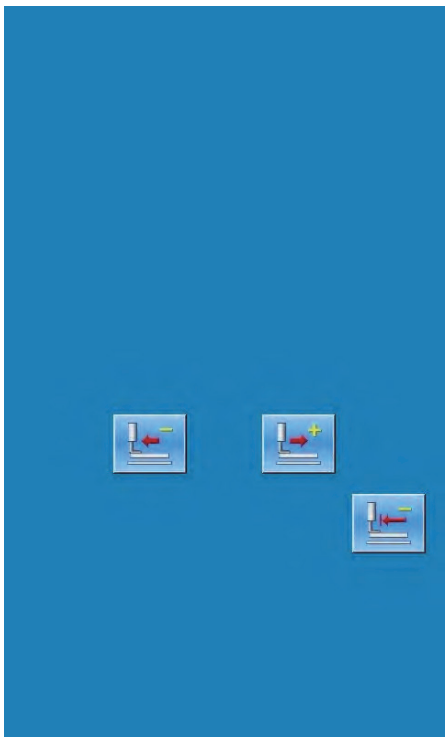
Press  to enter proceure setting interface.

：Backward feeding

：Forward feeding

：Return to Origin

Press  or  to move presser to the re-sewing position



④ **Restart sewing**

Step pedal to restart sewing

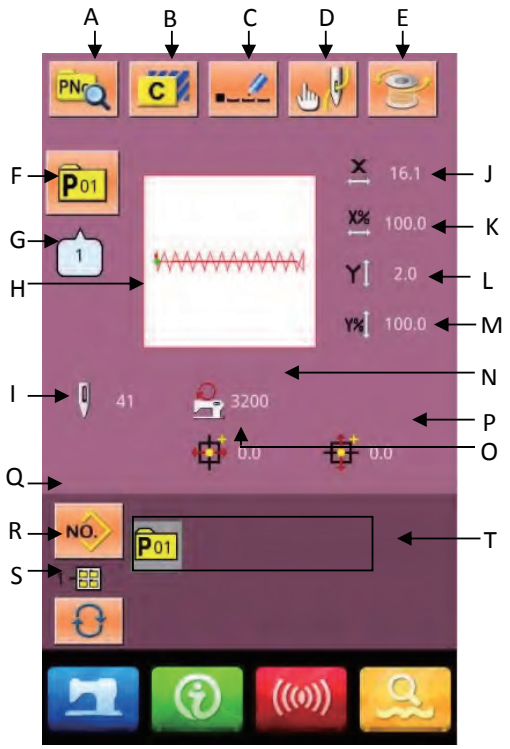
# 3 Operations on Prompt（P）Pattern

## 3.1 P Pattern Data Input

The Prompt pattern is called P Pattern for short, which contains a normal pattern and its relating sewing parameters, like X scale rate, Y scale rate, speed limitation and so on. If selecting a P pattern, user will get rid of the trouble for setting the parameters of the pattern at each time sewing

In the right picture, is shown the P Pattern Data Input Interface.

50 P patterns can be registered at most.




### List of Function Keys:

| No. | Functions | Content |
|---|---|---|
| A | P Pattern Edition | Edit the content of P pattern |
| B | P Pattern Copy | Copy the content of existing P pattern to an empty pattern number. |
| C | Pattern Naming | 14 figures can be inputted at most. |
| D | Threading | Presser it to lower the presser. |
| E | Winding | Wind the thread with a press on  |
| F | P Pattern Number Display | Display the number of the selected pattern. |
| G | Sewing Shape Number Display | Display the number of the normal pattern quoted in the existing P pattern. |
| H | Sewing Shape Selection | Display the sewing shape of the current pattern |
| I | Pattern Stitch Number Display | Display the stitch number of the currently selected pattern. |
| J | X Actual Size Display | Display the X actual size of current pattern |
| K | X Scale Rate Setting | Display the X scale rate of current pattern |
| L | Y Actual Size Display | Display the Y actual size of current pattern |
| M | Y Scale Rate Setting | Display the Y scale rate of current pattern |
| N | Max Speed Limitation | Display the Max Speed |

| No. | Functions | Content |
|---|---|---|
| O | X Travel Amount Display | Display the X travel amount of the currently selected pattern |
| P | Y Travel Amount Display | Display the Y travel amount of the currently selected pattern |
| Q | Return to Normal Pattern Data Input | Return to the interface for inputting normal pattern data |
| R | P Pattern File Folder Display | Display the file folder number of the current P pattern |
| S | P Pattern File Folder Selection | Shift the file folder number of P pattern in sequence. |
| T | P Pattern Selection | Display the registered P pattern |
| U | Thread Tension Value | Display the basic value of thread tension of this pattern |

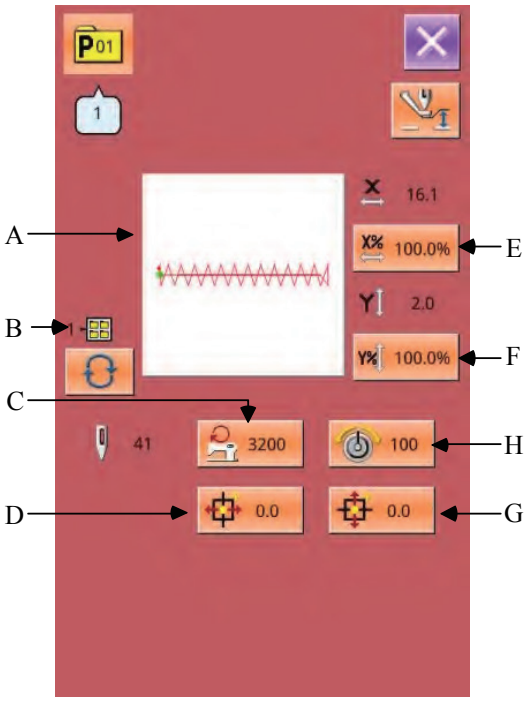
## 3.2 P Pattern Edition

**①Have Access to P Pattern Edition Interface**

Press  to have access to P Pattern Edition Interface (as shown at the right picture)

**② Change the Item Data**

Select the item for changing and set the value.




| | Item | Range | Default Value |
|---|---|---|---|
| A | Sewing Shape | | |
| B | File Folder Number | 1~5 | |
| C | Max Speed Limitation | 400~3000rpm | 3000rpm |
| D | X Travel Amount | -30.0~30.0mm | 0 |
| E | X Scale Rate | 1.0~400.0% | 100.0% |
| F | Y Scale Rate | 1.0~400.0% | 100.0% |
| G | Y Travel Amount | -30.0~30.0mm | 0 |
| H | Thread Tension | 0~200 | 100 |

**③Confirm the Change of Data**

Take the edition of "X Travel Amount" as example:

With 0 ~ 9 and keyboard or /, user can input the value. Press to finish the operation.



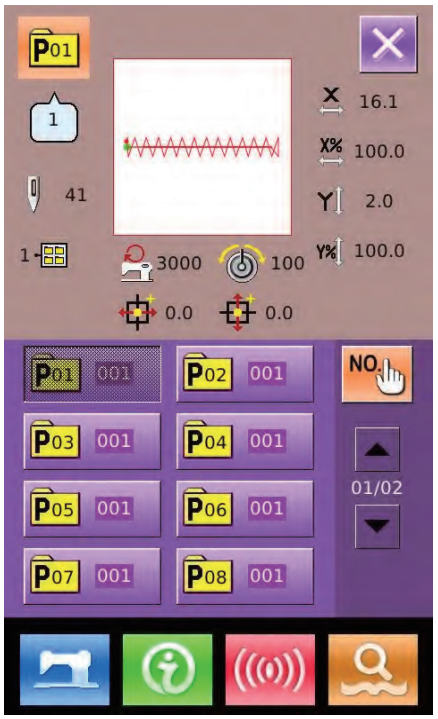

**④Quit the Edition**

Press to close P Pattern Edition Interface and the system will return to the Interface for Inputting Sewing Data

## 3.3 P Pattern Copy

**①Select a Pattern to Be Copied**

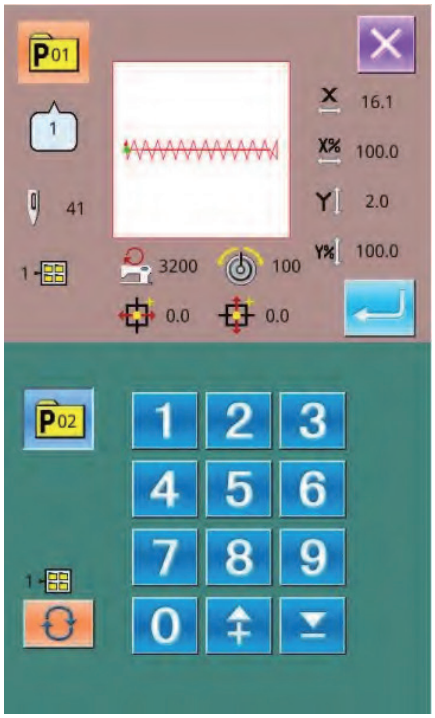
Press to have access to P Pattern Copy Interface (as shown at right picture). Select the number of the pattern that needs copying among the registered ones, and then press NO.



**②Input newly Registered Pattern Number**

The Pattern to be copied is displayed at the upper side of the interface. By using number keys, user can select the unregistered pattern number. The registered pattern number is unable to be registered again.

When pressing , user can select the file folder for saving. Press to finish the operations for copying the pattern, and the system will return to the Interface for Copying P Pattern



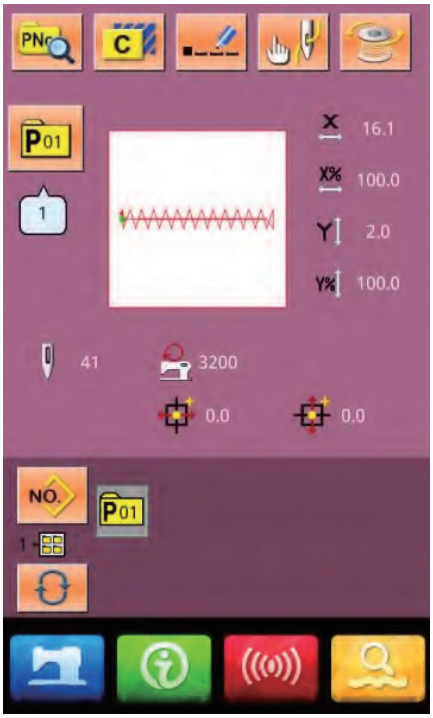

## 3.4 P Pattern Selection

**①Have Access to P Pattern Selection Interface**

As shown in right picture, user can press Key (A) to have access to P Pattern Selection Interface

**②Select Pattern Number**

The relating information of the currently selected pattern is displayed at the upper side of the interface. When user presses to shift the status of concealing the file folder number, the entire registered P patterns can be displayed.



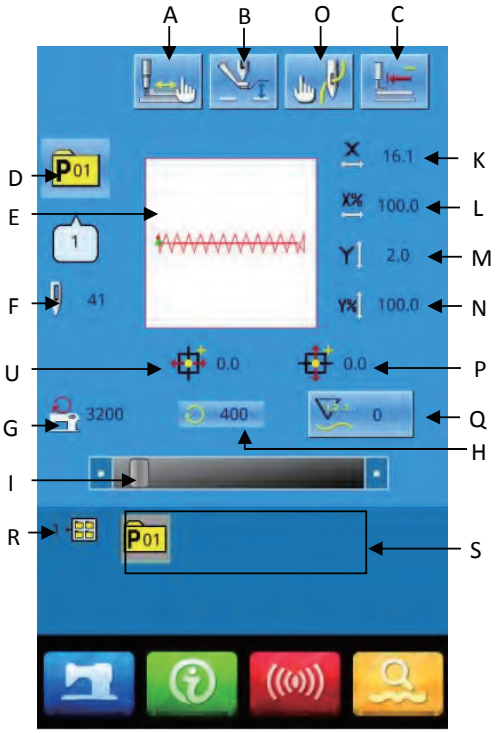
**③Confirm the Selection of Pattern**

The operation is same to that of normal pattern selection. Press  to end the selection




## 3.5 P Pattern Sewing

At the Interface for Inputting P Pattern Data, User can press  to have access to the Sewing Interface (as shown in right).




## List of Functions Keys：

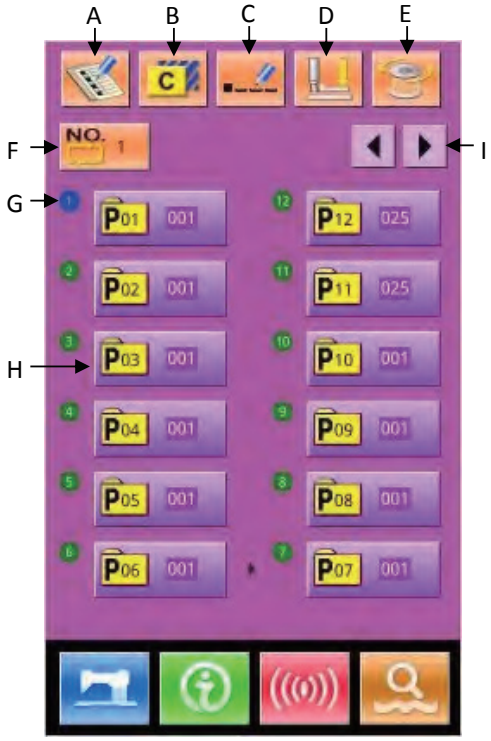
| No. | Functions | Content |
|---|---|---|
| A | Trial Sewing | Press it to have access to Trial Sewing Interface, where user can determine the shape of f pattern. |
| B | Threading | Press it to lower the presser. |
| C | Return to Origin | Press it to have the presser return to the start point. |
| D | P Pattern Number Display | Display the number of the currently selected pattern. |
| E | Sewing Shape Number Display | Display the number of the normal pattern quoted in the existing P pattern. |
| F | Pattern Stitch Number Display | Display the sewing stitch number of the currently selected pattern |
| G | Max Speed Limitation | Display the Max Speed Limitation |
| H | Sewing Speed Display | Display the current sewing speed |
| I | Sewing Speed Setting | Change the sewing speed |
| K | X Actual Size Display | Display the X actual size of current pattern |
| L | X Scale Rate Setting | Display the X scale rate of current pattern |
| M | Y Actual Size Display | Display the Y actual size of current pattern |
| N | Y Scale Rate Setting | Display the Y scale rate of current pattern |
| O | X Travel Amount Display | Display the X travel amount of the currently selected pattern |
| P | Y Travel Amount Display | Display the Y travel amount of the currently selected pattern |
| Q | Counter Setting | Press it to set the type and the present value of counter.<br>：Sewing Counter<br>：No. Pieces Counter |
| R | P Pattern File Folder Number Display | Display the file folder number of the current P pattern |
| S | P Pattern Selection | Display the registered P pattern |
| U | Thread Tension Setting | Press it to enter the interface for setting thread tension. |
| V | Intermediate Presser | Press it to set the basic value of intermediate presser |

# 4 Operations on Combination（C） Pattern

## 4.1 C Pattern Data Input

The combination pattern, called as C pattern for short, consists of a group of P patterns, which can contain 50 sub-patterns at most. In this model, 50 C patterns can be registered into the system at most.

For having access to the Interface of Combination Pattern Data Input (as shown at right), please refer to the content in [8.8 Change Sewing Type]




### List of Function Keys:

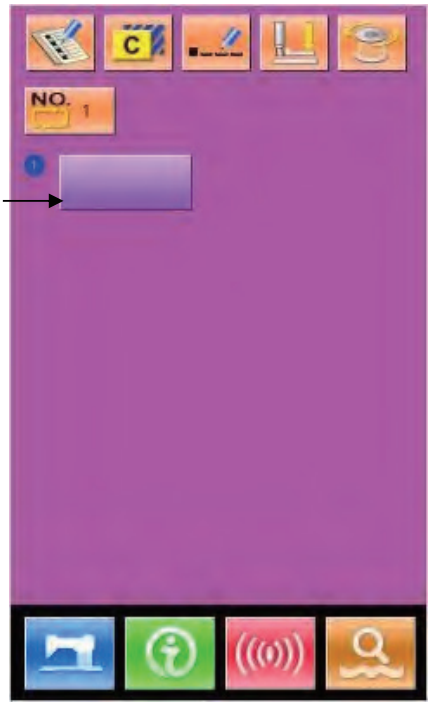
| No. | Function | Contents |
|---|---|---|
| A | C Pattern Registration | Register a new C pattern. |
| B | C Pattern Copy | Copy the content of Current C pattern to an empty pattern number. |
| C | Pattern Naming | 14 figures can be inputted at most. |
| D | Threading | Press it to lower the presser. |
| E | Winding | Wind the thread with a press on . |
| F | C Pattern Number Selection | The number of the currently selected pattern is displayed on the button. Press it to have access to the C Pattern Selection Interface. |
| G | Sewing Sequence Display | Display the sewing sequence of the currently selected pattern. The pattern with a blue marks is the initial sewing pattern. |
| H | C Pattern Shape Selection | Press it to have access to C Pattern Edition Interface. Operator can select a P pattern to input. |
| I | Page | 30 C patterns can be registered at most, and 6 C patterns can be displayed on each page at most. |
| J | C Pattern Name | Display the Name of C pattern. |

## 4.2 C Pattern Edition

**①Have Access to C Pattern Edition Interface**

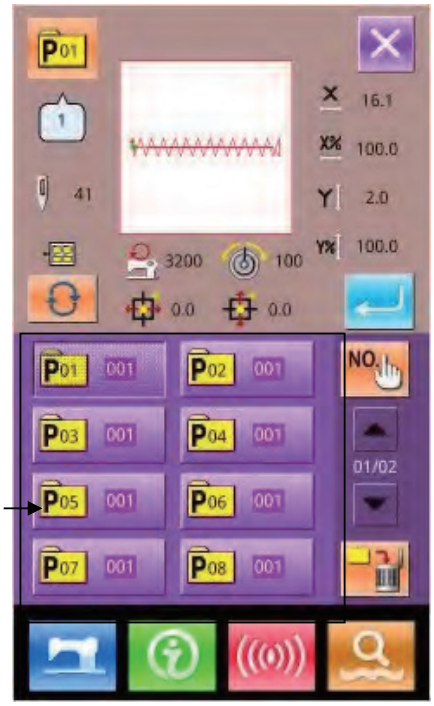
At Interface of C Pattern Data Input, user can press A to have access to C Pattern Edition Interface.

In initial status, because no sewing shape is registered to P pattern, the first one is displayed as blank



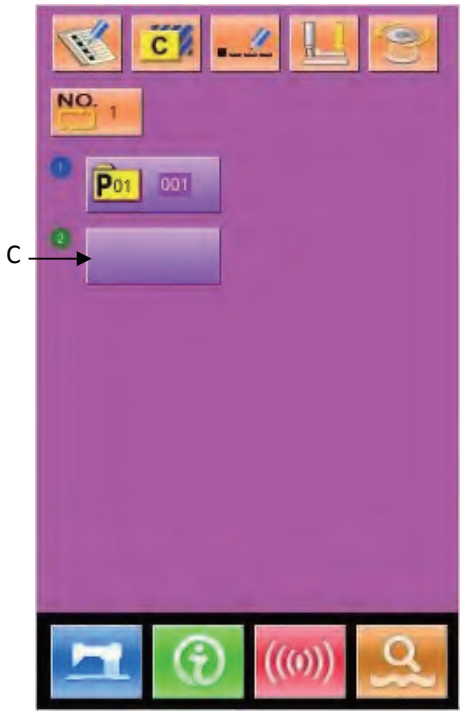

**②Select Shape**

At C Pattern Edition Interface (the right figure), user can select the P Pattern (B) for registration and then press  to finish the selection.



**③Repeat the Registration**

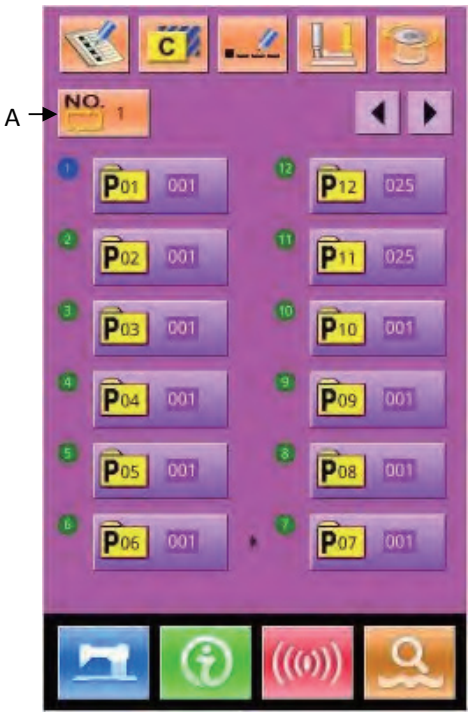
When the 1st pattern is registered, the Selection Key (C) for the 2nd pattern is displayed. Repeat the operations at above so as to register other patterns.




## 4.3 C Pattern Selection

**①Have Access to C Pattern Selection Interface**

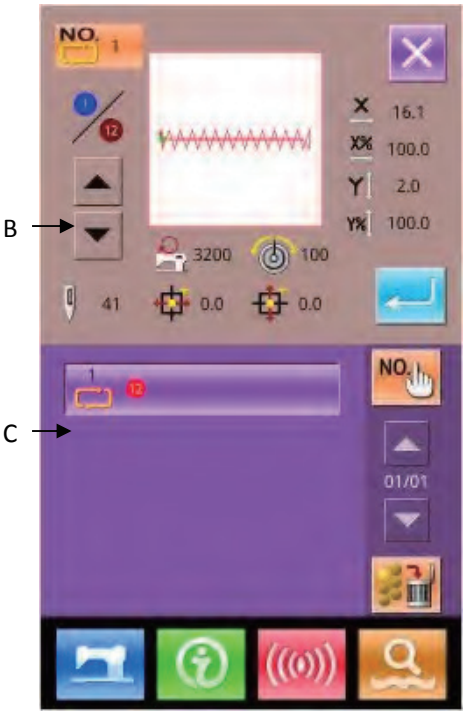
As shown on the right picture, user can have access to C Pattern Selection Interface by pressing Figure A.



**②Select C Pattern Number**

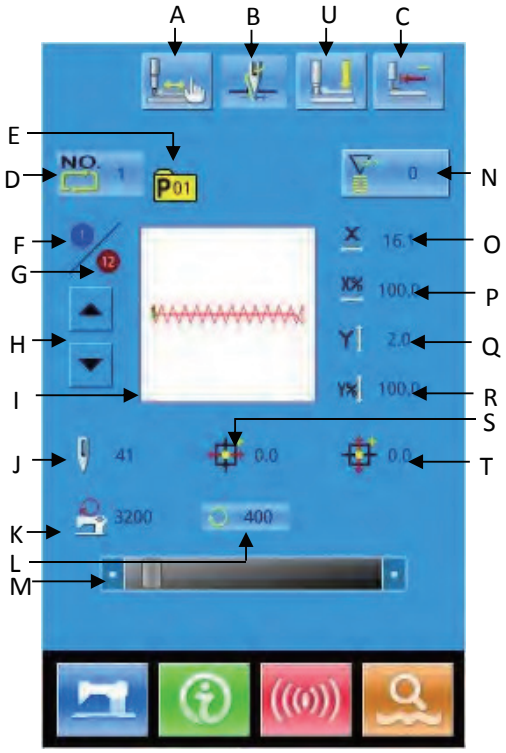
At C Pattern Selection Interface (the right figure), user can press B to change the data information of P patterns within the current C pattern in sequence.

Confirm the number of the needed C pattern (C), and then press  to finish selection




## 4.4 C Pattern Sewing

At Interface of C Pattern Data Input, user can press  to have access to Sewing Interface (as shown in right picture).



## List of Function Keys：

| No. | Functions | Contents |
|---|---|---|
| A | Trial Sewing | Press it to have access to Trial Sewing Interface, where user can determine the shape of f pattern. |
| B | Threading | Press it to lower the presser. |
| C | Return to Origin | Press it to have the presser return to the start point. |
| D | C Pattern Number | Display number of current C pattern |
| E | Sewing Shape Number Display | Display the number of the sewing shape registered under the current C pattern |
| F | Sewing Sequence Display | Display the sewing sequence number at current pattern |
| G | Total Number Display | Display the total number of sub-patterns registered in the current C pattern |
| H | Sewing Sequence Forward/Backward | Select the previous or next shape for sewing. |
| I | Pattern Shape | Display the shape registered at current sewing |
| J | Patten Stitch Number Display | Display the stitch number of the shape registered at current C pattern. |
| K | Max Speed Limitation Display | Display the Max speed at sewing this shape |
| L | Sewing Speed Display | Display current sewing speed |
| M | Sewing Speed Setting | Enable to change sewing speed |
| N | Counter Setting | Press it to set the type and the present value of counter.<br>：Sewing Counter<br>：No. Pieces Counter |
| O | X Actual Size Display | Display the actual size of the selected pattern in X direction. |
| P | X Scale Rate Setting | Display the X scale rate of the selected pattern. |
| Q | Y Actual Size Display | Display the actual size of the selected pattern in Y direction. |
| R | Y Scale Rate Setting | Display the Y scale rate of the selected pattern. |
| S | X Travel Amount Display | Display the X travel amount of the currently selected pattern |
| T | Y Travel Amount Display | Display the Y travel amount of the currently selected pattern |
| U | Thread Tension | Display the basic value of thread tension |

# 5 Pattern Edition

## 5.1 Have Access to Pattern Edition Mode

User can press  to shift the data input interface to the Mode Selection Interface (as shown at right picture), where user can make some detailed settings and editions.




For the detailed operations and settings at Mode Selection Interface, please refer to【8 Mode and Parameter Setting】.

Press  to shift with .

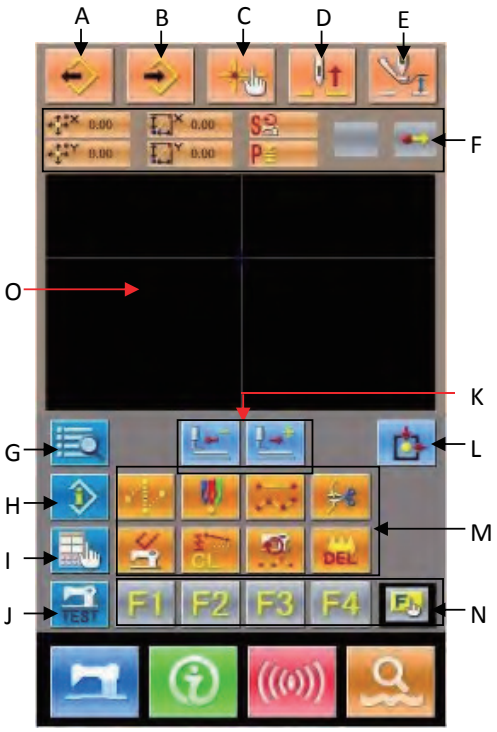
：Sewing Mode

：Edition Mode

Select , and then press  again to quit the Mode Selection Interface. At this moment, the system will ask user whether to have access to Pattern Edition Interface.



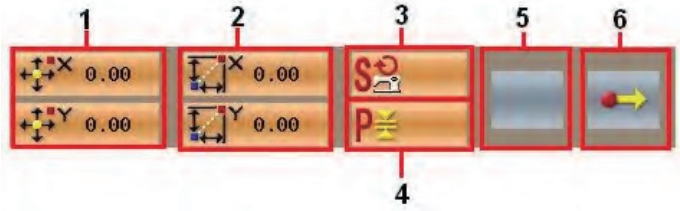
Press  to have access to Standard Interface for Pattern Edition, as shown in the right picture：




## List of Function Keys：

| No. | Function | Contents |
|---|---|---|
| A | Load Pattern | Display the Pattern Loading Interface |
| B | Input Pattern | Display the Pattern Input Interface |
| C | Needle-entry Point Inquiry | Promptly locate the needle entry point; when editing the patterns, user can input the coordinates of the sewing point directly. |
| D | Lift needle | Make needle return to the highest point |
| E | Move Intermediate Presser | Lift or lower the intermediate presser |
| F | Current Needle Position Information | Display the position information of needle at present |
| G | Code List | Display the entire available editing functions. Please refer to [List of Editing Functions] for details. |
| H | Information Display | Display the detailed information of the currently edited pattern |
| I | Display Setting | Enable wide-angle setting, needle entry point display setting and so on |
| J | Trial Sewing | Sew the currently edited pattern through a trial sewing |

| No. | Function | Contents |
|---|---|---|
| K | Forward· Backward Feeding | Move one stitch from the current position（forwards ； backwards ） |
| L | Return to Origin | Return the needle from current position to origin |
| M | Function Keys | Call the functions on the buttons directly |
| | | 1 ： Empty feeding |
| | | 2 ： Point Sewing |
| | | 3 ： Normal Sewing |
| | | 4  Thread-trimming |
| | | 5 ： Cancellation of Mechanical Control Order |
| | | 6 ： Element Deletion |
| | | 7 ： Changes on Sewing Speed Section |
| | | 8 ： Delete Current Pattern |
| N | Hot Keys | By using Function of Selection and Setting (Function Code 112), user can distribute the needed functions to each button. After the distribution, the figure of that function is displayed in the corresponding key. |
| O | Pattern Shape Display Area | Display the pattern |

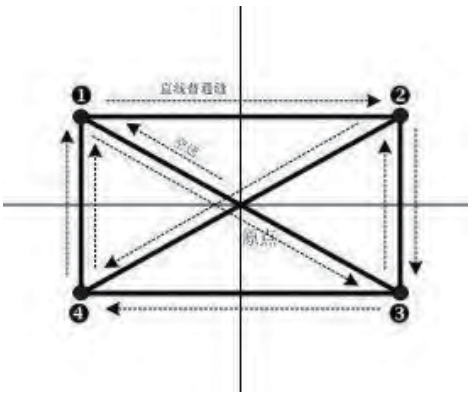



| No. | Item | Content |
|---|---|---|
| 1 | Absolute Coordinate | The absolute coordinate of current needle position to the origin |
| 2 | Relating Coordinate | The relating coordinate of current needle position |
| 3 | Speed | The sewing speed or empty feeding speed of current point. |
| 4 | Interval | The length of current element stitch. (If the stitch is scaled, the value before the scaling will be displayed.) |
| 5 | Type of Element | Types of current elements.At setting sewing data, the system will displayed the element types, like jump feed , broken line , free curve  and so on). At setting the mechanical orders, the type of the control order will be displayed (like thread-trimming). |

| No. | Item | Content |
|---|---|---|
| 6 | Types of Needle Entry | The types of the needle entry position: |
| | |  Start of Design: the start point (Origin) of a design. |
| | |  Middle Point of Element: the middle point of the element (neither the top point nor the ending point of the element). |
| | |  Top Point: the top point of a broken line. |
| | |  End Point of Element: the ending point of the element |
| | |  End Point of Pattern: the ending of pattern. |

## 5.2 Pattern Edition

Use Function of Pattern Edition to input the following pattern.




Input Point：

| | X (mm) | Y (mm) |
|---|---|---|
| ◆ | -40.00 | 25.00 |
| ❖ | 40.00 | 25.00 |
| ◆ | 40.00 | -25.00 |
| ☒ | -4000 | -25.00 |

Input Order: It is shown as the dotted arrow in the left.

### Input of Empty Feeding

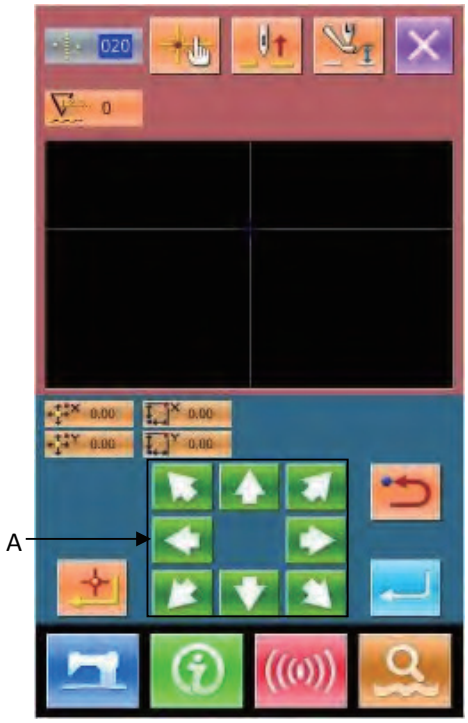
At Standard Interface for Pattern Edition, user can press  to activate the Interface for Setting Empty Feeding:：

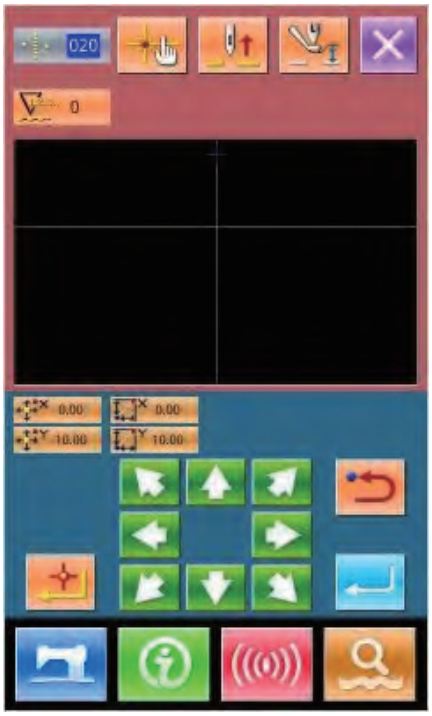
Note: user can also select “020: Empty Feeding” from function code list to enter the interface




After user presses , the Interface for Locating the Empty Feeding Position will be displayed：

At that Interface, user can use Direction Key (A) to move the icon (needle position) to the position with coordinate (0, 10). After pressing  for confirmation, user need press  to save the settings. After that, the system will return to the Standard Interface for Pattern Edition and display the empty Feeding stitch



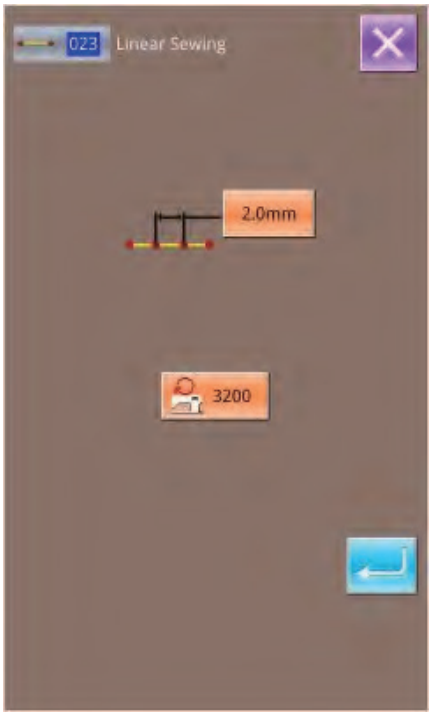




### &Input of Linear Normal Sewing

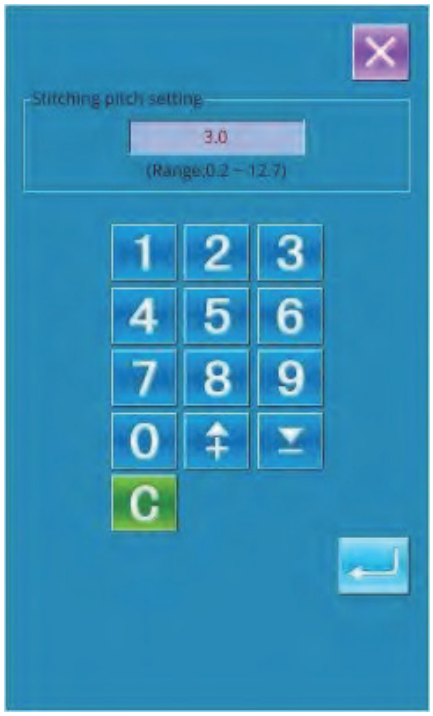
At Function Code List, select “023 Linear Normal Sewing”, and then press  to have access to Interface for Setting Linear Normal Sewing



At Interface for Setting Linear Normal Sewing, press 

to have access to the interface for setting the sewing stitch length, as shown in right picture.




Press 

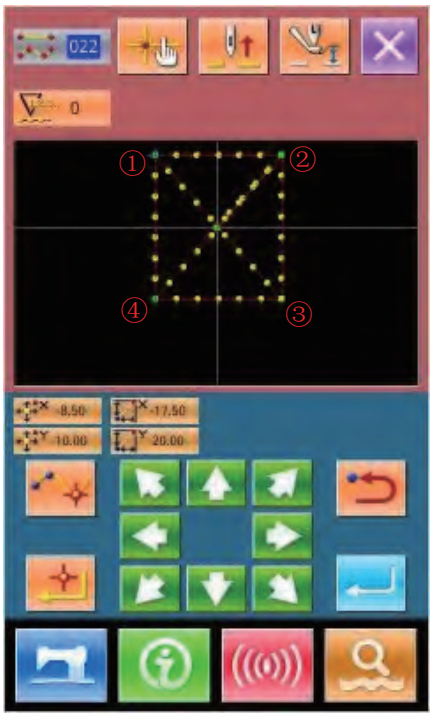
and 

in order to change the sewing length to “3.0”, and then press “ENTER” to save value and have the system return to the Interface for Setting Linear Normal Sewing

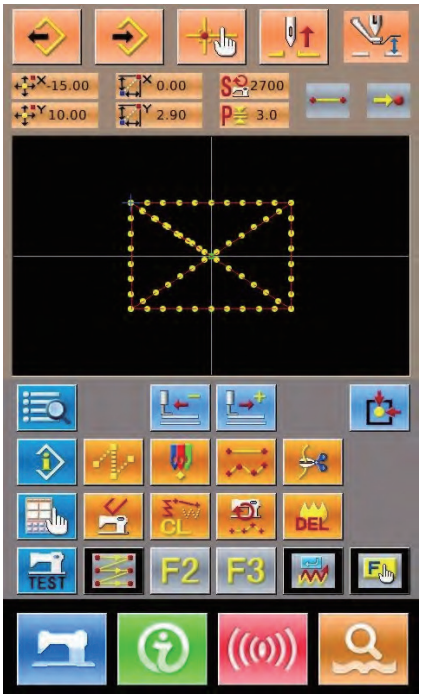
Note: Press 

to clear the value.

After confirming the value “3.0mm” as the length of sewing stitch, user can press 
to have access to the Interface for Setting Linear Normal Sewing.
In that interface, user needs press Direction Keys to move the icon (where the needle locates) from ◆to❖, and then press 
. Repeat the above operations to move the icon in the order of❖∀⬩∀☒∀◆∀⬩∀❖∀☒∀◆, as shown in right picture.



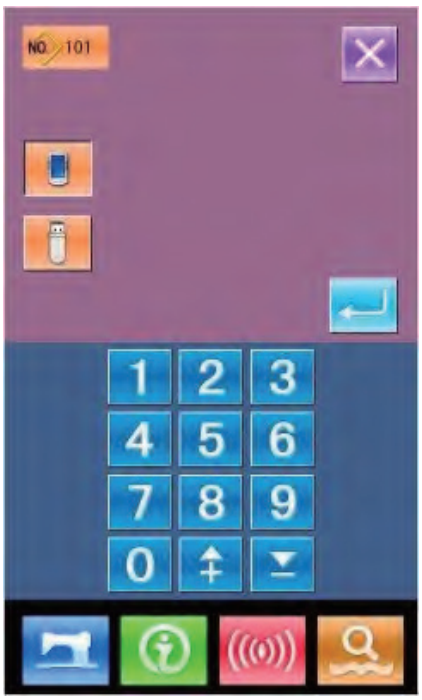
After confirming the pattern design, user can press  to create the pattern data and have system return to Standard Interface for Pattern Edition, where the pattern will be displayed




**●Save Pattern**

Press  to have access to Pattern Saving Interface to save the edited pattern, as shown in right pictures.

The system will set the pattern number automatically; user can also input the value with  ~  and keyboard or . With  and , user can select the location for saving the pattern. Both the U disk and the memory on operation panel will be available for saving the pattern.



Press  to add automatic thread-trimming action;

Press  to cancel the insertion of automatic thread-trimming action

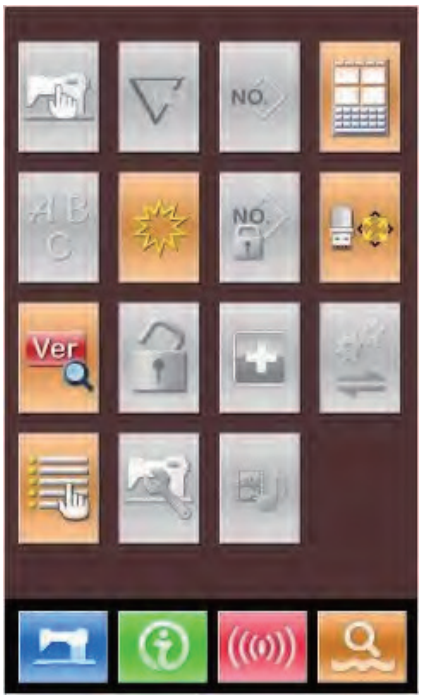
After the operations, the system will return to Standard Interface for Pattern Edition.

**For the detailed operations and instructions of pattern edition, please refer to <SP510 Pattern-making Operation Manual>.**




## 5.3 Quit Pattern Edition Mode

At Standard Interface for Pattern Edition, user can press  to have access to Mode Selection Interface, as shown at right picture.



Press  to shift to ：：

：Edition Mode

：Sewing Mode

Press  again to quit the Mode Selection Interface. At this moment, the system will ask user whether to return to Sewing Mode.

Pressing  is to quit from Pattern Edition Mode and to head for Sewing Mode.



# 6 Information Functions

The Information Functions contain the following three functions：

1）The oil replacement (grease-up) time, needle replacement time, cleaning time, etc. can be specified and the warning notice can be performed after the lapse of the specified time.

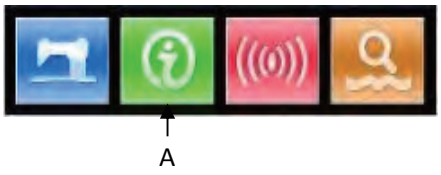
2）Speed can be checked at a glance and the target achieving consciousness as a line or group is increased as well by the function to display the target output and the actual output.

3）Display the threading picture

## 6.1 Maintenance & Repair Information

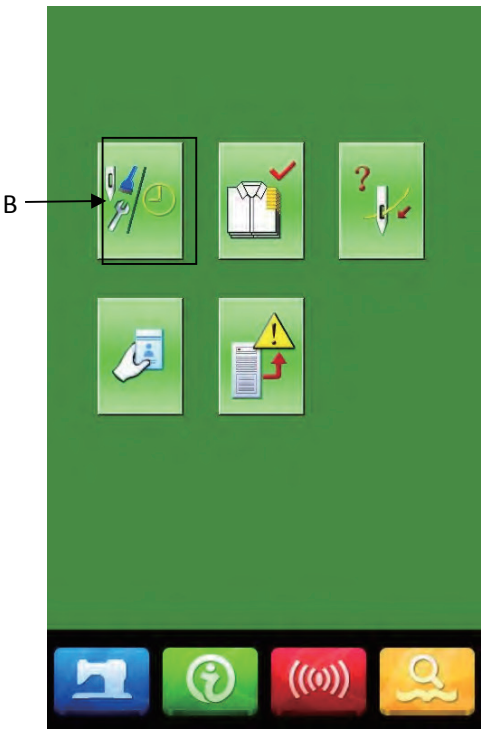
**①Display Information Interface**

At Sewing Data Input Interface, user can Press Information Key (A) to activate the Information Interface.




**②Display Maintenance & Repair Interface**

Please press  (B) at Information Interface



At Maintenance & Repair Interface, the system will display the information of the following three items

：Needle Replacement (Thousand Stitches)

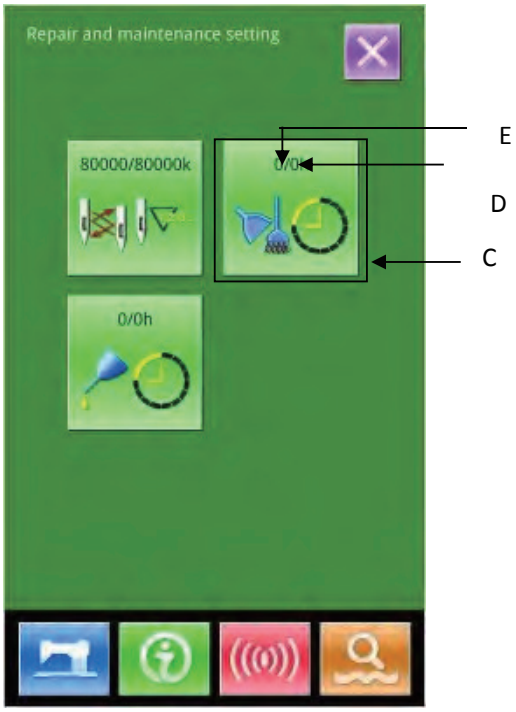
：Cleaning Time (Hour)

：Oil Replacement Time (Hour)

The figure of each item is displayed on the button (C), the time interval for the repair notice is displayed at (D), and the time left to the replacement is displayed at (E)

Additionally, the time left to the replacement can be cleared by users.

Press  to quit to information interface




## 6.2 Input Time for Maintenance & Repair

① **Display Information Interface（Maintenance Level）**

At Interface for Inputting Sewing Data, user can hold the Information Key (A) for about 3 seconds to activate the Information Interface (Maintenance Level).

At that level, there are 6 buttons displayed on the interface



② **Information Interface**

At Maintenance level, there are 6 functions displayed as below

：Maintenance & Repair

：Production Control

：Threading

：Alarm Record

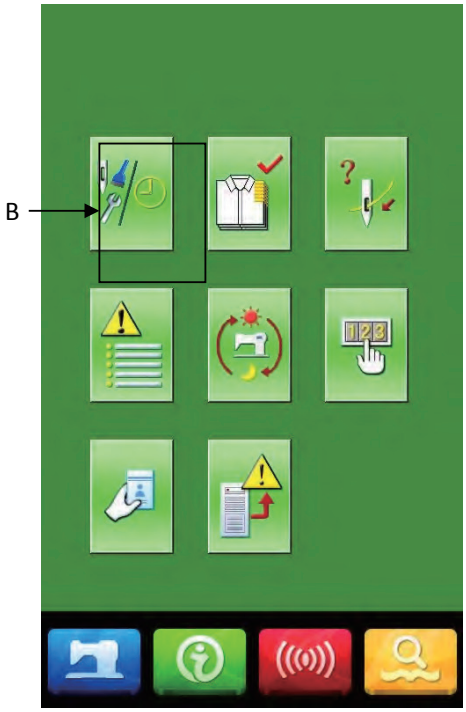
：Running Records

：Periodical Password

：Network punch

：Network report error

Please press Maintenance & Repair Information Key (B) to activate the interface.

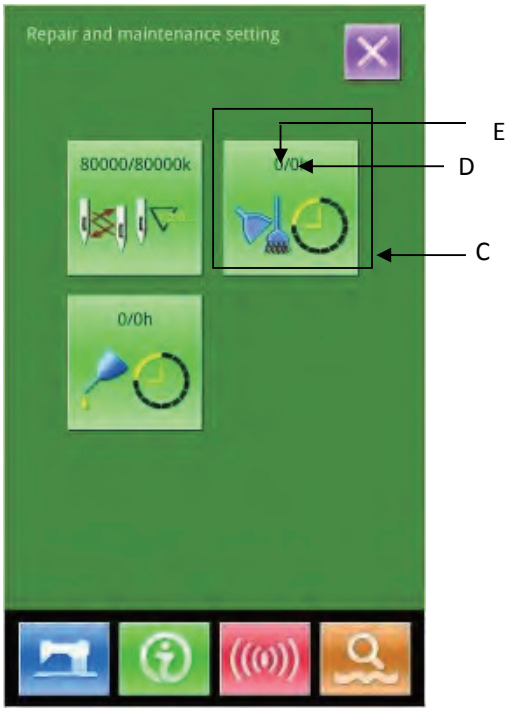



③ **Setting of Maintenance & Repair**

At Maintenance & Repair Information Interface, the information displayed is as same as that on the ordinary Maintenance & Repair Information Interface. Press the Item Button C (for changing the repair and maintenance time) to activate the relating input interface.

Exp. Pressing  is to set the cleaning time

Press  to return to the information interface directly

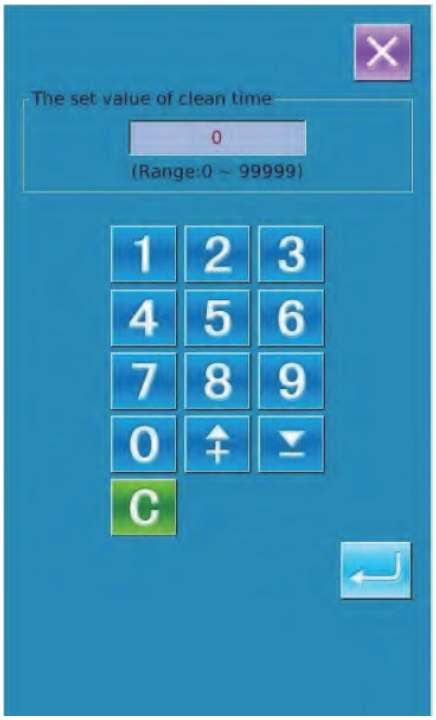


④ **Set Maintenance & Repair Item**

If the value of this item is set at 0, the function of maintenance & repair will be stopped.

The items for setting include:

- Needle Replacement Time
- Cleaning Time
- Oil Replacement Time




Press the figure to enter the corresponding interface：

A、Input the value via keyboard

B、Press  to confirm the input.

C、Press  to return to the interface for repair & maintenance directly

## 6.3 How to Release Alarm

When it comes to the pointed time for maintenance or repair, the system will activate the prompt interface. If user wants to clear the maintenance and repair time, please press . Before the clearance of the maintenance and repair time, the information prompt interface will be displayed after each one sewing task.

The following are the prompt code for each item

- •Needle Replacement ： M-052
- •Oil Replacement Time：M-053
- •Cleaning Time：M-054

## 6.4 Production Control

In the interface of production control, the system will be able to display the amount of products from the beginning to now and the target producing amount, as long as the user fixes the time of start.

There are two ways to activate the production control interface:

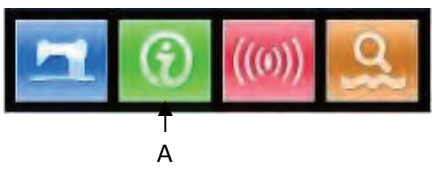
③ Via Information Interface

④ Via Sewing Interface

### 6.4.1 Via Information Interface

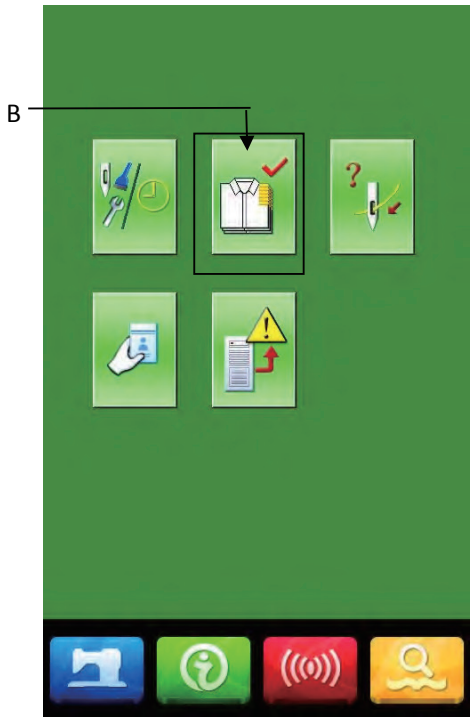
**①Display the Information Interface**

At Interface for Inputting Sewing Data, press Information Key (A) to activate the Information Interface.



**②Display the Production Control Interface**

Please press Production Control Button (B) at the Information Interface so as to display the Production control interface（as shown at right picture）




There are five items displayed on the production control interface

**A：Existing Target Value**

According to the pitch time, the target sewing amount up to now is displayed automatically.

**B：Actual Result Value**

Automatically display the amount of pieces sewn

**C：Final Target Value**

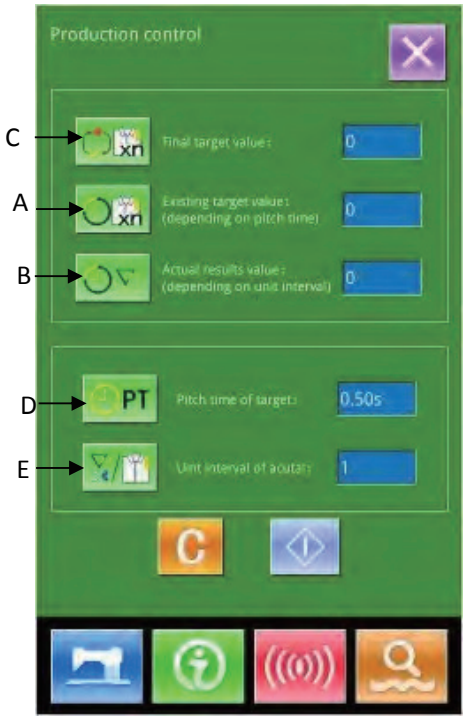
Set the final Target amount of production

**D：Pitch Time of Target**

Set the pitch time (Second) among each working process

**E：Unit Interval of Actual**

Set the actual time for finishing one process

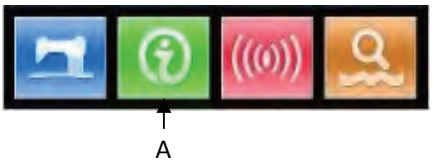


### 6.4.2 Via Sewing Interface

**①Display Sewing Interface**

At Interface for Inputting Sewing Data, user can press  to activate the Sewing Interface.

**②Display Production Control Interface**

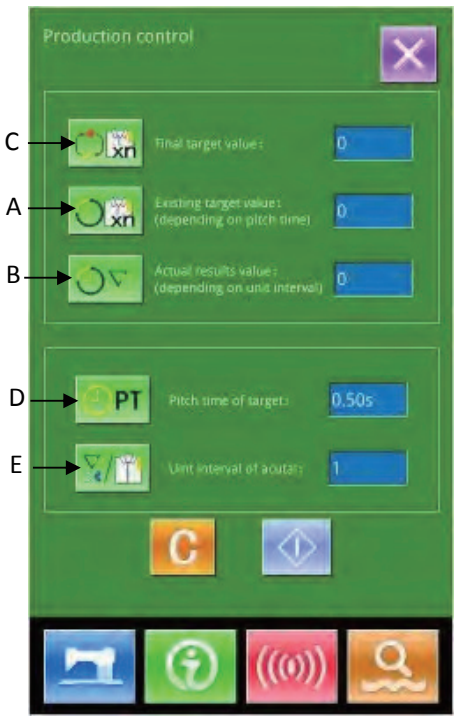



At Sewing Interface, user can press Information Key (A) to activate the Production Control Interface.
The displayed content and the functions are same to the content in Chapter 6.4.1 at at above.

### 6.4.3 Setting on Production Control

**① Display Production Control Interface**

Press  to display the Production Control Interface



② **Input Final Target Value**

Firstly, please input the number of production target pieces to which the sewing is performed from now on. Press Final Target Amount Key (C) to activate the Target Value Input Interface.

Please use the number keys or +/- keys to input the wished value. After the input, please press to confirm. Press to quit.




③ **Input Pitch Time of Target**

Then, input the pitch time needed for one process.

By pressing thePitch Time of Target Key (D), user can activate the Pitch Time Input Interface.

Please use the number keys or +/- keys to input the wished value. After the input, please press to confirm. Press to quit.



④ **Input Unit Interval of Actual**

Then, input the time for trimming at one process in average. By pressing Unit Interval of Actual Key  (E) at previous page, the user can activate the Interface for Inputting Trimming Time

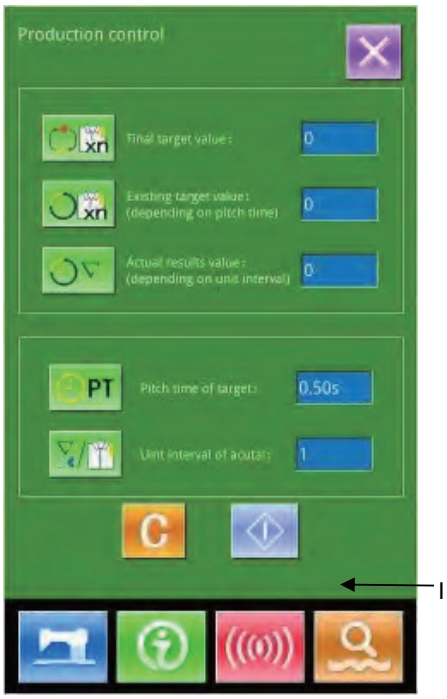
Please use the number keys or +/- keys to input the wished value. After the input, please press  to confirm. Press  to quit.




⑤ **Start to Count Amount of Production**

Press (I) to start counting the number of production amount,the [Final Target Value], [Existing Target Value] and [Actual Result Value] will turns to dark

**Final Target Value：** Can be used as the time reference
**Existing Target Value：** The target value adds 1 after each time pitch set [Pitch Time of Target]
**Actual Result Value：** After entry from the "6.4.2 Via Sewing Interface", the system will start count the actual value by adding 1 at finishing each piece
**By setting the Target Value and the Actual Result Value, user can find out the change of productivity.**




⑥ **Stop Counting**

In the status of counting, you can see the  displayed on the screen. Press  to stop counting. After stop, the Counting Key  will take the position of . If user wants to continue counting, please press . Without pressing , the value will be kept.

Press  to quit directly

⑦ **Clear the Data in Counter**

For clearing the value of the counter, the user should stop the counter at first and then press .

The values of  and  can be cleared both.

(Note: the clear key can only be displayed when the counter is stopped.)

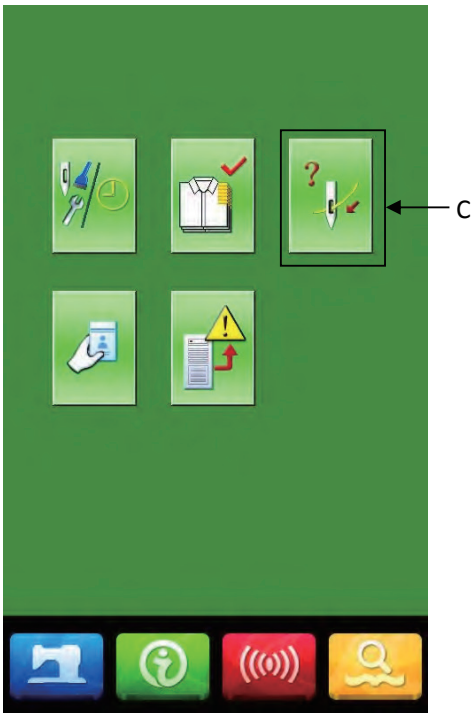
After pressing , the Interface for Confirming Clearance is activated.

In the Interface for Confirming Clearance, user can press  to confirm the clearance. Press  to quit.

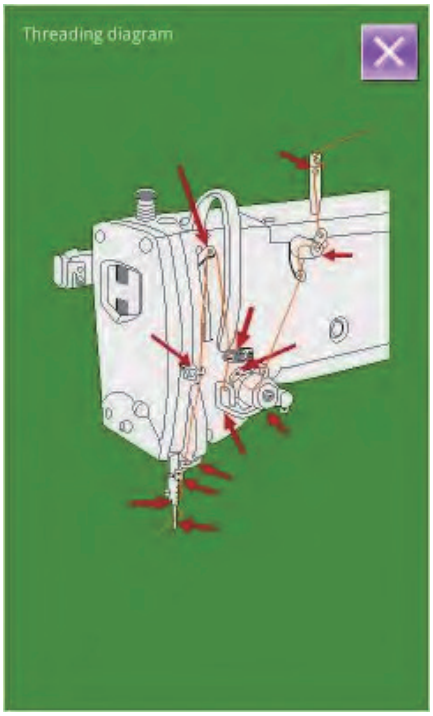


## 6.5 Display Threading Figure

At Information Interface, user can press Threading Button  (C) to activate the Threading Figure, which can be taken reference when user threads the machine.

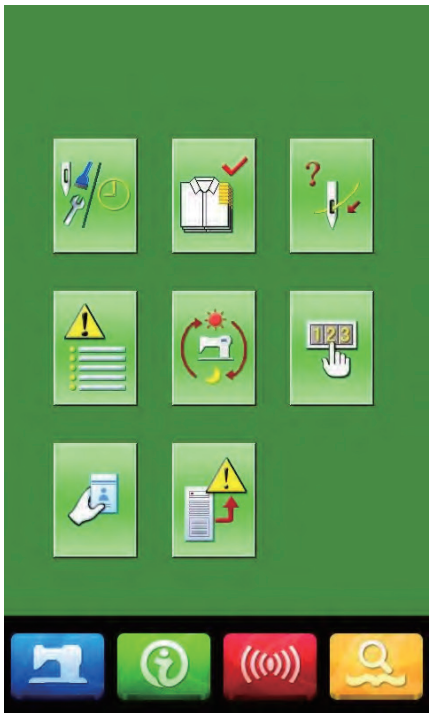



Please take reference at threading



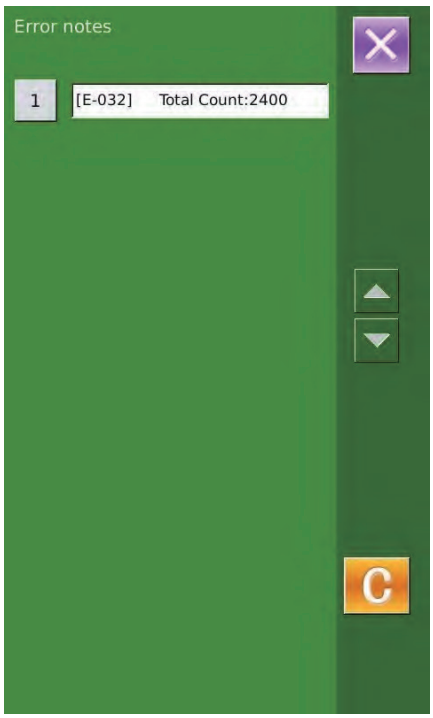
## 6.6 Alarm Record

① **At Maintenance Level, press**  **to inquire the alarm records.**



② **Press**  **to check the records**

As in the picture, the warning information and the times of occurrence are displayed




Function of Keys：

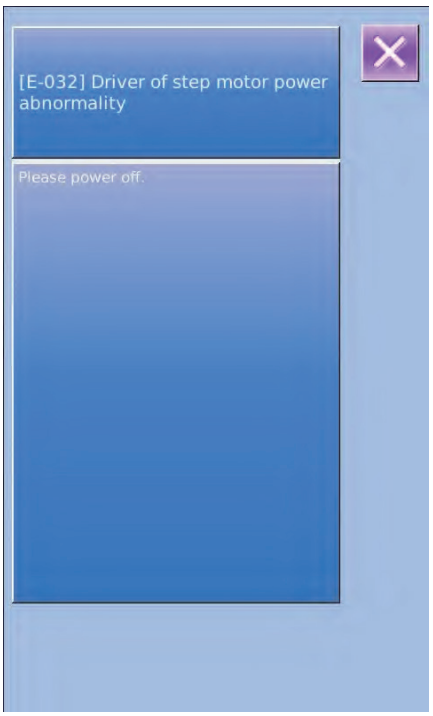
A、Press  or  to turn pages

B、Press  to quit the inquiry

C、Press  to clear the filed record

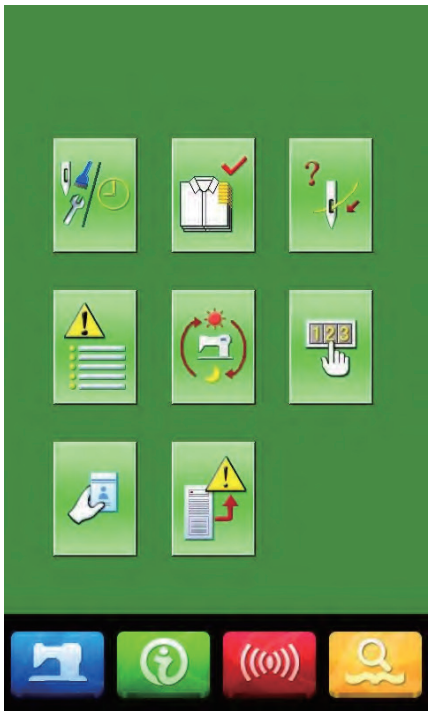
③ **Press the number key at the left of the column to display the details of the warning records**

Press  to quit




## 6.7 Running Record

① In the interface of maintenance level, press  to check the running information of the machine



② **The Running Records contain：**

a) :Accumulated running time（Hour）

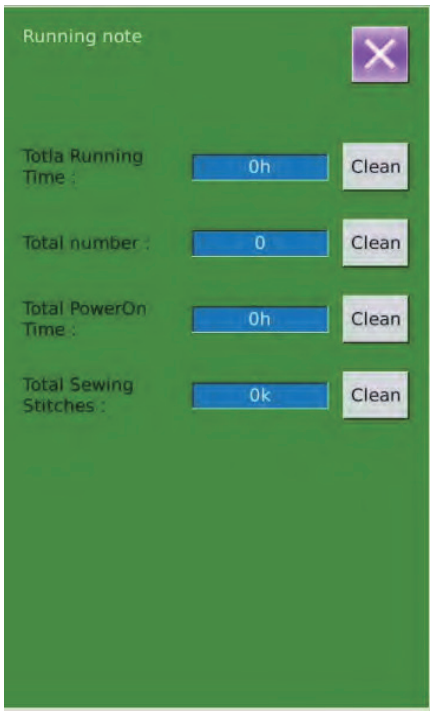
b) :Accumulated times for thread trimming

c) :Accumulated time of power-on (Hour)

d) :Accumulated number of stitch（1000stitch）

A、Press  to quit

B、Press Clear to clear the record



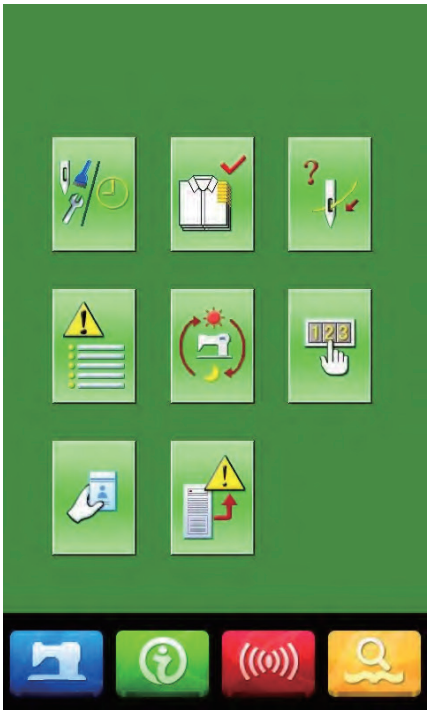

## 6.8 Setting of Periodical Password

① **In maintenance level, Press**  **to set periodical password**

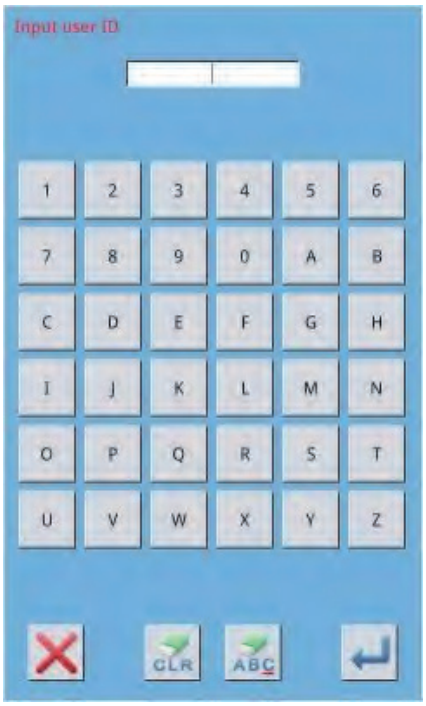
In this interface, the system will ask user to input the User ID. Input the right manufacturer ID to enter the password management mode, where user can set and manage the periodical passwords.

◆ At most ten periodical passwords with different activation dates can be set

◆ The system will display the information of passwords set by manufacturer.



② **Press**  **To input User ID**




③ **Input the Correct Factory ID to enter the password setting interface**

Procedure for setting the periodical password:

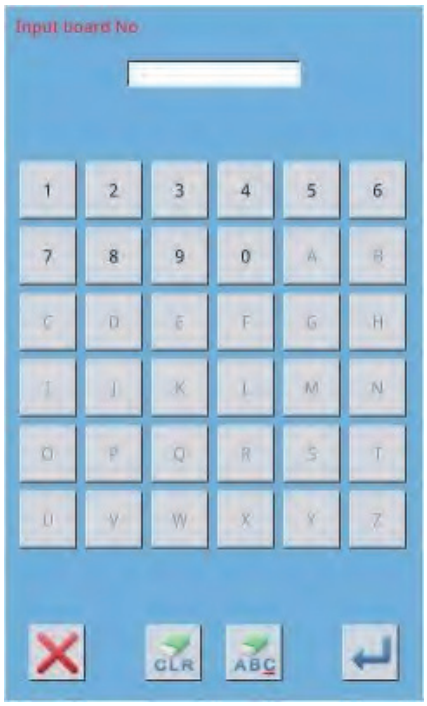
Continue inputting other periodical passwords



④ **Input Board Number**

Press 【Board Number】 to enter the board number input interface. Input the board number and press  to finish the input

**※ The board is a four-figure number, from 0~9999**




⑤ **Input System Clock**

Press【Clock】 to enter the interface for setting the system clock. And set the time.

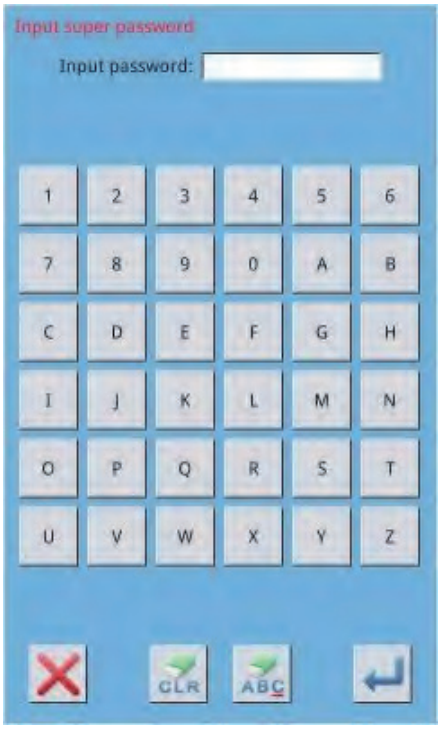


⑥ **Input the super password**

Press the【Super Password】to enter the interface for setting super password

※ **At most, nine-figures super passwords can be input**

※ **At the password confirmation, make sure the two input passwords are same**



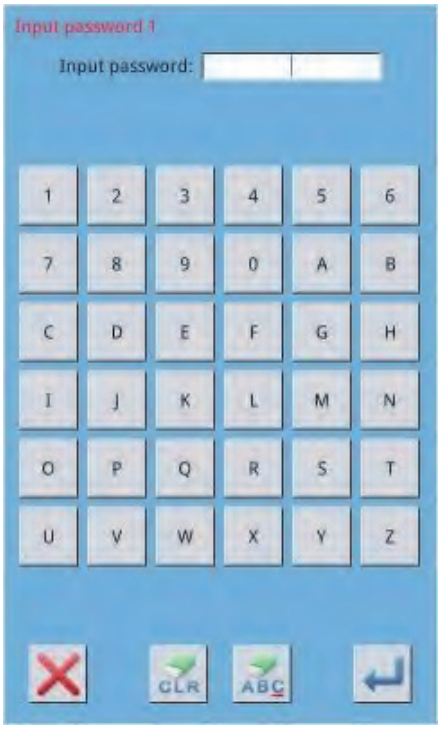
⑦ **Input periodical password**

Press 【Password-1】 to enter the first password date, where user can input the first date for activation. After selecting the proper date, user can press for confirmation. Then enter the password setting interface to input the password.

※ **The date should not be earlier than the system date**

※ **At the password confirmation, make sure the two input passwords are same**



⑧ **Input other periodical password**

The setting of other periodical password is same to that in step ⑦. Please take the reference to that

※ **The next activation date shall be later than the previous date.**




⑨ **Save Password**

A、After inputting the password, please press to save it.

B、After the password is saved, the system will display【Save the password successfully】. Press to finish the operation and return to the main interface of information.



⑩ **Clear Password before Activation**

It is to clear the passwords before its activation.

A、The method for entering the password interface is same to that of the password setting

B、 Input the right factory ID to activate the right interface.

C、 The system will display current clock and the activation dates

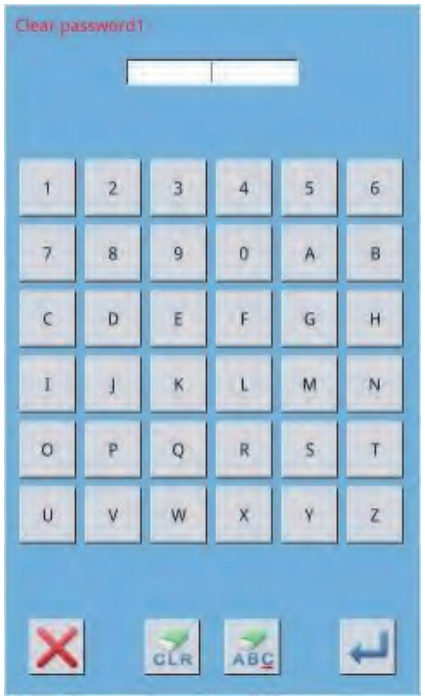
D、Press  to delete the password orderly




Input the right periodical password to clear the current password. If the super password is input, all passwords will be cleared;

After the deletion of the password, the date of that password will be displayed in red.

If all the passwords are cleared, the system will automatically quit to the main interface of information.




⑪ **Clear Password at Activation**

If the system has password and that password is still effective, it will be activated at the activation day.
If user wants to use the machine he should input the right password.
A、The effective passwords include current password and super password
B、If the current password is input, the current password will be deleted. After user clears the current password, if it is the last password in machine, no more activation of password will happen in future.
C、If the super password is input, all the periodical passwords will be deleted.

# 7 USB Communication Function

At Communication, user can perform the following functions:

- Download the sewing data made at other sewing machines or produced by the pattern-designing software to the sewing machine;
- Load sewing data to U disk or computer
- Load parameters from U disk
- Input the parameters within the operation panel to U disk
- Update the software within the operation panel

## 7.1 About the Available Data

The available data is shown at below, as well as the data type:：

| Data Type | Standard Type |
|---|---|
| VDT | [0-9][0-9][1-9].vdt |
| DXF | [0-9][0-9][1-9].dxf |
| DST/DSB | [0-9][0-9][1-9].dst/<br>[0-9][0-9][1-9].dsb |
| B/BA | [0-9][0-9][1-9].(1-599)/<br>[0-9][0-9][1-9].(600-999) |
| PAT | [0-9][0-9][1-9].pat |

When saving data to the U disk, user needs save it to the DH_PAT folder. Otherwise, the file is unable to be read.

## 7.2 USB Operations

① **Display the Communication Interface**

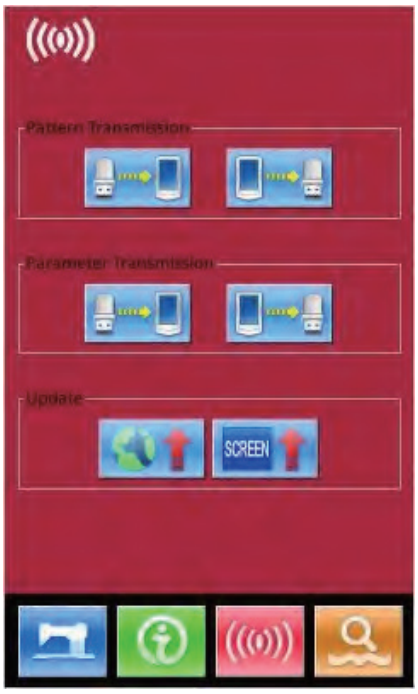
In the data input interface, press  to display the communication interface

② **Select the relating operations**

The following three kinds of functions can be selected in this interface:

- Pattern Transfer
- Parameter Transfer
- Software Update

Click the corresponding figure to perform the operations.




③ **Press**  **to quit the Communicatin**

## 7.3 Pattern Transfer

① **Display the Communication Interface**

In communication interface, press:

A: Input patterns from U Disk to Operation Panel

B: Output patterns from Operation Panel to U Disk

Path of U Disk：DH_PAT

※ **When inputting patterns from U disk, user has to save the pattern into the DH_PAT in the U disk.**

※ **When outputting patterns from operation panel, user has to save the pattern into the DH_PAT in the U disk.**

※ **Naming Method of Patterns within U Disk**

**When inputting patterns from U disk, user needs follow the naming rule at below:：**

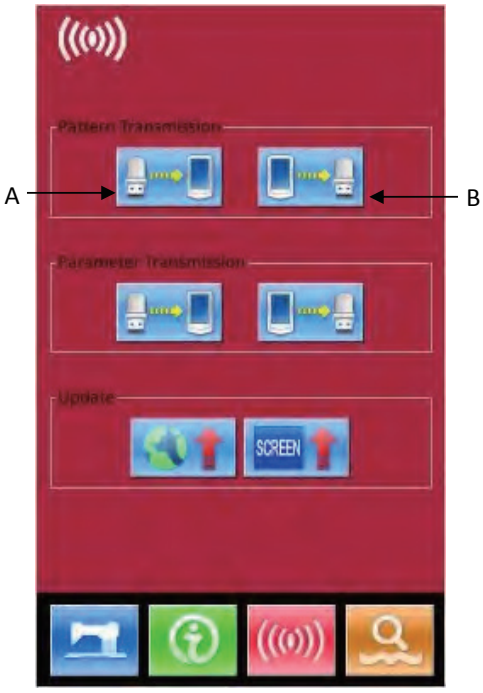
**File Name：3 figures，001~999**

**Suffix：**vdt（no matter at CAP or not）

**Example：**

**Right Names：** 100.vdt、102.VDT

**Other naming methods are wrong, which can not be recognized by machine**



② **Press button A to enter the interface for inputting patterns from U Disk**

**Note：If the pattern in U disk has the same name to the pattern within the panel, the pattern number will be displayed in red. The pattern with red code can only be inputted with button F, as shown in figure 1**

A、Use【Up Arrow】,【Down Arrow】to turn the page

B、Use these three methods to select patterns

- Press  to select all the patterns
- Press  to select in contrary way
- Input Pattern Number

C、Press  to finish pattern input. At this moment, the patterns inputted and the patterns selected share the identical pattern number, as shown in figure 2




Figure 1

D、Press  to delete the selected pattern

E、Press  to quit Communication Interface

F、Select a pattern and then press  to display the interface shown as figure 3.

Input the pattern number for saving;

G、If user selects several patterns, he will be unable to perform the above operation. Press  to quit to the previous r interface。




Figure 2

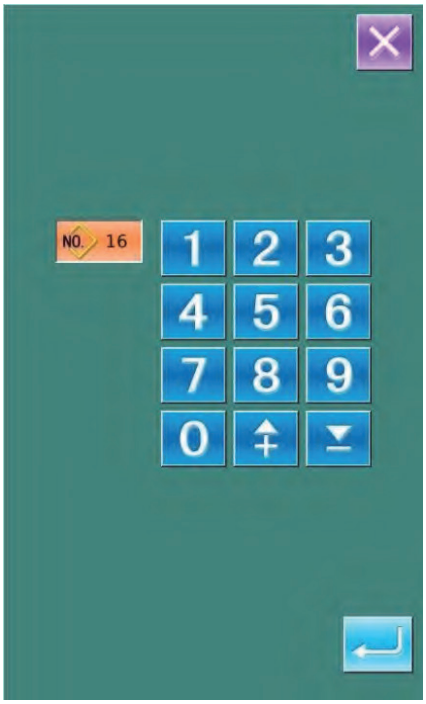


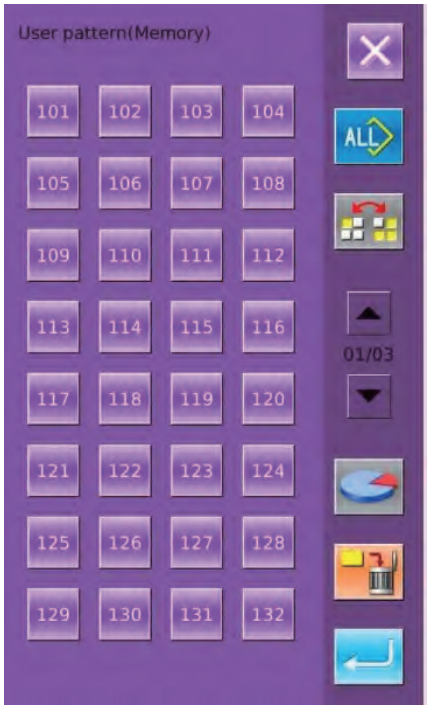

Figure 3

**Attention：If the selected pattern number exists in operation panel, the screen as the figure 4 will be displayed. If the data is in other format, the panel will automatically turn it to the vdt format and save it into memory.**




Figure 4

③ **Press Button B to enter the interface for outputting patterns from panel to U Disk**




A、A、Use【Up Arrow】,【Down Arrow】to turn the page

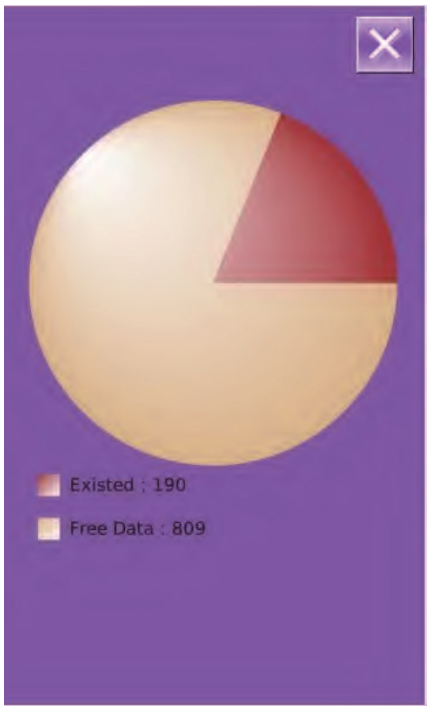
B、Use these three methods to select patterns

- Press  to select all the patterns
- Press  to select in contrary way
- Input Pattern Number

C、Press  to delete the selected pattern

D、Press  to finish pattern output

E、Press  to quit Communication Interface




F、In this interface, press  to display the free room of the memory and the number of pattern.

## 7.4 Parameter Transfer

① **Display the Communication Interface**

In communication interface, press:

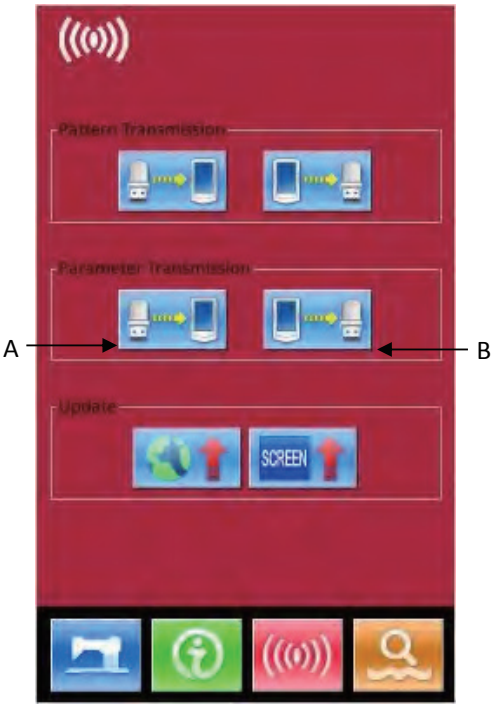
A: Input parameters from U Disk to Operation Panel

B: Output parameters from Operation Panel to U Disk

※ **When inputting patterns from U disk, user has to save the parameters into the DH_PARA in the U disk with name ukParam.**

※ **When outputting patterns from operation panel, user has to save the parameters into the DH_PARA in the U disk with name ukParam.**

※ **The parameter file is the binary file, which is operated on the control panel. User can not change that file manually on PC, or the file may be damaged**




② **Press Button A to Input Parameters from U Disk to Operation Panel**

A、Press  to input the parameters and quit

B、Press  to quit directly.



③ **Press Button B to Output Parameters to U Disk**

A 、 Press  to output parameters from operation panel to U disk and quit

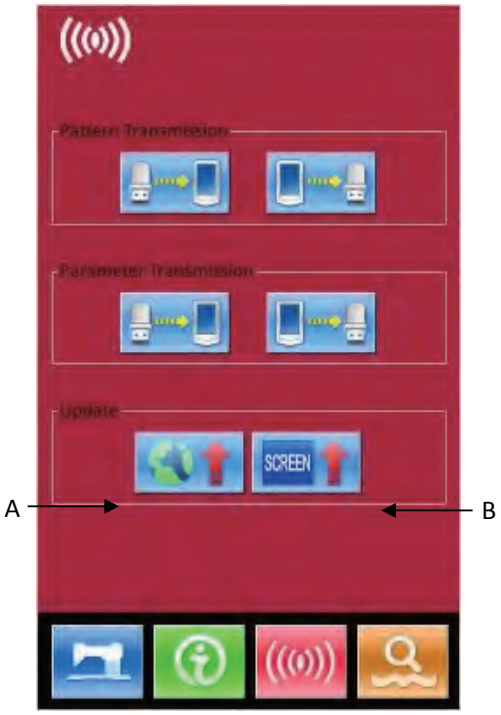
B、Press  to quit directly



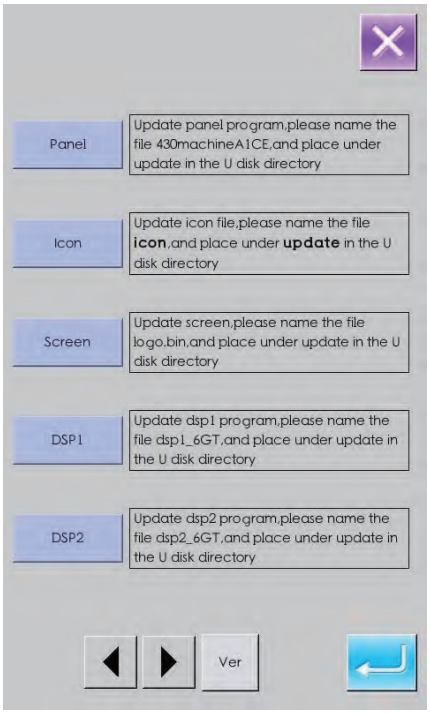

## 7.5 Software Update

① **Display the Interface**

In Communication interface, press A to enter Software Update Interface



② **Update Selection**




The software update contains：

- Operation Panel Software
- Icon
- Font
- Power-on Screen

Press  and  to turn the page

A、Press  to finish the selected update and quit

B、press  to quit directly

C、User can select several items for update at same time. The system will perform the update according to the order

E、 After the update, please restart the machine.

③ **Press B to enter the interface for updating the power-on screen**



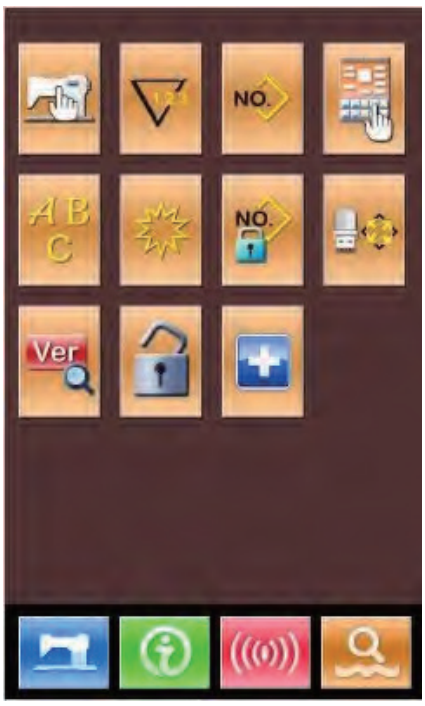

Put the bin file (generated from the power-on screen) into the “Update” catalogue in U disk. Select the bin file and then press  to finish the update.

# 8 Mode and Parameter Setting

Press  to shift from the Data Input Interface to the Mode Interface (as shown in right figure), where user can perform some detailed settings and editions.

Hold  for 3 seconds to have access to Mode Setting Level 2 Interface; hold for 6 seconds to have access to Mode Setting Level 3 Interface.




Mode Setting Level 2 Interface




Mode Setting Level 3 Interface

## 8.1 List of Function Keys

| No. | Figure | Functions | Content |
|---|---|---|---|
| 1 |  | Level 1 Parameters Setting | Set the Level 1 (U) parameters |
| 2 |  | Counter Setting | Set the type of counter, counting value and default value |
| 3 |  | Sewing Type Setting | Shift between normal pattern sewing and combination pattern sewing |
| 4 |  | Pattern Lock | Enter the interface for locking pattern |
| 5 |  | Pattern Edition | Have access to pattern edition status |
| 6 |  | U Disk Initialization | Initialize the U disk. |
| 7 |  | Software Version Inquiry | Inquire the versions of the current panel, main controller and motor |
| 8 |  | Keyboard Lock | Lock some functions that can be set. |
| 9 |  | Test Mode | Set the mechanical devices and LCD |
| 10 |  | Parameter Back-up | Backup or recover the current parameters |
| 11 |  | Activate Parameter Edition | Activate or deactivate the edition of parameters |
| 12 |  | Level 2 Parameters Setting | Set the Level 2 (K) parameters |
| 13 |  | Play Video | Play the video |
| 14 |  | Pattern Mode | Pattern Editing |
| 15 |  | Letter Sweing Edit | Set Letter Sewing |

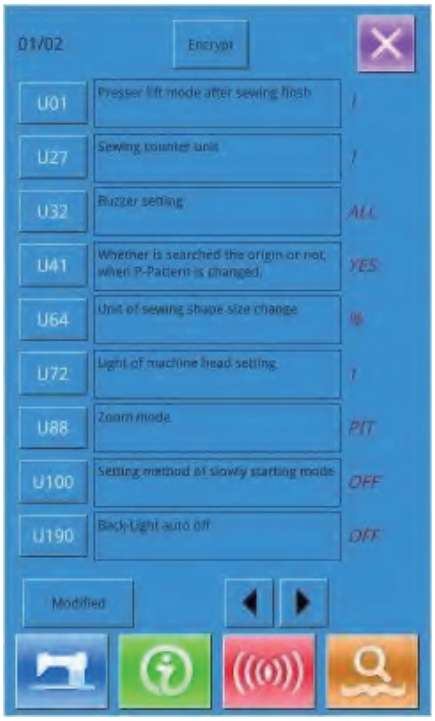
## 8.2 Level 1 Parameters Setting

① **Set Parameter**

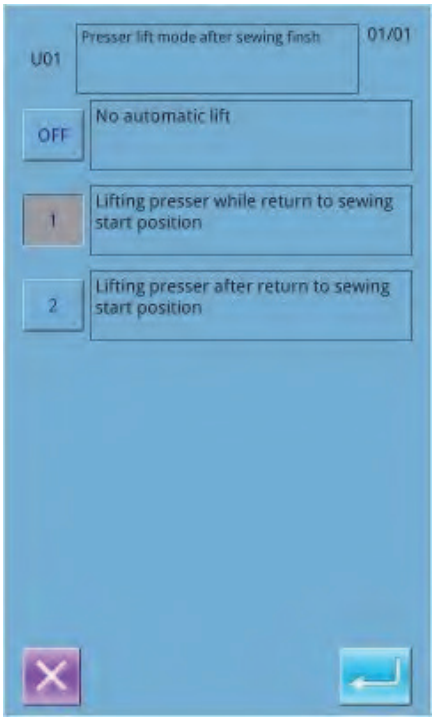
Select  to enter the interface of Level 1 parameter setting (shown as the figure at right).

Press  to quit the setting interface. When some parameters are changed, the system will display the “Modified” in the parameter setting interface.

Select the parameter for changing; Then the system will enter the setting status. The parameters are separated as “Data Input Type” and “Selection Type”. Please refer to the example at below:




Select U01 and enter the interface below




Select U27 and enter the interface below



② **Parameter Encryption**

A、Press “Encryption” to enter the password input interface.

Press 

to clear all the content

Press 

to erase one figure at each pressing

B、Input the right password to enter the interface for parameter encryption

Select the parameter for encryption

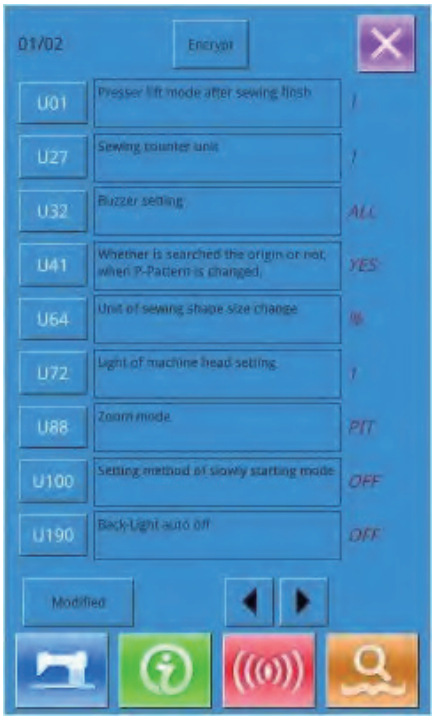
Press 【Select All】 to attach password to all the parameters

Press 【 Reverse 】 to select parameter for encryption in reverse way

Press【Change】 to change the password, the default is the manufacturer ID

Press  to quit the encrypting function



③ **Check the changed parameter**

D、When parameter is changed, the system will display “Modified” key at parameter setting interface.

E、In the parameter setting interface, press 【 Modified 】 to check the changed parameters.

At first, the system will ask user to input the password. For the operation at password input interface, please refer to the “A” at ②. After inputting the right password, user can enter the interface for inquiring changed parameters.

F、Under the interface of changed parameter inquiry, user can find the list containing all the changed parameters with their current value and default value.




In that interface：

- Press 【 All Rest 】 will restore all the changed parameters to their default values
- Click Parameter Name, like【Presser Type】 and then press【Select Rest.】to restore this parameter to the default value. User can select many parameters at here.
- Press Parameter Number, like【U14】 to enter the parameter setting interface, where user can reset the parameter value.
- When the pages are more than one, user can use arrow key to turn the page
- Press  to quit the interface.




**List of Level 1 Parameters**

| No. | Parameter | Range | Unit | Default value |
|---|---|---|---|---|
| U01 | Presser lift mode after sewing finish | OFF:NO automatic lift<br>1:Lifting presser while return to sewing start position | | 1 |

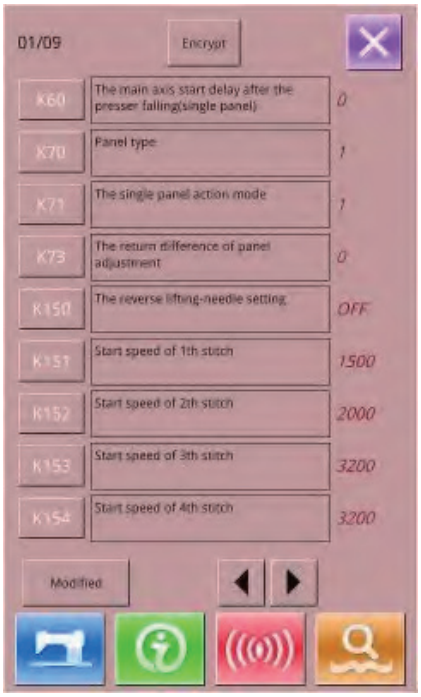
| No. | Parameter | Range | Unit | Default value |
|---|---|---|---|---|
| | | 2:Lifting presser after return to sewing start position | | |
| U27 | Sewing counter unit | 1~30 | 1 | 1 |
| U32 | Buzzer setting | OFF：Buzzer off<br>PAN：Control Panel Voice available<br>ALL：Voice of Control Panel and buzzer available | | ALL |
| U41 | Whether is searched the origin or not,when P-Pattern is changed | Yes:Searched<br>NO:No searched | | NO |
| U55 | Pattern Include start tack sew or not | ON:Yes<br>OFF:No | | ON |
| U64 | Unit of sewing shape size change | %：Percentage<br>SIZ:Actual size | | % |
| U88 | Zoom Mode | OFF：Prohibit<br>PIT：Interval Increase or decrease<br>STI：Stitch increase or decrease | | PIT |
| U100 | Setting method of Slowly starting mode | OFF:Start speed of 1th-5th stitch base on the value of K151-K155 parameter<br>ON:base on the sloely start setting of per program | | OFF |
| U190 | Back Light auto Off | OFF：Disable auto off<br>ON：Auto Off | | OFF |
| U191 | Wait time of black-light auto off | 1~9 | 1 | 3 |
| U192 | Back-light brightness control | 20~100 | 1 | 100 |
| U193 | Profibit to change counter | OFF:Permi modifyt<br>ON:Forbid modify | | OFF |
| U194 | Operation of sewing machine counter reach setting value | OFF：Stop sewing<br>ON：Sewing operation can be continued | | OFF |
| U195 | Volume | 30~63 | 1 | 50 |
| U204 | Address of Update Main Program | 655360~917504 | 1 | 851968 |
| U900 | Language setting | ZH: Chinese<br>EN:English<br>TU:TÜrk | | EN |
| U901 | Whether to select language when power on | OFF：No<br>ON：Yes | | OFF |

## 8.3 Level 2 Parameters Setting

① **Parameter Setting**

At Mode Setting Level 3 Interface, press  to have access to Level 2 Parameter Setting Interface (as shown in right picture). For the operation methods, please refer to descriptions at 8.2 Level 1 Parameters Setting.

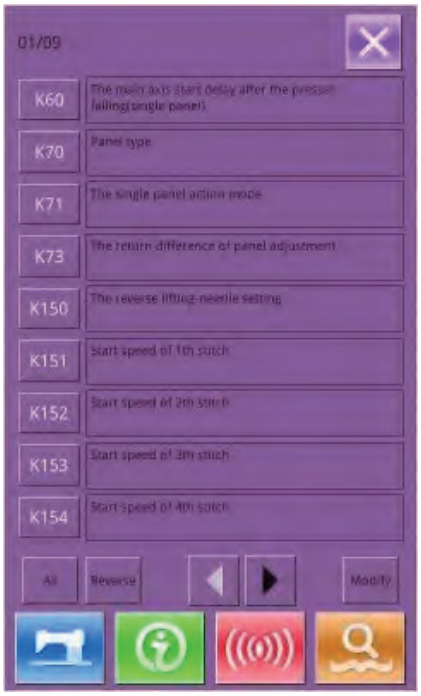
When some parameters are changed, the system will display the "Modified" in the parameter setting interface.




Press  to quit the setting interface

② **Parameter Encryption**

For the operations, please refer to the description within "8.2 Level 1 Parameters Setting"



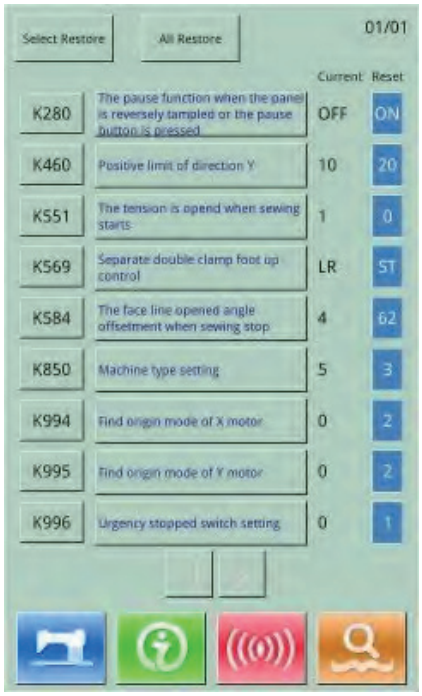

Press  to quit parameter encryption interface

### ③ Check the changed parameters

When parameter is changed, the system will display “Modified” key at parameter setting interface

In the parameter setting interface, press 【Modified】 to check the changed parameters. User can also reset the parameters here.

For the specific operation, please refer to “7.2 Level 1 Parameter Setting”




**List of Level 2 Parameters**

| No. | Parameters | Range | Unit | Default |
|---|---|---|---|---|
| K60 | The main axis start delay after the presser falling(single panel) | 0~3000ms | 1 | 10 |
| K70 | Pedal Type | 1:Single pedal<br>2:Double pedal<br>3:Double pedal start directly | | 2 |
| K71 | The single panel action mode<br>1：1 for releasing presser，2 for sewing<br>2： 1 for lowering in half way， 2 for lowering to the bottom and sewing | 1~2 | | 1 |
| K73 | The return difference of panel adjustment | 0~15 | 1 | 0 |
| K125 | OC length | 202.5~262.5 | 0.1 | 232.5 |
| K126 | OD length | 177.8~237.8 | 0.1 | 207.8 |
| K127 | BD length | 72~92 | 0.1 | 82 |
| K128 | Step control method | 0~63 | 1 | 0 |
| K129 | Step driver mode setting | 0~15 | 1 | 12 |
| K130 | XY synchronous feeding mode | OFF:Close<br>ON:Open | | ON |
| K136 | XY feeding angle of start fine adjustment | 0~200 | 1 | 0 |
| K139 | Needle cool | -1~30 | 1 | 0 |
| K141 | Suction force of branch electromagnet | -20~20 | 1 | 0 |
| K142 | Holding force of branch electromagnet | -40~40 | 1 | 0 |
| K150 | The reverse lift needle setting | OFF:The reverse lifting needle is disable when the main-axis is stopped | | OFF |

| No. | Parameters | Range | Unit | Default |
|---|---|---|---|---|
| | | ON1:The reverse lifting-needle is enable when the main-axis is stopped<br>ON2:The reverse lifting-needle is enable and return when the main-axis is stopped | | |
| K151 | Start speed of 1th stitch | 200~3000rpm | 100 | 800 |
| K152 | Start speed of 2th stitch | 200~3000rpm | 100 | 1200 |
| K153 | Start speed of 3th stitch | 200~3000rpm | 100 | 2500 |
| K154 | Start speed of 4th stitch | 200~3000rpm | 100 | 2700 |
| K155 | Start speed of 5th stitch | 200~3000rpm | 100 | 2700 |
| K156 | The 5th stitch speed before stopping | 400~3000rpm | 100 | 2700 |
| K157 | The 4th stitch speed before stopping | 400~3000rpm | 100 | 2700 |
| K158 | The 3th stitch speed before stopping | 400~3000rpm | 100 | 2700 |
| K159 | The 2th stitch speed before stopping | 400~3200rpm | 100 | 2400 |
| k163 | Max speed | 200~3000 | 100 | 2700 |
| K164 | If or no premit to trim thread | ON:No<br>OFF:Yes | | ON |
| K171 | Is motor lock after running | OFF:Lock Off<br>ON:Lock | | OFF |
| K182 | (C)Motor search origin mode | 0:Step coder negative<br>1:Step coder positive<br>2:<translation><br>3:Sensor outside positive<br>4:Sensor outside negative | | 2 |
| K183 | (P) Motor search origin mode | 0:Step coder negative<br>1:Step coder positive<br>2:<translation><br>3:Sensor outside positive<br>4:Sensor outside negative | | 0 |
| K227 | Main axis motor type | 0~6 | 1 | 0 |
| K229 | Main axis pierce mode | OFF:Close<br>ON:Open | | OFF |
| K250 | Searching the origin after sewing stop | ON：Yes<br>OFF：No | | OFF |
| K251 | Searching the origin of combinational sewing | OFF：No<br>PAT：After per pattern<br>CLC：After per loop | | OFF |
| K252 | Trim stopped speed adjust | 50~400 | 10 | 200 |
| K258 | XY feeding angle of start fine adjustment | -30~30 | 1 | 0 |
| K259 | Send cloth angle of start fine adjustment | -30~30 | 1 | 0 |
| K260 | Change all feeding cloth time<br>-：Advance<br>+：Delay | -30~30 | 1 | 200 |

| No. | Parameters | Range | Unit | Default |
|---|---|---|---|---|
| K261 | Change 1th feed cloth time of sewing starting<br>-：Advance<br>+：Delay | -30~30 | 1 | 0 |
| K262 | Change 2th feed cloth time of sewing starting<br>-：Advance<br>+：Delay | -30~30 | 1 | 0 |
| K263 | Change 3th feed cloth time of sewing starting<br>-：Advance<br>+：Delay | -30~30 | 1 | 0 |
| K264 | Send cloth angle of the third stitch offset in the end<br>-：Advance<br>+：Delay | -30~30 | 1 | 0 |
| K265 | Change 2th feed cloth time of sewing stopping<br>-：Advance<br>+：Delay | -30~30 | 1 | 0 |
| K266 | Change 1th feed cloth time of sewing stopping<br>-：Advance<br>+：Delay | -30~30 | 1 | 0 |
| K269 | Delay of the Air presser | -80~80 | 1 | 0 |
| K270 | Thread-break check is effective or not | Off: Invalid<br>On:Valid | | OFF |
| K271 | The presser waiting position | ON：Zone center<br>OFF：The sewing starting position | | OFF |
| k274 | The presser failing speed | -4~2 | 1 | 0 |
| K275 | The presser raising speed | -4~2 | 1 | 0 |
| K276 | The presser raising speed while sewing stop | -4~2 | 1 | 0 |
| K278 | Number pulses when wiping junction with presser | -20~20 | 1 | 0 |
| K279 | The presser control mode | MOT:Motor presser<br>AIR1:Pneumatic presser open<br>PART1:Pneumatic presser close<br>AIR2:Pneumatic presser close<br>PART2:Separate double clamp close | | AIR2 |
| K280 | The pause function when the panel is reversely tampled or the pause button is pressed | OFF:Invalid<br>ON:Valid | | ON |
| K281 | The XY origin searching speed | 0~100 | 1 | 0 |

| No. | Parameters | Range | Unit | Default |
|---|---|---|---|---|
| K282 | Angle of ending motion adjust after sewing finished | 0~30 | 1 | 0 |
| K398 | Speed setting | 1000~3200 | | 3200 |
| K399 | Speed setting | ON：Open<br>OFF：Close | | OFF |
| K458 | Positive limit of direction X | 0~50 | 1 | 30 |
| K459 | Negative limit of direction X | 0~50 | 1 | 30 |
| K460 | Positive limit of direction Y | 0.0~30.0mm | 1 | 30 |
| K461 | Negative limit of direction Y | 0.0~30.0mm | 1 | 30 |
| K462 | The trimming electromagnet acctracting current setting | 0~45 | 1 | 10 |
| K465 | Sewing pattern parallel movement distance setting | 1:The movement distance is not saved<br>2:The movement distance is saved<br>3:Prohibit to set the movement distance | | 1 |
| K469 | The tension setting | ON：Setting<br>OFF：Close | | OFF |
| K472 | The level presser setting | -30~30 | 1 | 0 |
| K551 | The tension is opend when sewing starts | 0：Close<br>1~3：Open at set stitch number | 1 | 0 |
| K560 | The tension clampdevice control mode | 0:Clamp<br>1:Support | | 1 |
| K568 | Shearing electromagnet suction and force fine tuning | 10~60 | 1 | 16 |
| K570 | Is the outside presser motor installed | NO:Uninstalled<br>YES:Installed | | 1 |
| K571 | The mid-presser control mode | 0~4<br>0:No mid-presser<br>1:Air switch<br>2:Motor AP<br>3:Motor follow<br>4:Motor MJ | 1 | 1 |
| K572 | Thread-trimming Function at Emergency Stop<br>0：No Trimming at Stop<br>1：Manual Trimming at Stop<br>2：Auto Trimming at Stop | OFF:Prohibit to trim<br>MAN:Manual trim thread<br>AUT:Automatic trim thread | 1 | MAN |
| K573 | Feed speed | 0~5 | 1 | 3 |
| K582 | The face line tension is reinforced when sewing start | OFF:Invalid<br>ON:Valid | | ON |
| K583 | The face line reinforced angle offsetment when sewing start | -150~150 | 1 | 0 |
| K584 | The face line opened angle offsetment when sewing stop | 0~80 | 1 | 40 |
| K585 | The 1th stitch line tension | 0~200 | 1 | 75 |

| No. | Parameters | Range | Unit | Default |
|---|---|---|---|---|
| K587 | The face line tension is opened when sewing start | 0~300 | 1 | 0 |
| K588 | The time of the main clamp device opening after stopping | 0~50ms | 1 | 0 |
| K590 | Set the line tension while trimming | 0~200 | 1 | 75 |
| K591 | The-trimming angle | -10~10 | 1 | 0 |
| K592 | The-trimming speed | 200~700 | 100 | 400 |
| K593 | The wipper speed change | -3~3 | 1 | 0 |
| K594 | The needle stopping position | -10~10 | 1 | 0 |
| K595 | Release thread time when trimming | -40~40 | 1 | 0 |
| K596 | The tilt switch is enable or not | OFF:Invalid<br>ON1:ON1<br>ON2:ON2 | | OFF |
| K597 | The time of the trimming electromagnet current failing | -30~30 | 1 | 0 |
| K598 | Out of the way of pin after trimming | -10~0 | 1 | -4 |
| K599 | Head Emergency Switch<br>ON：Effective<br>OFF：Ineffective | 1：ON<br>0：OFF | | 1 |
| K756 | The bobbin speed setting | ON：Max speed 2000sit/min<br>OFF：No Limit | | ON |
| K850 | Machine type setting | 15:Press classper of Tang suit<br>17:9060 | | 17 |
| K890 | EXtended machine ID | 0~255 | 1 | 0 |
| K900 | Restore to original parameters | | | |
| K991 | Moving range of mid-presser | -10~10 | 1 | 0 |
| K992 | Reserved | | | 30 |
| K993 | Reserved | | | 0 |
| K994 | Find origin mode of X motor | 0:Step coder negative<br>1:Step coder positive<br>2:<translation><br>3:Sentor outside positive<br>4:Sentor outside negative | | 3 |
| K995 | Find origin mode of Y motor | 0:Step coder negative<br>1:Step coder positive<br>2:<translation><br>3:Sentor outside positive<br>4:Sentor outside negative | | 4 |
| K996 | Urgency stopped switch setting | 0:Open all the time<br>1:Close all the time | | 1 |
| K997 | Stitch Numberof thread break checking | 0~5 | 1 | 0 |
| K998 | Delay of electronic magnet wipeing thread | -127~128 | 1 | 0 |
| K999 | Reserved | -127~128 | 1 | 0 |

## 8.4 Counter Setting

Press  to have access to the Counter Setting Interface (as shown in right picture).

Procedure

① **Counter Selection**

Select Sewing Counter or No.of Pcs Counter

② **Set the Current Value and the Set Value of Counter**

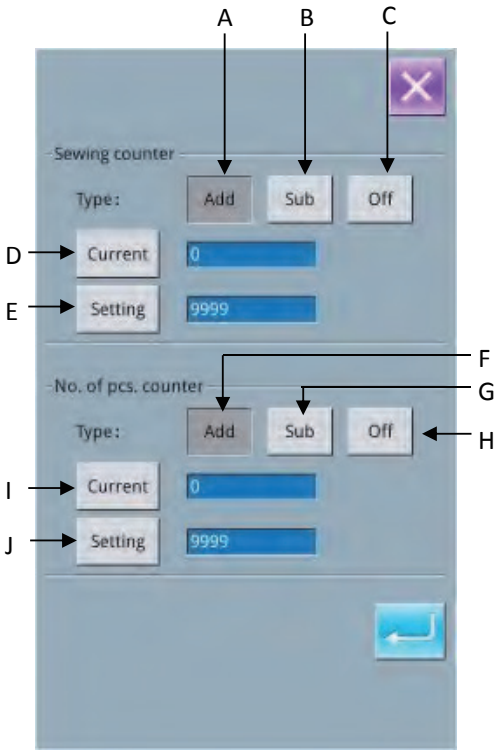
At the set type, press the “Current” or “Setting” to perform the relating operation.

③ **Select Up Counter or Down Counter**

At the selected type, please press “Up” and “Down” to perform the relating operations

Press  to quit counter setting interface

Press  to finish setting and quit.




**Sewing UP Counter ：**

Every time the sewing of one shape is performed, the existing value is counted up 1. When the existing value is equal to the set value, the interface of counter exceed warning will be displayed. Press  to restore the existing value to 0

**Sewing DOWN Counter：**

Every time the sewing of one shape is performed, the existing value is counted down 1. When the existing value is reached to "0", the interface of counter exceed warning will be displayed. Press  to restore the existing value to the set value.

**No of piece UP counter：**

Every time a cyclic sewing or a continuous sewing is performed, the existing value is counted up 1. When the existing value is equal to the set value, the interface of counter exceed warning will be displayed. Press  to restore the existing value to 0

**No of piece DOWN counter：**

Every time a cyclic sewing or a continuous sewing is performed, the existing value is counted down 1. When the existing value is reached to "0", the interface of counter exceed warning will be displayed. Press  to restore the existing value to the set value.

④ **Turn Off Counter**

At the selected counter type, press “Off” to turn off the counter

### 8.4.1Functions

| No. | Function |
|---|---|
| 1 | Sewing Add Counter |
| 2 | Sewing Down Counter |
| 3 | Sewing Counter Off |
| 4 | Set Current Sewing Counter Value |
| 5 | Set the Setting Value of Sewing Counter |
| 6 | No.of Pcs Add Counter |
| 7 | No.of Pcs Down Counter |
| 8 | No.of Pcs Counter Off |
| 9 | Set Current No.of Pcs Counter Value |
| 10 | Set the Setting Value of No.of Pcs Counter |

## 8.5 Change Sewing Mode

Press  to enter the interface of sewing type selection

: Normal Sewing

: Cyclic Sewing

After confirming the sewing type, press  to end the operation. Press , then the data input interface of the selected sewing type is displayed.

Press  to quit and the original sewing type remains.



## 8.6 Have Access to Pattern Edition

Press  to shift between the following two figures. Select the corresponding mode and press  to enter the pattern edition mode（Please refer to section 5.1）

：Sewing Mode

：Edition Mode




## 8.7 Set Pattern Lock

In Setting Mode Level 1, press  to enter the interface for setting pattern lock, where the entire pattern number will be dislayed. 32 pattern numbers are in each page. For locking a pattern, user only needs to press the pattern number. The seelcted pattern numer will be displayed in dark.

Press  to save the setting. The selected patterns will be locked.

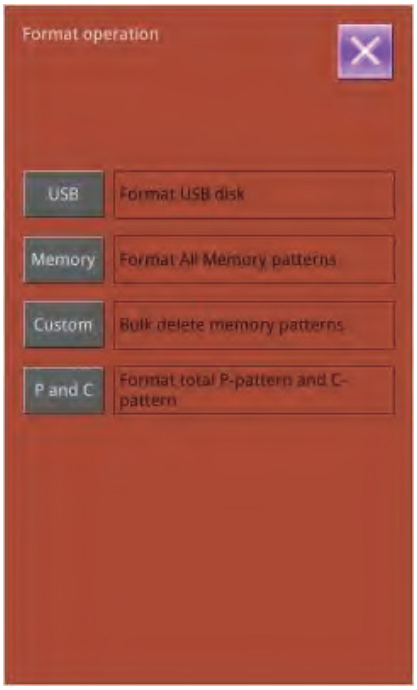


## 8.8 Initialization

Press  to enter the interface for setting the keyboard lock.

In this interface, user can operate：

- U Disk Initialization
- Memory Initialization
- Customized Initialization
- P and C Pattern Initialization




Press the relating functions keys and enter the corresponding interface.

Press  to quit.

① **Press "USB" to Initialize U Disk Files**

Press  to initialize all the U disk files

Press  to quit U disk initialization



② **Press "Memory" to initialize memory patterns**

The following patterns can be initialized：

- Normal Pattern (Basic Patterns & User Patterns)
- Cyclic Sewing Pattern
- Registered P Pattern

Press  to initialize all the files in memory

Press  to quit




**※Caution! This operation will delete all the patterns within the memory!**

③ **Press "Custom" to perform the batch deletion**

In this interface, the system will display all the pattern files within the memory. Click the corresponding button to perform the batch deletion.

Operations at this function：

A． Use "Up Arrow", "Down Arrow" to turn the page

B、 Use the following three operations to select patterns

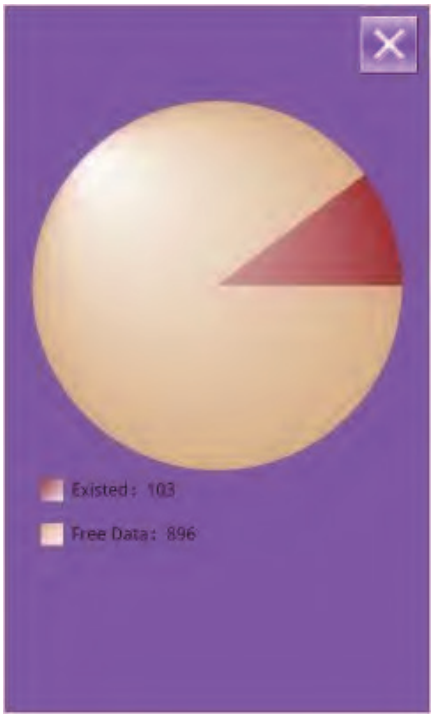
- Press  to select all the patterns
- Press  to select pattern in contrary way
- Input pattern number

C、Press  to delete the patterns in batch

D、Press  to quit Initialization Interface



④ **Under the Interface of Custom Initialization, press**  **to display the free room of the memory and the number of patterns in each format.**

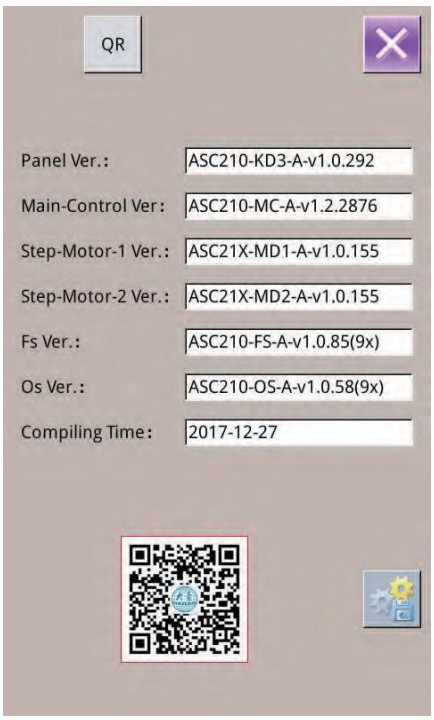



Press  to return to the upper interface.

## 8.9 Software Version Inquiry

At Mode Setting Level 2 Interface, user can press  to check the software version of system.

: Save the Current version information to the root directory of U disk.



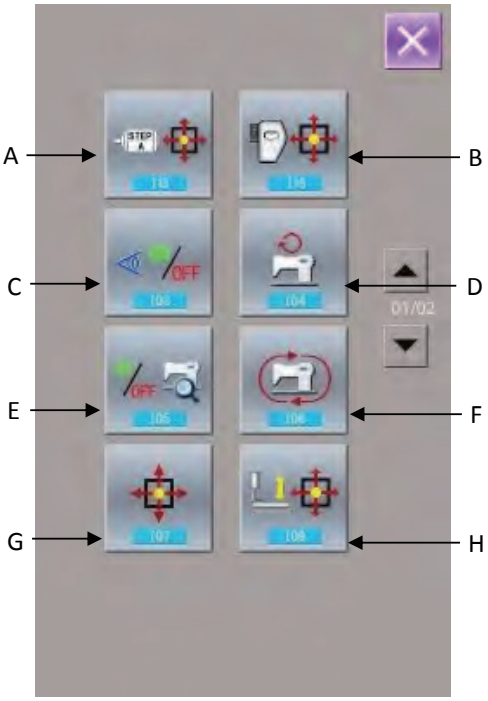
## 8.10 Test Mode

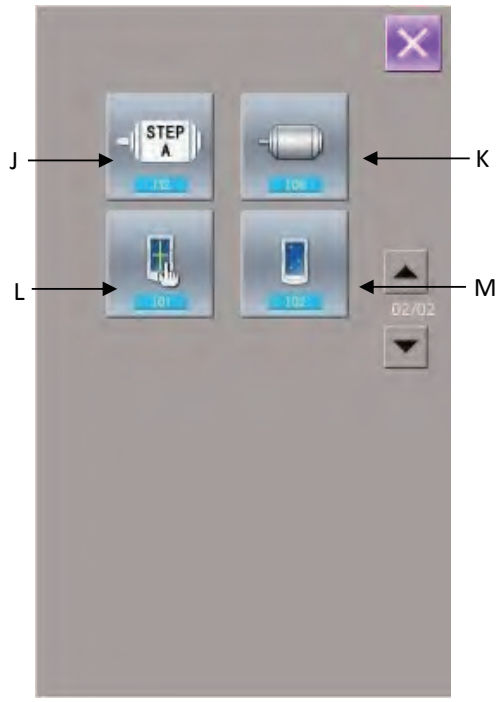
At Mode Setting Level 2 Interface, user can press  to have access to the Test Mode Interface (as shown in right picture)

The following is the list of each figure

| No. | Name |
|---|---|
| A | I13 Stepping Motor Origin Adjustment |
| B | I15 Return to Origin |
| C | I03 Input Test |
| D | I04 Speed Test |
| E | I05 Output Test |
| F | I06 Continuous Running |
| G | I07 XY Motor Origin Test |
| H | 09 Presser·/ Origin Sensor Test |
| I | Intermediate Presser Origin Sensor Test |
| J | Head Board Data Setting |
| K | Main Motor Origin Test |
| L | I01 Touching Panel Correction |
| M | I02 LCD Test |

Press  to quit the Test Mode interface



## (1) Stepping Origin Adjustment

A、 In the test mode interface, user can press  to enter theinterface for adjusting the stepping rigin (as shown in right). User can press  to quit.




B、 User can adjust the origin of the following motors in this interface：

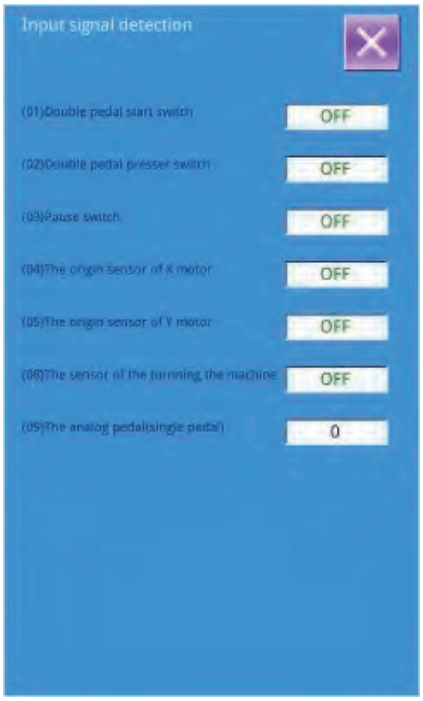
- X Stepping Motor
- Y Stepping Motor
- Presser Stepping Motor
- Intermediate Presser Stepping Motor

Adjustment Procedure：

- At entry to the system, the input indicator will sparkle.
- User can step the pedal to level 2 and press arrow to input the value. The letter will sparkle and the setting indicator is on
- Step the pedal to confirm the origin and setting indicator is off
- Press  to save the value
- Press  to clear the value

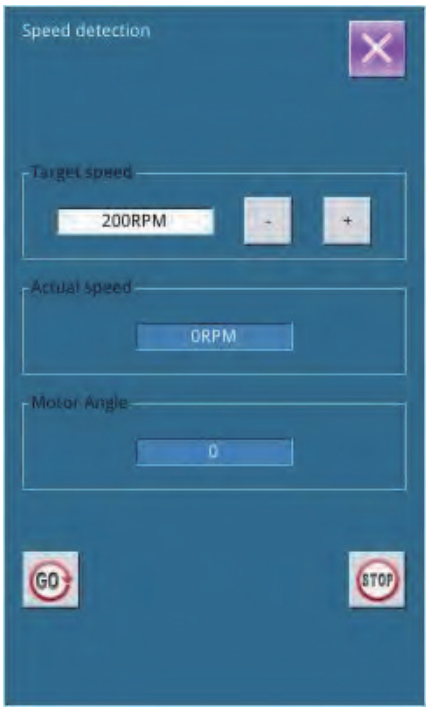
## (2) Input Signal Test Method

In the interface of Test Mode, press  (I03 Input Inspection) to enter the interface of input inspection interface (as shown in right). Users can confirm the input status of each switch and sensor.




**ON**：Turn On
**OFF**：Turn Off
01：Start Switch
02：Presser Switch
03：Emergency Switch
04：X Motor Origin Sensor
05：Y Motor Origin Sensor
06：Origin Sensor of Outer Presser Motor
07：Origin Sensor of intermediate Presser Motor
08：Sensor of Head Tilt
09：Sensor of Simulated (Single) Pedal

## (3) Speed Test




**①Interface for Speed Test**

In the interface of Mode Inspection, Press  （I04speed test） to enter the interface for Speed Test (as shown in right figure). The speed of main shaft motor can be tested in that interface.

Press  to quit the interface for speed test.

**②Speed Test Setting**

Press “+” & “-“ to set the speed of the main shaft motor. Press , then the motor will run at the set speed. At this moment, the actual tested speed is displayed in the interface.. Press  to stop the machine

## (4) Output Inspection




In the interface of Mode Inspection, Press  (I05 Output Inspection) to enter the interface of Output Inspection (as shown in the right figure). The following output status of the solenoid can be checked under that interface.

01：Thread-trimming Solenoid Test

02:Thread-releasing Solenoid Test

03：Thread-Stirring Solenoid Test

Press  to quit output inspection interface

**※Attention: Sewing machine will perform relating actions.**

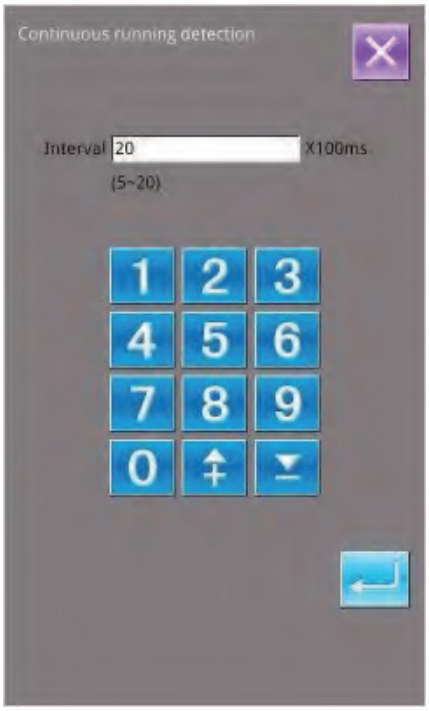
## (5) Continuous Running

**①Display the interface for continuous running**

In the interface of Mode Inspection, Press （I06continuous running）to enter the interface of continuousrunning (as shown in right figure).

A：Action interval

Press to quit that interface.



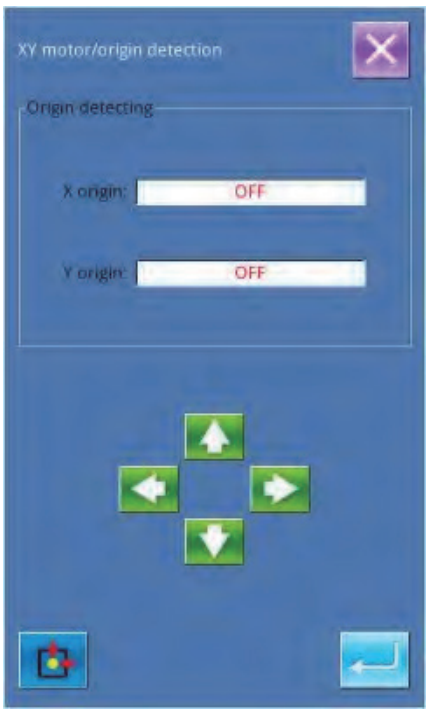

**②Continuous running setting**

Click the columns under the interface of Continuous Running to set the Action interval and Origin Detection. Set the value with the number keys.

Press and step the pedal to start the continuous running. During the running, user can use the pause switch to stop machine or he can stop machine by stepping the pedal or pressing pause switch at action end.

## (6) XY Motor Origin Sensor Test

At Test Mode Interface, user can press (I07XY Motor Origin Test) to activate XY Motor/Origin Output Test Interface (as shown in right picture). If user turns on the machine without entering the Ready Status and pressing to search the origin, user can directly press the direction keys to move the motor and display the On/Off statuses of Sensors at both XY sides. In this way, user can test the working condition of the XY Motor Driver and their sensors. If user enters the Ready Status after power-on or presses to search origin, the user will have to press to serach origin at each entry to the I07 mode in future so that he couuld use direction keys to move XY motors. This is the manual adjustment of the XY origin. The coordinates displayed at left is the deviation value of the origin, while the coordinates displayed at right is the current position of presser



frame. User can press  to set current position as the reference value of the origin.

## (7) Presser Motor / Origin Sensor Detection

According to the status of the presser origin sensor, the position A displays the status (ON/OFF) of presser origin sensor;

By using  & , the user can drive the presser motor at each pulse

Additionally, pressing  is to drive presser motor to the position pointed at below, whose figure is displayed in dark.

A: Presser down Position

B:

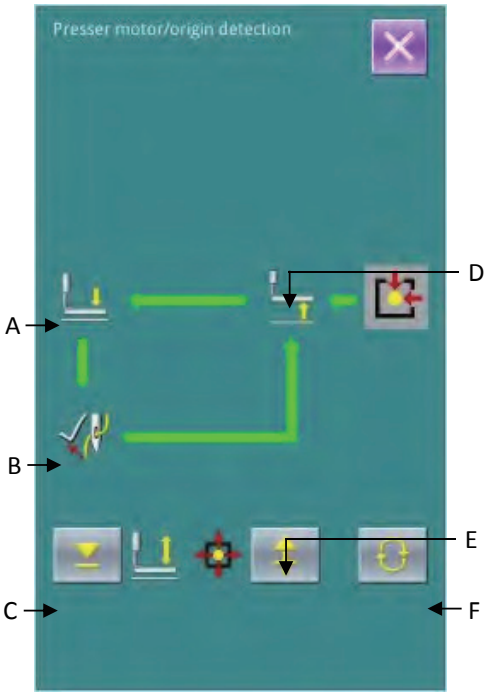
D: Presser Up Position

C: Forward one Step

E: Backward one Step

F: Move to Next Position

**Note: Use Switch to search the origin of presser & thread-trimming motor, then this function will be effective.**



## (8) Main Motor Correction




In Test Mode Interface, press  to enter the interface for correcting the main shaft（As shown in right）

In this status, user can turn the shaft to show the angle of main shaft, so that the main shaft angle correction can be performed.

Press  to set thecurrent position as the origin reference

Press  to quit

## (9) Correction of Touching Panel




A 、 In the interface of Mode Inspection, Press (I01Touch Panel Correction). Then system will hint user 【Enter Touching Panel Correction Mode?】.

Press  to enter the interface for Touch Panel Correction (as shown in right figure). Press  to quit the correction status.

B、 Because the corrections for five spots are needed, the user had better click the cross icon on the screen with tools like touching pen. After the correction, the system will tell user that this operation is successful or not.

**※ During the correction, please do perform the operation according to the positions of crosses. Otherwise, the touching panel will be unable to work normally after the correction**

(10) LCD Test

In the interface of Mode Inspection, press  (I02 LCD Test) to enter the interface of LCD Display Inspection (as shown in right figure). Check whether the LCD fades in that status.



Touch the panel to have the screen display in the cycle of "Blue — Black — Red —Green — White".

Press  to quit the interface of LCD Display Inspection

## 8.11 Keyboard Lock

At Setting Mode Level 2 Interface, user can press  to activate Keyboard Lock Setting Interface.

**①Operation for Keyboard Lock**

：Keyboard Unlocked

：Keyboard Locked

Select  and then  to finish the operation of locking keyboard. Press  to quit the keyboard lock operation.



**②Display of Keyboard Lock Status**

Close Parameter Setting Mode Interface, and have system return to Sewing Data Input Interface (as shown in right picture.), where user can see a lock figure  under the pattern number. In the Keyboard Locked status, only the available figures can be displayed.

**③Range of Keyboard Lock**

1、Interface of Normal Sewing Data Input：

1) Pattern Registration
2) Pattern Naming
3) Scale Rate Setting
4) Max Speed Limitation
5) P Pattern Registration
6) Pattern Deletion

2、Normal Sewing Interface：

1) Frame-moving
2) Counter Setting

3、P Pattern Input Interface：

1) P Pattern Edition
2) P Pattern Copy
3) P Pattern Naming
4) Pattern Deletion

4、P Pattern Sewing Interface：

1) Counter Setting

5、C Pattern Data Input Interface：

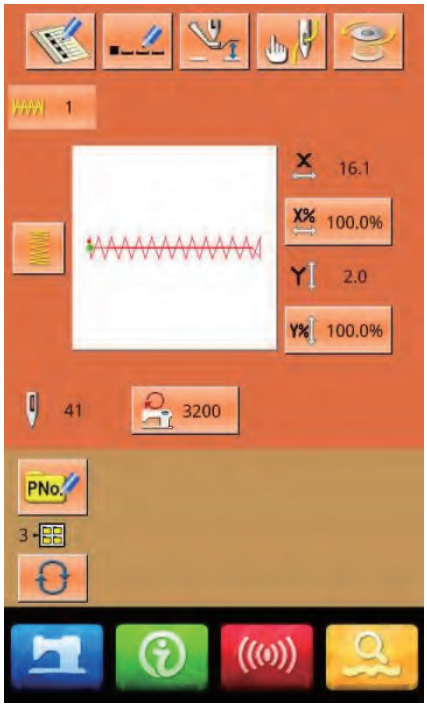
1) C Patten Registration
2) C Pattern Copy
3) C Pattern Naming
4) C Pattern Edition
5) Pattern Deletion

6、C Pattern Sewing Interface：

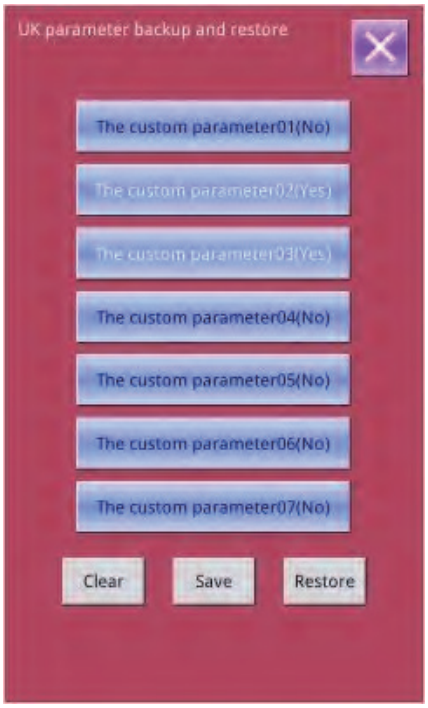
1) Counter Setting

7、parameter Setting Mode：

1) Level 1 Parameter
2) Level 2 Parameter
3) Counter edition
4) Test Mode
5) Pattern Lock Setting



## 8.12 Parameter Back-up

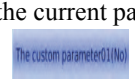



n setting mode level 3, press  to enter the interface of parameter back-up & restoration, as shown in right:

Clear： Clear all the customized parameters that are saved.

Save：Save current parameters

Restore：Restore the current parameters

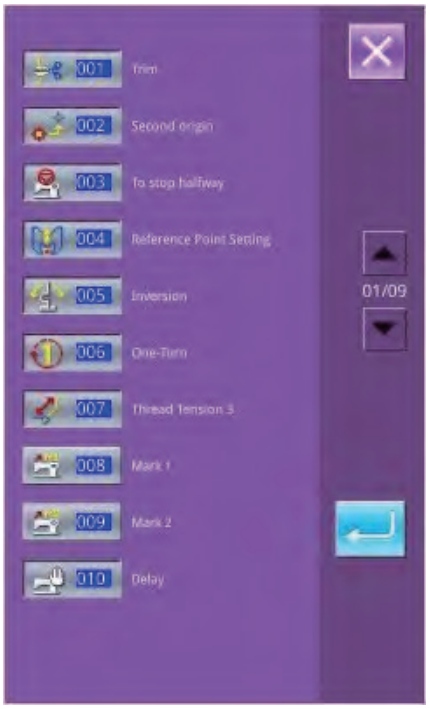
①Click any key among  ~ to set the position for saving the parameter. And then press「Save」to save that parameter.

② Check the content on「Custom xx（On/Off）」. If 「On」 is displayed in bracket, that means this position has the user parameter, for an example 。

③ Select the button with parameters, press「Restore」to reload the corresponding parameter values

④ Press「Clear」to delete all the saved parameters

## 8.13 Pattern Edition Parameter Setting




At Setting Mode Level 3 Interface, user can press  to activate the Interface for Setting Pattern Edition Parameters.

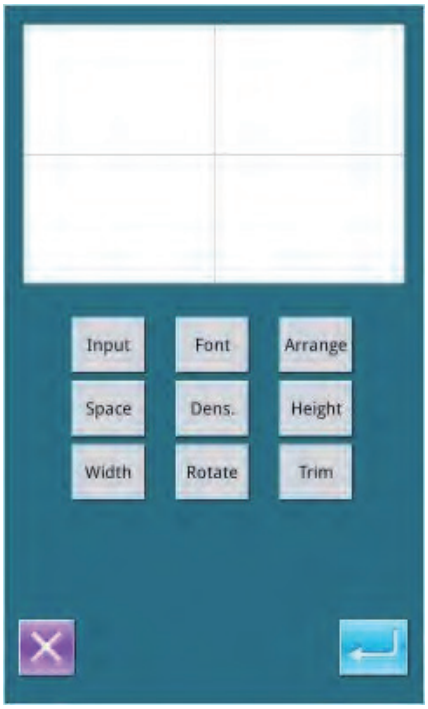
The figures of the available functions are displayed in dark, while the figures of the unavailable functions are displayed with highlight.

Edit the parameters according to your needs, press  to finish the setting.

## 8.14 Letter Embroidery Editions

### 8.14.1Parameter Setting

Press  to have access to the interface for setting letter embroidery parameters (as figure at right).

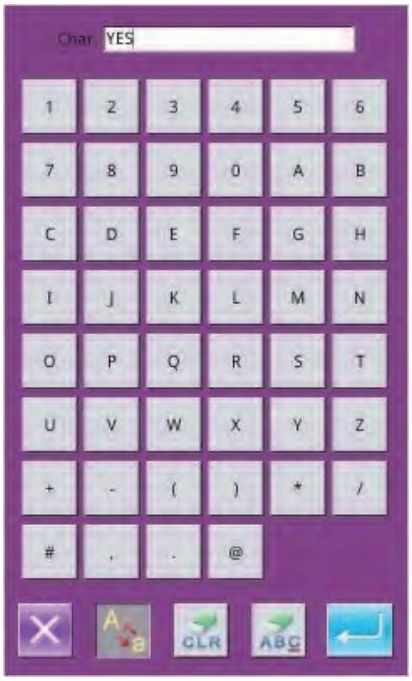



**Function List:**

| Name | Function | Content |
|---|---|---|
| Input | Input figure | Input figure. At most, 20 figures can be input. |
| Font | Select Font | Support 28 kinds of font |
| Arrange | Method of Array | Four kinds of array method: Horizontal Line, Vertical Line, Convex Arc and Concave Arc |
| Space | Letter Interval | Set the interval between neighboring letters |
| Density | Satin Density | Set the density of satin. The larger the set value is, the denser the satin will be. |
| Height | Height Scaling | Scale the height of letter, range from 50~200. |
| Width | Width Scaling | Scale the width of letter, range from 50~200. |
| Rotation | Rotation/Follow（not Follow） | When the array method is line (Horizontal or Vertical), this button will be displayed as Rotation, so that user can use it to set rotating angle of letters;<br>When the array method is arc (Convex Arc or Concave arc), this button will be displayed as Follow (Not Follow), so that user can use it to set whether the figure rotates along with arc. |
| Thread-trimming | Trim/ No Trim | Make sure whether to insert thread-trimming automatically. |

**1、Figure Input**

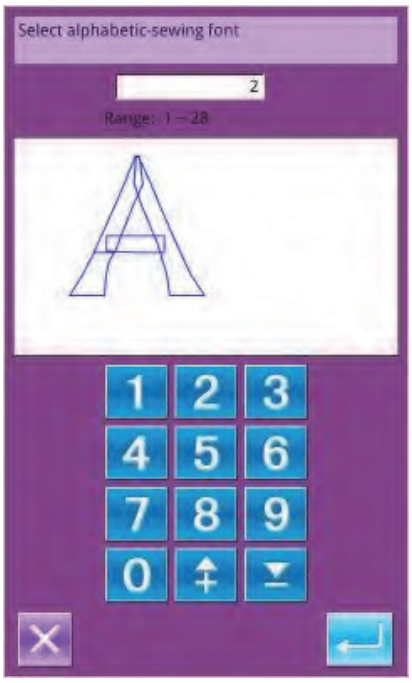
Press「Input」to enter the figure input interface. User needs at least input 1 figure, while 20 figures can be input at most. Press  to save it and quit.




**2、Select Font**

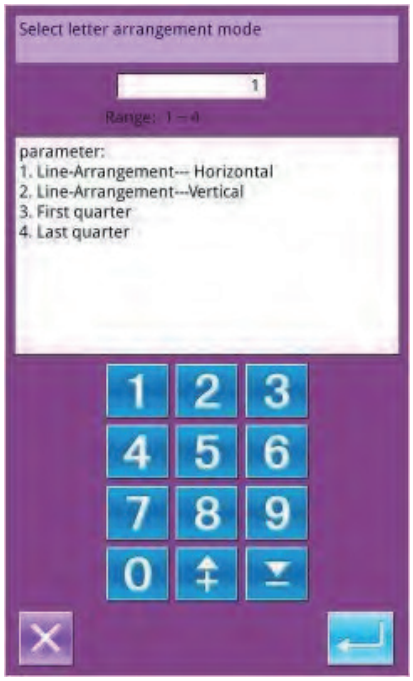
Press「Font」 to enter the font selection interface. The system provides 28 kinds of font. User can input figure from 1 to 28 to select it. Press  to save it and quit.

In this interface, the shape of font will be displayed.



### 3、Arrangement Method

Press「Array」to enter the interface for setting the array method. In this interface, user can select Horizontal Line, Vertical Line, Convex Arc or Concave Arc. Press  to save it and quit.



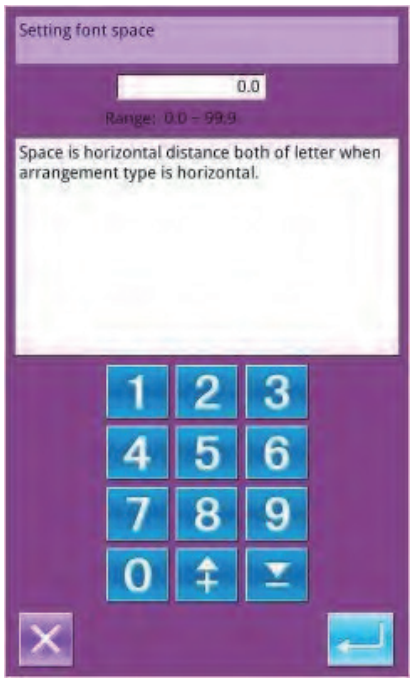

### 4、Letter Interval

Press「Interval」to enter the interface for setting. At horizontal arrangement, the interval is the horizontal distance.

At vertical arrangement, the interval is the vertical distance.

At arc arrangement, the interval is the distance between the letters on the arc.

Range is 0~99.9mm。



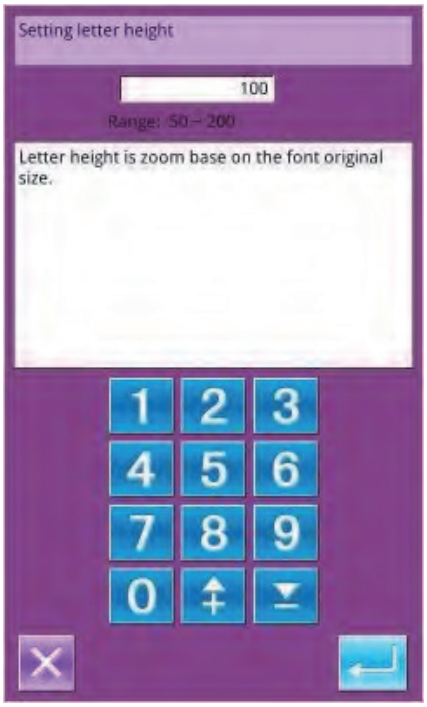
**5、Satin Density**

Press「Density」to enter the interface for setting the satin density. The range of satin density is 50~200.



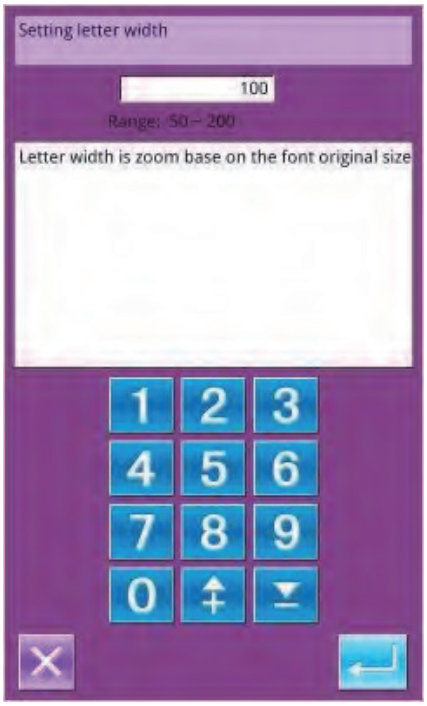

**6、Height Scale**

Press「Height」to enter the interface for setting the letter height. The scale rate of letter height is 50~200.



**7、Width Scale**

Press「Width」to enter the interface for setting the letter height. The scale rate of letter width is 50~200.

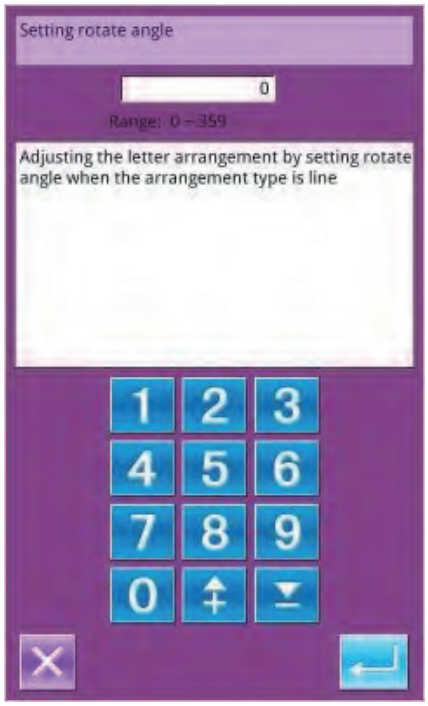



**8、Rotation Angle**

When the array method is horizontal or vertical arrangement, this button is the rotating angle of letter. Press "Rotation" to enter the interface for setting the rotating angle.

The rotating direction is anti-clockwise, ranging at 0°~359°。

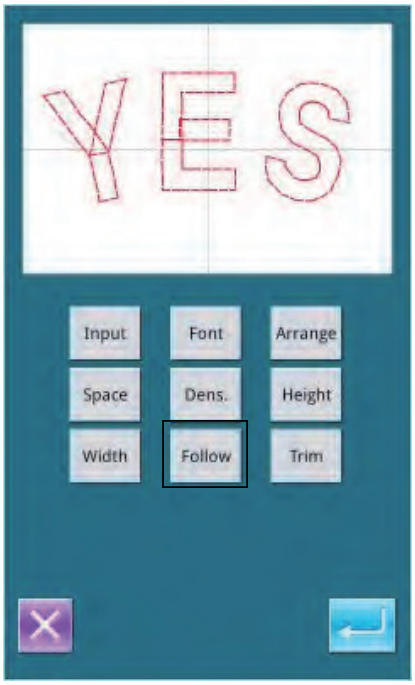
**Note: When the arrangement method is convex arc or concave arc, this button will be used to set whether the letter rotates with arc.**



**9、Follow/ Not Follow**

When the arrangement method is convex arc or the concave arc, this button will be used to set whether the letter rotates along with the arc. Press this button to shift between “Follow” and “Not Follow”.

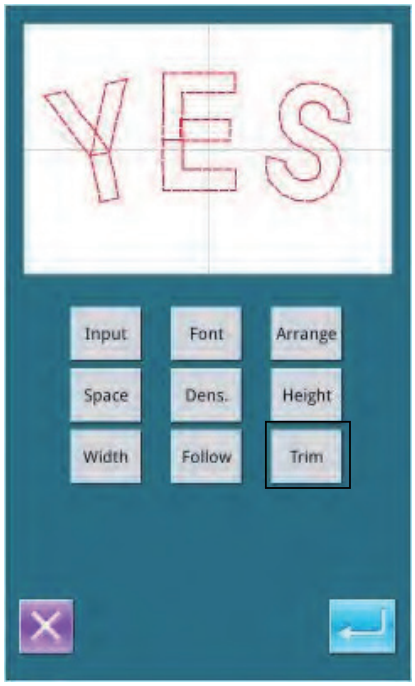
**【 Note 】: When the arrangement method is horizontal line or vertical line, this button is used to set rotating angle**




**10、Auto Insert Trimming**

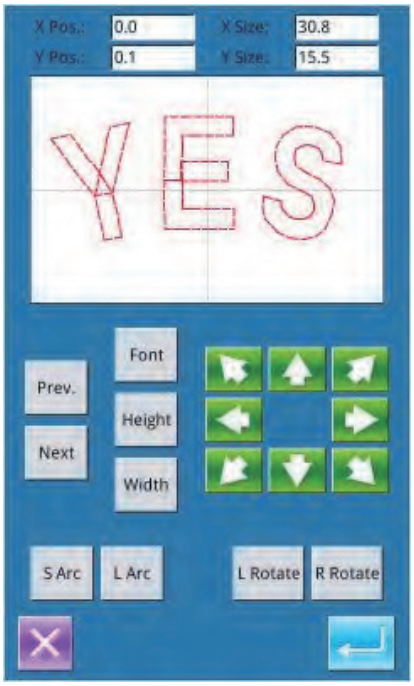
In default condition, the system will add trimming code automatically, which is to add trimming code at the joint between linear sewing and empty feeding at letter sewing, as well as the sewing end.

Press this button to shift between “Trim” and “Not Trim”. “Not Trim” means the system deactivates the functions for adding trimming code automatically.



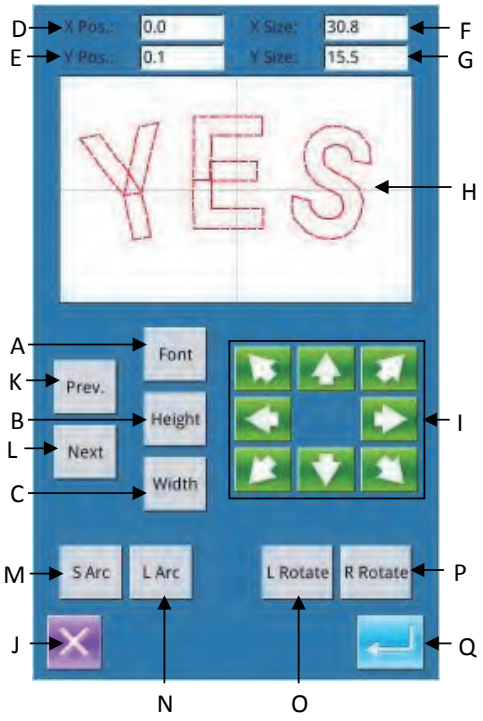
**11、Confirm the Pattern**

Set the pattern for sewing and press to enter the interface for adjusting the letter sewing pattern.




## 8.14.2Adjustment of Pattern at Letter Sewing

In the interface for setting the parameter of letter sewing, user can set each parameter. Then user can press to enter the adjustment interface, where user can have the further adjustmetn on the pattern.



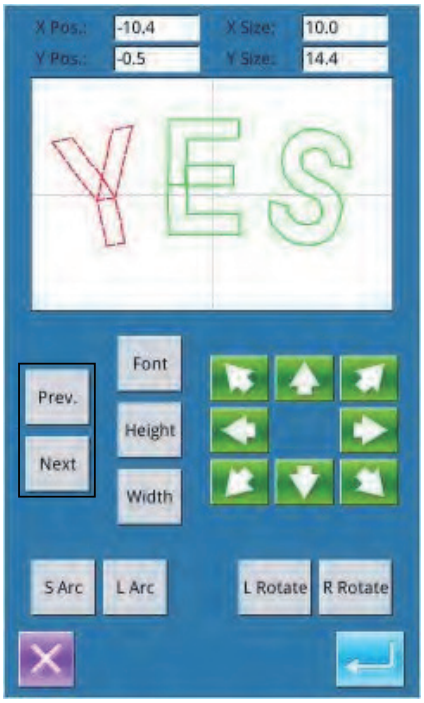
**Functions:**

| No. | Functions | Content |
|---|---|---|
| A | Font Selection | Change the font of the selected letter. The setting method is same to that in Parameter Setting |
| B | Scale in Height | Scale the height of the selected letter. The setting method is same to that in Parameter Setting |
| C | Scale in Width | Scale the width of the selected letter. The setting method is same to that in Parameter Setting |
| D | X Position | Display the X coordinate of center point of the selected letter |
| E | Y Position | Display the Y coordinate of center point of the selected letter |
| F | X Size | Display the width of the selected letter |
| G | Y Size | Display the height of the selected letter |
| H | Pattern Display | Display the current pattern for letter sewing. The selected letters are displayed in red; the unselected letter is displayed in green. |
| I | Direction Key | Adjust the position of the selected letter. |
| J | Esc | Return to the previous interface |
| K | Previous Letter (from right to left) | Select the letter for adjustment from right to left. The selected figure is displayed in red. When the icon still goes to left at selecting the last letter, the entire letters will be selected |
| L | Next Letter (from left to right) | Select the letter for adjustment from left to right. The selected figure is displayed in red. When the icon still goes to right at selecting the last letter, the entire letters will be selected |
| M | Left Tilt/Radian Down | When the array method is horizontal array or the vertical array, this button will display “Left Tilt”. Pressing this button will rotate the entire pattern counterclockwise in the center of origin<br>When the array method is arc, this button will display “Radian Down”. Pressing this button will reduce the radian of entire pattern.<br>[Note] This operation is for the entire pattern. |
| N | Right Tilt/Radian Up | When the array method is horizontal array or the vertical array, this button will display “Right Tilt”. Pressing this button will rotate the entire pattern clockwise in the center of origin<br>When the array method is arc, this button will display “Radian Up”. Pressing this button will increase the radian of entire pattern.<br>[Note] This operation is for the entire pattern. |
| O | Left Rotation | Adjust the rotating angle of the selected letter counterclockwise. The rotation center is the center of the letter |
| P | Right Rotation | Adjust the rotating angle of the selected letter clockwise. The rotation center is the center of the letter |
| Q | Enter | Press it to have access to the pattern save interface |

Example:

**6、 Select Single Letter for Adjustment**

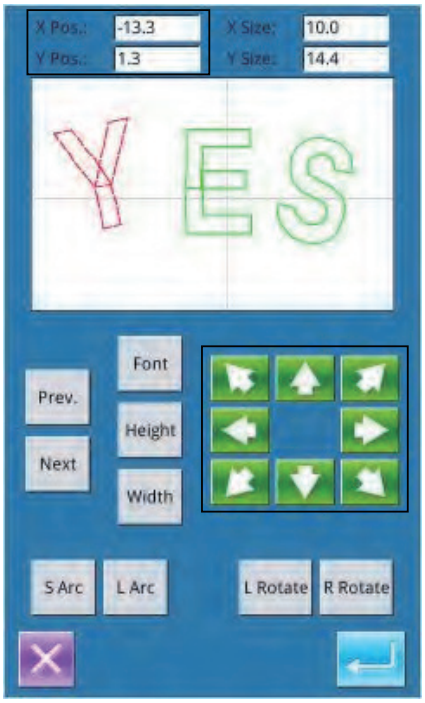
Press “Previous Letter” or “Next Letter” to select the single letter for adjustment. The selected letter is displayed in red, while the unselected are displayed in green




**7、 Letter Position Adjustment**

Press the direction key to adjust the position of the selected letter. User can see the coordinates from “X Position” and “Y Position”

With the same operations, user can adjust the position of other letters.



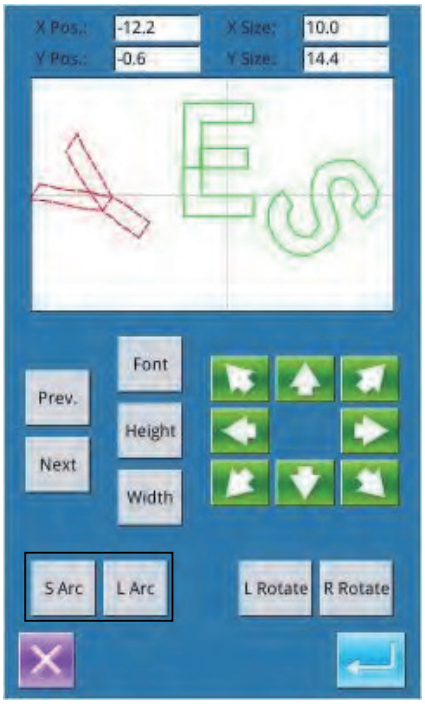
**8、 Adjust the Rotating Angle of Entire Pattern**

Press “Left Tilt” or “Right Tilt” to adjust the rotating angle of the entire pattern

“Left Tilt”: Counterclockwise Rotation

“Right Tilt”: Clockwise Rotation

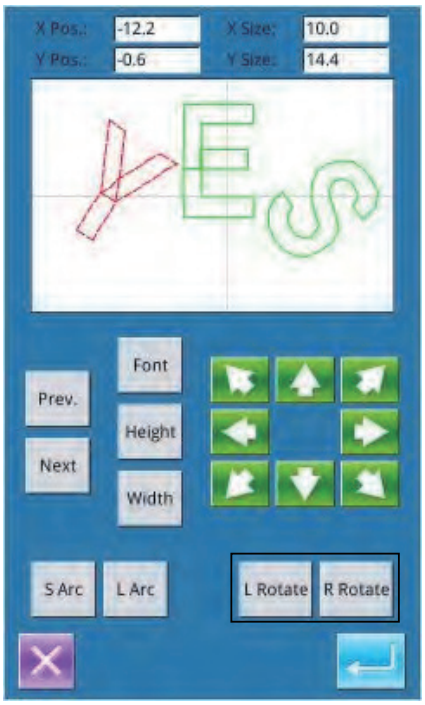
**[Note]: When the array method is arc, these buttons will turn to “Radian Up”/ “Radian Down”, which are to adjust the radian of the entire pattern**




**9、 Rotation of Single Letter**

Select a letter and then press “Left Rotation” or “Right Rotation” to adjust the rotating angle of the selected letter

**[Note] When adjusting the rotating angle, user had better adjust the rotating angle of the entire pattern at first. If user adjusts the rotating angle of the single letter at first, the adjustment will be canceled when user rotates the entire pattern.**



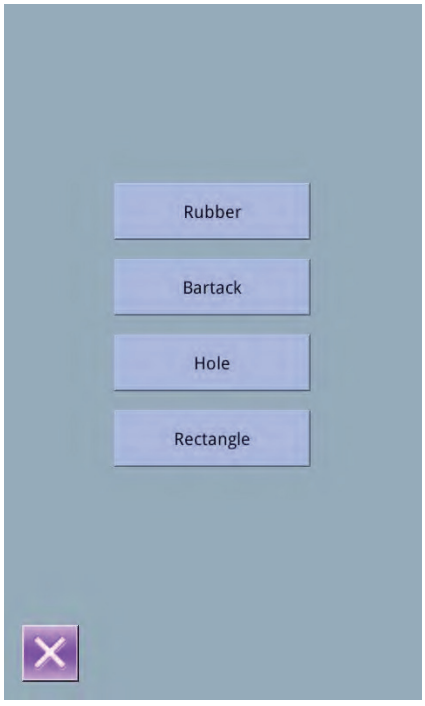
**10、 Save Pattern**

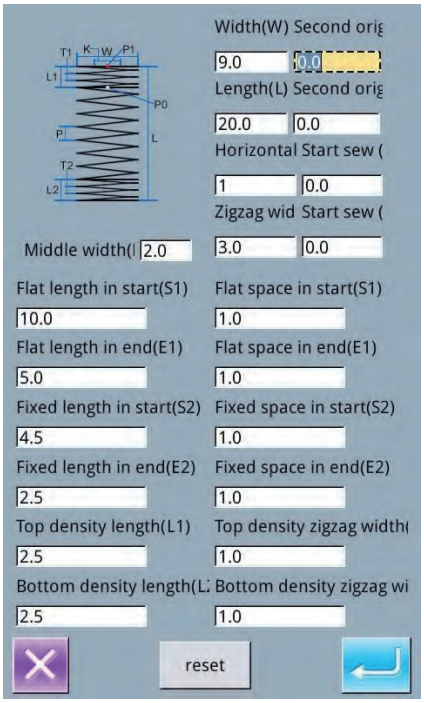
After the adjustment, press  to have access to interface for saving patterns



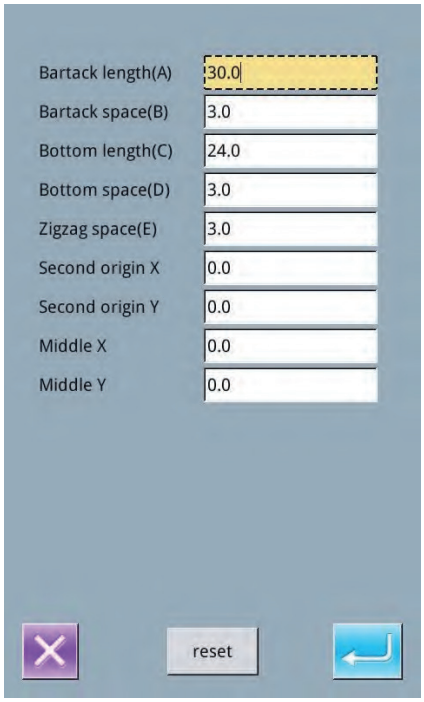

## 8.15 Model Input

Press  using parameter Settings to quickly generate template patterns

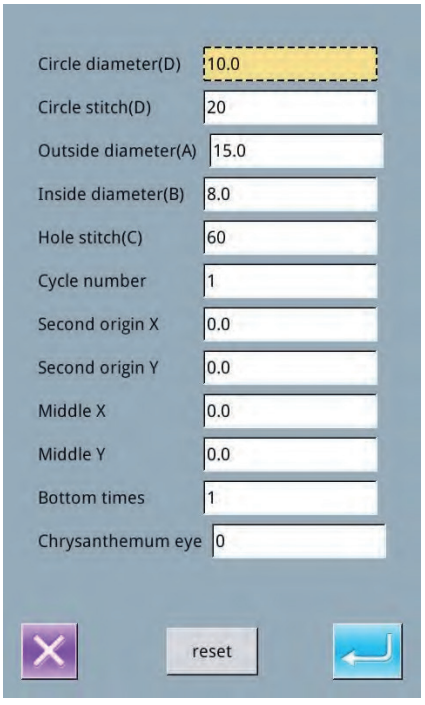




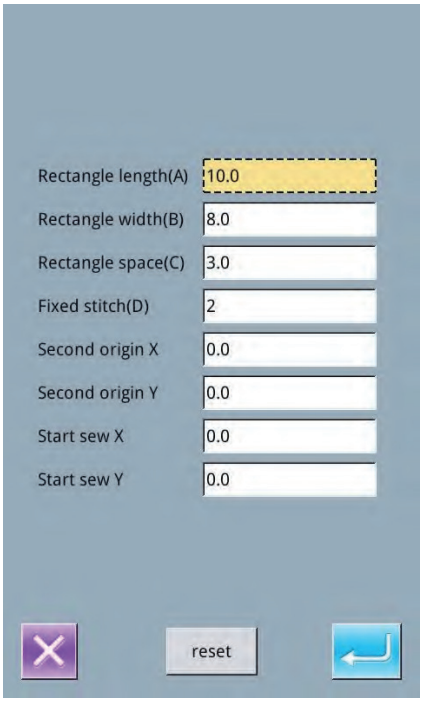

Rubber




Bartack




Hole

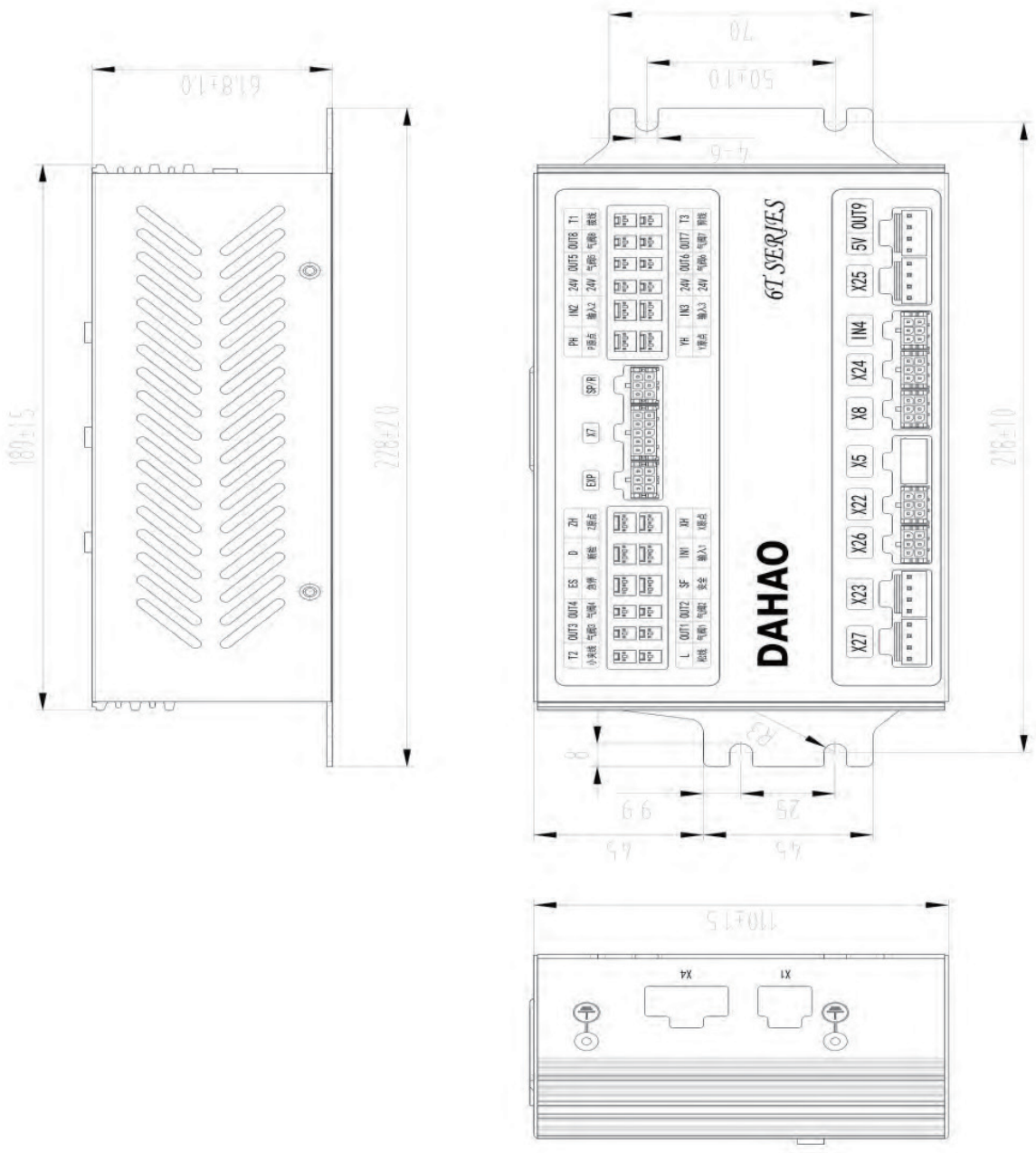



Rectangle

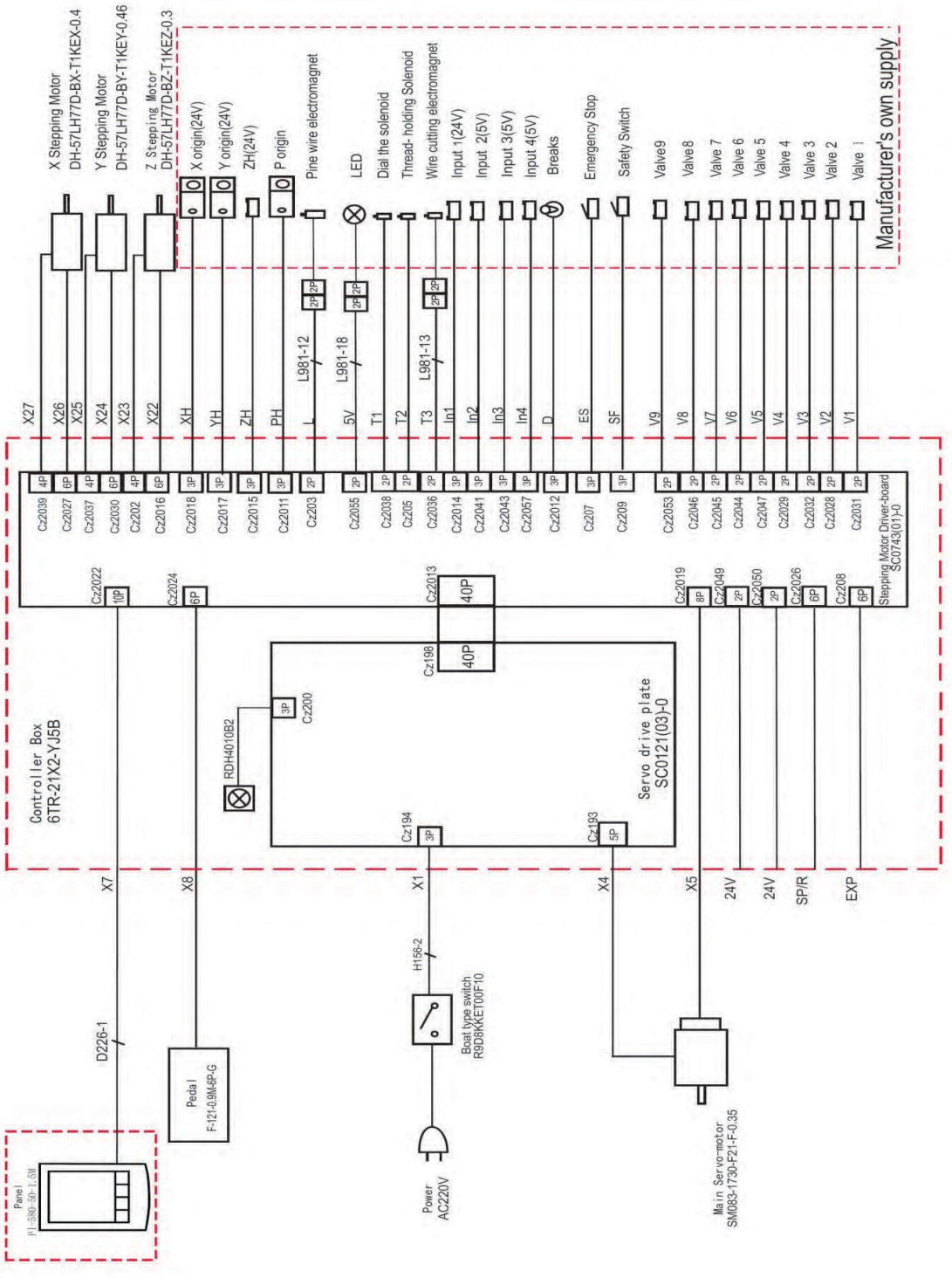
# 9 Appendix 1 Control System Principl

## 9. 1 Installation Size of Control Panel

## 9. 2 Installation Size of Control Box



## 9. 3 Diagram and Cable Connection

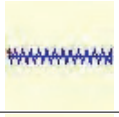
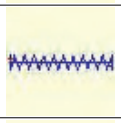
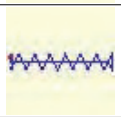
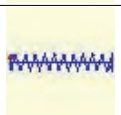
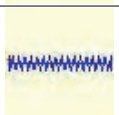
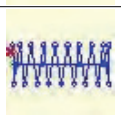
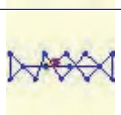
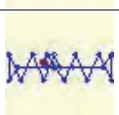


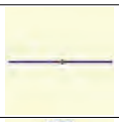
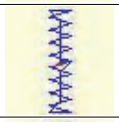
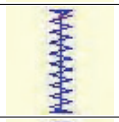
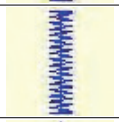
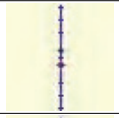
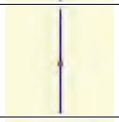
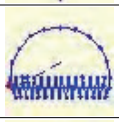
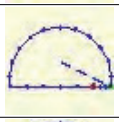
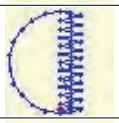
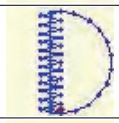
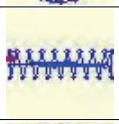
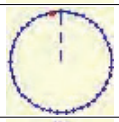
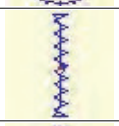
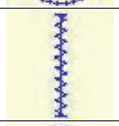
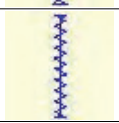
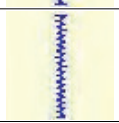
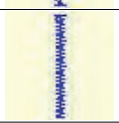
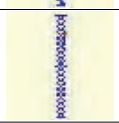
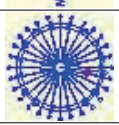
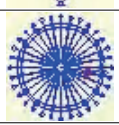
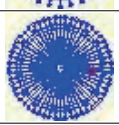
# 10 Appendix 2 Pattern List

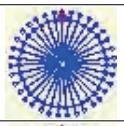
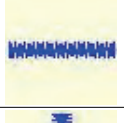
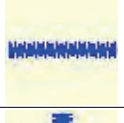
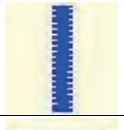
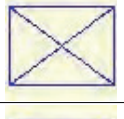
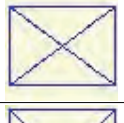
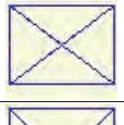
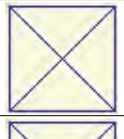
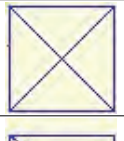
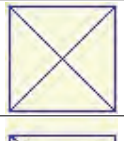
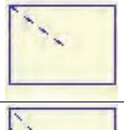
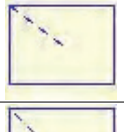
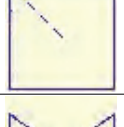
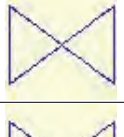
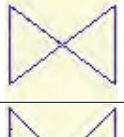
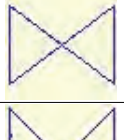
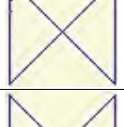
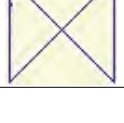
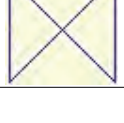
The following sewing patterns are the preset ones, which can be used according to the set specifications.(As long as user can confirm a pattern is within the working range of the presser and feeding plate, he could select that pattern for sewing)

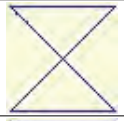
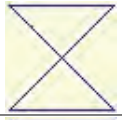
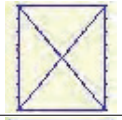
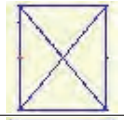
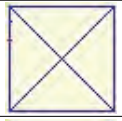
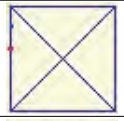
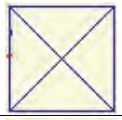
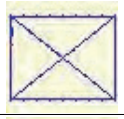
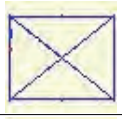
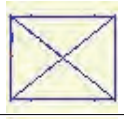
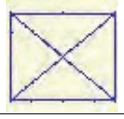
Please use the presser and the feeding plate that meet the needs of patterns. The sewing size is the size with scale rate at 100%.

- **The basic pattern within SC212（468G）**

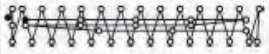
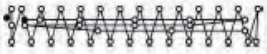
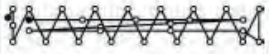
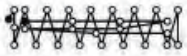
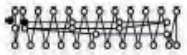
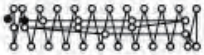
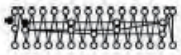
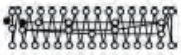
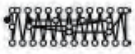
| NO. | Sewing Pattern | Stitch Number | Size (mm) | NO. | Sewing Pattern | Stitch Number | Size (mm) |
|---|---|---|---|---|---|---|---|
| 1 |  | 41 | 16.1×2 | 2 |  | 41 | 10.2×2 |
| 3 |  | 41 | 16×2.4 | 4 |  | 41 | 24×3 |
| 5 |  | 27 | 10.1×2 | 6 |  | 27 | 16×2.4 |
| 7 |  | 35 | 10.1×2 | 8 |  | 35 | 16×2.4 |
| 9 |  | 55 | 24×3 | 10 |  | 63 | 24×3 |
| 11 |  | 20 | 6.1×2.4 | 12 |  | 27 | 6.2×2.4 |
| 13 |  | 35 | 6.1×2.4 | 14 |  | 14 | 8×2 |
| 15 |  | 20 | 8×2 | 16 |  | 27 | 8×2 |
| 17 |  | 20 | 10×0 | 18 |  | 27 | 10×0 |
| 19 |  | 27 | 25.2×0 | 20 |  | 35 | 24.8×0 |

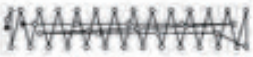
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 21 |  | 40 | 25.2×0 | | 22 |  | 43 | 35×0 |
| 23 |  | 27 | 4×20 | | 24 |  | 35 | 4×20 |
| 25 |  | 41 | 4×20 | | 26 |  | 55 | 4×20 |
| 27 |  | 17 | 0×20 | | 28 |  | 20 | 0×10 |
| 29 |  | 20 | 0×20 | | 30 |  | 27 | 0×20 |
| 31 |  | 51 | 10.1×7 | | 32 |  | 62 | 12.1×7 |
| 33 |  | 23 | 10.2×6 | | 34 |  | 30 | 12×6 |
| 35 |  | 47 | 7×10 | | 36 |  | 47 | 7×10 |
| 37 |  | 89 | 24×3 | | 38 |  | 27 | 8×2 |
| 39 |  | 25 | 11.8×12 | | 40 |  | 45 | 12×12 |
| 41 |  | 28 | 2.4×20 | | 42 |  | 38 | 2.4×25 |
| 43 |  | 38 | 2.4×25 | | 44 |  | 57 | 2.4×30 |
| 45 |  | 75 | 2.4×30 | | 46 |  | 41 | 2.4×30 |
| 47 |  | 89 | 8×8 | | 48 |  | 98 | 8×8 |
| 49 |  | 147 | 8×8 | | 50 |  | 163 | 8×8 |

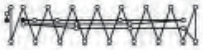
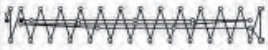
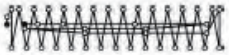
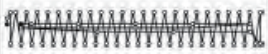
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 51 |  | 110 | 7.9×7.9 | 52 |  | 120 | 7.9×7.9 |
| 53 |  | 130 | 7.9×7.9 | 54 |  | 51 | 12.4×10.2 |
| 55 |  | 50 | 12.4×10.2 | 56 |  | 52 | 21×6 |
| 57 |  | 57 | 21×6 | 58 |  | 102 | 19×3 |
| 59 |  | 115 | 40×5 | 60 |  | 115 | 40×5 |
| 61 |  | 93 | 5×30 | 62 |  | 109 | 5×30 |
| 63 |  | 108 | 40×30 | 64 |  | 80 | 40×30 |
| 65 |  | 64 | 40×30 | 66 |  | 96 | 30×30 |
| 67 |  | 76 | 30×30 | 68 |  | 60 | 30×30 |
| 69 |  | 52 | 40×30 | 70 |  | 40 | 40×30 |
| 71 |  | 32 | 40×30 | 72 |  | 44 | 30×30 |
| 73 |  | 36 | 30×30 | 74 |  | 28 | 30×30 |
| 75 |  | 60 | 40×30 | 76 |  | 48 | 40×30 |
| 77 |  | 36 | 40×30 | 78 |  | 56 | 30×30 |
| 79 |  | 44 | 30×30 | 80 |  | 36 | 30×30 |

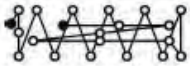
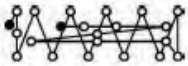
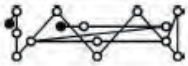
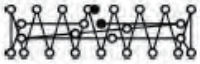
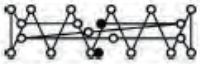
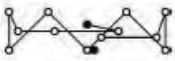
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 81 |  | 67 | 40×30 | | 82 |  | 51 | 40×30 |
| 83 |  | 39 | 40×30 | | 84 |  | 55 | 30×30 |
| 85 |  | 35 | 30×30 | | 86 |  | 42 | 30×30 |
| 87 |  | 32 | 30.1×30 | | 88 |  | 26 | 30×30 |
| 89 |  | 74 | 20×24 | | 90 |  | 54 | 20×24 |
| 91 |  | 65 | 20×20 | | 92 |  | 49 | 20×20 |
| 93 |  | 39 | 20×20 | | 94 |  | 63 | 25×20 |
| 95 |  | 51 | 25×20 | | 96 |  | 45 | 25×20 |
| 97 |  | 42 | 25×20 | | 98 |  | 33 | 25×20 |
| 99 |  | 27 | 25×20 | | 100 |  | 88 | 30×25 |

- **The machine type is 210. When the Parameter K[850] is set at 3, 5, K or F:**

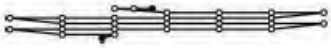
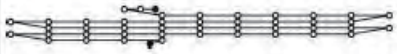
| 适用于一般重量的布料（-03） | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 1 |  | 42 | 16 | 2 | 65 |  | 43 | 16 | 2 |
| 4 |  | 31 | 16 | 2 | 66 |  | 32 | 16 | 2 |
| 5 |  | 29 | 10 | 2 | 67 |  | 30 | 10 | 2 |
| 8 |  | 21 | 7 | 2 | 68 |  | 22 | 7 | 2 |
| 13 |  | 35 | 10 | 2 | 69 |  | 36 | 10 | 2 |
| 15 |  | 42 | 10 | 2 | 70 |  | 43 | 10 | 2 |
| 20 |  | 28 | 7 | 2 | 71 |  | 29 | 7 | 2 |
| 21 |  | 35 | 7 | 2 | 72 |  | 36 | 7 | 2 |
| 64 |  | 30 | 16 | 2 | 89 |  | 90 | 24 | 3 |

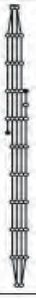
| 适用于厚重的布料（-05） | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 2 |  | 42 | 20 | 3 | 18 |  | 56 | 24 | 3 |
| 3 |  | 35 | 20 | 3 | 19 |  | 64 | 24 | 3 |
| 6 |  | 30 | 16 | 3 | 62 |  | 42 | 20 | 3 |
| 14 |  | 35 | 16 | 3 | 63 |  | 35 | 20 | 3 |
| 16 |  | 43 | 16 | 3 | 78 |  | 43 | 20 | 3 |
| 17 |  | 42 | 24 | 3 | 79 |  | 36 | 20 | 3 |

| 适用于厚重的布料（-05） | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 80 |  | 31 | 16 | 3 | 83 |  | 43 | 24 | 3 |
| 81 |  | 36 | 16 | 3 | 84 |  | 57 | 24 | 3 |
| 82 |  | 44 | 16 | 3 | 85 |  | 65 | 24 | 3 |

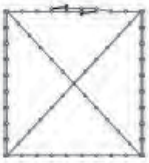
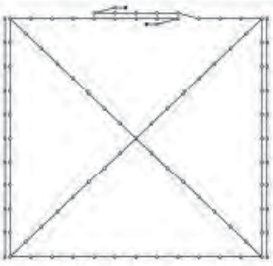
| 适用于针织布料（-0K）和女性内衣(-0F) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 7 |  | 28 | 8 | 2 | 73 |  | 29 | 8 | 2 |
| 9 |  | 21 | 7 | 2 | 74 |  | 22 | 7 | 2 |
| 22 |  | 14 | 7 | 2 | 75 |  | 15 | 7 | 2 |
| 31※ |  | 28 | 8 | 2 | 76※ |  | 29 | 8 | 2 |
| 32※ |  | 22 | 8 | 2 | 77※ |  | 23 | 8 | 2 |
| 33※ |  | 15 | 8 | 2 | | | | | |

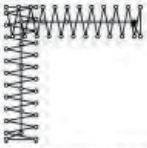
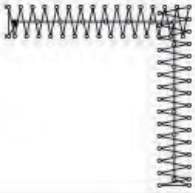
*the positions of start stitch and end stitch are at the center of the pattern

| 直线结 | | | | | 垂直曲折缝 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 10 |  | 21 | 10 | 0.3 | 44 |  | 46 | 9 | 15 |
| 11 |  | 28 | 10 | 0.3 | | | | | |
| 12 |  | 28 | 20 | 0.3 | 45 |  | 70 | 9 | 25 |
| 23 |  | 35 | 25 | 0.3 | | | | | |
| 24 |  | 42 | 25 | 0.3 | | | | | |
| 25 |  | 45 | 25 | 0.3 | | | | | |

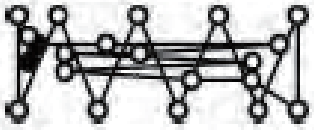
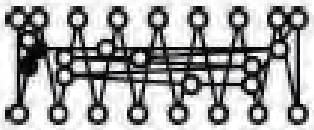
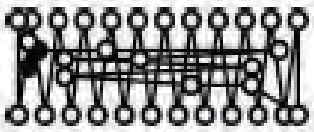
| 垂直结 | | | | | 垂直直线结 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 26 |  | 28 | 3 | 10 | 28 |  | 19 | 0.3 | 10 |
| 27 |  | 35 | 3 | 10 | 29 |  | 21 | 0.3 | 10 |
| 40 |  | 32 | 3 | 16 | 30 |  | 28 | 0.3 | 10 |
| 41 |  | 36 | 3 | 16 | 46 |  | 27 | 0.3 | 20 |
| 42 |  | 44 | 3 | 20 | 47 |  | 44 | 0.3 | 25 |
| 43 |  | 68 | 3 | 24 | | | | | |

| 月牙结 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 34 |  | 35 | 12 | 7 | 37 |  | 57 | 7 | 12 |
| 35 |  | 58 | 12 | 7 | 38 |  | 53 | 7 | 10 |
| 36 |  | 57 | 7 | 12 | 39 |  | 53 | 7 | 10 |

| X形结 | | | | | 交叉结 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 48 |  | 70 | 10 | 10 | 50 |  | 84 | 16 | 16 |
| 49 |  | 93 | 9.6 | 9.6 | 51 |  | 105 | 30 | 26 |

| L形结 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 52 |  | 60 | 11.3 | 11.2 | 53 |  | 60 | 11.3 | 11.2 |
| 54 |  | 78 | 15.3 | 15.2 | 55 |  | 78 | 15.3 | 15.2 |

| 菊形缝 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | | 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 | | | | 长度 | 宽度 |
| 56 |  | 106 | 9 | 9 | 59 |  | 104 | 10 | 10 |
| 57 |  | 116 | 9 | 9 | 60 |  | 114 | 10 | 10 |
| 58 |  | 127 | 9 | 9 | 61 |  | 124 | 10 | 10 |

| 圓眼鈕孔 | | | | |
|---|---|---|---|---|
| 号码 | 花样 | 针数 | 尺寸（mm） | |
| | | | 长度 | 宽度 |
| 86 |  | 21 | 6 | 2 |
| 87 |  | 28 | 6 | 2 |
| 88 |  | 35 | 6 | 2 |

*the positions of start stitch and end stitch are at the center of the pattern

- **The machine type is 210. When the parameter K[850] is set at BUTN:**

The following patterns are preset in the system. As long as the needle can go across the button hole, user can select that pattern. For the pattern without satin stitch, user needs do the sewing at one side firstly, and then make the sewing at the other side after trimming.

| No. | Button Hole Number | Pattern | Line Number | Over-seam Line | Stitch Number | Size (mm) | |
|---|---|---|---|---|---|---|---|
| | | | | | | X | Y |
| 1 | 2 |  | 6 | - | 12 | 3.4 | 0 |
| ※1 54 | | | 6 | - | 12 | | |
| 2 | | | 8 | - | 14 | | |
| ※2 55 | | | 8 | - | 14 | | |
| 3 | | | 10 | - | 16 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | | | 12 | – | 18 | | |
| ※2<br>5 | | | 16 | – | 22 | | |
| ※2<br>6 | | | 20 | – | 26 | | |
| ※1<br>56 | | | 6 | – | 11 | | |
| ※3<br>7 | |  | 6 | – | 12 | 0 | 3.4 |
| ※3<br>23 | | | 10 | – | 16 | | |
| ※3<br>8 | | | 12 | – | 18 | | |
| ※3<br>9 | |  | 5-5-5 | – | 21 | | |
| ※3<br>24 | | | 7-7-7 | – | 27 | | |
| ※3<br>25 | 3 |  | 5-5-5 | – | 21 | 2.6 | 2.4 |
| ※3<br>26 | | | 7-7-7 | – | 27 | | |
| ※1<br>57 | | | 6-6 | 1 | 18 | | |
| 10 | | | 6-6 | 1 | 19 | | |
| ※1<br>58 | |  | 8-8 | 1 | 22 | | |
| 11 | | | 8-8 | 1 | 23 | | |
| 12 | | | 8-8 | 3 | 25 | 3.4 | 3.4 |
| 13 | | | 10-10 | 1 | 27 | | |
| 27 | | | 12-12 | 1 | 31 | | |
| ※4<br>14 | 4 | | 6-6 | 0 | 24 | | |
| ※5<br>36 | | | 6-6 | 0 | 24 | | |
| ※4<br>28 | |  | 8-8 | 0 | 28 | | |
| ※5<br>37 | | | 8-8 | 0 | 28 | 3.4 | 3.4 |
| ※4<br>15 | | | 10-10 | 0 | 32 | | |
| ※5<br>38 | | | 10-10 | 0 | 32 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ※4 29 | | | 12-12 | 0 | 36 | | |
| ※5 39 | | | 12-12 | 0 | 36 | | |
| ※1 59 | | | 6-5 | 1 | 17 | | |
| 16 | | | 6-5 | 1 | 18 | | |
| ※1 60 | |  | 8-7 | 1 | 21 | | |
| 17 | | | 8-7 | 1 | 22 | | |
| 30 | | | 10-9 | 1 | 26 | | |
| ※1 61 | | | 6-6 | 1 | 18 | | |
| 18 | | | 6-6 | 1 | 19 | | |
| ※1 62 | | | 8-8 | 1 | 22 | | |
| 19 | |  | 8-8 | 1 | 23 | | |
| ※1 63 | | | 10-10 | 1 | 26 | | |
| 31 | | | 10-10 | 1 | 27 | | |
| 45 | | | 12-12 | 1 | 31 | | |
| ※4 20 | | | 6-6 | 0 | 24 | | |
| ※5 40 | | | 6-6 | 0 | 24 | | |
| ※4 32 | |  | 8-8 | 0 | 28 | | |
| ※5 41 | | | 8-8 | 0 | 28 | | |
| ※4 33 | | | 10-10 | 0 | 32 | | |
| ※5 42 | | | 10-10 | 0 | 32 | | |
| ※1 64 | | | 6-6 | 1 | 18 | | |
| ※3 21 | |  | 6-6 | 1 | 19 | 2.4 | 3.4 |
| ※3 34 | | | 10-10 | 1 | 27 | | |
| ※3※4 22 | |  | 6-6 | 0 | 24 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ※3※5 43 | | | 6-6 | 0 | 24 | | |
| ※3※4 35 | | | 10-10 | 0 | 32 | | |
| ※3※5 44 | | | 10-10 | 0 | 32 | | |
| 46 | | | 6-7 | 1 | 19 | 3.4 | 3.4 |
| 47 | |  | 8-9 | 1 | 23 | | |
| 48 | | | 10-11 | 1 | 27 | | |
| 49 | | | 12-13 | 1 | 31 | | |
| 65 | 4 | | 6-6 | 1 | 19 | 2.8 | 2.8 |
| 66 | | | 8-8 | 1 | 23 | | |
| 67 | |  | 8-8 | 3 | 25 | | |
| 68 | | | 10-10 | 1 | 26 | 2.6 | 2.6 |
| 69 | | | 12-12 | 1 | 31 | | |

※ 1 It is used at small hole button.

※ 2Don't use the button elevation spring.

※ 3After sewing one side, the machine will lift the button clamp and stir the thread. In order to finish the sewing, user needs step the pedal again before the machine starts sewing at other side; or step the pedal after machine sews one side.

※ 4After sewing one side, the machine will stir the thread without lifting the button clamp, and then make the sewing at the other side.

| Used for buttons with handles | | | | | |
|---|---|---|---|---|---|
| No. | Pattern | Line Number | Stitch Number | Size (mm) | |
| | | | | X | Y |
| 50 |  | 6 | 12 | 3.4 | 0 |
| 51 | | 8 | 14 | | |
| 52 | | 10 | 16 | | |
| 53 | | 12 | 18 | | |

# 11 Appendix 3Warning List

| NO. | Name of Malfunction | Solution |
|---|---|---|
| E-010 | The emergency stop switch is not in the correct position | Press the reset key to eliminate the error |
| E-002 | Emergency stop during sewing | Press the reset key to eliminate the error |
| E-007 | IPM overvoltage | |
| E-011 | The machine enters emergency stop 1 | |
| E-014 | The spindle origin retrieves the exception | Please turn off the power |
| E-016 | When the power is in, the panel has a key in the state of pressing down, or the key contact is poor | Turn off the power and confirm the operation panel keys |
| E-017 | Disconnection detection abnormalities | Press the reset button |
| E-025 | When the power is connected or when the prepare button is pressed, the pedal switch is pressed to the 2nd position | Confirm that the pedal switch is in the 0 position |
| E-028 | Valve (fan) failure | |
| E-029 | The origin detection of the medium pressure foot is abnormal | |
| E-030 | The communication between stepping and master is abnormal | Please turn off the power |
| E-032 | The Z signal of the spindle motor encoder is abnormal | |
| E-034 | The power supply is not working properly | Please turn off the power |
| E-035 | When the power supply is connected or when the prepare button is pressed, the pedal switch is pressed to the 1st position | Confirm that the pedal switch is in the 0 position |
| E-036 | When the power supply is connected, the pedal switch is reversed to 3rd gear or the pedal is not connected | |
| E-045 | Device abnormality | |
| E-046 | Validation error | |
| E-047 | Data validation error | |
| E-050 | When the power is plugged in, the sewing machine head flips over | Turn off the power, hold up the head, and confirm that the head is turned to the switch position correctly |
| E-051 | The machine head flips over before entering the sewing readiness state | Turn off the power and confirm that the tip switch position is correct |
| E-052 | Head tip over when entering the sewing readiness state | Turn off the power, hold up the head, and confirm that the head tipping switch is in the correct position |
| E-053 | The machine head flips over after entering the sewing readiness state | Turn off the power, hold up the head, and confirm that the head tipping switch is in the correct position |
| E-054 | The head of the sewing machine overturns | Turn off the power, hold up the head, and |

| NO. | Name of Malfunction | Solution |
|---|---|---|
| | during sewing | confirm that the head tipping switch is in the correct position |
| E-056 | The master communicates with the first stepping (X14/X15) error | Please turn off the power and check the connection cable between the master and the stepper board |
| E-057 | X motor overcurrent | Please turn off the power and replace the stepper board |
| E-058 | X motor out-of-range | Please turn off the power |
| E-059 | X motor overdrive | Please turn off the power and replace the stepper board |
| E-060 | Y motor overcurrent | Please turn off the power and replace the stepper board |
| E-061 | Y motor out-of-range | Please turn off the power and replace the stepper board |
| E-062 | Y motor overspeed | Please turn off the power and replace the stepper board |
| E-063 | The master communicates with the second stepping (X12/X13) incorrectly | Please turn off the power and check the connection cable between the master and the stepper board |
| E-064 | Step error 64 | Please turn off the power |
| E-065 | Step error 65 | Please turn off the power |
| E-066 | Step error 66 | Please turn off the power |
| E-067 | The presser foot motor overcurrents | Please turn off the power |
| E-068 | The presser foot motor is out of range | Please turn off the power |
| E-069 | The presser foot motor is overdriven | Please turn off the power |
| E-070 | The X motor cannot find the origin | Please turn off the power |
| E-071 | The Y motor cannot find the origin | Please turn off the power |
| E-072 | Step error 72 | Please turn off the power |
| E-074-089 | Stepper driver upgrade failed | |
| E-090 | Upgrade stepping error: The query stepping status timed out | |
| E-091 | Upgrade stepping error: The query stepping status timed out | |
| E-093 | Stepper closed-loop DSP1 (X25/27) communication packet verification error | |
| E-094 | Stepping closed-loop DSP1 (X25/27) communication packet illegal command | |
| E-095 | Stepping closed-loop DSP2 (X21/23) communication packet validation error | |
| E-096 | Stepping closed-loop DSP2 (X21/23) communication packet illegal command | |
| E-100 | After the oil refueling alarm notification appears, if grease is not added, this display will appear again after a period of continued | After adding grease, perform the operation of clearing the count |

| NO. | Name of Malfunction | Solution |
|---|---|---|
| | use | |
| E-101 | The number of stitches accumulated to the number of refueling alarm notification stitches | |
| E-103 | Expansion device communication exception | Please turn off the power |
| E-104 | The expansion device is operating abnormally | Please turn off the power |
| E-105 | 步进闭环 DSP1(X25/X27)主轴同步模式错误 | |
| E-106 | 步进闭环 DSP2(X21/X23)主轴同步模式错误 | |
| E-110 | The spindle is set to overspeed at a set speed | Turn off the power and confirm whether the sewing machine motor is abnormal |
| E-111 | The actual speed of the spindle is overdriven | Turn off the power and confirm whether the sewing machine motor is abnormal |
| E-121 | The position of the scissors is abnormal | Turn off the power supply and confirm that the blade part of the fixed knife moving knife is not damaged |
| E-131 | The encoder is faulty or the encoder is not connected | Turn off the power |
| E-132 | The motor is overspeeding | |
| E-133 | After sewing, the sewing master motor stops incorrectly | Please turn off the power |
| E-135 | The motor is running abnormally | Please turn off the power |
| E-136 | IPM frequently overcurrent1 | Please turn off the power |
| E-137 | IPM is frequently overcurrent2 | Please turn off the power |
| E-138 | Motor stalled 1 | Please turn off the power |
| E-139 | Motor stalled 2 | Please turn off the power |
| E-140 | Parking overcurrent | Please turn off the power |
| E-141 | The motor is overloaded | Please turn off the power |
| E-142 | The bus voltage is abnormal | Please turn off the power |
| E-143 | Abnormal current | Please turn off the power |
| E-146 | The presser foot motor cannot find the origin | Please turn off the power |
| E-200 | X origin detection is abnormal, X motor is abnormal, or X encoder contact is poor | Please turn off the power |
| E-201 | X validation error | Please turn off the power and confirm whether the direction of the X distribution is abnormal |
| E-210 | Y origin detection is abnormal, Y motor is abnormal, or Y encoder contact is poor | Please turn off the power |
| E-211 | Y verification error | Please turn off the power and confirm whether the direction of the Y distribution is abnormal |

| NO. | Name of Malfunction | Solution |
|---|---|---|
| E-217 | The stepping software version is abnormal | Please turn off the power |
| E-218 | The master software does not match the motherboard hardware type | Please turn off the power |
| E-219 | Stepper motor overcurrent | Please turn off the power |
| E-220 | MD1 step overcurrent | Please turn off the power |
| E-221 | MD1 X direction is not finished | Please turn off the power |
| E-222 | MD1 Y direction is not finished | Please turn off the power |
| E-223 | MD2 step overcurrent | Please turn off the power |
| E-224 | The MD2 X direction is not finished | Please turn off the power |
| E-225 | The MD2 Y direction is not finished | Please turn off the power |
| E-300 | Abnormal foot origin detection | Please turn off the power |
| E-301 | The presser foot motor is out of step | |
| E-302 | The tip of the thread is not positioned correctly at the beginning of the sewing | Please press the reset button to restore |
| E-310 | Step origin retrieves exceptions | Please turn off the power |
| E-400 | The operating head is incorrectly connected to the sewing machine | Please turn off the power |
| E-401 | The stepper motor communicates abnormally | Please turn off the power |
| E-410 | The communication between the motherboard and the power control board motherboard is abnormal | Please turn off the power |
| E-420 | The main USB flash drive is not connected | Press the Reset key to troubleshoot the error |
| E-421 | The data of the main USB flash drive is incorrect | Press the Reset key to troubleshoot the error |
| E-422 | Error reading from the main USB flash drive | Press the Reset key to troubleshoot the error |
| E-424 | The main USB flash drive is not enough | Press the Reset key to troubleshoot the error |
| E-425 | The main USB flash drive is written incorrectly | Press the Reset key to troubleshoot the error |
| E-427 | Patterns registered in the loop seam are removed | Press the Reset key to troubleshoot the error |
| E-428 | The pattern set in the program is deleted | Press the Reset key to troubleshoot the error |
| E-430 | Pattern data cannot be saved to the motherboard | Press the Reset key to troubleshoot the error |
| E-450 | Headboard EEPROM read error | Please turn off the power |
| E-451 | When the system parameter version is changed, all default system parameters are automatically initialized | |
| E-452 | The system parameter range is abnormal | |
| E-453 | Stepping drive DSP1 curve CRC verification error | |
| E-454 | Stepper drive DSP2 curve CRC verification error | |

| NO. | Name of Malfunction | Solution |
|---|---|---|
| E-474 | Master memory is full | Press the Reset key to troubleshoot the error |
| E-500 | Scaled beyond the sewing range | Press the Reset key to troubleshoot the error |
| E-501 | Beyond the scope of sewing | Please turn off the power |
| E-502 | Maximum stitch pitch exceeded | Press the Reset key to troubleshoot the error |
| E-510 | Data error | Press the Reset key to troubleshoot the error |
| E-511 | The completion code cannot be entered into the program data | Press the Reset key to troubleshoot the error |
| E-512 | Maximum number of stitches exceeded | Press the Reset key to troubleshoot the error |
| E-600 | Polygon line fracture occurs | Press the Reset key to troubleshoot the error |
| E-690 | The origin of the medium pressure foot motor is wrong | Please turn off the power |
| E-692 | The position of the medium pressure foot motor is abnormal | Please turn off the power |
| E-701 | 300V is too high | Please turn off the power |
| E-702 | 300V is too low | Please turn off the power |
| E-704 | 24V is too high | Please turn off the power |
| E-705 | 24V is too low | |
| E-706 | 24V overcurrent | Please turn off the power |
| E-707 | Stepper board 90V power supply overcurrent | Please turn off the power |
| E-710 | IPM overvoltage | Please turn off the power |

# 12 Appendix 4 List of Hint Information

| No. | Name | Content |
|---|---|---|
| M-001 | Pattern data not exist | Please reload or input again |
| M-002 | Set value is too large | Please input value within valid range |
| M-003 | Set value is too small | Please input value within valid range |
| M-004 | Save parameter abnormal | Press Enter to restore the default values |
| M-005 | Communication Error | Abnormal event occurs in the communication between the operation head and the control box. |
| M-006 | Fail to load letter sewing file | |
| M-007 | Operation head not match to machine type | Please check the model and the software version |
| M-008 | Beyond max stitch interval | |
| M-009 | Wrong password | Please input password again |
| M-010 | Hardware clock error | The hardware clock has problem, please contact manufacturer for repair. |
| M-011 | Letter sewing pattern saved successfully | Please enter pattern loading interface to select newly created letter sewing pattern |
| M-012 | SRAM initialization | Clear all data in SRAM. Please turn off power and restore the setting of DIP switch. |
| M-013 | Turn off machine, Bye | |
| M-014 | USB is pulled out | U Disk Is Pulled Out ! |
| M-015 | Cannot find pattern data in U disk | |
| M-016 | At least input one letter | The periodicalpassword is set. Can not change system time. |
| M-017 | No alarm record | |
| M-018 | Wrong User ID | Please input again |
| M-019 | Fail to confirm password | Please input password again |
| M-020 | Cannot change system time | The periodicalpassword is set. Can not change system time. |
| M-021 | Fail to save password file | |
| M-022 | Fail to load password file | |
| M-023 | Password saved successfully | |
| M-024 | Fail to clear all passwords | Cannot delete password file |
| M-025 | Fail to clear password | After the password is cleared, the file input becomes abnormal |
| M-026 | Password file is deleted without authorization | Periodical password is deleted without authorization, please turn off machine |
| M-027 | User ID file damage | |
| M-028 | Empty input invalid | Can not input empty password |
| M-029 | Password not match | Current password is wrong |
| M-030 | New password is different. | New password is different from the retry password |

| | | |
|---|---|---|
| M-031 | Enter Touching Panel Correction Mode? | Are You Sure？Yes：enter No：X |
| M-032 | Touching panel correction successful | Correction is successful. Please turn off power to restart. |
| M-033 | Touching panel correction failed | Please do it again |
| M-034 | Clear alarm records? | Are You Sure？Yes：enter No：X |
| M-035 | Periodical passwords can’t be same to super password | Please input password again |
| M-036 | Pattern Data Error | Current pattern data is wrong, it will be replaced by the default pattern! |
| M-037 | Fail to open pattern file | Please restore default pattern! |
| M-038 | Memory full | Please delete the idle sewing data |
| M-039 | Replace Pattern | Are You Sure？Yes：enter No：X |
| M-040 | P Pattern Open Failed | Pattern file is wrong, and it will be deleted. |
| M-041 | C Pattern Open Failed | Pattern file is wrong, and it will be deleted. |
| M-042 | Pattern is existed. | Can not replace the pattern. |
| M-043 | Delete Pattern Data | Press Enter to delete the pattern; Press ESC to quit. |
| M-044 | Delete the selected file | Are You Sure？Yes：enter No：X |
| M-045 | Pattern is quoted, can not be deleted! | Please release the quotation in the P pattern or C pattern |
| M-046 | At least keep one pattern! | Can not delete the last pattern |
| M-047 | Load default pattern | No pattern in memory, please load the default pattern |
| M-048 | Cannot find pattern in memory | Press Enter to load the default patterns |
| M-049 | Number is not exited | Please input again |
| M-050 | Cannot find Ppattern | Please create a P pattern |
| M-051 | Software version saving successful | Software version is saved to the base catalogue of U disk successfully |
| M-052 | Replace needle | Reach set value for needle replacement, please replace needle! |
| M-053 | Replace oil | Reach set value for oil replacement, please replace oil! |
| M-054 | Clean machine | Reach set value for cleaning machine, please clean machine! |
| M-055 | Clear needle replacement value? | Are You Sure？Yes：enter No：X |
| M-056 | Clear oil replacement value? | Are You Sure？Yes：enter No：X |
| M-057 | Clear machine clean value? | Are You Sure？Yes：enter No：X |
| M-058 | Clear production control value? | Are You Sure？Yes：enter No：X |
| M-059 | Clear accumulated running time? | Are You Sure？Yes：enter No：X |
| M-060 | Clear accumulated sewing pieces? | Are You Sure？Yes：enter No：X |
| M-061 | Clear accumulated power-on time? | Are You Sure？Yes：enter No：X |
| M-062 | Clear accumulated stitch numbers? | Are You Sure？Yes：enter No：X |
| M-063 | Clear accumulated over-current time？ | Are You Sure？Yes：enter No：X |
| M-064 | Clear accumulated stop time？ | Are You Sure？Yes：enter No：X |

| | | |
|---|---|---|
| M-065 | Edit new pattern? | Are You Sure? Yes：enter No：X |
| M-066 | Return to sewing mode? | Are You Sure? Yes：enter No：X |
| M-067 | Restore all the settings? | Are You Sure? Yes：enter No：X |
| M-068 | Restore the selected item? | Are You Sure? Yes：enter No：X |
| M-069 | Not select item | Please select one or more parameters |
| M-070 | Sewing counter reach set value | Press Enter to clear it |
| M-071 | Piece No. counter reach set value | Press Enter to clear it |
| M-072 | Successful | Current operation is successful! |
| M-073 | Failed | Current operation is failed! |
| M-074 | Fail to copy file | Please check the space in memory |
| M-075 | Fail to copy file | Please check if the USB disk is pulled! |
| M-076 | File I/O error | File I/O error |
| M-077 | Verification failed at updating main software | |
| M-078 | Can not delete pattern data | The selected pattern is in use |
| M-079 | Transfer the parameters? | Are You Sure? Yes：enter No：X |
| M-080 | Cannot open transferred pattern | Please confirm pattern |
| M-081 | Wrong transferred pattern format | Please confirm pattern |
| M-082 | Transferred pattern data is too long | Please confirm pattern |
| M-083 | Update successful | Update is successful, please restart machine |
| M-084 | Fail to open file | Fail to open file in U disk |
| M-085 | Parameter recovery successful | Parameter recovery is successful, please restart machine |
| M-086 | Not select update item | At least select one item for updating |
| M-087 | Some selected update items can not be found | The system will cancel the item without the updating files. For updating the rest items, please confirm again |
| M-088 | Format U Disk? | Press Enter to perform formatting operation. Press Esc to quit current operation. After formatting, all pattern files will be deleted. |
| M-089 | Format memory? | Press Enter to perform formatting operation. Press Esc to quit current operation. All the patterns within the memory will be deleted |
| M-090 | Low Memory | |
| M-091 | Can not select that function | |
| M-092 | Set shape point is repeated | |
| M-093 | Can not return | |
| M-094 | Can not find next sewing stitch data | |
| M-095 | Can not find previous sewing stitch data | |
| M-096 | Pattern data is too large | |
| M-097 | Calculation Error | |
| M-098 | Pattern-designing Error | |
| M-099 | Pattern is not existed | |
| M-100 | Over moving range | |
| M-101 | Beyond sewing range | Make sure pattern data is in sewing range |

| | | |
|---|---|---|
| M-102 | Stitch number beyond range | Please reduce stitch number |
| M-103 | Pattern file data error | |
| M-104 | Confirm to change point | |
| M-105 | Confirm to insert trimming automatically | |
| M-106 | Delete new edited pattern | Press Enter to confirm; Press Esc to quit |
| M-107 | Delete element | Press Enter to confirm; Press Esc to quit |
| M-108 | Are you sure to perform？ | Press Enter to confirm; Press Esc to quit |
| M-109 | Delete machine control order？ | Press Enter to confirm; Press Esc to quit |
| M-110 | Delete needle entry point | Press Enter to confirm; Press Esc to quit |
| M-111 | Are you sure to move presser？ | Press Enter to confirm; Press Esc to quit |
| M-112 | Delete shape point? | Press Enter to confirm; Press Esc to quit |
| M-113 | Caution：Formatting will delete the entire data on disk！ | Press Enter to confirm; Press Esc to quit |
| M-114 | Change Model? | Press Enter to confirm; Press Esc to quit |
| M-115 | Pattern is locked | Please unlock it firstly |
| M-116 | Can not modify basic pattern | |
| M-117 | Turn off machine | Current operation is finished, please restart machine |
| M-118 | Cannot change counter | At change, please turn off setting |
| M-119 | Load Basic Pattern | Please press Enter to load basic pattern. Do not turn off machine！ |
| M-120 | Restore to default setting | Press Enter to confirm; Press Esc to quit |
| M-121 | Clear entire customized parameters? | Are You Sure？ Yes：enter No：X |
| M-122 | Head board parameter abnormal | Press Enter to restore the default value |
| M-123 | Pattern Calculation Error | |
| M-124 | Delete entire P and C patterns | Press Enter to perform the deletion; press ESC to quit |
| M-125 | Restore head board parameter? | Are You Sure？ Yes：enter No：X |
| M-126 | Beyond setting range | |
| M-127 | Can not find customized pattern! | The current operation can only be done on the customized pattern, and the basic patterns can not be output! |
| M-128 | Outer presser is at up position. | Please lower the outer presser before current operation! |
| M-129 | Can not perform right operation | |
| M-130 | USB Disk not Exist | Please insert the U disk with mp3 file |
| M-131 | Can not find vid.avi files | Please save the vid.avi files to the catalogue naming “pdat” in the U disk, and then enter the update interface to update the video file. |
| M-132 | The parameter setting is abnormal | The generated pattern data exceeds the maximum needle length, please check the parameter settings |
| M-133 | The length or radius parameter is set abnormally | 1. The length of the bottom seam exceeds the length of the sleeve |

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| | | 2. The length of the nesting is too long compared with the length of the bottom seam<br>3. The inner diameter exceeds the outer diameter of the pattern<br>4. The height of the half moon is lower than the nesting needle distance or the relative sleeve length is too high<br>Please check the parameter settings |
| M-134 | The stitch pitch or number of stitches is set abnormally | The pitch is less than the minimum pitch, please check the pitch or number of stitches setting |
| M-135 | The sewing data exceeds the maximum needle length | Modify the parameter settings |
| M-136 | The base pattern is wrong, and the base pattern needs to be upgraded again | |
| M-137 | Upgrade step end check error | |
| M-138 | QR code display failed | |
| M-139 | The accuracy of the EMB pattern format is wrong | |
| M-140 | Whether to switch the nail buckle to strengthen the basic pattern | Switching parameters will delete all patterns and reload the base pattern |
| M-141 | Determine the recovery step parameters | Are you sure? Yes: Enter No: X |
| M-150 | The panel does not match the master | The current system has an installment password, and you need to contact the manufacturer to unlock it |
| M-151 | There is a password in the current panel and needs to be synchronized | There is a password on the panel, and there is no password for the master |
| M-152 | The current master has a password and needs to be synchronized | There is a password for the master, and there is no password for the panel |
| M-153 | The motherboard ID does not exist | |
| M-154 | The panel is not encrypted, the master is encrypted | The system locks the system |
| M-155 | The panel is encrypted, and the master is not encrypted | Determines the key synchronization encryption status |
| M-156 | The system already has a remote staging setup | OK key to continue, cancel key to exit operation |
| M-157 | Wireless module 1 failed to connect | System speed is reduced to a minimum, please contact the manufacturer |
| M-158 | The system has been set to non-networked mode | Detection can be performed when the networking function is turned on |
| M-159 | Join failed | |
| M-160 | The swap operation cannot be performed | At least one parameter and pattern needs to be selected |
| M-161 | The replacement was successful | The parameter or pattern has successfully covered the machine and needs to be shut down and restarted |

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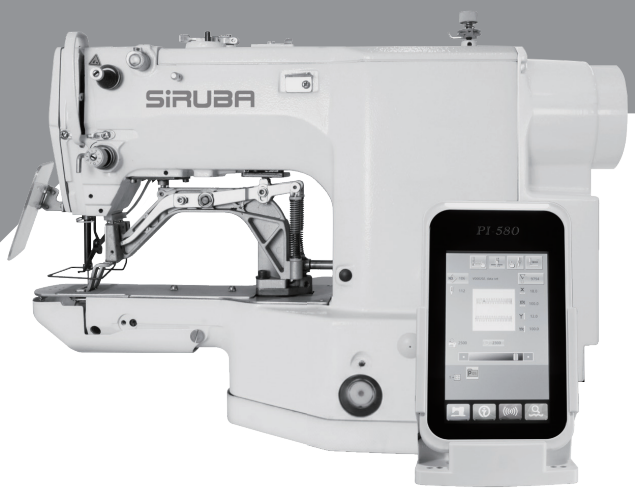
| M-162 | Whether to update the pattern thumbnail immediately | Thumbnails are also generated after the pattern is used |
| M-163 | The pattern does not exist, whether it is downloaded from the server | Are you sure? Yes: Enter No: X |
| M-164 | The request pattern is not in standard NSP format | |
| M-165 | There are no request tricks on the server | |
| M-166 | The server updates the software and whether to perform an upgrade operation | Upgrade now? Yes: Enter No: X |
| M-168 | The request failed | |
| M-169 | Clock-in successful | |
| M-170 | Clock-in failed | |
| M-171 | The network is down | |
| M-172 | Please perform OK key saving first | |
| M-173 | No hotspot selected | |

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由於對產品的改良及更新 , 本產品零件圖及外觀的修改恕不事先通知 !
The specification and/or appearances of the equipment described in this parts list are subject to change because of modification which will without previous notice.

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