

21X 套结钉扣机(触摸屏 E)
2017-01

前 言

欢迎您使用本公司的特种缝纫机控制系统。

请您仔细阅读本操作手册，以确保正确的操作、使用特种缝纫机，请按照本手册内注明的方式进行操作，否则，如违规操作所造成损失本公司不承担责任。此外，请将本用户手册妥善保存在安全地点，以便随时查阅。若发生故障须由本公司指定的技术人员或专业人员进行维修。

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。 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。 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。 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。 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。 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。 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。 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。 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。 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

3. 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!")

4. 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. The source of strong disturbance will affect the normal operation of the sewing machine.
	The voltage fluctuation shall be within $\pm 10\%$ 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: $0^{\circ}\text{C}\sim 45^{\circ}\text{C}$. 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
Installation	
	Please ask the trained technicians to install the sewing machine.
	Don't connect machine to power supply until the installation is finished. 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. If the sewing machine loses its balance, it will fall into floor thus causes the personal injury or mechanical damage.
	Grounding is a must. 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: 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:. 1.Repair, adjustment and inspection ; 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控系统，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	ASC210/ASC212
1	用途	套结、钉扣
2	缝制范围	ASC210 X(左右) 方向 40mm× Y(前后) 方向 30mm ASC212 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	ASC210 是脉冲马达抬压脚连动 ASC212 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—2016《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。

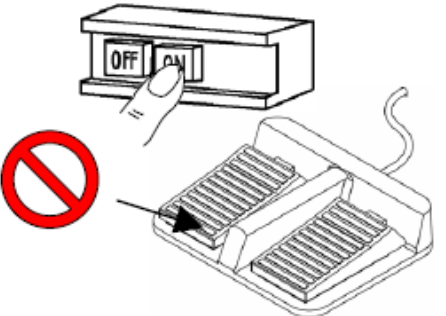
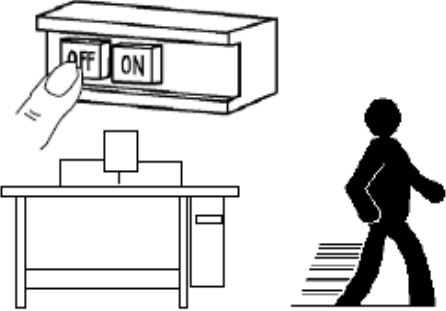
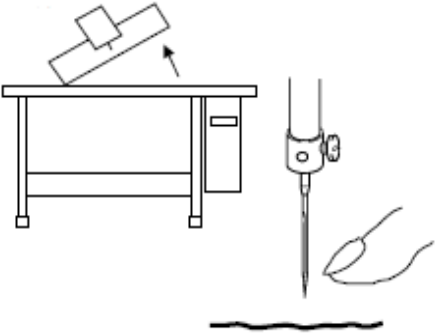
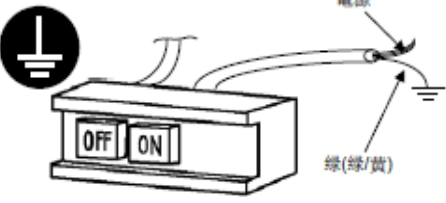
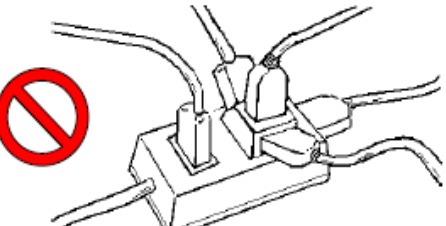
 警告	错误的行动可能会发生重伤或死亡	 注意	错误的行为可能会发生伤害或房屋或财产的损害
---	-----------------	---	-----------------------

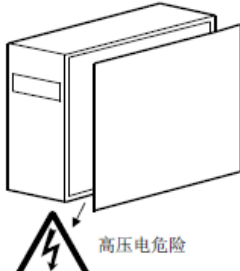
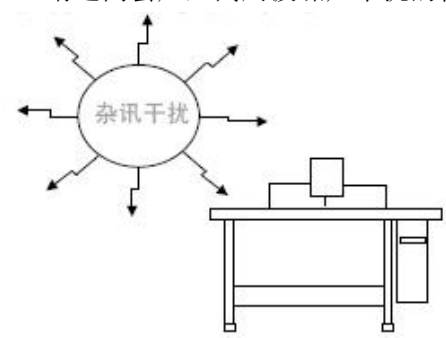
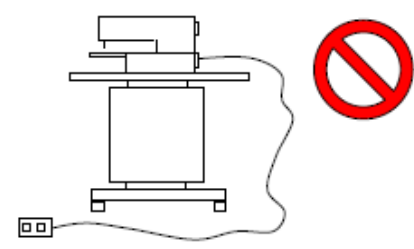
- 标示符号的表示如下说明。

	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

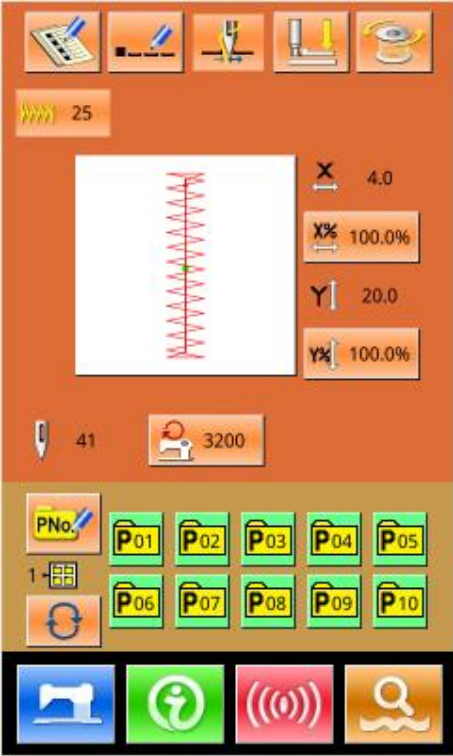


1、当手要按开关 [ON] 时，脚定要离开脚踏板。 	2、要离开工作岗位时，请务必关掉电源。 
3、如要横倒头部或更换机针或穿面线时，请务必关掉电源。 	4、接地线要做好接地。 
5、不要用家庭用多插孔式延长线。 	6、控制箱内部存有危险的高压电，所以关掉电源后等候 5 分钟才可打开控制箱盖。

	
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 标准化

功能按键采用业界公认的图形标识，图形是国际化语言，各国用户都可以识别。



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。

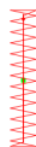
2.2 基本操作

①打开电源开关

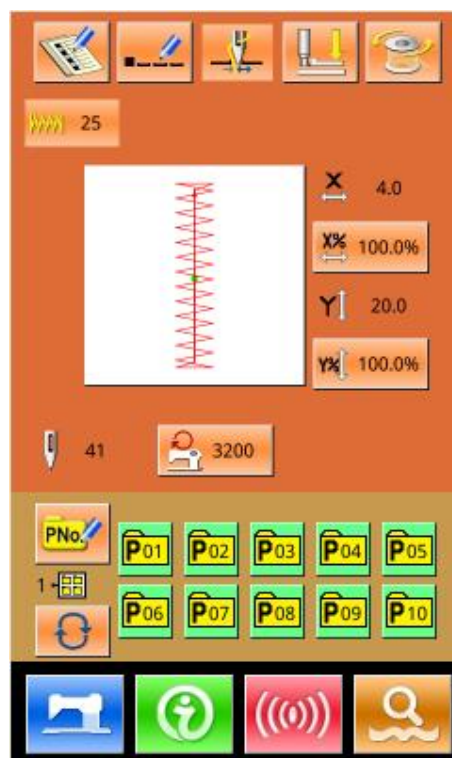
打开电源之后，显示出数据输入界面。

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

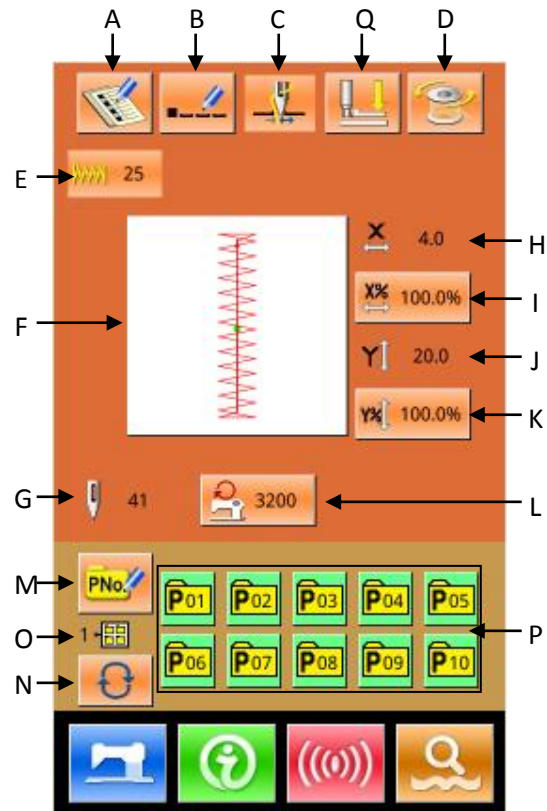
把缝制品安放到压脚部，踩踏板落下压脚，缝纫机启动，开始进行缝制。



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。



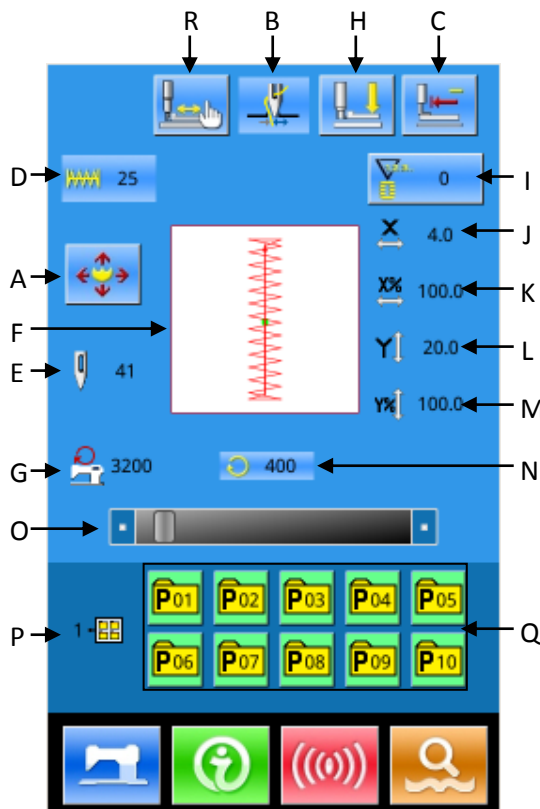
功能说明：

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。 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。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。 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 花样文件夹号码显示	显示当前 P 花样文件夹号码。
N	P 花样文件夹选择	顺序切换 P 花样文件夹号码。
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。初期状态不显示该按键。

(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。



The diagram shows the sewing interface with various controls labeled A through Q:

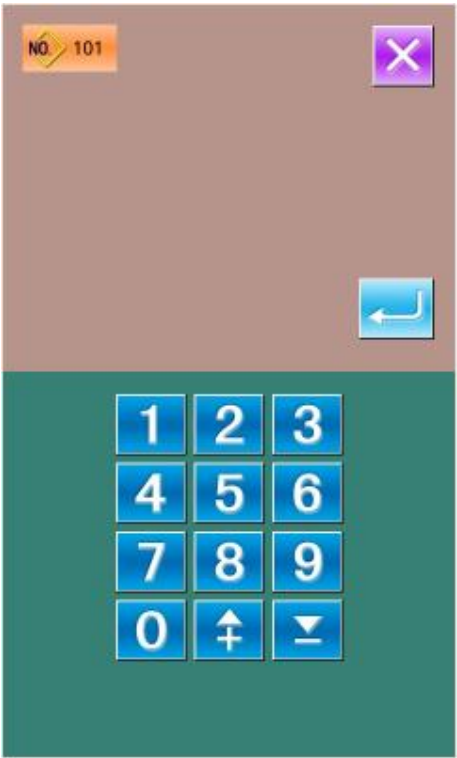
- A: Move frame button (移框键)
- B: Thread button (穿线按钮)
- C: Return to start button (返回起缝点)
- D: Needle selection (针)
- E: Needle number (41)
- F: Needle position (针位)
- G: Needle pressure (针压)
- H: Needle pressure adjustment (针压调节)
- I: Needle pressure adjustment (针压调节)
- J: Needle pressure adjustment (针压调节)
- K: Needle pressure adjustment (针压调节)
- L: Needle pressure adjustment (针压调节)
- M: Needle pressure adjustment (针压调节)
- N: Needle pressure adjustment (针压调节)
- O: Needle pressure adjustment (针压调节)
- P: Needle pressure adjustment (针压调节)
- Q: Needle pressure adjustment (针压调节)

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	穿线按钮	下降压脚，显示出下降压脚画面。
B	抓线按钮	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。  : 缝制计数器  : 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 花样文件夹号码显示	显示当前 P 花样文件夹号码。
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



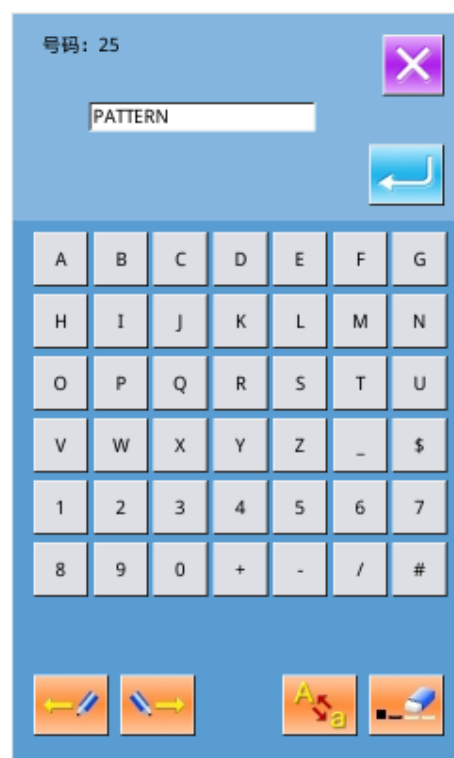
: 字母大小写切换键



: 清除键

选择想要输入的字符，按下  结束花样命名操作。

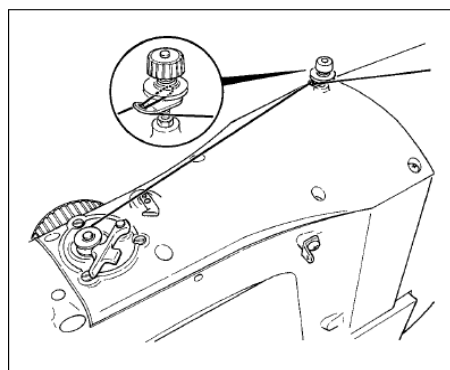
通过移动光标可以确定该字符位置，消除键可以消除该位置字符。



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

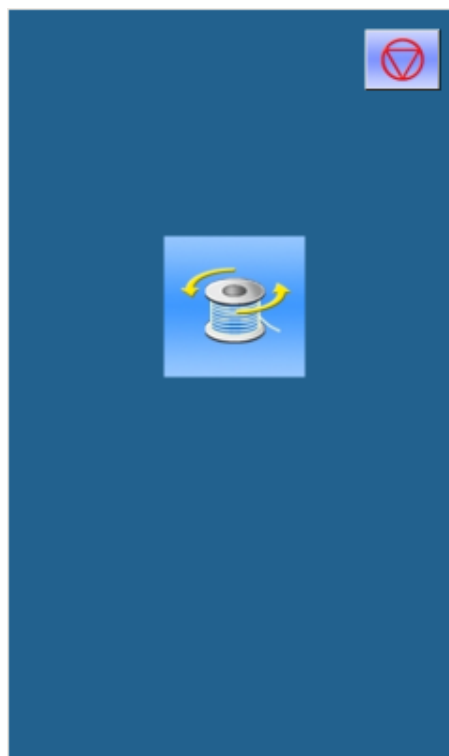
踩踏启动踏板之后，缝纫机转动，开始卷绕底线。

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，因此再次踩踏启动踏板，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。

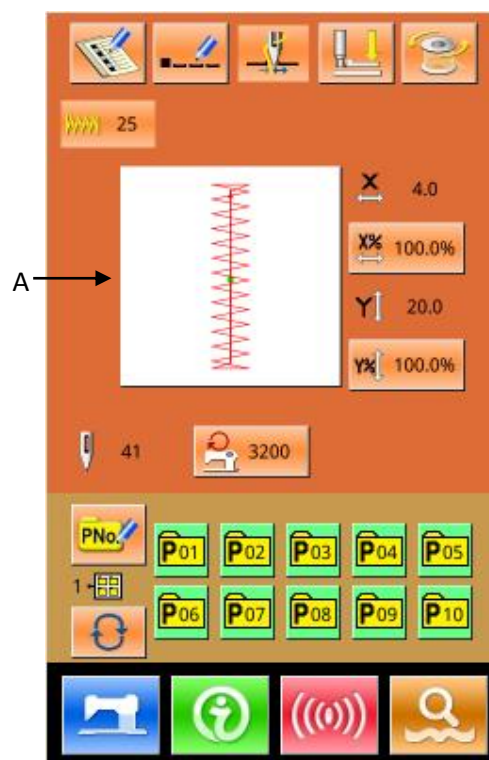
样，按准备键之后显示出缝制画面。



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。



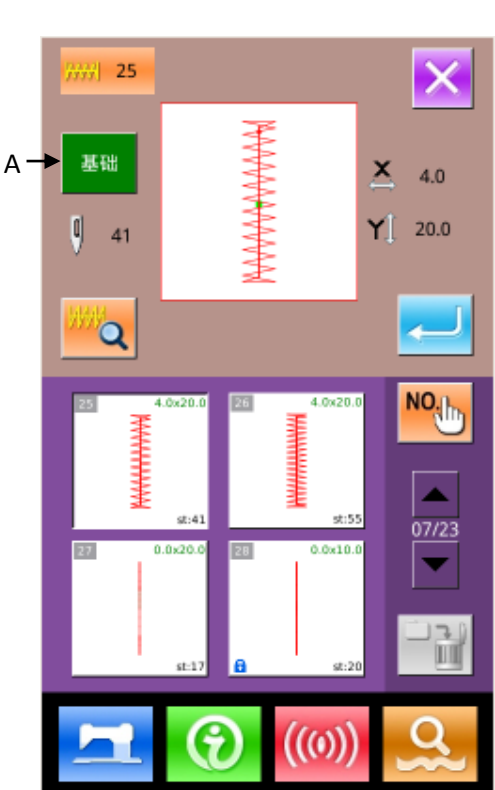
花样选择界面上方为当前选择花样的缝制形状，下方为已登记的花样号码。

- ：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。



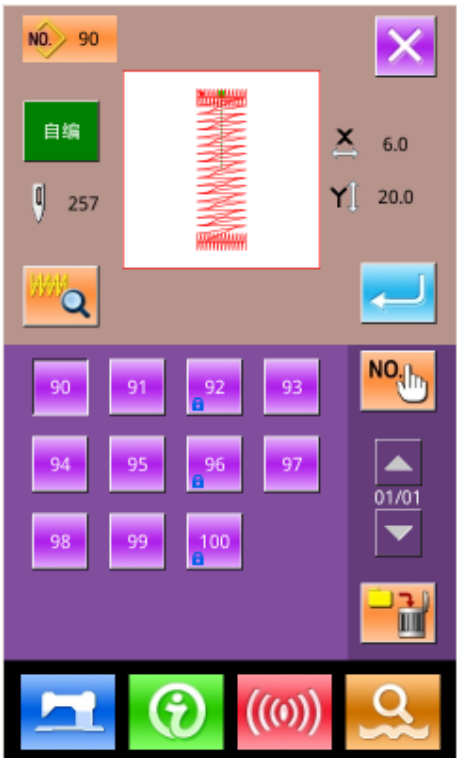
③花样查询

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

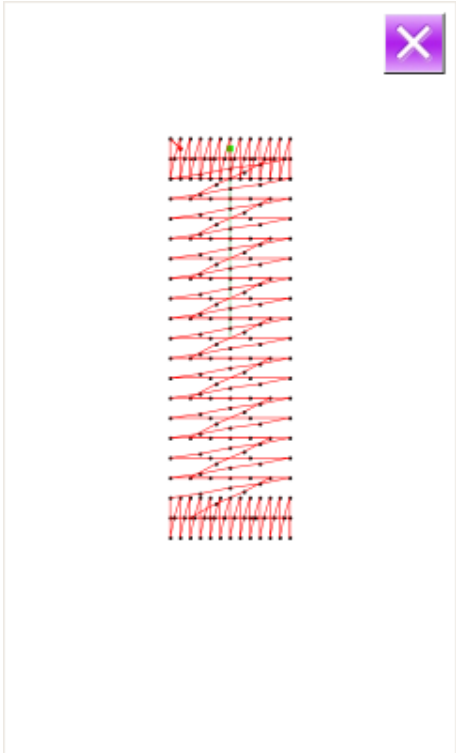
选中已登记的花样，按下键就会删除掉该花样，但是被登记到 **P** 的花样是不能被删除的。

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

键可以全屏预览当前花样形状。
(背景色为白色)



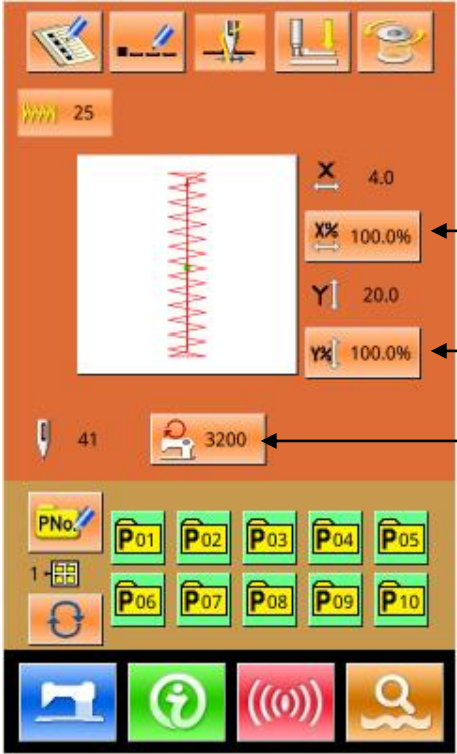
2.8 缝纫数据设定

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
--	----	------	-----

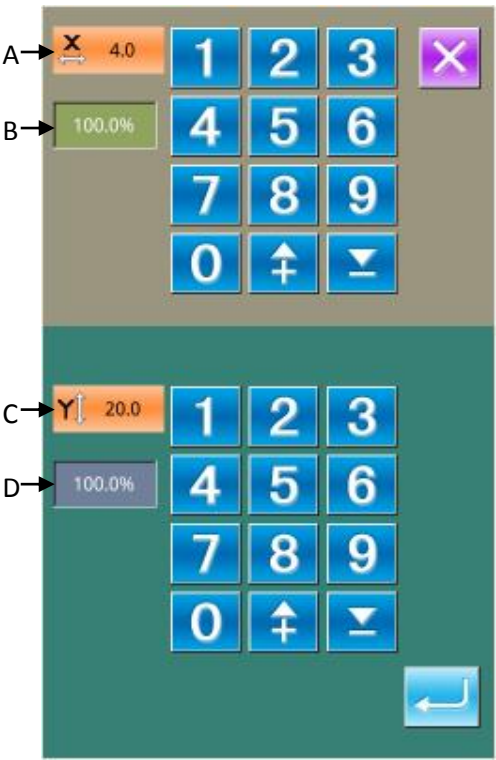
A	X 方向放大缩小率	1.0~400.0%	100.0%
B	Y 方向放大缩小率	1.0~400.0%	100.0%
C	最高速度限制	400~2700rpm(各机型上限不同)	2700rpm

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  ~  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。

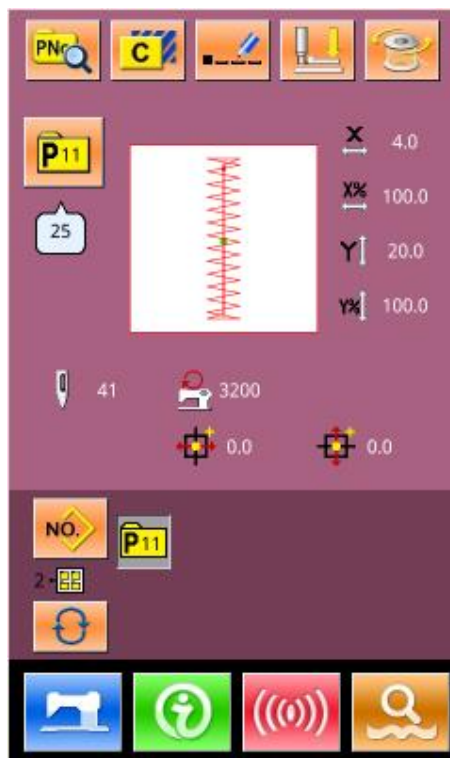
③选择文件夹号码

P 花样号码可以登记到 5 个文件夹里，每个文件夹最多保存 10 个 P 花样。文件夹选择键  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

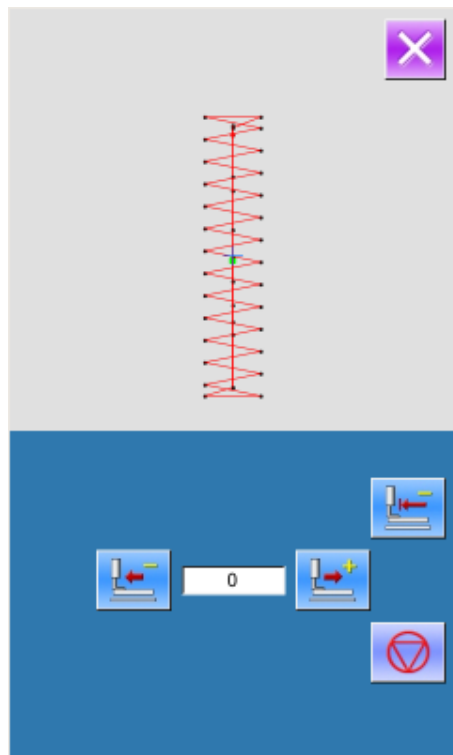
①显示缝制界面

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。花样形状没有开始在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

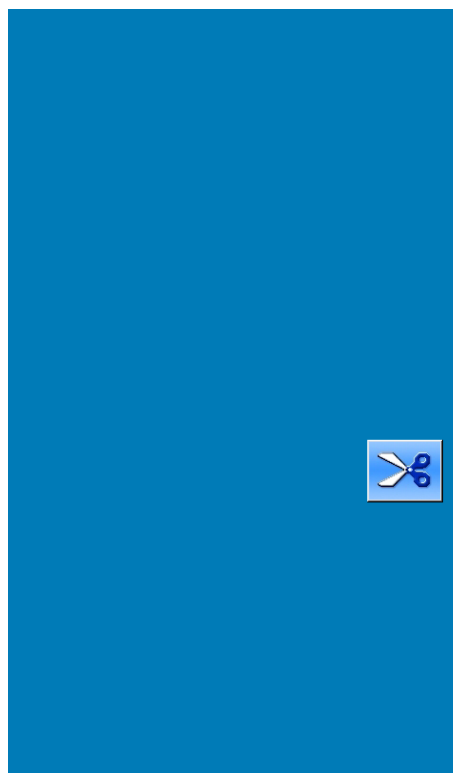
在缝制中按了暂停键之后，可以停止缝纫机转动。
此时异常画面被显示，通知停止开关被按下。此时按下复位键解除异常。



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。



②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

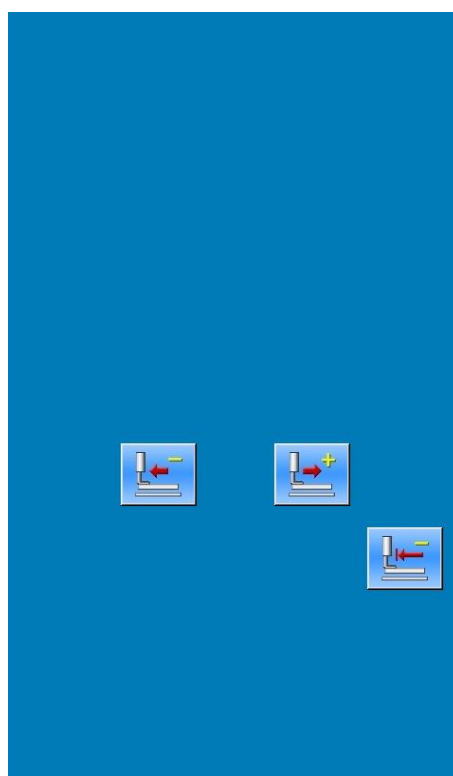


：起缝点复位

按下或，移动压脚到重新缝纫位置。

③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。

序号	功能	内容
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	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 花样文件夹号码显示	显示当前 P 花样文件夹号码。
S	P 花样文件夹选择	顺序切换 P 花样文件夹号码。
T	P 花样选择	显示出已登记的 P 花样。

3.2 P 花样编辑

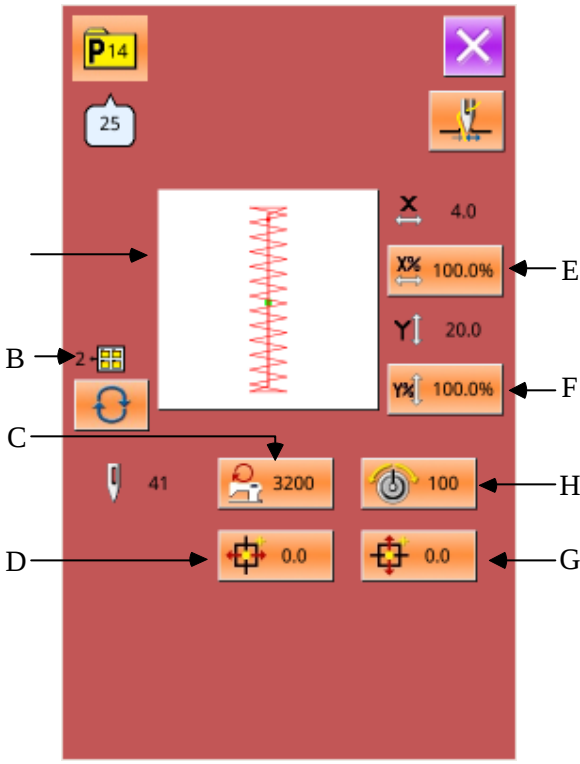
①进入 P 花样编辑界面

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	文件夹号码	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  ~  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

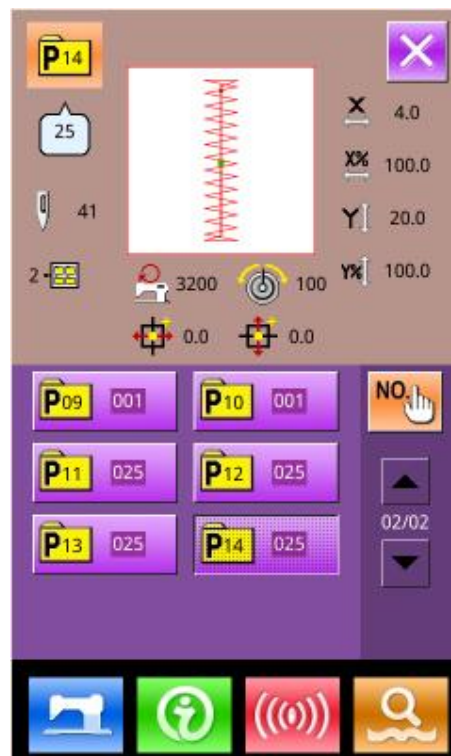
按下退出键  关闭P花样编辑界面，返回数据输入界面。



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 。

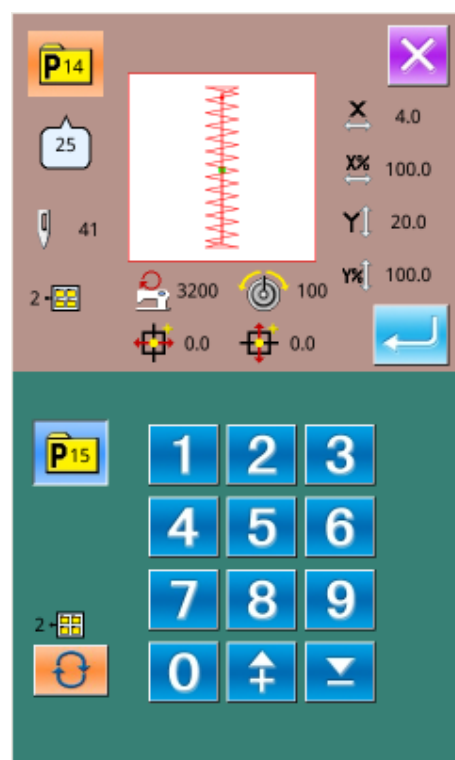


②输入新登记的花样号码

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。

文件夹选择键  可以选择保存的文件

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。



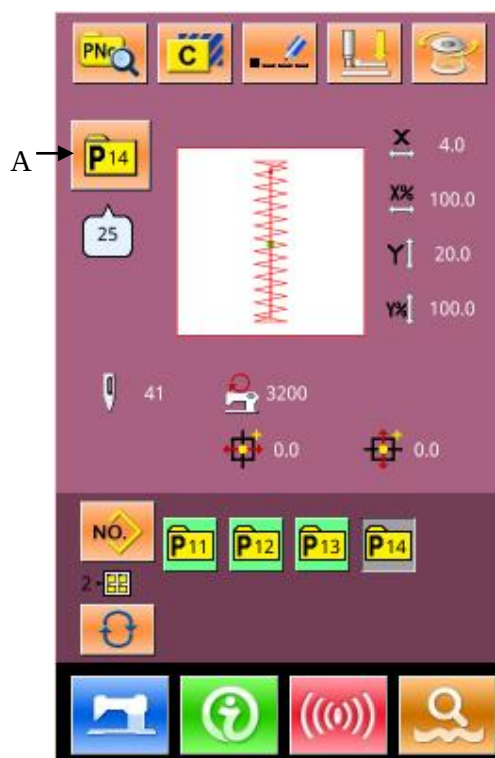
3.4 P 花样选择

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。

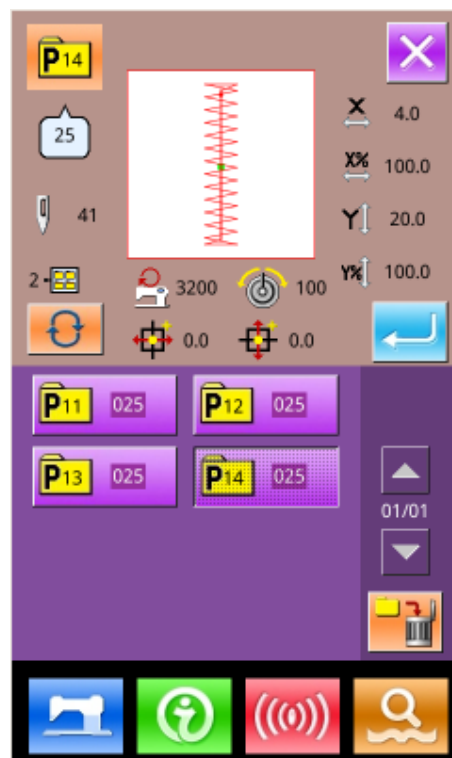
②选择花样号码

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



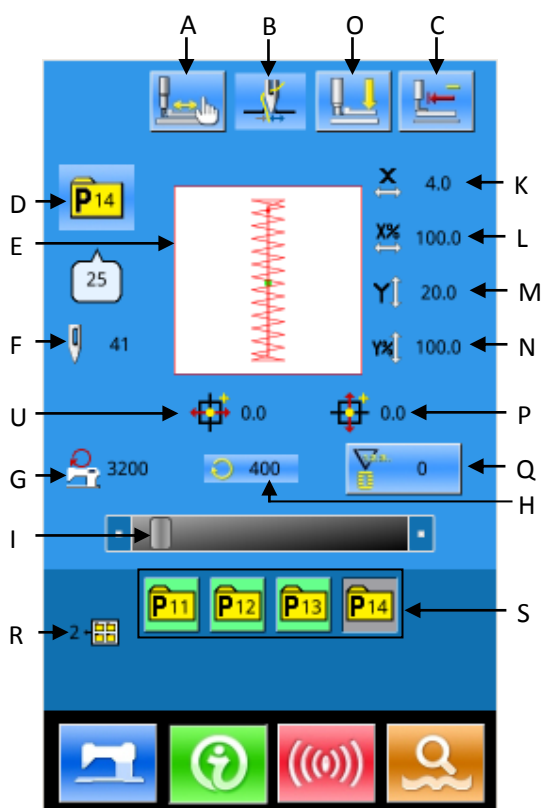
③确定花样选择

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:

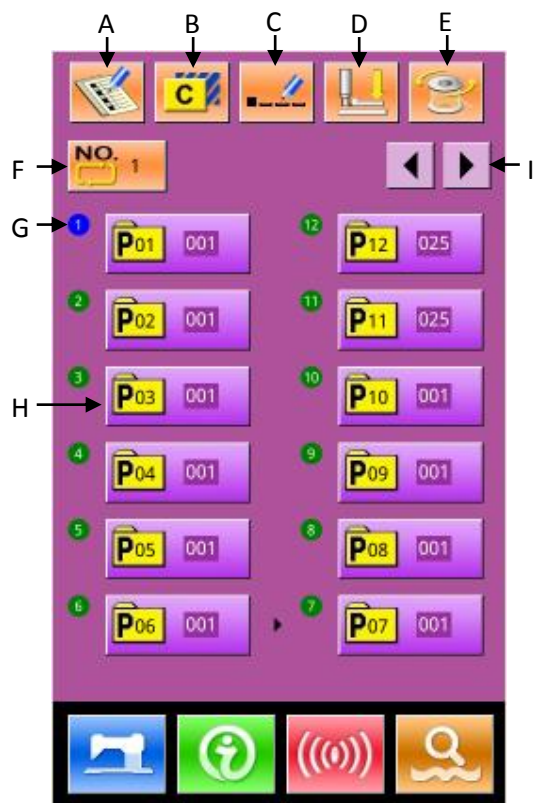
序号	功能	内容
A	试缝	按下后进入试缝界面, 可以确定花样形状。
B	穿线	按下之后外压脚下降。
C	原点复位	按下后压脚返回始缝点。
D	P 花样号码显示	显示当前选择花样号码。
E	缝纫形状号码显示	显示当前 P 花样下引用的普通花样号码。
F	花样针数显示	显示当前选择花样缝纫针数。
G	最高转速限制显示	显示最高转速限制值。
H	缝纫速度显示	显示当前缝纫速度。
I	缝纫速度设置	可以变更缝纫速度。
K	X 实际尺寸值显示	显示当前选择花样的 X 方向实际尺寸值。
L	X 放大缩小率设定	显示当前选择花样的 X 方向放大缩小率。
M	Y 实际尺寸值显示	显示当前选择花样的 Y 方向实际尺寸值。
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。  : 缝制计数器  : 计件计数器
R	P 花样文件夹号码显示	显示当前 P 花样文件夹号码。
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
花样数据输入界面，如右图所示。



功能说明:

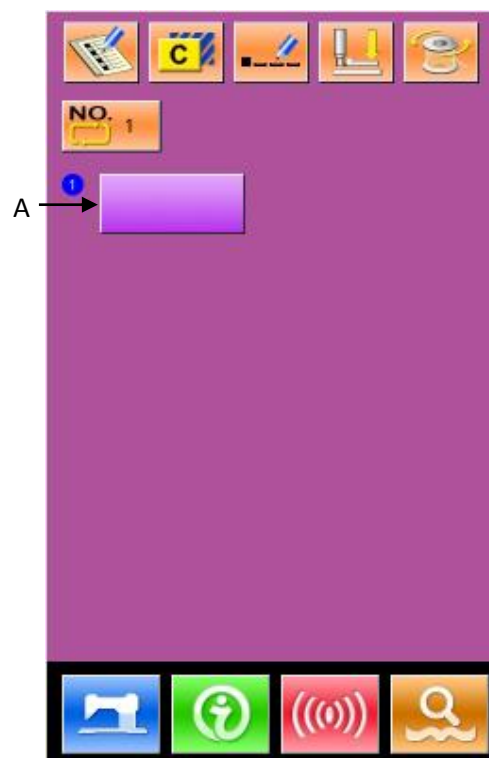
序号	功能	内容
A	C 花样登记	登记一个新组合花样。
B	C 花样复制	可以复制当前 C 花样内容到一个空花样号码下。
C	花样命名	最多可以输入 14 个字符。
D	压脚设置	按下之后外压脚下降。
E	绕线	按下一次准备键  之后方可绕线。
F	C 花样号码选择	按键上显示当前选择花样号码，按下后进入 C 花样选择界面。
G	缝制顺序显示	显示当前选择花样的缝制顺序，蓝色显示为起始缝制图案。
H	C 花样图案选择	按下后进入 C 花样编辑界面，可以选择输入一个 P 花样。
I	翻页键	C 花样图案最多可以登记 30 个，每页最多显示 6 个图案。

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。

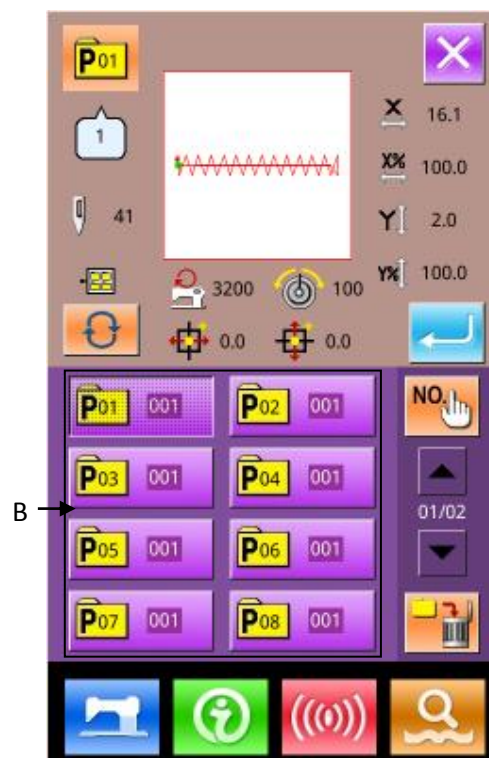
在初期状态下，没有登记到 P 花样做为缝制图案，因为第一个图案以空白状态显示。



②选择图案

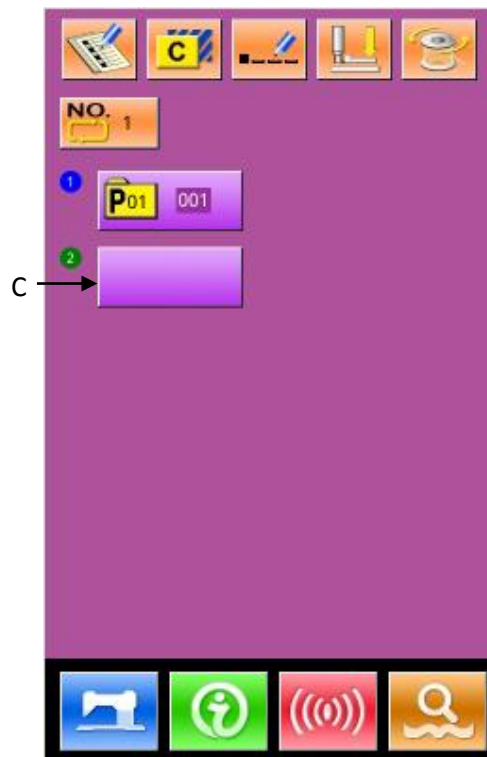
右图为 C 花样编辑界面，选择想要登记的

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

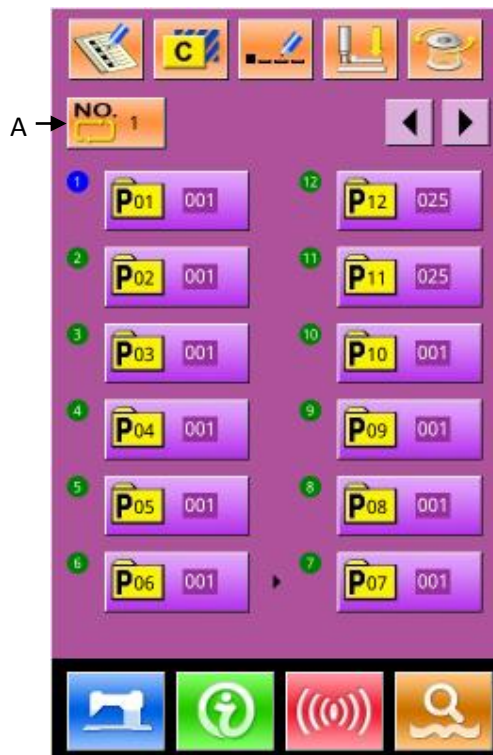
第一个图案登记确定之后，第二个图案选择键 C 被显示出来，操作同上，可以反复登记其它剩余图案。



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。

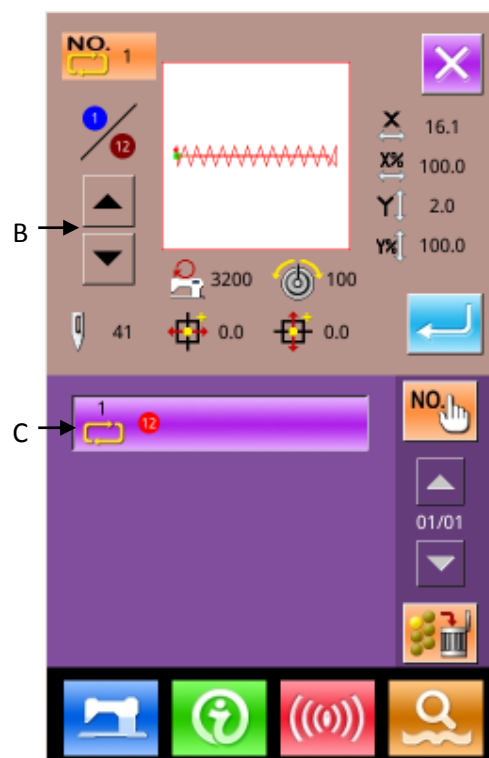


②选择 C 花样号码

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。

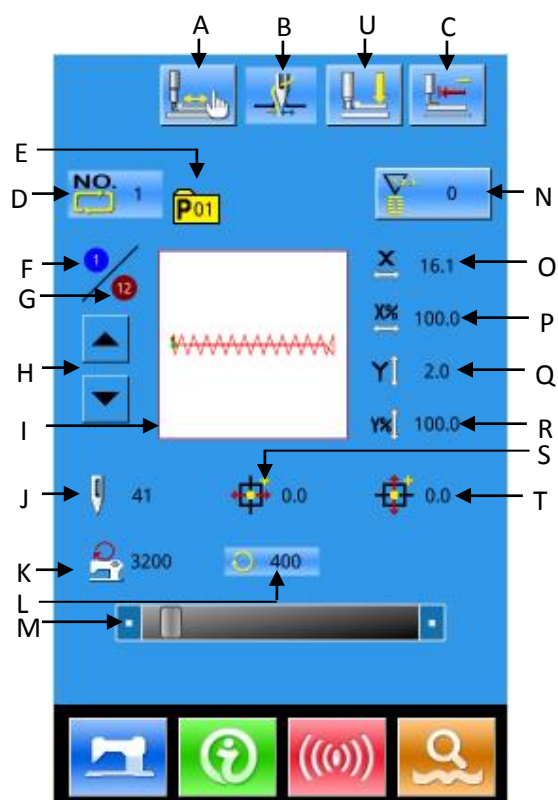
确定要想要选择的 C 花样号码键 C，按下

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。 ：缝制计数器 ：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

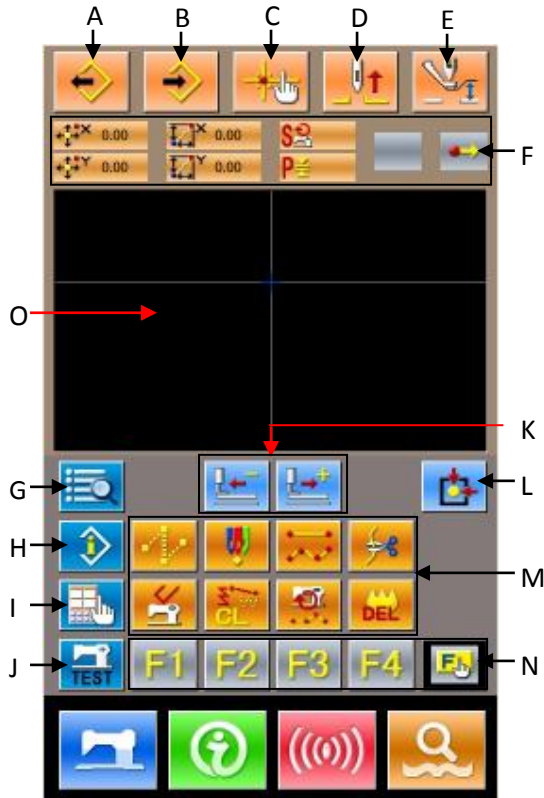
：编辑模式



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。



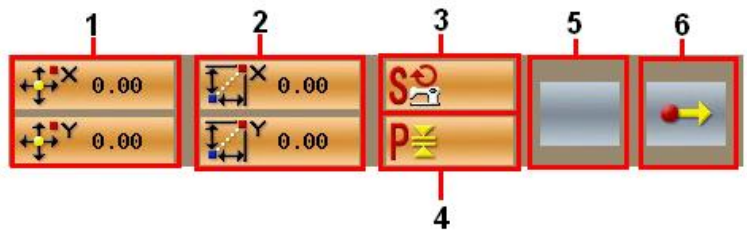
按下后，进入花样编辑标准界面，如右图所示：



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

序号	功能	内容
		 1: 空送  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。

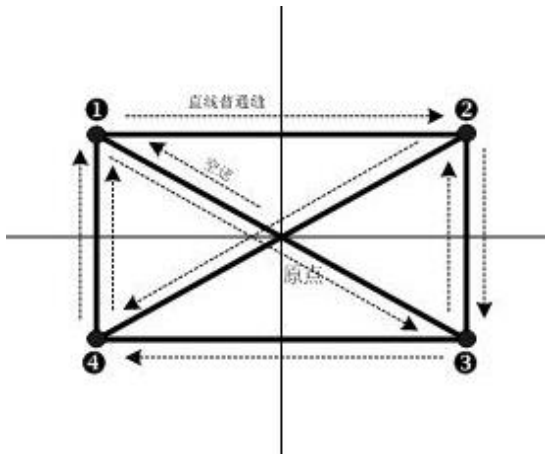


序号	项目	内容
1	绝对坐标	表示从现在的机针位置的原点的绝对坐标。
2	相对坐标	表示现在的机针位置的相对坐标。
3	速度	表示当前点的缝制速度或空送速度。
4	间隔	表示现在的要素缝制针迹长度。(扩大・缩小读取后，扩大缩小前的数值被显示。)
5	要素种类	表示当前的要素种类。缝制数据时，显示该要素种类(空送  、折线  、自由曲线  等)的图标。机械控制命令时，显示该机械控制命令的种类(切线等)的图标。
6	落针种类	表示有关落针位置的种类。  图案起点，表示是图案的起点位置(原点)。

序号	项目	内容
		 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。
		 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：

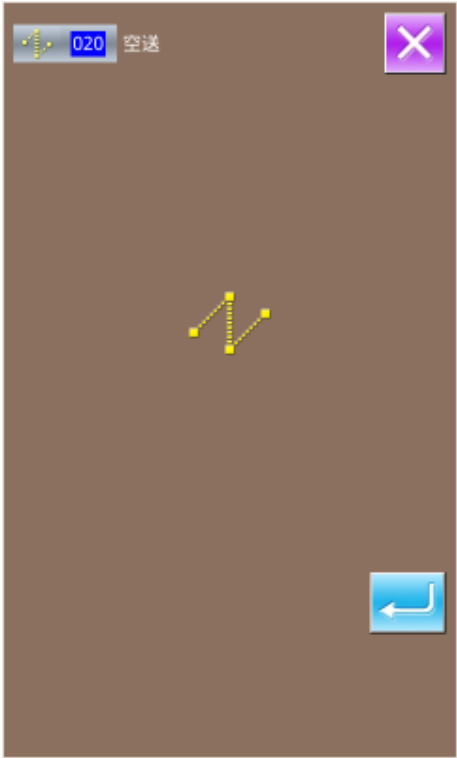
	X (mm)	Y (mm)
①	-40.00	25.00
②	40.00	25.00
③	40.00	-25.00
④	-4000	-25.00

输入次序：如左图中虚线箭头所示。

①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：

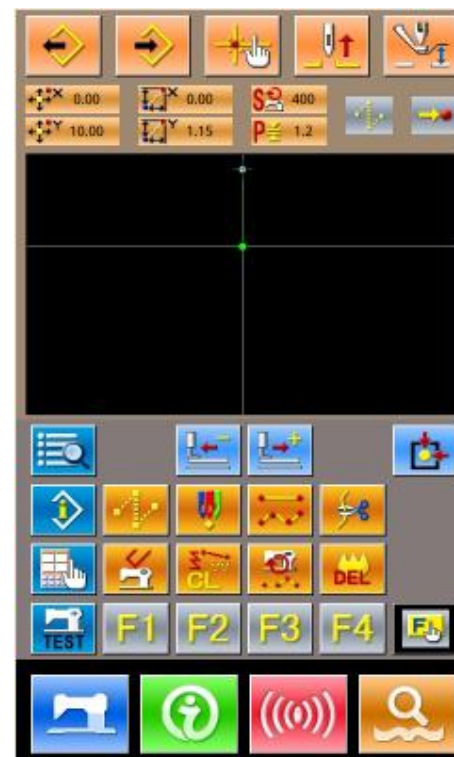
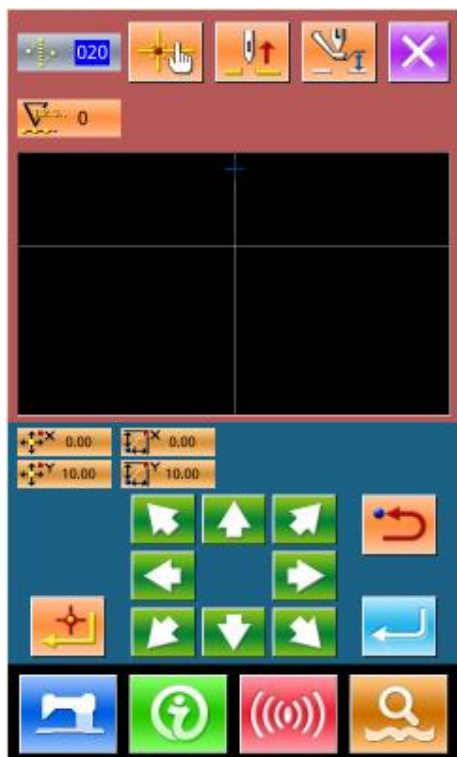
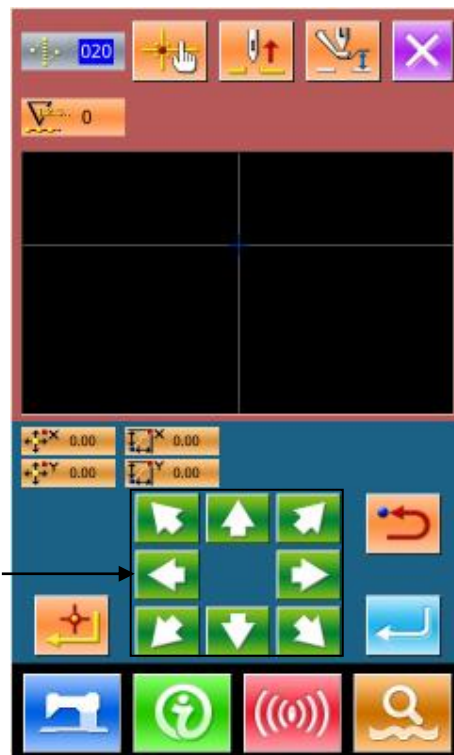
注：也可以从功能代码一览表里直接选择020：空送，进入该界面。



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：

A



② 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：

019 缝切机停止

020 空送

021 点缝

022 普通缝

023 直线普通缝

024 自由曲线普通缝

025 圆弧普通缝

026 圆普通缝

030 直线标准曲折缝

031 自由曲线标准曲折缝

NO

02/08

023 直线普通缝

2.0mm

3200

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。

针间距设置

3.0

(范围: 0.2 - 12.7)

123

456

789

0↕↖

C

确认缝迹长度设定按钮的显示值为

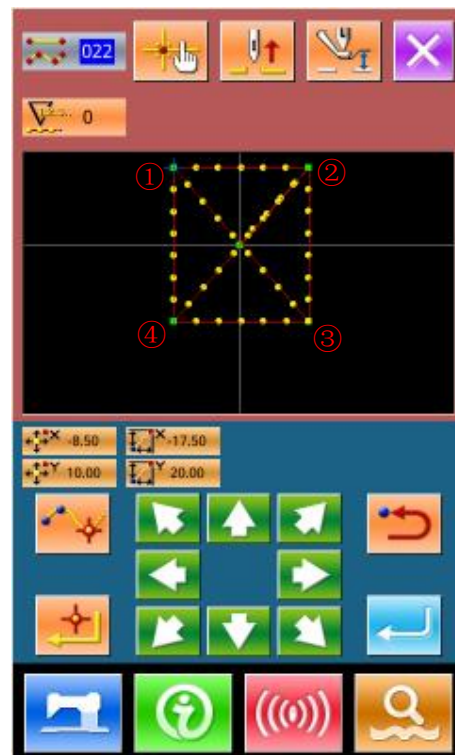
“3.0mm”之后，按确认键，进入直线普通缝位置设定界面。

在此界面下，通过方向移动键，将光标（机针位置）从①处移动到②处，然后按确定

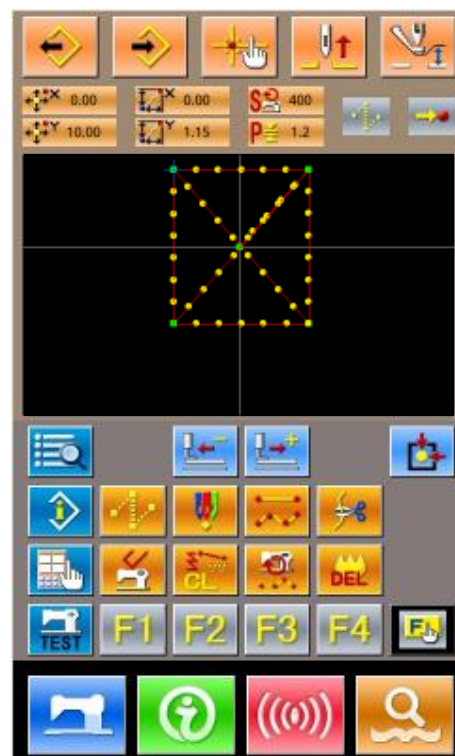
按钮。反复进行上述移动操作，将光标按照

②→③→④→①→③→②→④→①

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。

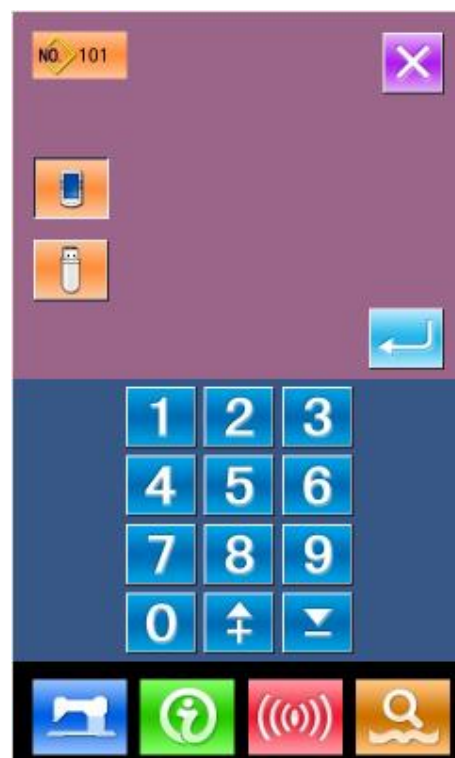


③保存花样

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。



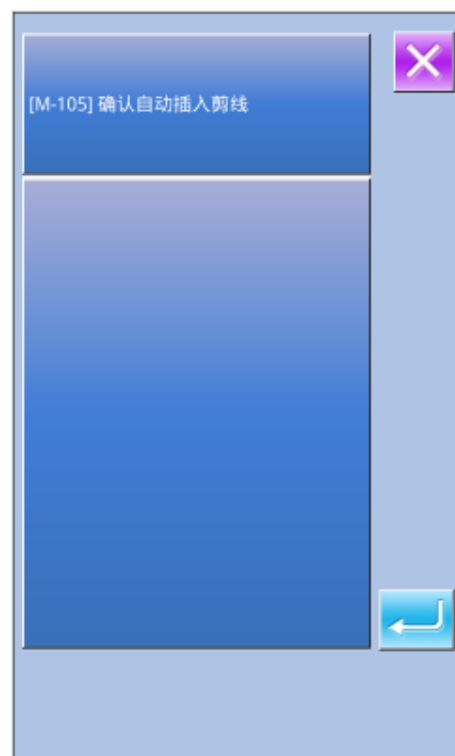
按  键后保存花样图案，系统提示，是否自动插入切线，如右图所示。

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：



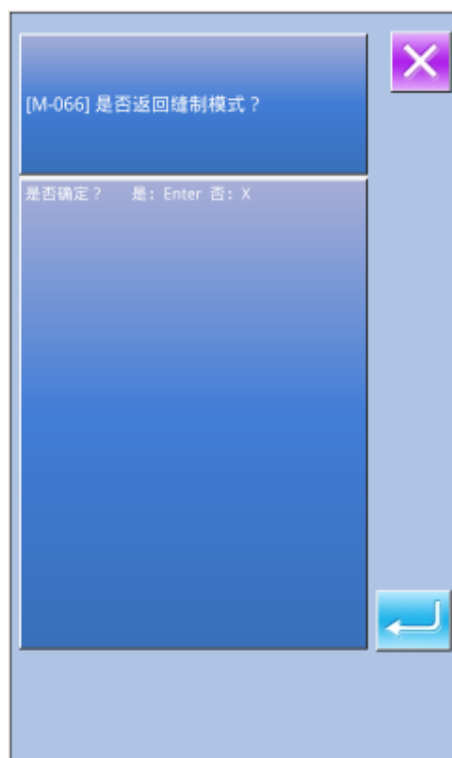
：编辑模式



：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。

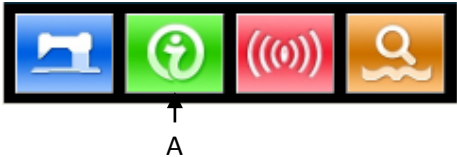
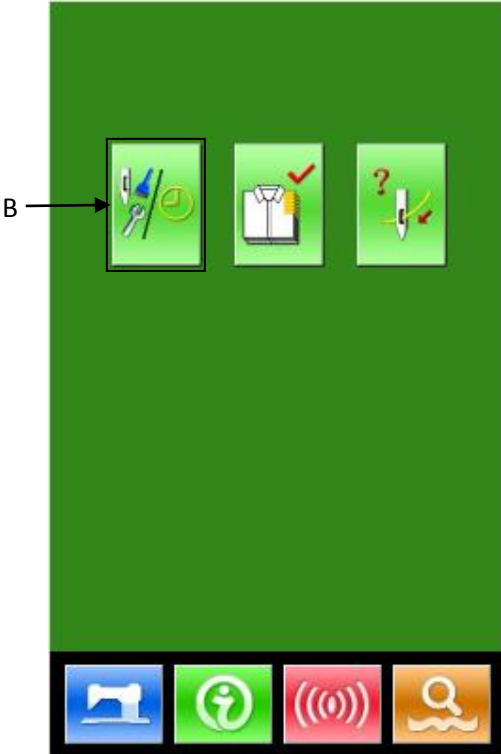


6 信息功能

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)

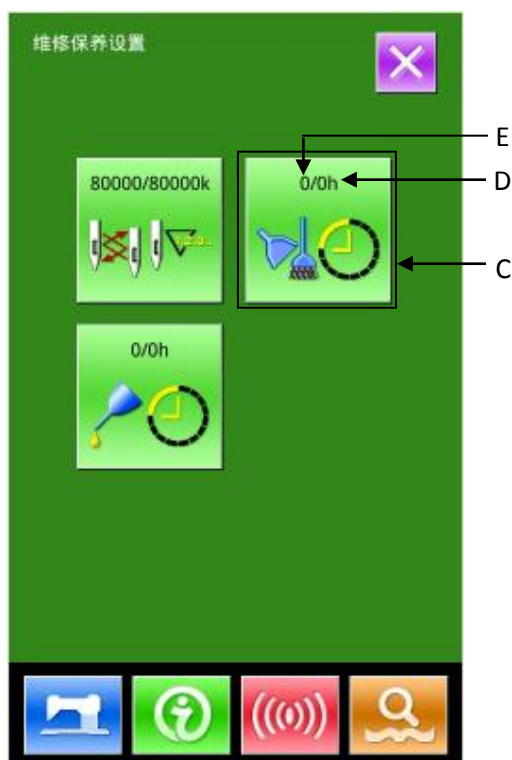


: 机油更换时间(小时)

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。

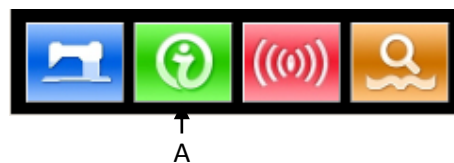


6.2 维修保养时间设置

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，有六项功能显示：



：维修保养



：生产管理



：穿线示意



：报警记录



：运转记录

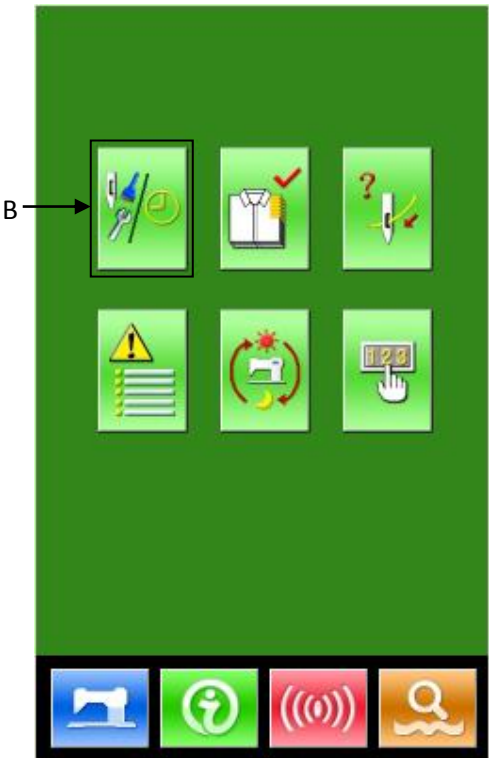


：分期密码

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

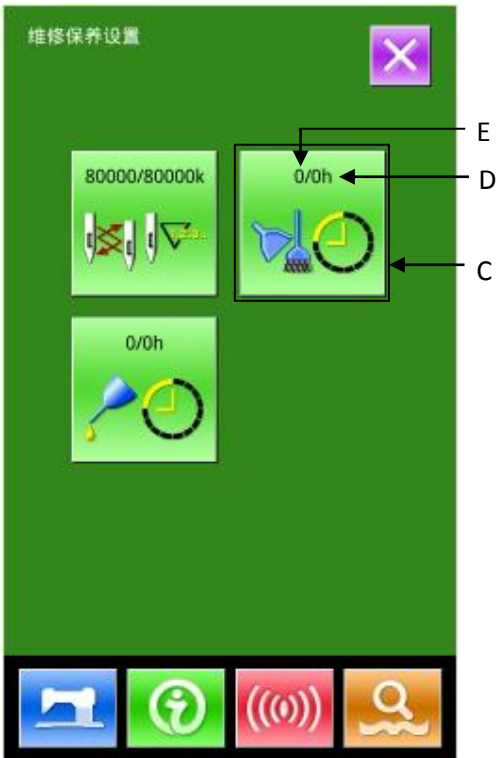
在保养维修信息界面上，显示出与通常的维修保养信息界面一样的信息。按了想变更维修保养时间的项目按键(C)之后，相关输入界面被显示出来。



比如按下



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：

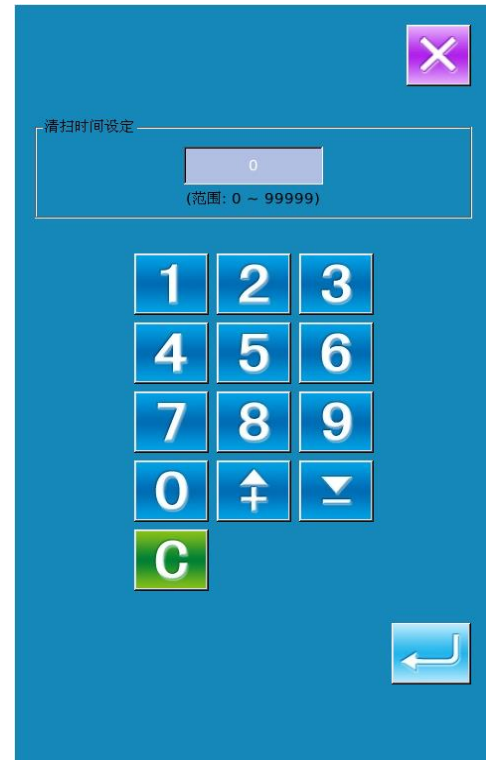
- ◆ 机针更换时间设定
- ◆ 清扫时间设定
- ◆ 机油更换时间设定

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。

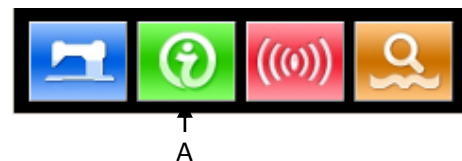
生产管理界面的显示方法有以下2 种：

- 从信息界面显示
- 从缝制界面显示

6.4.1 从信息界面显示

①显示信息界面。

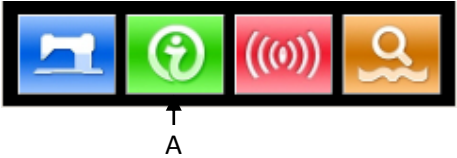
在数据输入界面按了开关部的信息键（A）之后，信息界面被显示出来。



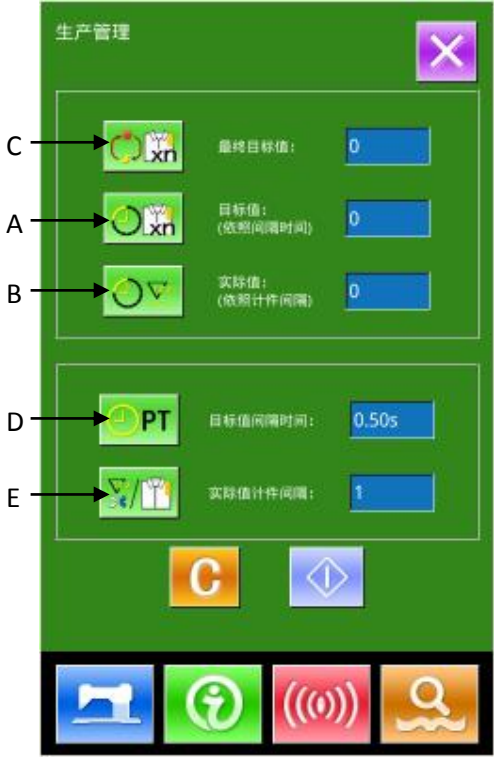
②显示生产管理界面。 请按信息界面的生产管理界面显示按钮（B）。生产管理界面被显示出来（如右图所示）。	 A screenshot of the main menu with a green background. At the top, there are three icons: a wrench and screwdriver, a document with a checkmark, and a question mark. An arrow labeled 'B' points to the document icon. At the bottom, there is a row of four icons: a sewing machine, an information icon, a signal icon, and a user icon.
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。	 A screenshot of the '生产管理' (Production Management) screen. It has a green background and a purple close button in the top right. The screen is divided into two main sections. The top section has three rows of controls, each with an icon and a text input field. The bottom section has two rows of controls, each with an icon and a text input field. At the bottom, there are two large buttons labeled 'C' and 'D'. An arrow labeled 'C' points to the first icon in the top section. An arrow labeled 'D' points to the second icon in the top section. An arrow labeled 'E' points to the first icon in the bottom section.

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。



⑤ 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

了停止按钮  之后, 停止计数。停止后,

在停止按钮的位置显示出计数按钮 。

需要继续进行计数时, 请再次按计数按钮

。在按了清除按钮  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，按下清除按钮.

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钮可以显示。）

按下清除按钮之后，显示出清除确认界面。

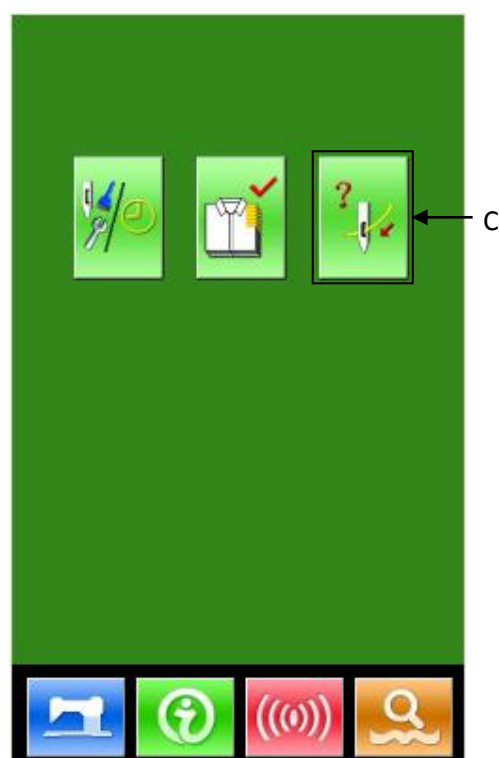
在清除确认界面，按下确定按钮确认

清除，按下退出键直接退出。

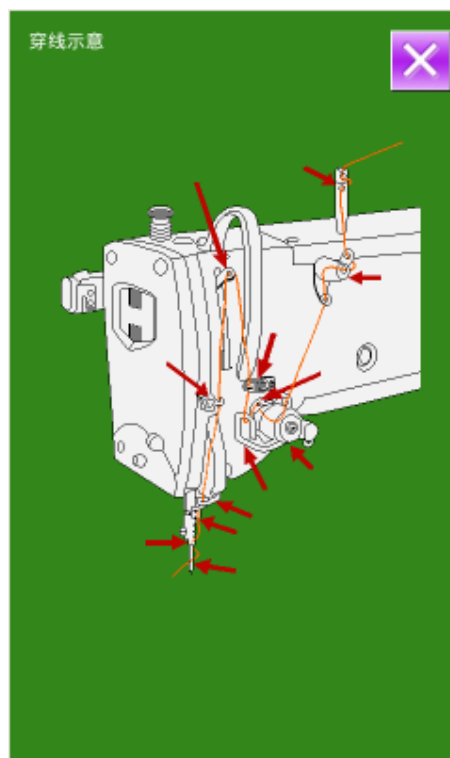


6.5 显示穿线图

信息界面按下穿线按钮（C）之后，上穿线图被显示出来。



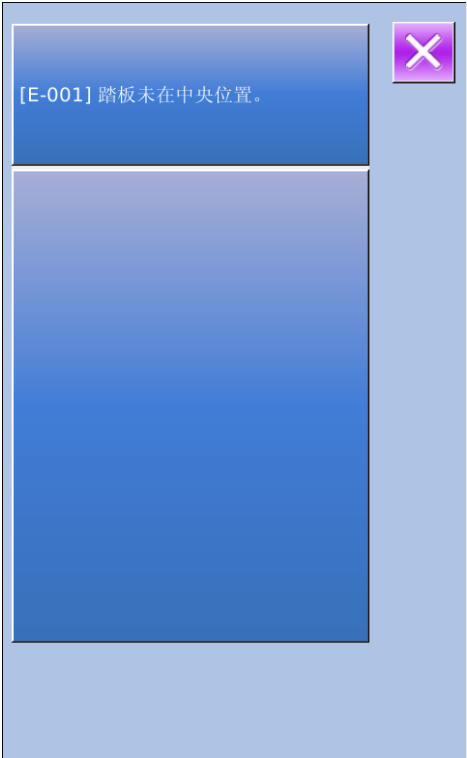
穿线时，请参阅。



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

运转记录 

累积运转时间：	0h	清除
累积缝纫件数：	0	清除
累积上电时间：	0h	清除
累积缝纫针数：	0k	清除

6.8 分期密码设置

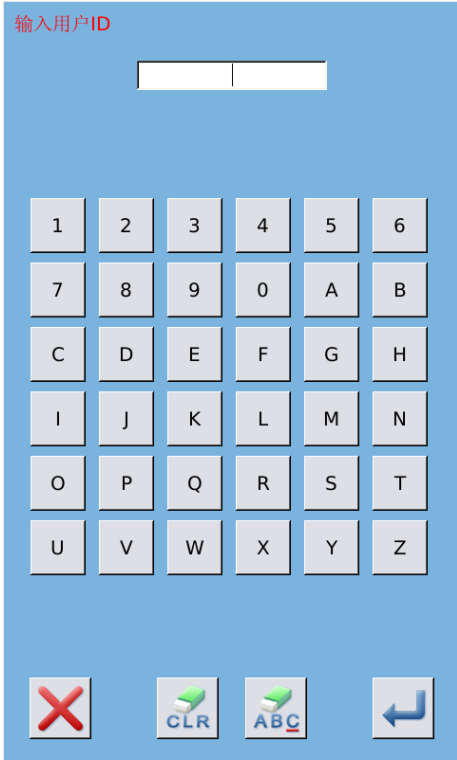
1) 维修人员等级时，按下可以设置分期密码

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

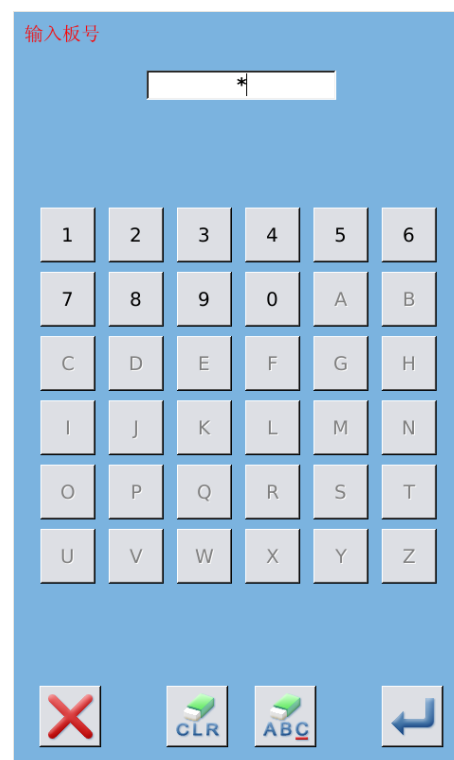


4) 输入板号

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

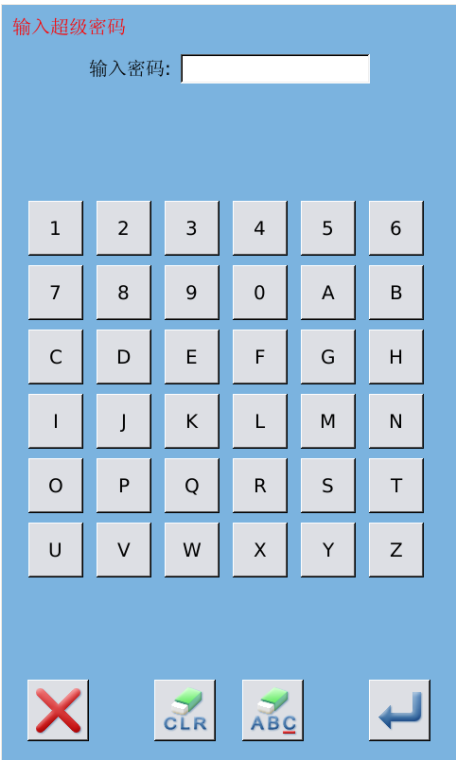
按下【时钟】键，进入系统时钟设置界面，
确定系统时钟



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

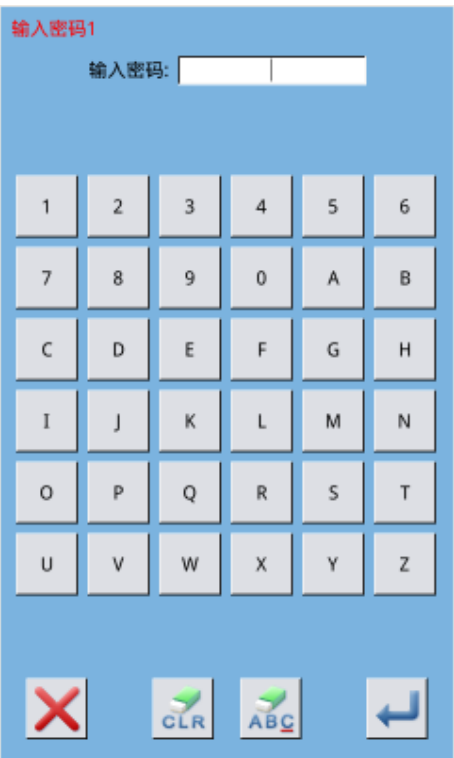


7) 输入分期密码

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】

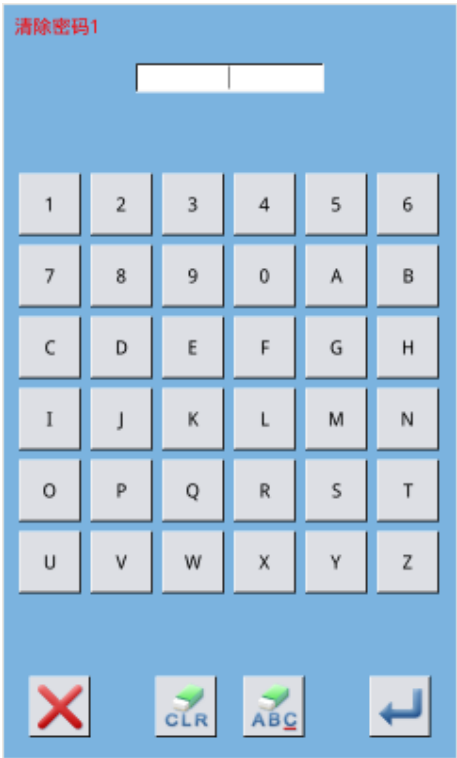
10) 主动清除密码

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。



1) 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 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/ [0-9][0-9][1-9].dsb
B/BA	[0-9][0-9][1-9].(1-599)/ [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文件夹里，否则就不能读取文件。

7.2 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，请将花样文件保存在U盘的DH_PAT目录中

※ 从操作头导出花样时，导出的花样文件保存在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：

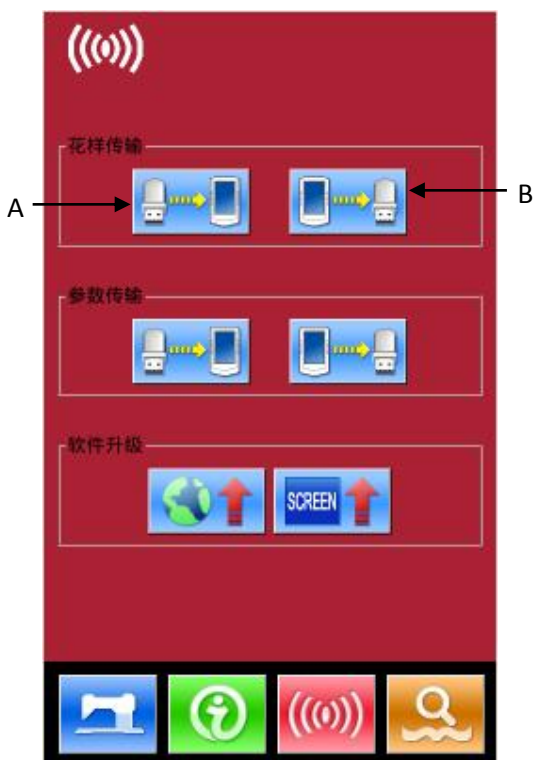
文件名：三位数字，001~999

后缀名：vdt（大小写无关）

举例：

正确的文件命名： 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。

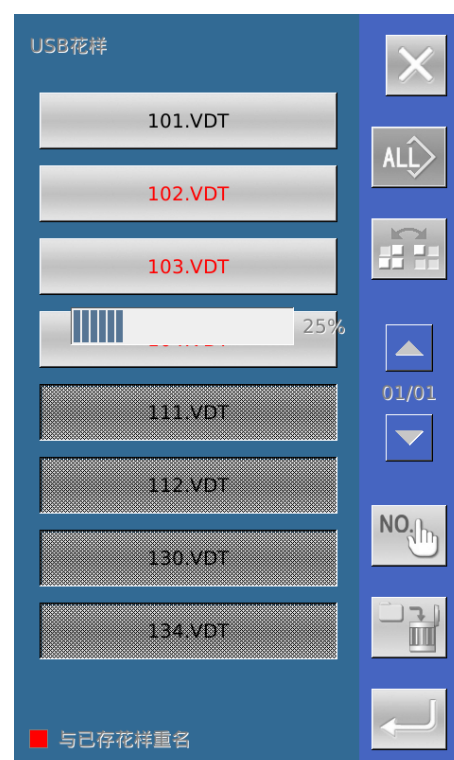


图 2

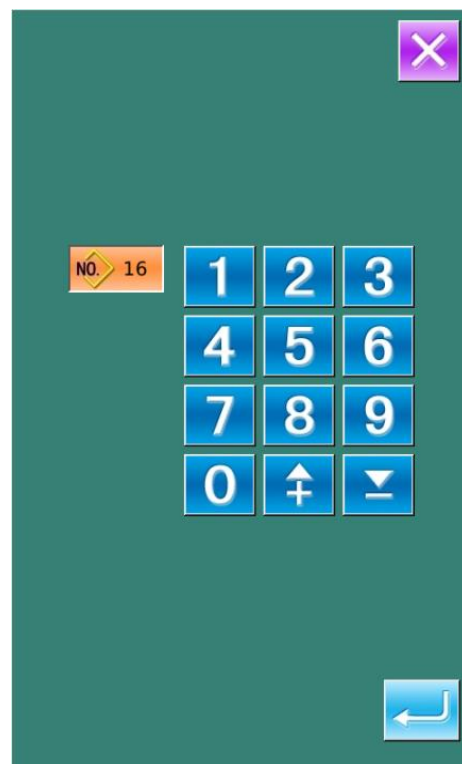


图 3

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,

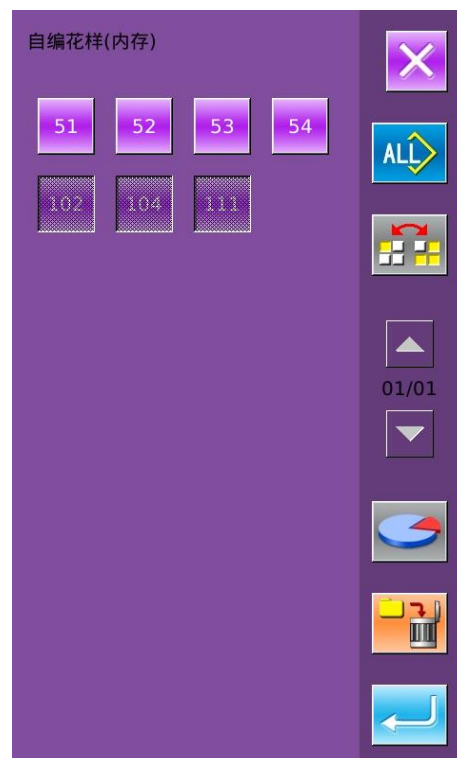
➤ 按  反向选择

➤ 点击花样号码按键

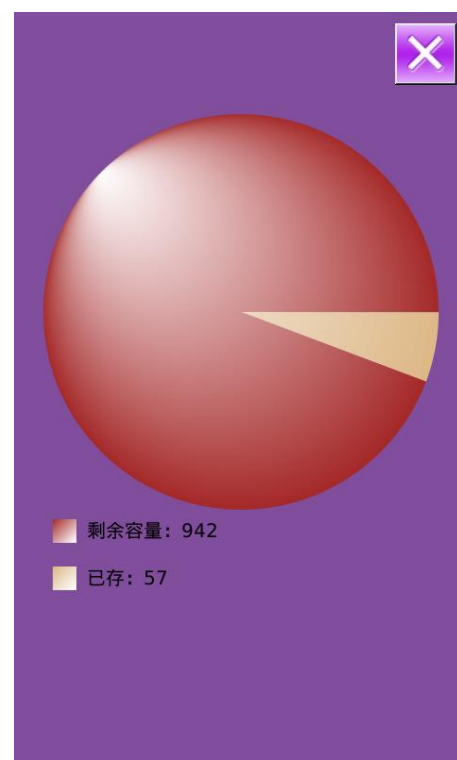
C、按  完成选中花样的删除功能

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：

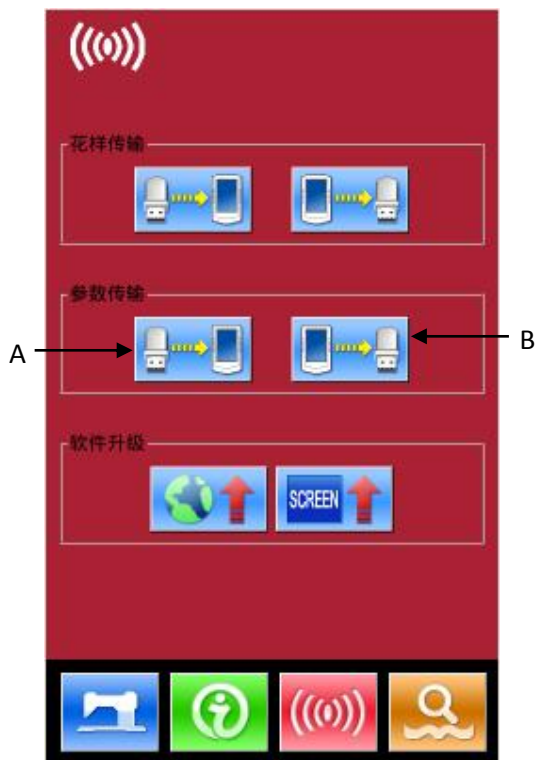
A：从U盘中向操作头导入参数

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，请将参数文件保存在U盘的DH_PARAM目录中，并命名为：
ukParam

※ 从操作头导出参数时，导出的参数文件保存在U盘的DH_PARAM中，参数文件：
ukParam

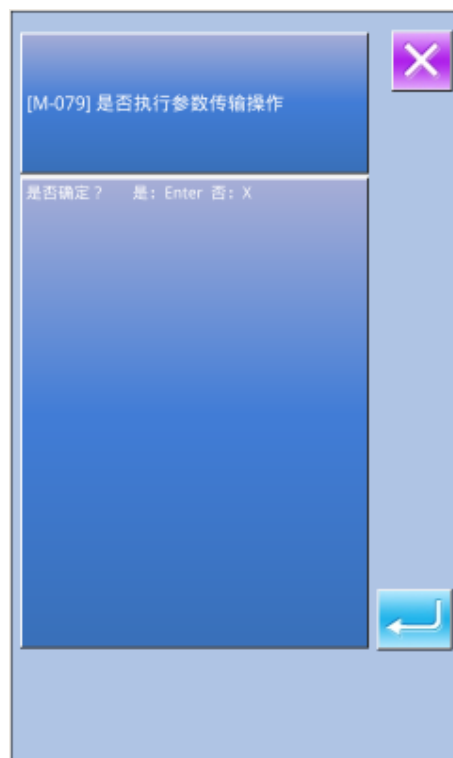
※ 参数文件是二进制文件，对文件的操作在操作头上完成，不要手动修改文件，以免影响使用。



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



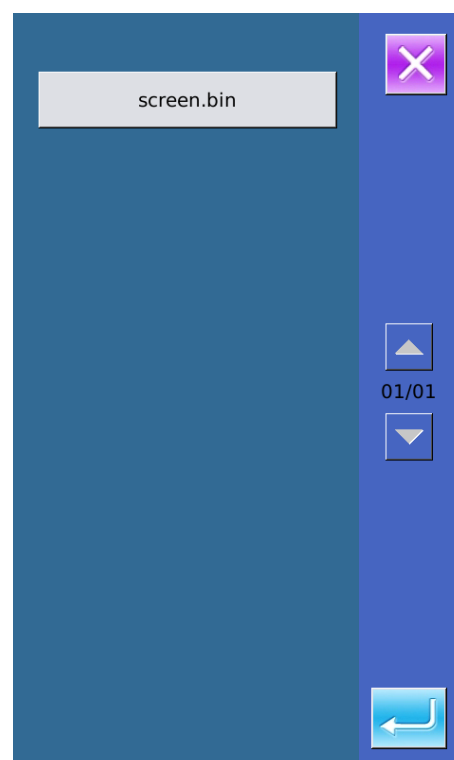
7.5 软件升级

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文件放入U盘的update目录下，选择bin文件后，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。





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	可播放视频文件
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：

01/02

加密



U01	缝制完成后压脚/扭夹上升方式	↑
U27	缝制计数器计数单位	↑
U32	缝鸣器声音设定	ALL
U41	切换P花样时是否先检索原点	YES
U64	缝制形状尺寸变更单位	%
U72	机头板照明灯亮度控制	↑
U88	放大缩小模式	PIT
U100	慢自动模式的设定方法	OFF
U190	背光自动关闭	OFF

已修改





选择 U01，进入界面

U01

缝制完成后压脚/扭夹上升方式

01/01

OFF

不自动上升

1

回起缝点同时抬压脚

2

回起缝点再抬压脚





选择 U27，进入界面

U27

缝制计数器计数单位

1

范围：1 - 30

步长：1

缝制计数器计数单位

123

456

789

0↑↓

C





72

② 参数加密

A、按“加密”键后，进入密码输入界面。

按  全部清除输入内容

按  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

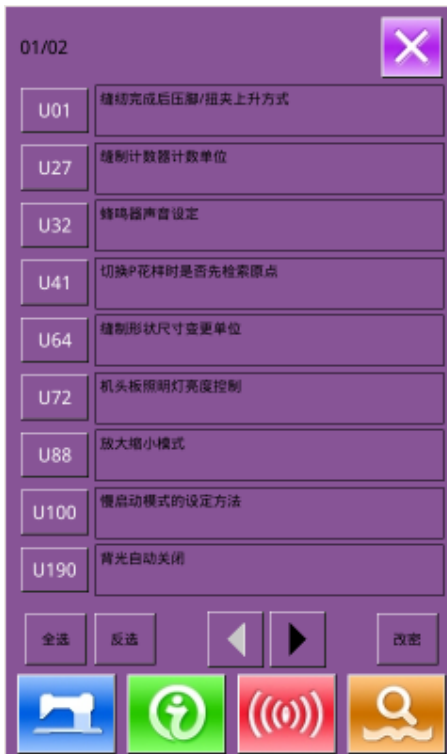
按【反选】，反向选择参数加密

按【改密】，修改加密密码，默认是厂

家 ID

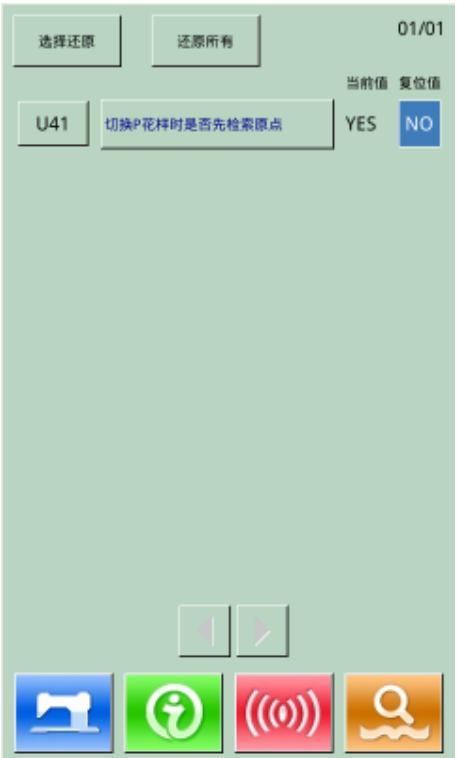
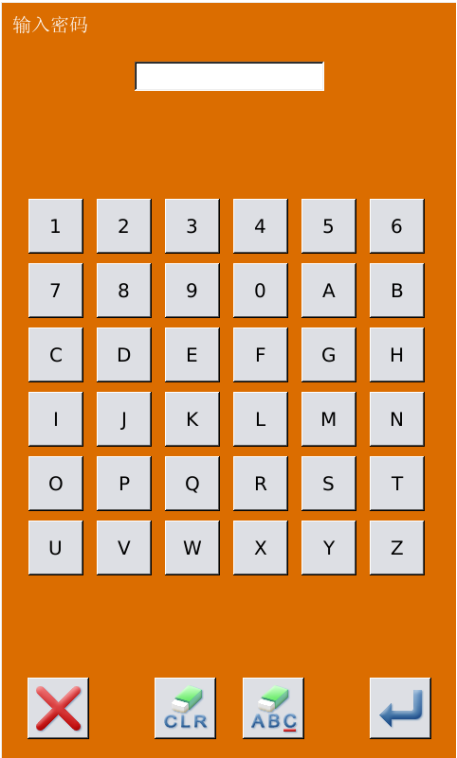
按退出键  退出加密功能

输入密码



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
----	----	------	------	------

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
U32	蜂鸣器声音设定 OFF: 禁止蜂鸣器 PAN: 操作盘声音 ALL: 操作盘加报警	0: 无蜂鸣音 1: 操作盘音 2: 操作盘+报警音		2
U41	切换 P 花样时是否先检索原点 Yes: 检索 No: 不检索	0: Yes 1: No		0
U64	选择尺寸变更单位 %: 输入百分比 SIZ: 输入实际尺寸	0: 输入百分比 1: 输入实际尺寸		0
U88	放大缩小模式 OFF: 禁止 PIT: 间隔增减 STI: 针数增减	0: 禁止 1: 间隔增减 2: 针数增减		1
U100	慢启动模式的设定方法 OFF: 1-5 针的启动速度按照 151-155 存储开关的设定 ON: 按照各程序的慢启动设定	0: OFF 1: ON		1
U190	背光自动关闭 OFF: 不能自动关闭 ON: 自动关闭	0: 否 1: 是		0
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		100
U193	禁止计数器被修改 OFF: 允许修改 ON: 禁止修改	0: 允许修改 1: 禁止修改		0
U194	计数器达到设定值时缝纫机的操作 OFF: 停止缝纫 ON: 可继续缝纫	0: 停止缝纫 1: 可继续缝纫		0
U195	音量大小	30~63		50
U900	语言选择 0: 中文 1: 英文	0: 中文 1: 英文		0
U901	开机是否进入语言选择 OFF: 否 ON: 是	0: OFF 1: ON		0

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

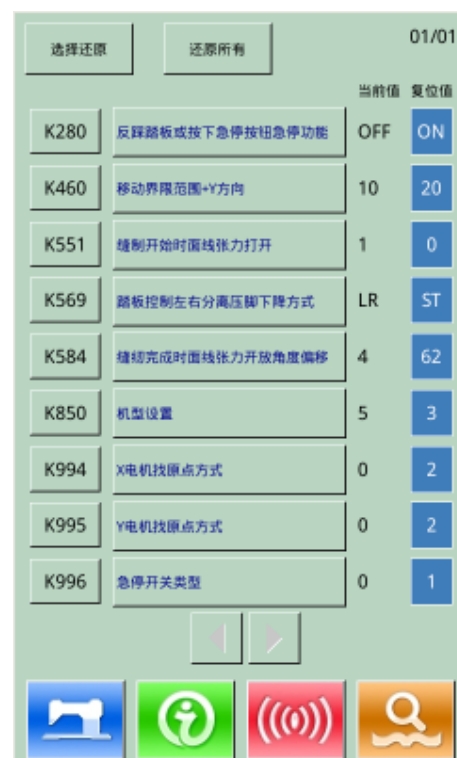


③ 已修改参数查询

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	10	0
K70 ^[1]	踏板类型 1: 单踏板 2: 双踏板	1: 单踏板 2: 双踏板	1	1 (ASC210) 2 (ASC212)
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 2: 1档降一半, 2档降到最低并开始缝纫	1~2	1	1
K72	双踏板动作模式(70号参数处于2时有效) 1: 压脚开关1档放下压脚, 启动开关起缝 2: 压脚开关1档降到中间, 2档降到最低, 启动开关起缝 3: 踩下启动开关后放下压脚并开始缝纫	1~3	1	1
K73	踏板行程回差微调	0~15	1	0
K150	主轴停止时反转抬针 ON: 主轴停止时反转抬针 OFF: 主轴停止时不反转抬针	0: OFF 1: ON	1	0
K151 ^[1]	缝纫开始第1针的速度	200~3200rpm	100	1500
K152 ^[1]	缝纫开始第2针的速度	200~3200rpm	100	3200

序号	参数	设定范围	编辑单位	出厂设置
K153 ^[1]	缝纫开始第 3 针的速度	200~3200rpm	100	3200
K154 ^[1]	缝纫开始第 4 针的速度	200~3200rpm	100	3200
K155 ^[1]	缝纫开始第 5 针的速度	200~3200rpm	100	3200
K156 ^[1]	缝纫结束前 5 针的速度	400~3200rpm	100	3200
K157 ^[1]	缝纫结束前 4 针的速度	400~3200rpm	100	3200
K158 ^[1]	缝纫结束前 3 针的速度	400~3200rpm	100	3200
K159 ^[1]	缝纫结束前 2 针的速度	400~3200rpm	100	2400
k163	最高缝制速度	1200~3200	100	3200
K250	缝纫完成时有无原点检测 ON: 有 OFF: 无	0: OFF 1: ON	1	0
K251	组合缝原点检索 OFF: 无原点检索 PAT: 每一图案结束后 CLC: 每一循环结束后	0: OFF 1: PAT 2: CLC	1	0
K253	进入缝纫待命状态的方法 0: 将脚踏板踩到第 2 档（双联动脚踏板则是踩启动开关） 1: 按 RESET（复位）键 2: 按专用外部输入开关（可选件输入）	0~2	1	0
K260	改变全部送布时间 -: 送布时间提前 +: 送布时间延迟	-30~30	1	0
K261	改变开始缝纫第 1 针时的送布时间 -: 送布时间提前 +: 送布时间延迟	-30~30	1	0
K262	改变开始缝纫第 2 针时的送布时间 -: 送布时间提前 +: 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 -: 送布时间提前 +: 送布时间延迟	-30~30	1	0
K264	改变缝纫结束前第 3 针时的送布时间 -: 送布时间提前 +: 送布时间延迟	-30~30	1	0
K265	改变缝纫结束前第 2 针时的送布时间 -: 送布时间提前 +: 送布时间延迟	-30~30	1	0

序号	参数	设定范围	编辑单位	出厂设置
K266	改变缝纫结束前第 1 针时的送布时间 -: 送布时间提前 +: 送布时间延迟	-30~30	1	0
K270	断线检测是否有效 OFF: 无效 ON: 有效 *K270 只针对 ASC212 机型。	0: OFF 1: ON	1	0
K271	压脚/纽夹的待机位置 ON: 待机位置为区域中心 OFF: 缝纫开始位置为待机位置	0: OFF 1: ON	1	0
k274	压脚下降速度 负向: 压脚下降速度减慢 正向: 压脚下降速度加快	-5~2	1	0
K275	压脚上升速度 负向: 压脚上升速度减慢 正向: 压脚上升速度加快	-5~2	1	0
K276	缝制结束时压脚上升速度 负向: 压脚上升速度减慢 正向: 压脚上升速度加快	-5~2	1	0
K278	压脚联动拨线操作脉冲数	30~60	1	45
K280	反踩踏板或者按下急停按钮急停功能: 1: ON 0: OFF	0、1	1	0
K281	XY 原点检索速度	0~100	1	0
K282	拨线延时	0~50	1	0
K399	转速限制 ON: 开启 OFF: 关闭	0: OFF 1: ON		0
K458	X 正方向的缝纫区域限制	0.0~40.0mm	1	40
K459	X 负方向的缝纫区域限制	0.0~40.0mm	1	40
K460	Y 正方向的缝纫区域限制	0.0~30.0mm	1	30
K461	Y 负方向的缝纫区域限制	0.0~30.0mm	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 ON: 设定所有程序共同的张力值 OFF: 每次登录程序都需设定	1: ON 0: OFF	1	0
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 针	1	1

序号	参数	设定范围	编辑单位	出厂设置
	0: 关闭 1~3: 在指定的针数内打开			
K560	张力夹线器控制方式 0: 夹线方式 1: 支线方式	0 或 1	1	1
K568	剪线线头长短调整 数值越大线头越长	0~50	1	0
K570	剪线电磁铁吸合电流 PWM 控制 ON: 使用 PWM 控制 OFF: 不使用 PWM 控制	1: ON 0: OFF	1	1
K571	剪线电磁铁吸合电流 PWM 时间	0~40	1	0
K572	急停后剪线功能设定 0: 急停后不剪线 1: 急停后手动剪线 2: 急停后自动剪线	0~2	1	1
K573	剪线电磁铁吸合时开启 33V 电压 ON: 开启 33V OFF: 使用 24V	1: ON 0: OFF	1	0
K582	缝纫开始时坚固面线张力 ON: 有效 OFF: 无效	1: ON 0: OFF	1	1
K583	缝纫开始时面线张力紧固角度偏移	-150~150 度	1	0
K584	缝纫完成时面线张力开放角度偏移	0~17 度	1	4
K585	缝纫开始时的坚固面线张力值 (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的点	0~50ms	1	35
K590	切线时的线张力设定	0~200	1	75
K591	剪线角度 (K95)	-10~10	1	0
K592	剪线速度 (K43)	200~700rpm	100	400
K593	拨线速度变化	-3~3	1	0
K594	机针停止位置	-10~10 度	1	0
K596	机头翻倒开关是否有效 ON: 有效 OFF: 无效	1: ON 0: OFF	1	1
K597	剪线电磁铁吸合时间补偿 (430F)	-30~30	1	0
K598	剪线后的出销方式选则	-10~0	1	-4

序号	参数	设定范围	编辑单位	出厂设置
K599	机头急停开关是否有效 ON: 有效 OFF: 无效	1: ON 0: OFF	1	1
K756	绕线速度限制 ON: 最高 2000sti/min OFF: 无限制	1: ON 0: OFF	1	1
K850 ^[1]	根据缝制的布料设定规格代码	3, 5, K, F	2	3
K900	恢复出厂设置			
K991	备用			0
K992	备用			0
K993	备用			0
K994	备用			0
K995	备用			0
K996	备用			0
K997	断线检测针数设定（只针对有断线检测功能的机型）	-100~100	0	0
K998	备用			0
K999	备用			0

^[1] 表格所列参数值是机型为 ASC212 时的设置

当机型为 ASC210 时，

序号	参数	设定范围	编辑单位	出厂设置
K70	踏板类型 1: 单踏板 2: 双踏板	1: 单踏板 2: 双踏板		1
K151	缝纫开始第 1 针的速度	200~3200rpm	100	800 套结 400 钉扣
K152	缝纫开始第 2 针的速度	200~3200rpm	100	1200 套结 400 钉扣
K153	缝纫开始第 3 针的速度	200~3200rpm	100	2500 套结 600 钉扣
K154	缝纫开始第 4 针的速度	200~3200rpm	100	3200 套结 900 钉扣
K155	缝纫开始第 5 针的速度	200~3200rpm	100	3200 套结 2700 钉扣
K156	缝纫结束前 5 针的速度	400~3200rpm	100	3200 套结 2700 钉扣
K157	缝纫结束前 4 针的速度	400~3200rpm	100	3200 套结 2700 钉扣

K158	缝纫结束前 3 针的速度	400~3200rpm	100	3200 套结 2700 钉扣
K159	缝纫结束前 2 针的速度	400~3200rpm	100	2400 套结 2000 钉扣
K850	根据缝制的布料设定规格代码	3, 5, K, F, BUTN		3

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，显示计数器溢出报警界面。按下键，计数器当前值恢复为设定值。

A

B

C

缝制计数器

类型：

加

减

关闭

D

当前值

0

E

设定值

9999

计件计数器

类型：

加

减

关闭

F

G

H

I

当前值

0

J

设定值

9999



82

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



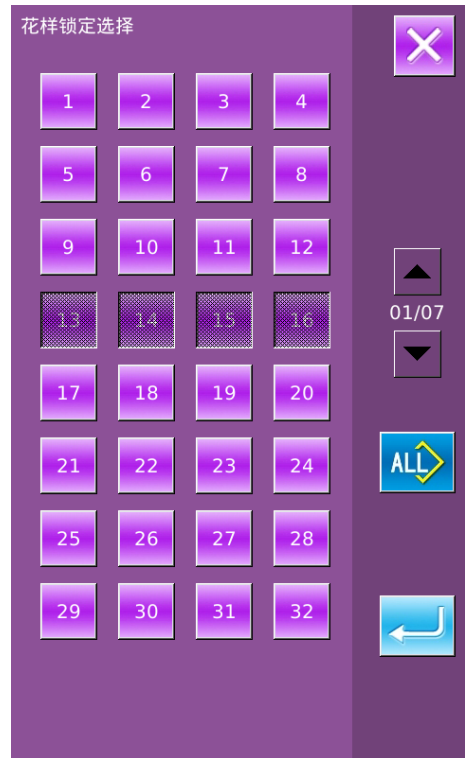
: 编辑模式



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。

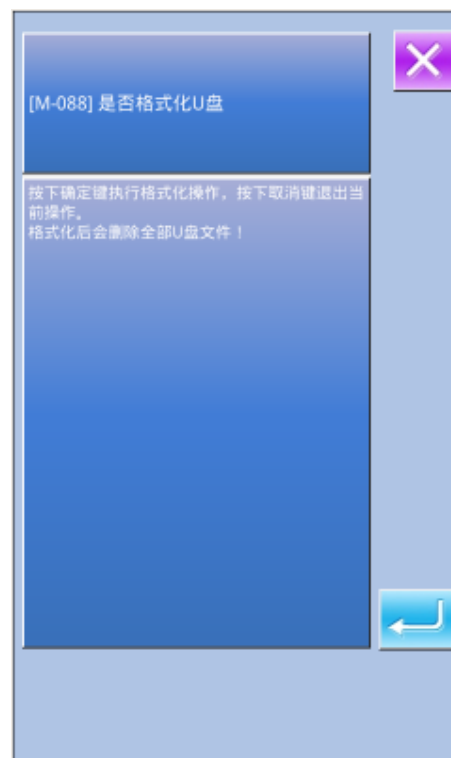
按退出键  退出格式化 U 盘



② 按“USB”键，进入 U 盘格式化

按回车键  全部格式化 U 盘文件

按退出键  退出格式化 U 盘



③ 按“内存”按键，格式化内存花样

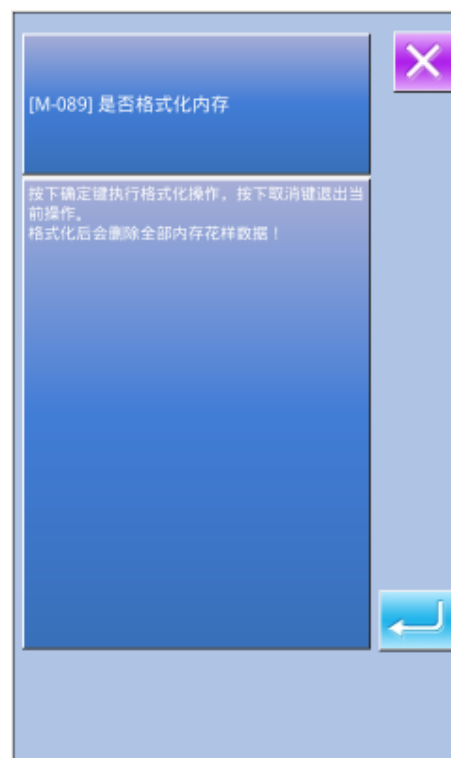
格式花样包括：

- 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文件删除，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文件，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

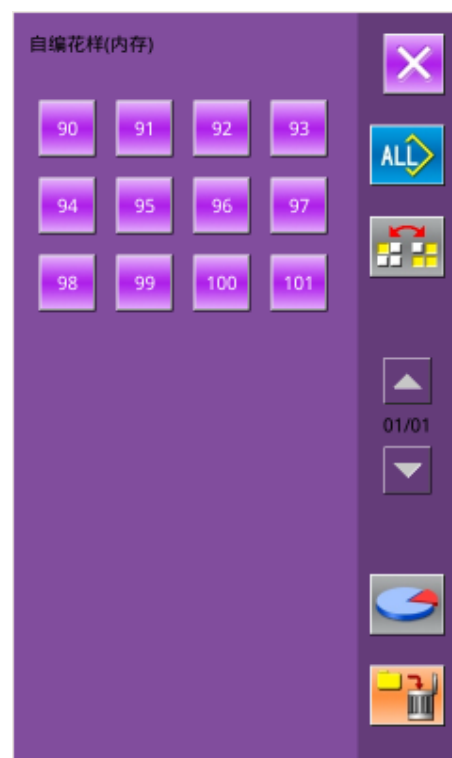
➤ 按  选择全部花样，

➤ 按  反向选择

➤ 点击花样号码按键

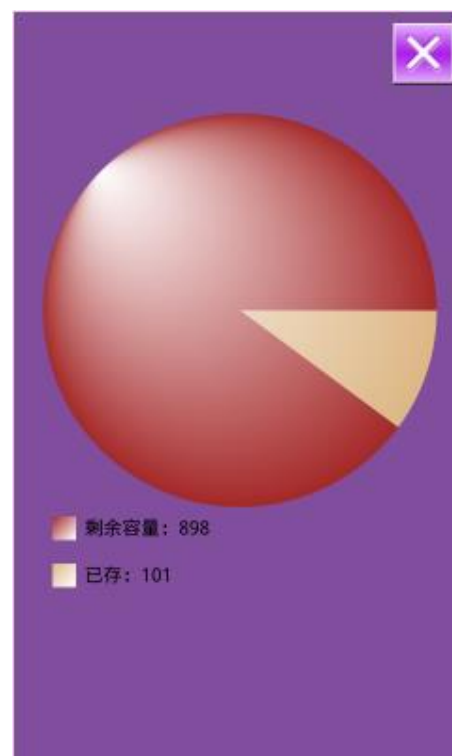
C. 按  完成批量删除功能

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

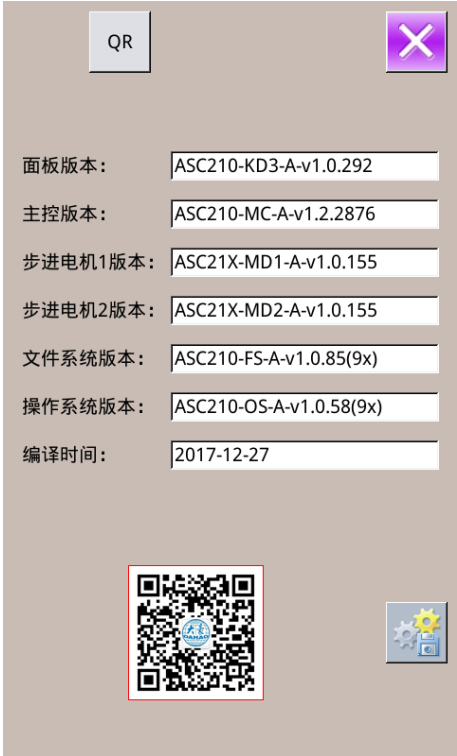
按退出键  退出到上一界面。



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。



QR

面板版本: ASC210-KD3-A-v1.0.292

主控版本: ASC210-MC-A-v1.2.2876

步进电机1版本: ASC21X-MD1-A-v1.0.155

步进电机2版本: ASC21X-MD2-A-v1.0.155

文件系统版本: ASC210-FS-A-v1.0.85(9x)

操作系统版本: ASC210-OS-A-v1.0.58(9x)

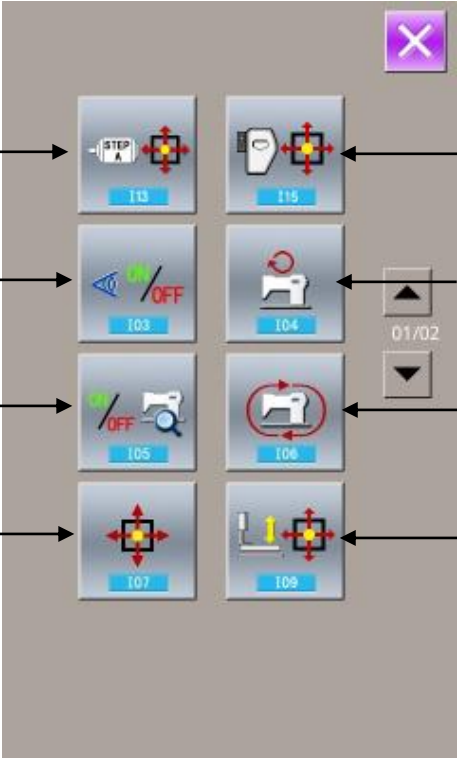
编译时间: 2017-12-27



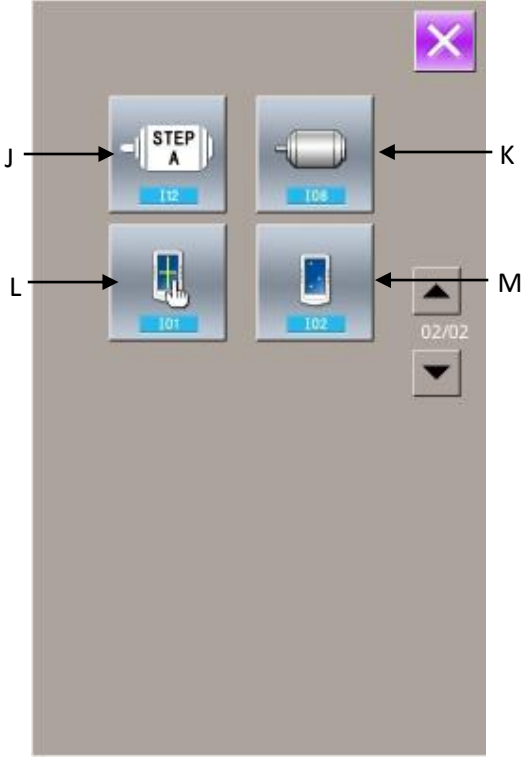
8.10 检测模式

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：

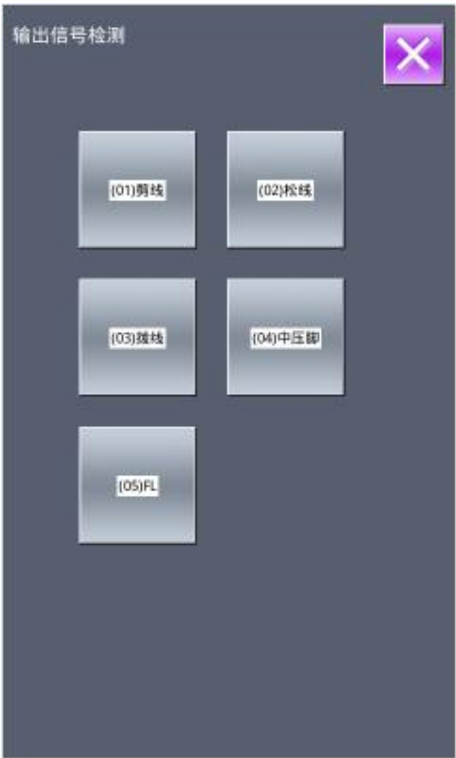
序号	名称
A	步进原点微调
B	所有电机去原点
C	I03 输入检测
D	I04 转速测定
E	I05 输出检测
F	I06 连续运转
G	I07XY 马达原点检测
H	09 压脚马达/原点传感器检测
J	机头板数据配置
K	主轴电机原点检测
L	I01 触摸屏校正
M	I02 液晶显示检测



A → B → C → D → E → F → G → H

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  (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	 输入信号检测 <table><tr><td>(01)双踏板启动开关</td><td>OFF</td></tr><tr><td>(02)双踏板压脚开关</td><td>OFF</td></tr><tr><td>(03)急停开关</td><td>OFF</td></tr><tr><td>(04)X马达原点传感器</td><td>OFF</td></tr><tr><td>(05)Y马达原点传感器</td><td>OFF</td></tr><tr><td>(06)外压脚马达原点传感器</td><td>OFF</td></tr><tr><td>(07)中压脚马达原点传感器</td><td>OFF</td></tr><tr><td>(08)机头翻转传感器</td><td>OFF</td></tr><tr><td>(09)模拟(单)踏板传感器</td><td>0</td></tr></table>	(01)双踏板启动开关	OFF	(02)双踏板压脚开关	OFF	(03)急停开关	OFF	(04)X马达原点传感器	OFF	(05)Y马达原点传感器	OFF	(06)外压脚马达原点传感器	OFF	(07)中压脚马达原点传感器	OFF	(08)机头翻转传感器	OFF	(09)模拟(单)踏板传感器	0
(01)双踏板启动开关	OFF																		
(02)双踏板压脚开关	OFF																		
(03)急停开关	OFF																		
(04)X马达原点传感器	OFF																		
(05)Y马达原点传感器	OFF																		
(06)外压脚马达原点传感器	OFF																		
(07)中压脚马达原点传感器	OFF																		
(08)机头翻转传感器	OFF																		
(09)模拟(单)踏板传感器	0																		
(3) 转速测定 ①显示转速测定界面  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。	 转速测试 目标转速 200RPM - + 实际转速 0RPM 主轴角度 0  																		

(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 ※ ASC210 机型没有 03 检测项	 Output Signal Detection screen showing five buttons: (01)剪线, (02)松线, (03)拨线, (04)中压脚, and (05)FL. A close button is in the top right corner.
(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。	 Continuous Operation Test screen showing an action interval input field set to 20 (x100ms), a numeric keypad (0-9, up, down), and a left arrow button at the bottom right.

(6) XY 马达原点传感器检测

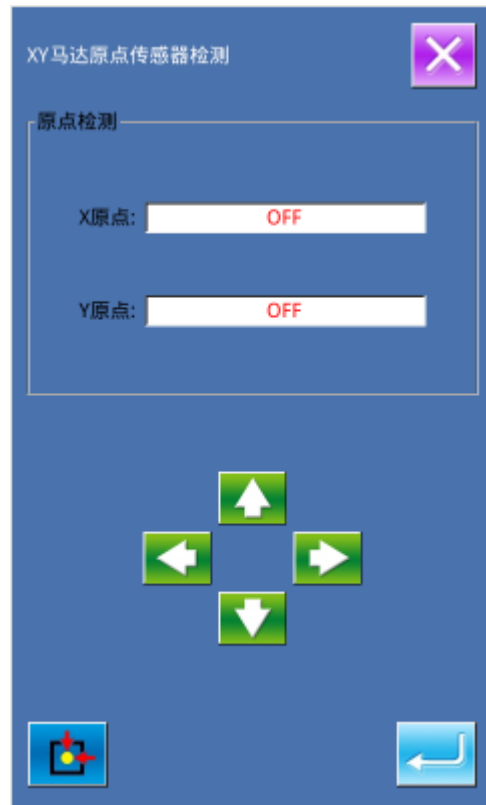
在检测模式界面按下  键进入 XY 马达、传感器输出检测界面（如右图所示）。若上电后不进入准备状态且在该

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 IO7 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

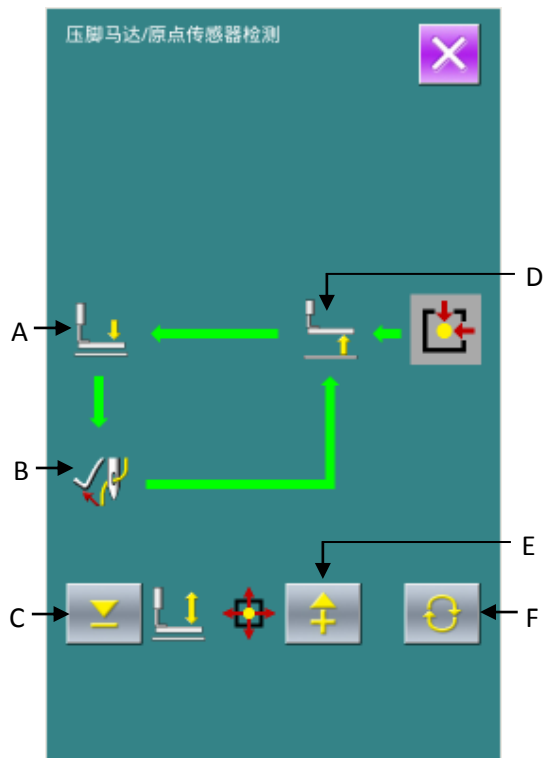
B: 拨线完成位置

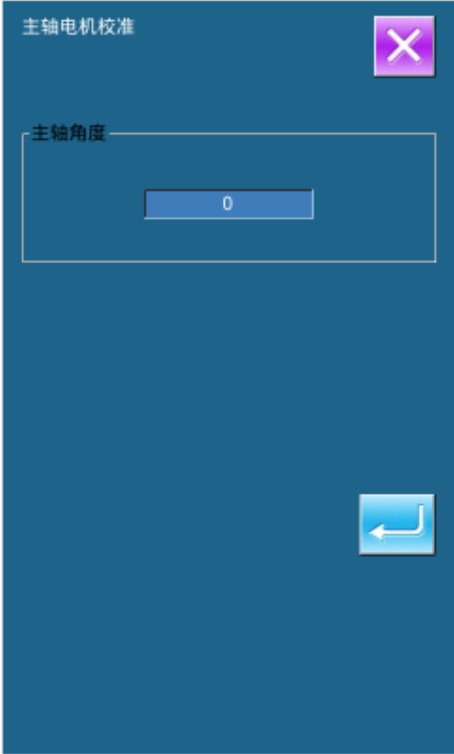
C: 正向运动一步

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  (IO2 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：

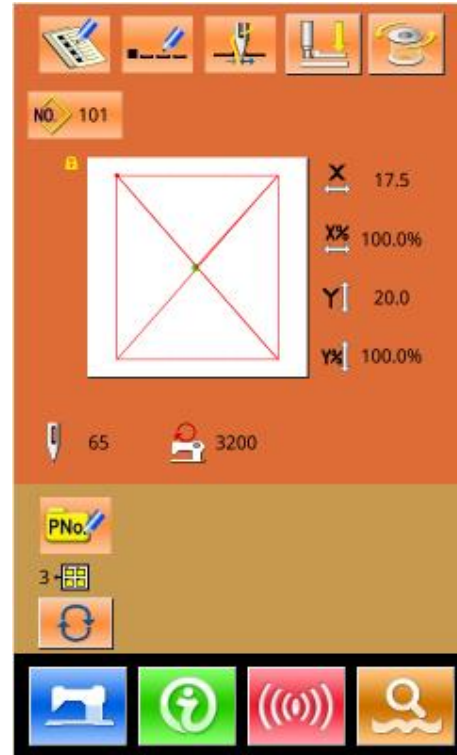
- 1) C 花样登记
- 2) C 花样复制
- 3) C 花样命名
- 4) C 花样编辑
- 5) 花样删除

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~

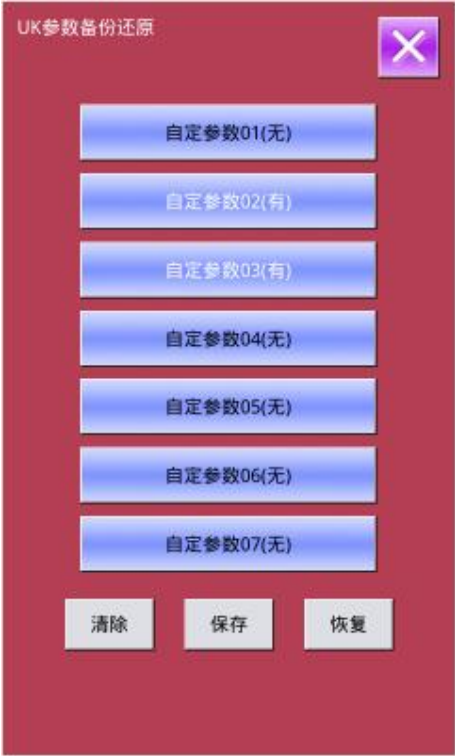
其中任意一键，
以确定参数保存位置，然后点击「保存」键
进行保存。

②观察「自定义参数 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义参数键，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。



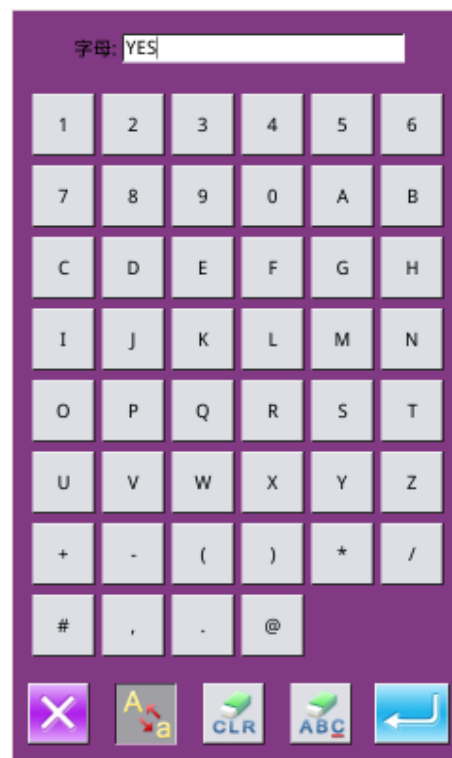
功能说明：

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； 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。

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。

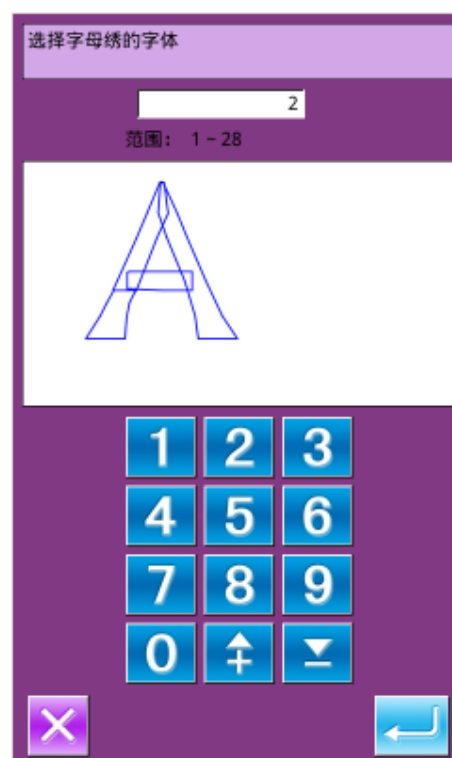


2、选择字体

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

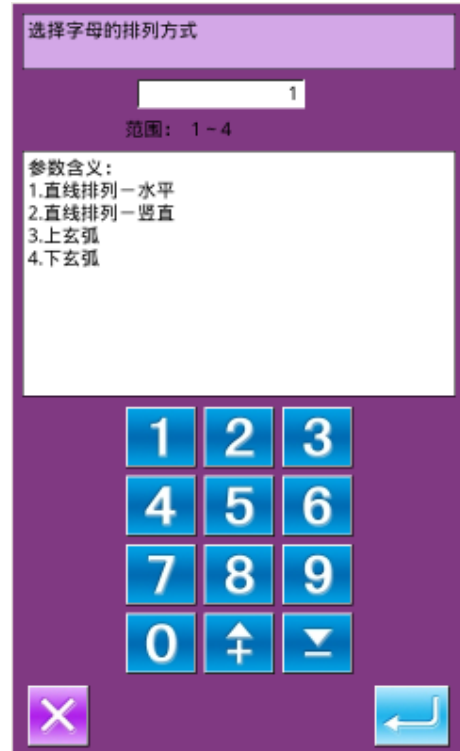
进行选择，按下  键保存并退出。

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。



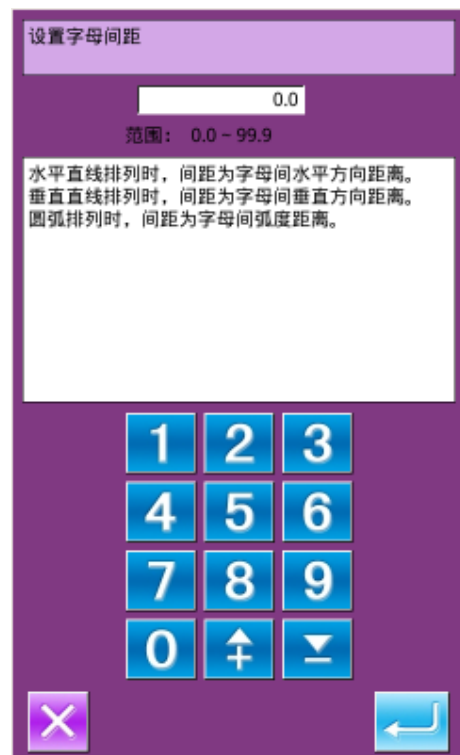
4、字符间距

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。

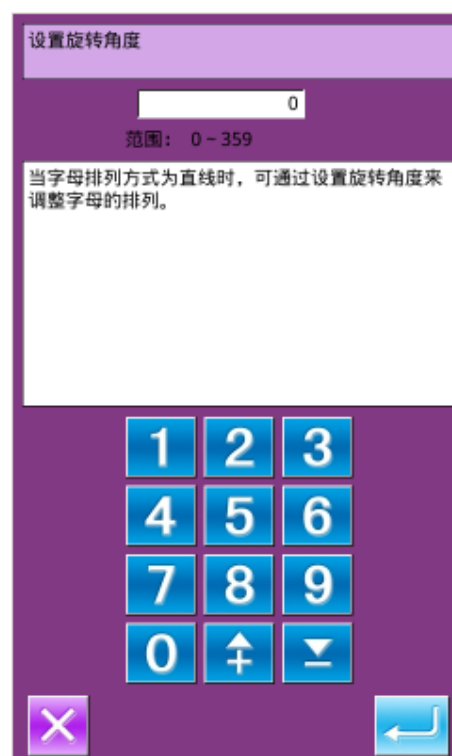


8、旋转角度设定

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° 。

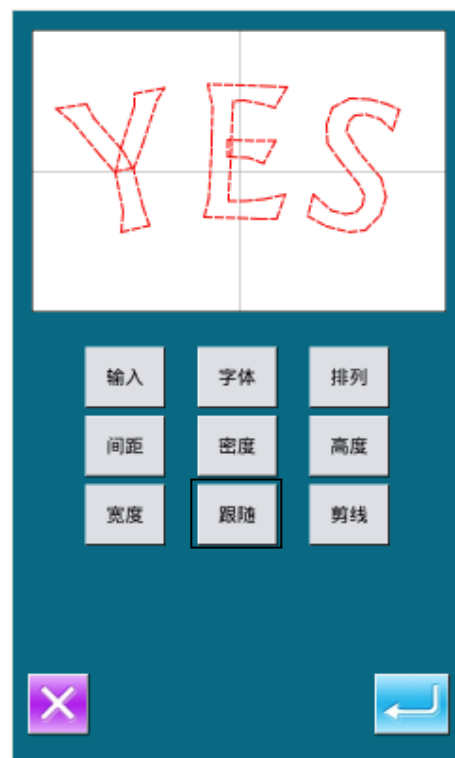
注：排列方式为上玄弧或下玄弧时，该按键功能为设置是否跟随圆弧旋转。



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。

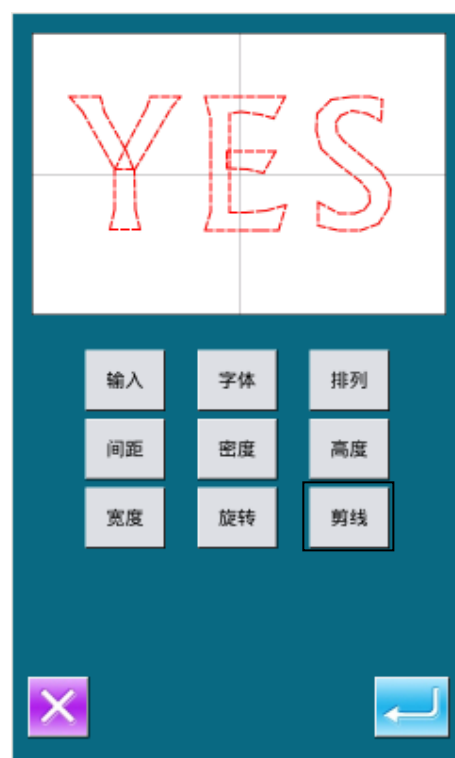
【注】排列方式为水平排列或者竖直排列时，该按键功能为设置旋转角度。



10、是否自动添加剪线

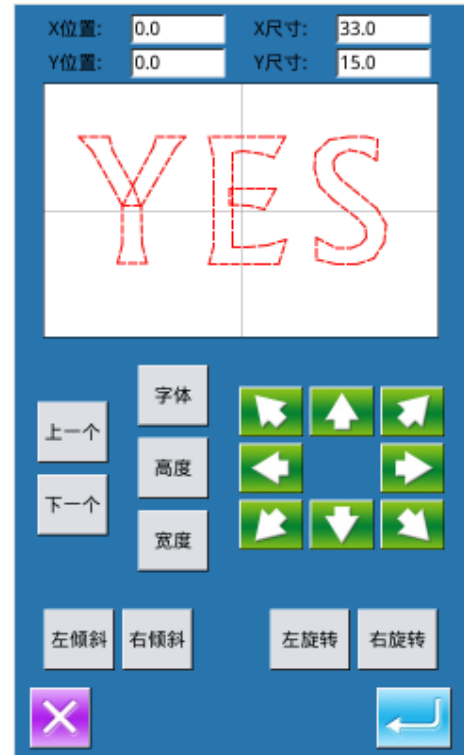
默认情况下是自动添加剪线，也就是在字母绣花样的车缝和空送连接处，以及缝纫最后添加剪线。

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。



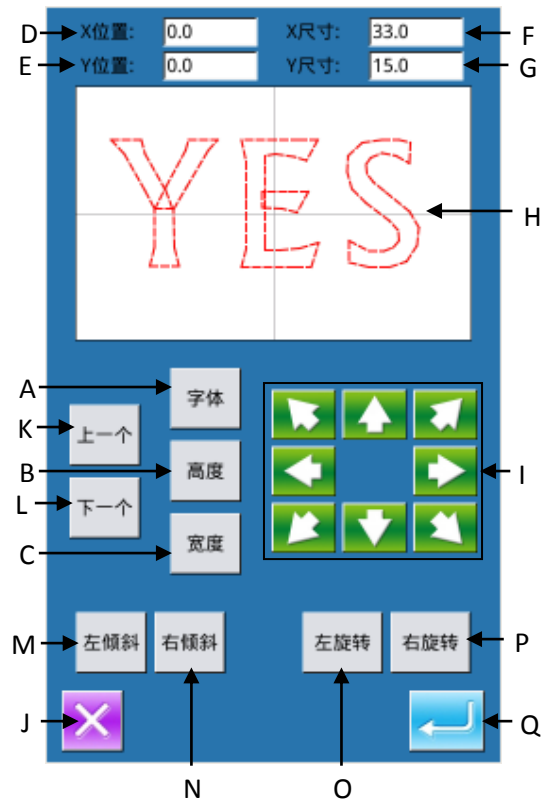
11、确定字母绣花样

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。



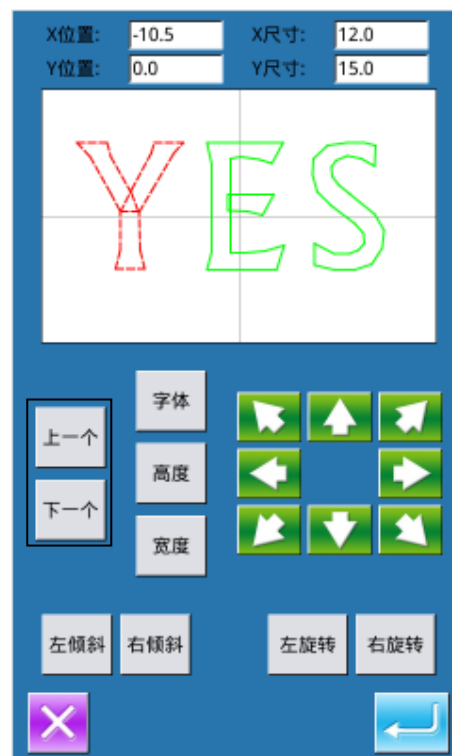
功能说明：

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。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。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。 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。 【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。 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。 【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

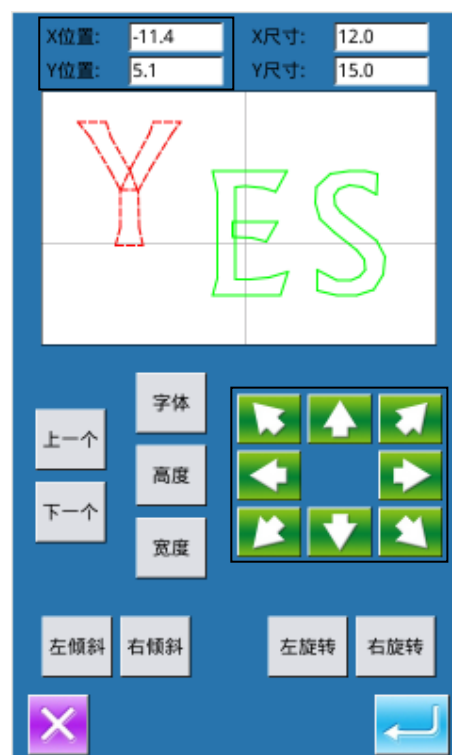
按下「上一个」键或「下一个」键，可以选择单个字母进行编辑，选中字母颜色为红色，未选中为绿色。



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。



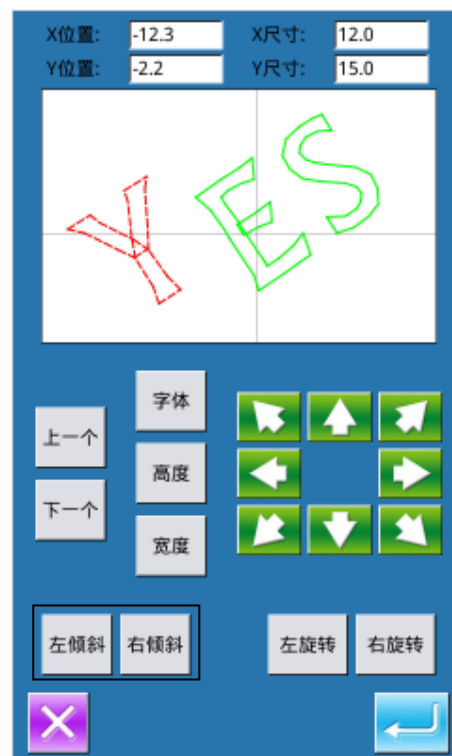
3、整个花样的旋转角度调整

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

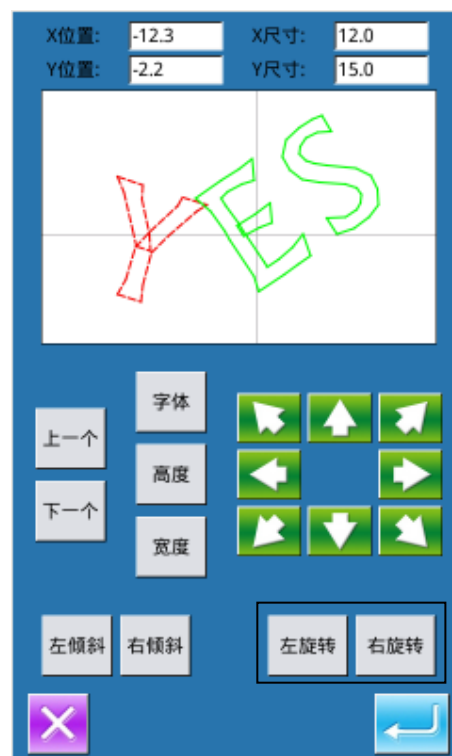
【注】排列方式为上玄弧或下玄弧时，该操作作为「小弧度」/「大弧度」，用于调整整个花样的弧度。



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。



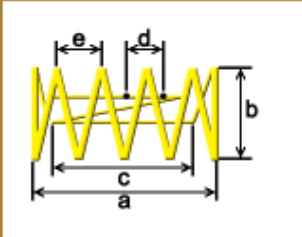
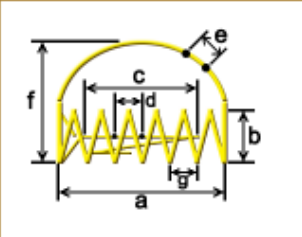
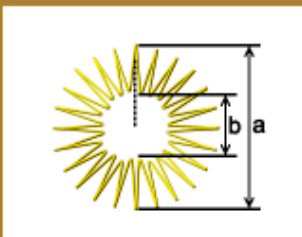
8.15 模板输入

8.15.1 模板输入功能设置

选择进入模板输入设置界面，系统默认进入后是直线套结输入界面。

模板输入功能方便用户进行套结花样的编辑，系统可以选择四种模板输入方式，分别是：

- 直线套结
- 半月型套结
- 圆型套结
- 钉扣型套结

 直线套结 优先方式 套结长度(a) 套结针距(b) 底缝长度(c) 底缝针距(d) 底缝首针距 曲折针距(e) 结束缝收针角 收针位置 锁针针长 旋转角度 总针数	 半月形套结 半月针距(e) 半月高度(f) 套结长度(a) 套结针距(b) 底缝长度(c) 底缝针距(d) 底缝首针距 曲折针距(g) 结束缝收针角 收针位置 锁针针长 旋转角度
 圆形套结 外径 内径 底缝直径 起点定位针 终点定位针 针数 起点送布 循环次数	 钉扣形 孔数 孔间距 孔间线数 起针针长 锁针针长 旋转角度 起针位置 连接方式 独立线迹 锁针针数

8.15.2 直线套结输入

1. 直线套结功能选择

- 系统默认进入直线套结界面，如图 1 所示。
- 选择参数设置区 C 区中的“直线套结”按键，可以通过“模板选择”界面选择“模板 1(直线套结)”功能，进行直线套结的编辑。

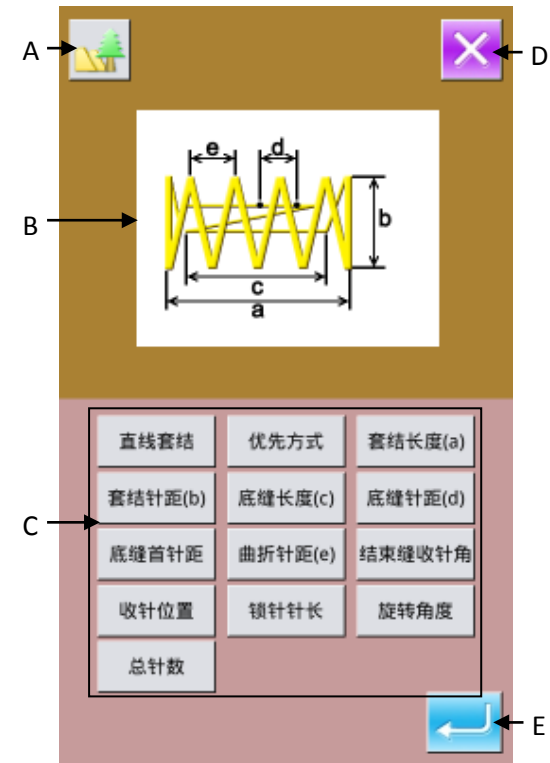


图 1



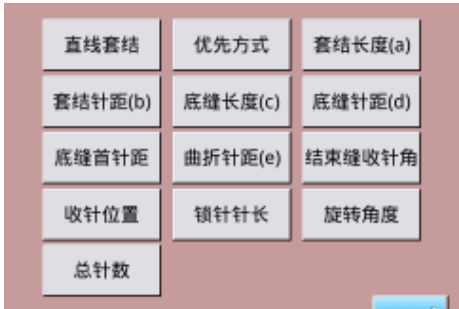
图 2

功能说明：

按键名称	功能	内容
A	套结图形预览	对生成的套结图形进行预览
B	套结形状示意图	显示套结形状的图形示意和参数位置
C	参数设置功能	设置控制套结生成的参数
D	退出	退出模板输入功能
E	确认	保存编辑的套结花样

2. 参数设置

在套结模板编辑界面的 C 区，提供了直线套结的参数输入区，用于控制直线套结花样生成的图案。

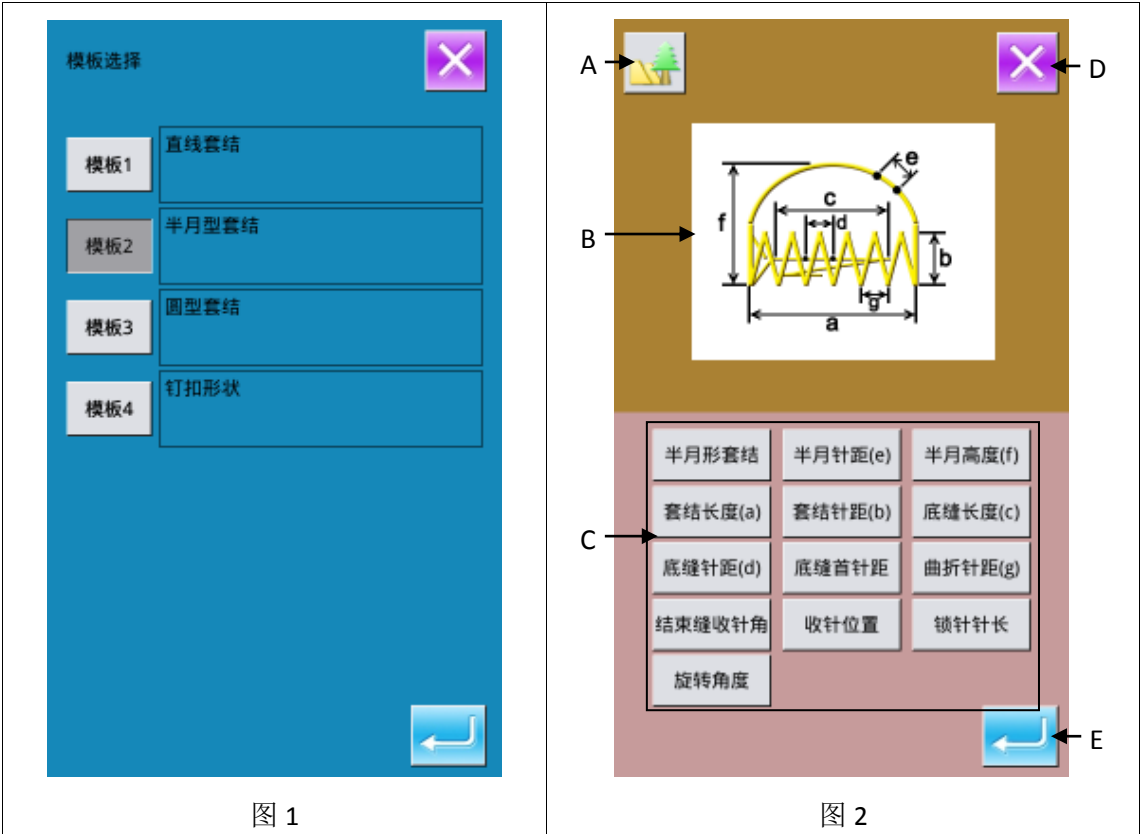


套结参数说明：		
序号	参数	备注
1	优先方式	点击“优先方式”按键，可以选择控制生成花样时，是优先保证针距数据还是优先保证总针数数据。
2	套结长度	设置直线套结的花样总长度，套结长度的意义如直线套结示意图上的 a 所示，控制套结花样 x 方向的大小。
3	套结针距	设置套结花样的高度，套结针距的意义如直线套结示意图中的 b 所示。 控制套结花样在 y 方向的大小
4	底缝长度	设置打底缝的长度，底缝长度的意义如直线套结示意图中的 c 所示。控制打底缝在 x 方向的大小
5	底缝针距	设置打底缝时，底缝的每针针距。底缝针距的意义如直线套结示意图中的 d 所示。
6	底缝首针距	设置底缝第一针的针距，底缝第一针的针距可以和其他针的针距不同
7	曲折针距	设置套结花样曲折缝的横针距，曲折针距的意义如直线套结示意图中的 e 所示。
8	结束缝收针角	设置结束缝时，收针角度值
9	收针位置	设置收针时，落针点是落在两端还是落在花样的 Y 向中心线上
10	锁针针长	设置收针针长
11	旋转角度	设置花样旋转角度，花样可以在 0、90、180、270 方向进行旋转
12	总针数	设置套结花样的总针数，当设置优先方式为针数优先时，此值有效，否则无效。

8.15.3 半月型套结输入

1. 半月型套结功能选择

- 选择参数设置区中的套结形状选择（直线套结、圆形套结、钉扣形）按键，可以通过“模板选择”界面选择“模板 2(半月型套结)”功能，进行半月形套结的编辑。如图 1 所示

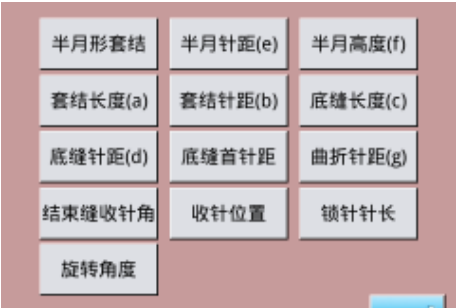


功能说明:

按键名称	功能	内容
A	套结图形预览	对生成的套结图形进行预览
B	套结形状示意图	显示套结形状的图形示意和参数位置
C	参数设置功能	设置控制套结生成的参数
D	退出	退出模板输入功能
E	确认	保存编辑的套结花样

2. 参数设置

在套结模板编辑界面的 C 区，提供了半月形套结的参数输入区，用于控制套结花样生成的图案。



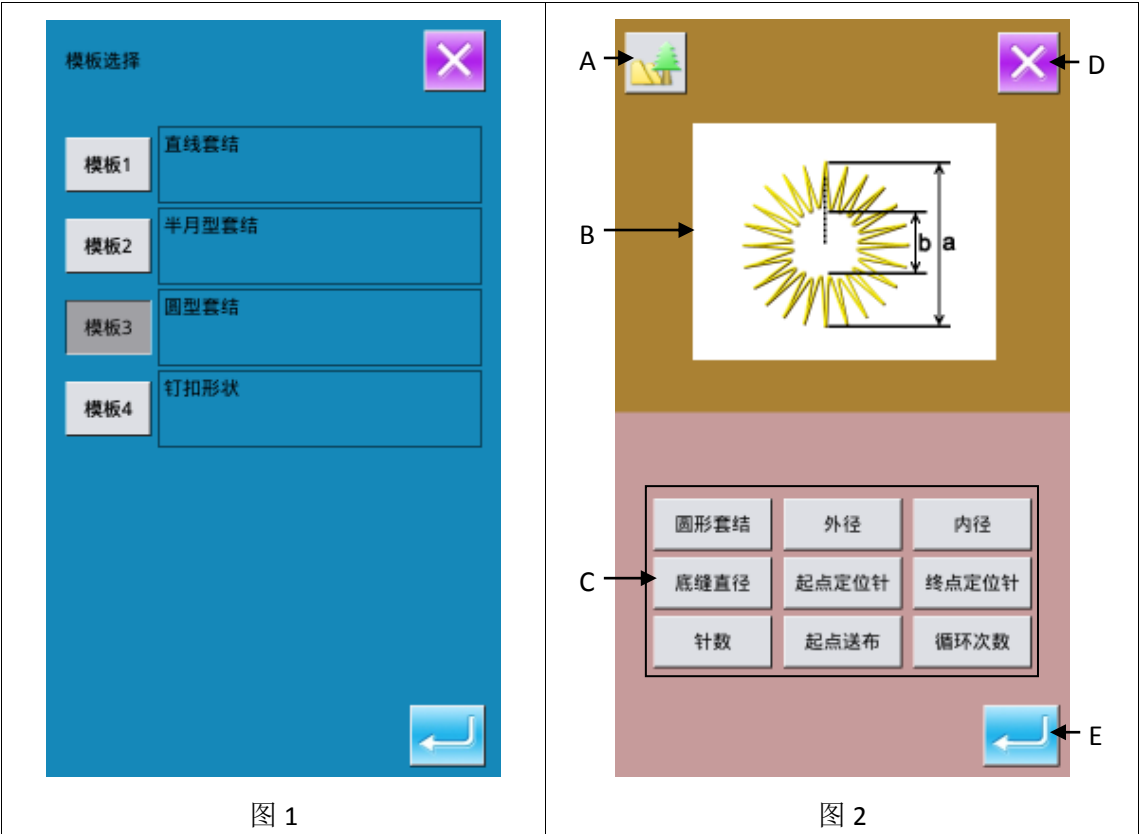
套结参数说明：

序号	参数	备注
1	半月针距	设置半月形套结的半月形状的落针点的针距，半月针距的意义如半月形套结示意图中的 e 所示。
2	半月高度	设置半月形套结花样的高度，半月高度的意义如半月形套结示意图中的 f 所示。用于控制整个花样在 y 方向的大小
3	套结长度	设置半月形套结的花样总长度，套结长度的意义如半月形套结示意图上的 a 所示，控制套结花样 x 方向的大小。
4	套结针距	设置半月形套结花样套结高度，套结针距的意义如半月形套结示意图中的 b 所示。
5	底缝长度	设置打底缝的长度，底缝长度的意义如半月形套结示意图中的 c 所示。控制打底缝在 x 方向的大小
6	底缝针距	设置打底缝时，底缝的每针针距。底缝针距的意义如半月形套结示意图中的 d 所示。
7	底缝首针距	设置底缝第一针的针距，底缝第一针的针距可以和其他针的针距不
8	曲折针距	设置套结花样曲折缝的横针距，曲折针距的意义如半月形套结示意图中的 g 所示。
9	结束缝收针	设置结束缝时，收针角度值
10	收针位置	设置收针时，落针点是落在两端还是落在花样的 Y 向中心线上
11	锁针针长	设置收针针长
12	旋转角度	设置花样旋转角度，花样可以在 0、90、180、270 方向进行旋转

8.15.4 圆形套结输入

1. 圆型套结功能选择

- 选择参数设置区中的套结形状选择（直线套结、半月形套结、圆形套结、钉扣形）按键，可以通过“模板选择”界面选择“模板 3(圆型套结)”功能，进行圆形套结的编辑。如图 1 所示

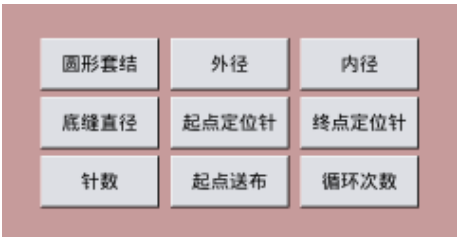


功能说明:

序号	功能	内容
A	套结图形预览	对生成的套结图形进行预览
B	套结形状示意图	显示套结形状的图形示意和参数位置
C	参数设置功能	设置控制套结生成的参数
D	退出	退出模板输入功能
E	确认	保存编辑的套结花样

2. 参数设置

在套结模板编辑界面的 C 区，提供了圆形套结的参数输入区，用于控制套结花样生成的图案。



套结参数说明：

序号	参数	备注
1	外径	设置圆形套结的曲折缝外圈直径，意义如圆形套结示意图中的 a 所示。它决定了整个花样的大小。
2	内径	设置圆形套结的曲折缝内圈直径意义如半月形套结示意图中的 b 所示。
3	底缝直径	设置圆形套结的打底缝直径。
4	起点定位针	设置圆形套结的花样起始锁针针数，0~5 针
5	终点定位针	设置圆形套结的花样结束锁针针数，0~5 针
6	针数	设置圆形套结的总的落针点个数
7	起点送布	设置圆形套结缝制开始时是否有送布
8	循环次数	设置圆形套结的曲折缝部分的循环次数，设置循环次数并不影响针数的设置

8.15.5 钉扣形输入

1. 钉扣形套结功能选择

- 选择参数设置区中的套结形状选择（直线套结、半月形套结、圆形套结、钉扣形）按键，可以通过“模板选择”界面选择“模板 4(钉扣形状)”功能，进行钉扣型花样的编辑。如图 1 所示
- 钉扣形模板根据扣眼数，分成 2 孔扣、3 孔扣、4 孔扣、5 孔扣，默认是 4 孔扣模板
- 各个模板根据扣眼数，参数有所不同

图 1

图 2

功能说明：

2. 参数设置

两孔扣参数

两孔扣、三孔扣的参数如右图所示。

钉扣形参数说明：

序号	参数	备注
1	孔数	设置钉扣形的孔眼数，可选择 2、3、4、5 孔扣
2	孔间距	设置两孔眼的中心距离。
3	孔间线数	设置两孔眼间走线的根数。
4	起针针长	设置起始锁针的针长
5	锁针针长	设置结束锁针针长
6	旋转角度	设置缝制形状的旋转角度，可在 0、90、180、270 间选择

四孔扣参数

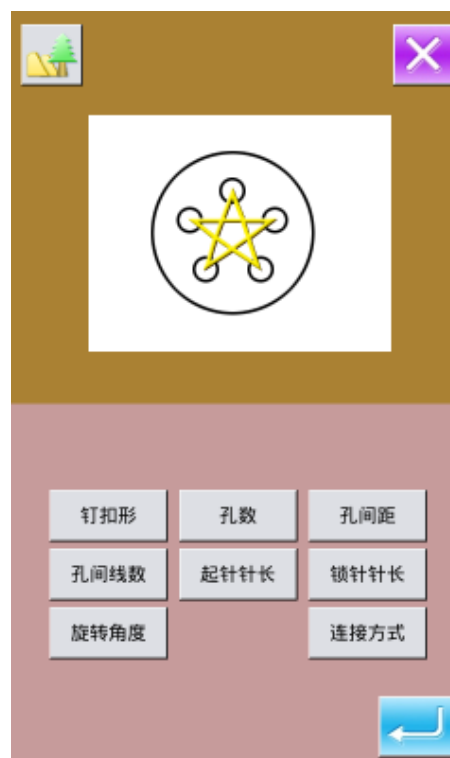
四孔扣的参数如右图所示。

钉扣形参数说明:

序号	参数	备注
1	孔数	设置钉扣形的孔眼数, 可选择 2、3、4、5 孔扣
2	孔间距	设置两孔眼的中心距离。
3	孔间线数	设置两孔眼间走线的根数。
4	起针针长	设置起始锁针的针长
5	锁针针长	设置结束锁针针长
6	旋转角度	设置缝制形状的旋转角度, 可在 0、90、180、270 间选择
7	起针位置	设置起针位置是从左上角还是右上角开始
8	连接方式	设置缝制线迹是十字交叉还是平行缝制
9	独立线迹	设置缝制线迹从一侧移到另一侧时, 连接线是空送过去还是缝制过
10	锁针针数	设置开始/结束时锁针针数

五孔扣参数

五孔扣的参数如右图所示。



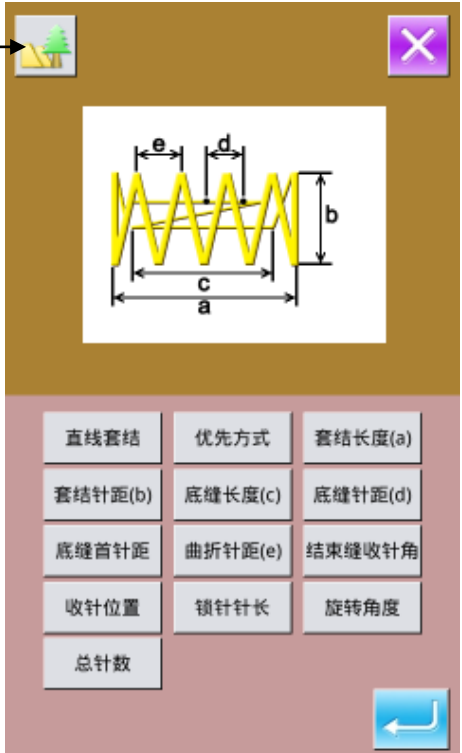
钉扣形参数说明:

序号	参数	备注
1	孔数	设置钉扣形的孔眼数，可选择 2、3、4、5 孔扣
2	孔间距	设置两孔眼的中心距离。
3	孔间线数	设置两孔眼间走线的根数。
4	起针针长	设置起始锁针的针长
5	锁针针长	设置结束锁针针长
6	旋转角度	设置缝制形状的旋转角度，可在 0、90、180、270 间选择
7	连接方式	设置缝制线迹是交叉还是平行缝制

8.15.6 套结花样的预览

以直线套结花样模板为例：

- 点击  按键，系统显示当前编辑套结花样的预览图形，如右图所示：

A → 

- 点击  按键，退出预览界面，返回到套结花样的编辑界面

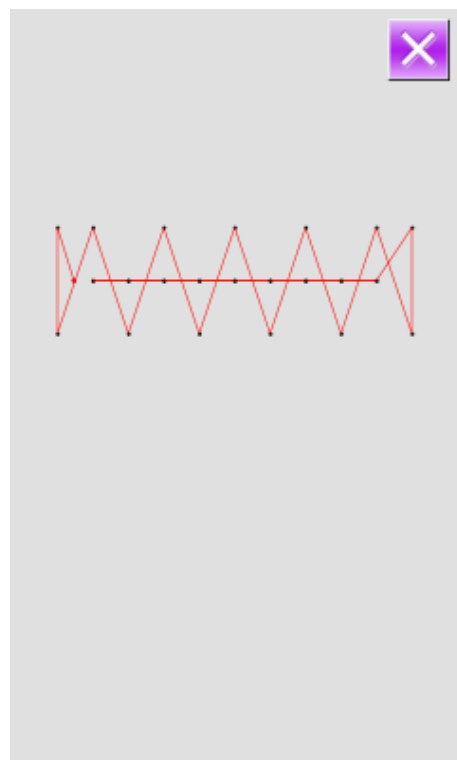
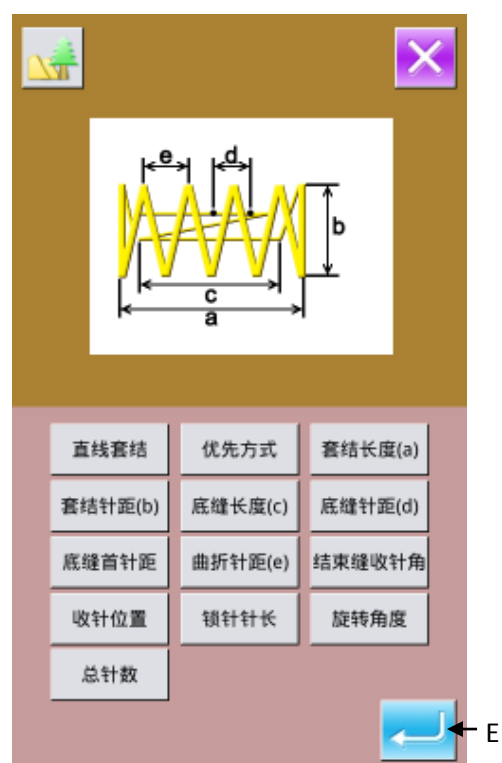


图 2

8.15.7 套结花样的保存

以直线套结花样模板为例：

- 点击按  键，进入文件保存界面



- 系统显示文件号输入界面，如右图所示。
- 通过数字键盘输入要保存的文件号
- 点击键，保存文件
- 点击按键，返回到套结花样的编辑界面

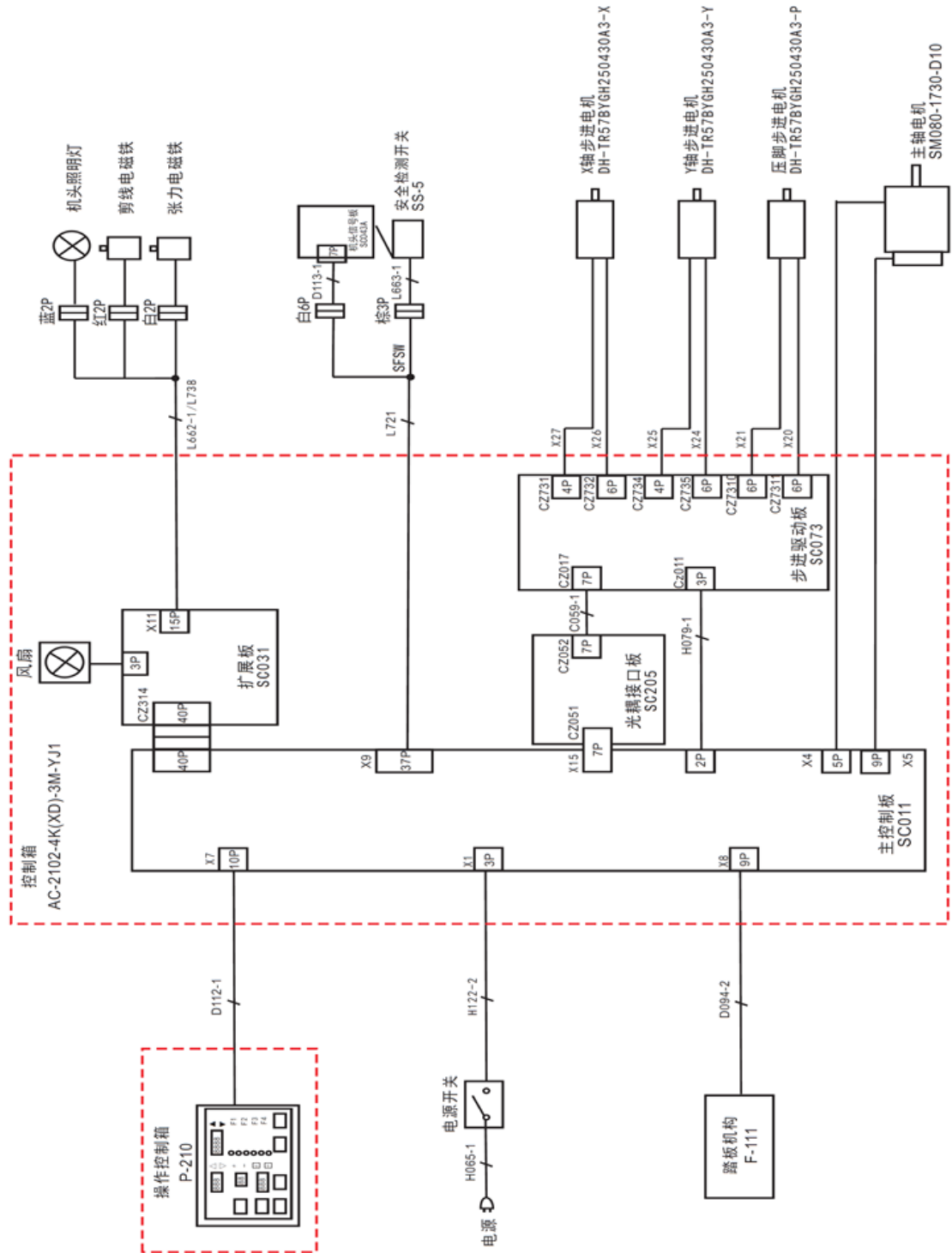


图 2

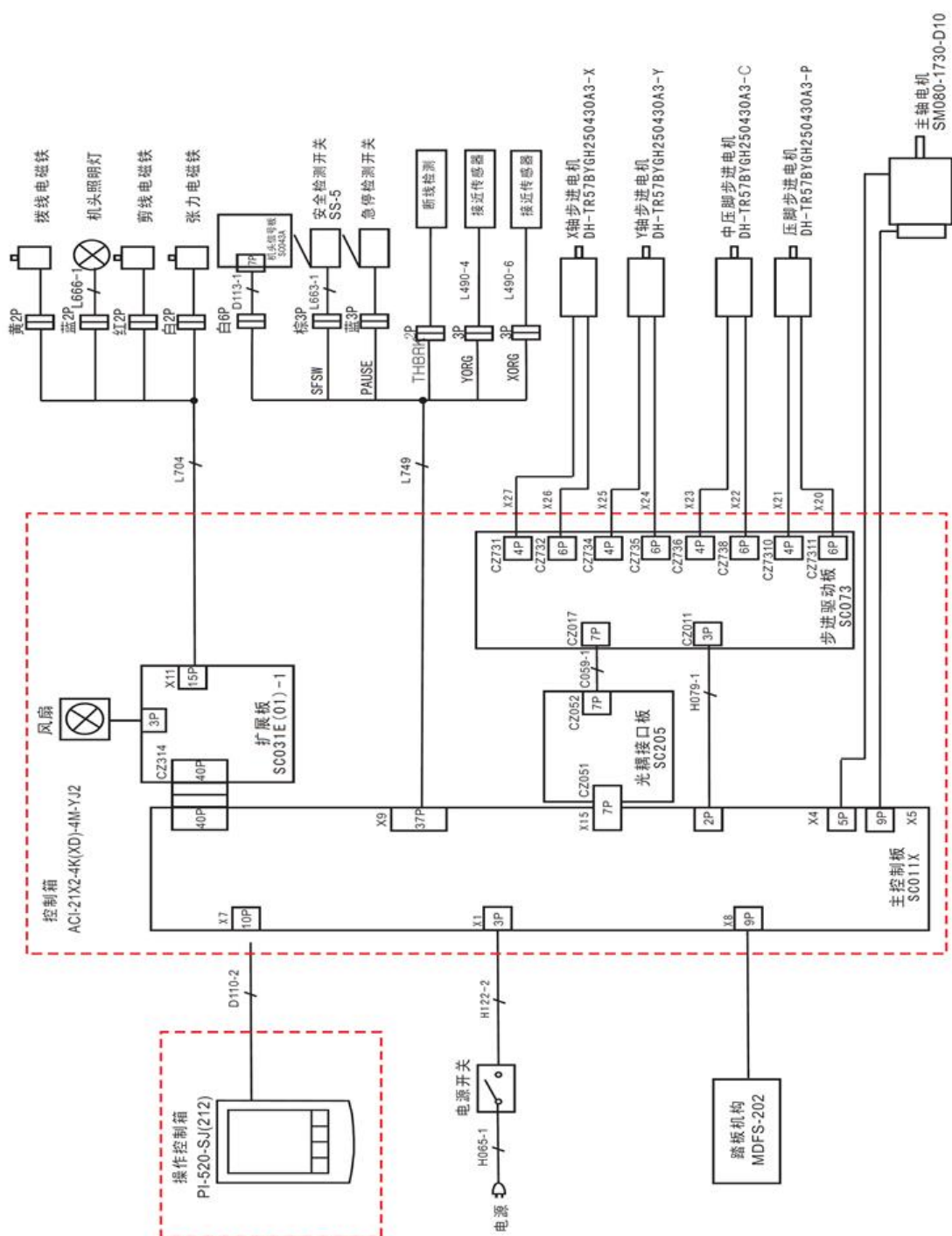
9 附录 1 电控系统原理

9.1 控制系统框图

ASC210-2B-X(430D/438D)



ASC212-2E-SJ



9.2 控制箱的外部线缆连接

外部线缆插头上有对应的编号，请仔细查看后对应接插。示意图 1、2。

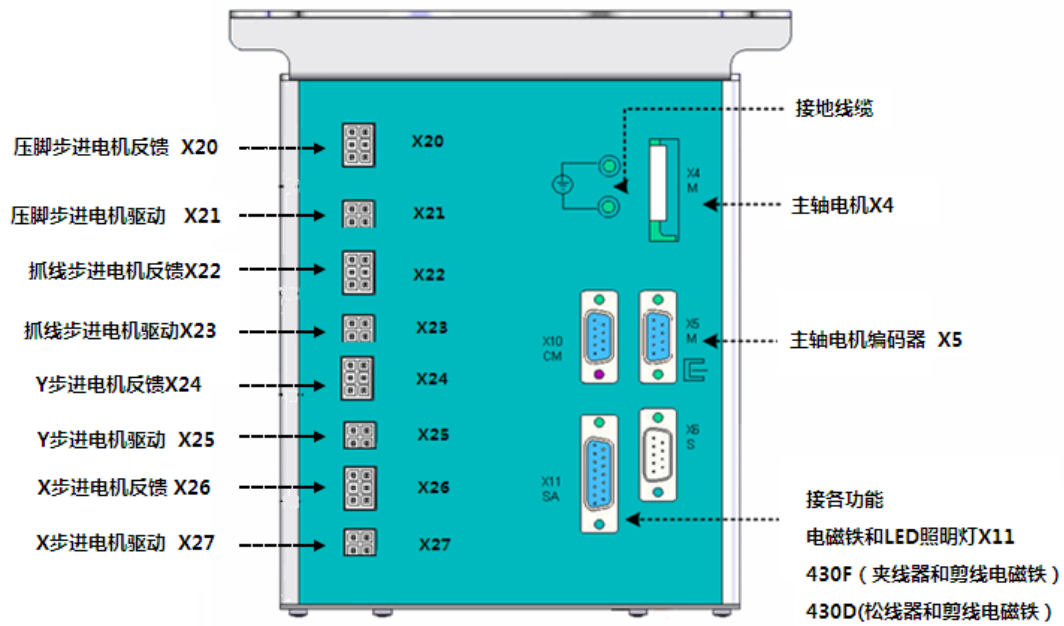


图 1

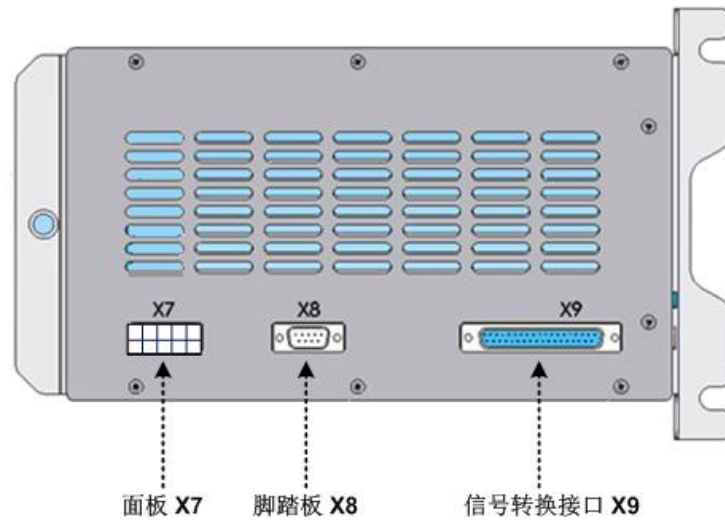


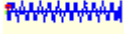
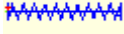
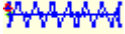
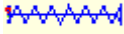
图 2

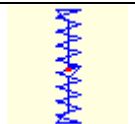
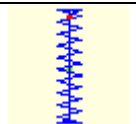
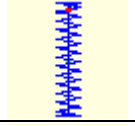
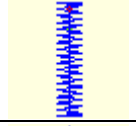
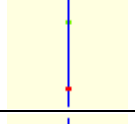
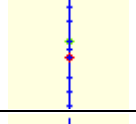
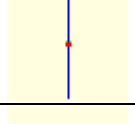
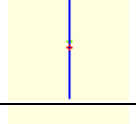
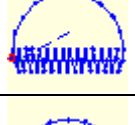
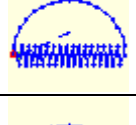
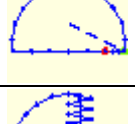
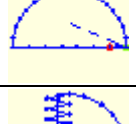
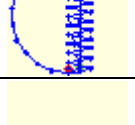
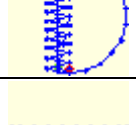
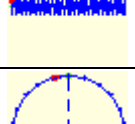
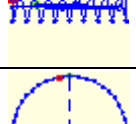
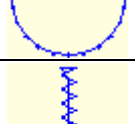
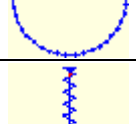
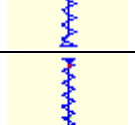
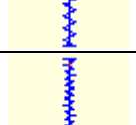
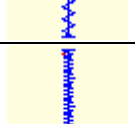
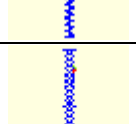
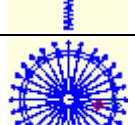
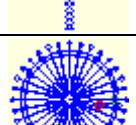
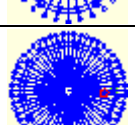
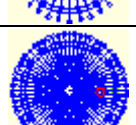
10 附录 2 基础花样一览表

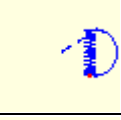
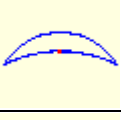
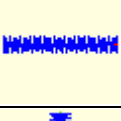
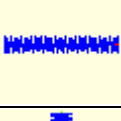
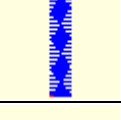
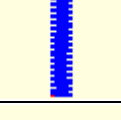
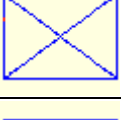
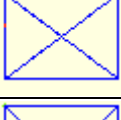
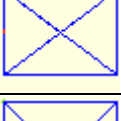
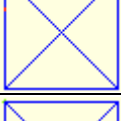
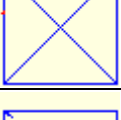
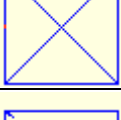
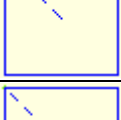
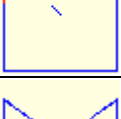
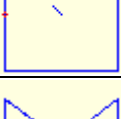
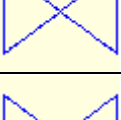
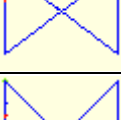
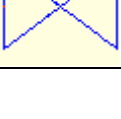
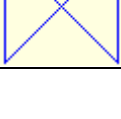
下面所示的缝纫花样已预先设置好，可以根据规格予以选择使用。(只要能够确认是在压脚、送布板的工作范围内，就可以选择使用任一种缝纫花样)

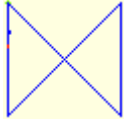
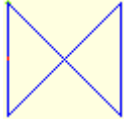
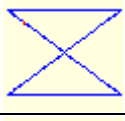
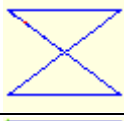
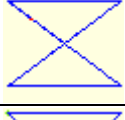
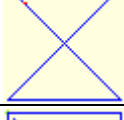
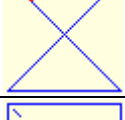
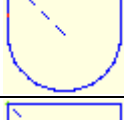
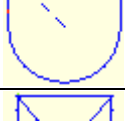
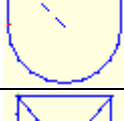
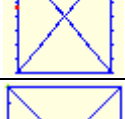
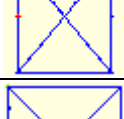
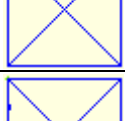
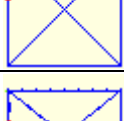
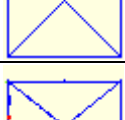
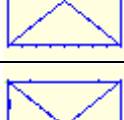
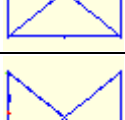
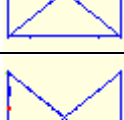
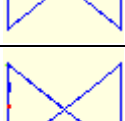
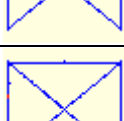
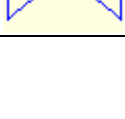
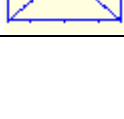
请使用符合各种缝纫花样要求的压脚和送布板。缝纫尺寸为 **100%** 缩放率时的长度。

● 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 **ASC210**，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

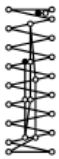
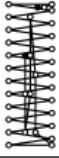
适用于厚重的布料（-05）									
号码	花样	针数	尺寸（mm）		号码	花样	针数	尺寸（mm）	
			长度	宽度				长度	宽度
2		42	20	3	18		56	24	3
3		35	20	3	19		64	24	3
6		30	16	3	62		42	20	3
14		35	16	3	63		35	20	3
16		43	16	3	78		43	20	3
17		42	24	3	79		36	20	3

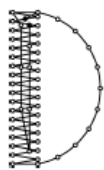
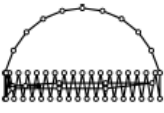
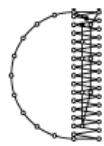
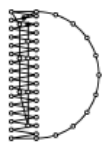
适用于厚重的布料（-05）									
号码	花样	针数	尺寸（mm）		号码	花样	针数	尺寸（mm）	
			长度	宽度				长度	宽度
80		31	16	3	83		43	24	3
81		36	16	3	84		57	24	3
82		44	16	3	85		65	24	3

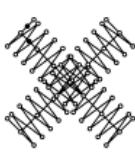
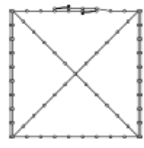
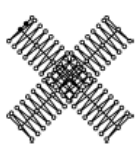
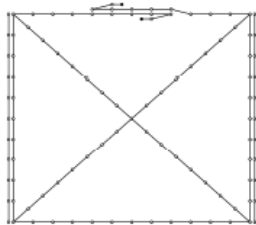
适用于针织布料 (-0K) 和女性内衣 (-0F)									
号码	花样	针数	尺寸 (mm)		号码	花样	针数	尺寸 (mm)	
			长度	宽度				长度	宽度
7		28	8	2	73		29	8	2
9		21	7	2	74		22	7	2
22		14	7	2	75		15	7	2
31 [※]		28	8	2	76 [※]		29	8	2
32 [※]		22	8	2	77 [※]		23	8	2
33 [※]		15	8	2					

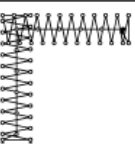
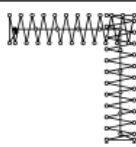
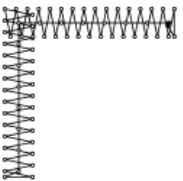
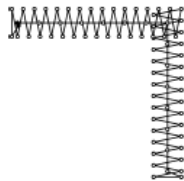
*始和终节的位置在图案的中间

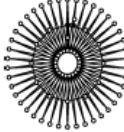
直线结					垂直曲折缝				
号码	花样	针数	尺寸 (mm)		号码	花样	针数	尺寸 (mm)	
			长度	宽度				长度	宽度
10		21	10	0.3	44		46	9	15
11		28	10	0.3					
12		28	20	0.3	45		70	9	25
23		35	25	0.3					
24		42	25	0.3					
25		45	25	0.3					

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 **ASC210**，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 54			6	—	12		
2			8	—	14		
※2 55			8	—	14		
3			10	—	16		
4			12	—	18		
※2 5			16	—	22		
※2 6			20	—	26		
※1 56			6	—	11	0	3.4
※3 7			6	—	12		
※3 23			10	—	16		
※3 8			12	—	18		
※3 9	3		5-5-5	—	21	2.6	2.4
※3 24			7-7-7	—	27		
※3 25			5-5-5	—	21		
※3 26			7-7-7	—	27		
※1 57	4		6-6	1	18	3.4	3.4
10			6-6	1	19		
※1 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 14			6-6	0	24	3.4	3.4
※5 36			6-6	0	24		
※4 28			8-8	0	28		
※5 37			8-8	0	28		
※4 15			10-10	0	32		
※5 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		
※3 34			10-10	1	27		
※3※4 22			6-6	0	24	2.4	3.4
※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 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。

用于带柄纽扣					
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-002	机器进入急停开关 2	按复位键  消除错误
E-010	急停开关未在正常位置	按复位键  消除错误
E-011	机器进入急停状态 1	按复位键  消除错误
E-016	电源接入时急停开关接触不良	关机
E-019	进入准备状态时按下急停开关	自恢复错误
E-025	电源接入时踏板开关被踩到 2 档	自恢复错误
E-035	电源接入时踏板开关被踩到 1 档	自恢复错误
E-036	电源接入时踏板开关被反踩到 3 档 或踏板未连接	自恢复错误
E-050	电源接入时机头翻到	关机，扶起机头
E-051	缝纫准备前机头翻到	关机，扶起机头
E-052	缝纫准备时机头翻到	关机，扶起机头
E-053	缝纫准备后机头翻到	关机，扶起机头
E-054	缝纫过程中机头翻到	关机，扶起机头
E-056	主控与第一路步进通信错误	关机
E-057	X 电机过流	关机
E-058	X 电机超差	关机
E-059	X 电机超速	关机
E-060	Y 电机过流	关机
E-061	Y 电机超差	关机
E-062	Y 电机超速	关机
E-063	主控与第二路步进通信错误	关机
E-064	抓线电机过流	关机
E-065	抓线电机超差	关机
E-066	抓线电机超速	关机
E-067	压脚电机过流	关机
E-068	压脚电机超差	关机
E-069	压脚电机超速	关机
E-100	加油报警提示后，未加油	按复位键  消除错误
E-101	缝制针数累积到加油报警针数后的 通知信息	按复位键  消除错误
E-111	针杆位置异常	关机
E-121	剪刀位置异常	关机
E-131	编码器故障或未连接	关机
E-132	电机超速	关机

故障号	故障名称	复位方法
E-133	缝制完成后主电机停止位置异常	关机
E-135	电机运行异常	关机
E-136	IPM 过流 1	关机
E-137	IPM 过流 2	关机
E-138	电机堵转 1	关机
E-139	电机堵转 2	关机
E-140	停车过流	关机
E-141	电机过载	关闭电源，稍待一些时间后再次打开电源。检查电控箱内的通讯线缆及主板与驱动板是否有故障。
E-142	母线电压异常	关闭电源，稍待一些时间后再次打开电源。
E-143	异常电流	关机
E-200	x 原点检测异常	关机。检测 x 步进电机驱动电路是否正常，编码器反馈信号是否正常
E-201	x 校验错误	关机。确认 X 送布是否正常
E-210	y 原点检测异常	关机。检测 y 步进电机驱动电路是否正常，编码器反馈信号是否正常
E-211	y 校验错误	关机。确认 Y 送布是否正常
E-217	步进软件版本异常	关机，确认步进版本
E-218	步进驱动电源异常	关闭电源，检查驱动板。
E-219	步进电机过流	关机
E-220	MD1 步进过流	关机
E-221	MD1 x 方向未走完	关机
E-222	MD1 Y 方向未走完	关机
E-223	MD2 步进过流	关机
E-224	MD2 x 方向未走完	关机
E-225	MD2 Y 方向未走完	关机
E-300	压脚原点检测异常	关机
E-301	压脚电机失步	关机
E-302	缝纫开始时剪线梢位置不正确	关机
E-400	操作头与缝纫机联机错误	关机，检查通讯线路
E-401	步进电机通讯异常	关机
E-410	主板和控电板通讯异常	关机，步进未执行完当前指令，但主控却再次发送了动作指令。
E-420	主控 U 盘未连接	按复位键  消除错误
E-422	主控 U 盘读取错误	按复位键  消除错误
E-424	主控 U 盘空间不足	按复位键  消除错误

故障号	故障名称	复位方法
E-425	主控 U 盘写时错误	按复位键  消除错误
E-427	注册在循环缝中的花样被删除	按复位键  消除错误
E-428	设定在程序中的花样被删除	按复位键  消除错误
E-430	花样数据无法保持到主板	按复位键  消除错误
E-450	机头板 E2PROM 读取错误	关机
E-474	主控内存已满	按复位键  消除错误
E-500	花样缩放后超出缝制范围	按复位键  消除错误
E-501	花样数据超出缝制范围	按复位键  消除错误
E-502	超过最大针距	按复位键  消除错误
E-510	数据错误	
E-511	完成代码无法输入到程序数据中	按复位键  消除错误
E-512	超过最大针数	按复位键  消除错误
E-600	发生面线断裂	按复位键  消除错误
关机	底线夹线马达原点检测异常	关机
E-692	底线夹线电机位置异常	关机
E-701	300V 过高	关机
E-702	300V 过低	关机
E-704	24V 过高	关机
E-705	24V 过低	关机
E-706	24V 过流	关机
E-710	IPM 过流或过压	关机
E-254	未定义错误	按下确定键 

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	字母绣字库文件读取失败	
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	密码文件写入失败	
M-022	密码文件读取失败	
M-023	密码保存成功	
M-024	清除全部密码失败	密码文件无法被删除
M-025	清除密码失败	清除密码后，文件写入异常
M-026	密码文件被恶意删除	用户设置的分期密码被恶意删除，请关机
M-027	用户 ID 文件损坏	
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
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	花样信息文件打开失败	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	花样文件错误, 将会被删除
M-041	C 花样打开失败	花样文件错误, 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	是否删除选中的文件	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	拷贝文件失败	请检查磁盘空间是否已满
M-075	拷贝文件失败	请检查是否拔出了 USB 盘
M-076	文件读写错误	文件读写错误
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	请确认花样文件
M-081	转换花样格式错误	请确认花样文件
M-082	转换花样数据超长	请确认花样文件
M-083	升级成功	升级成功，请重新启动机器
M-084	打开文件失败	U 盘中打开文件失败
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	不存在升级文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 盘文件！
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	制定的形状点重复	
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	花样文件数据错误	
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 文件的 USB 盘
M-131	没有视频文件 vid.avi	请将 vid.avi 文件存放到盘的 pdat 目录，并进入到升级界面升级视频文件

21X Bar-tacking Buttoning Machine
(Touching Panel E)

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	Touching Panel SC212/ASC210
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 $\pm$ 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.		

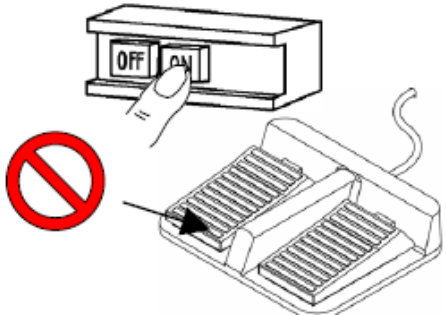
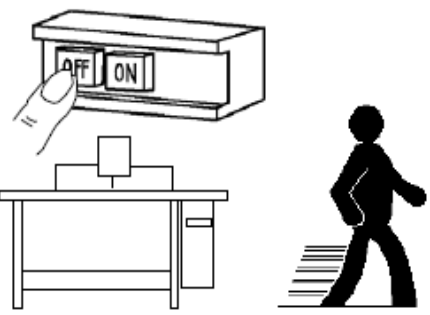
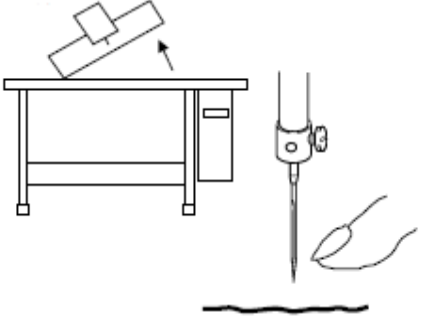
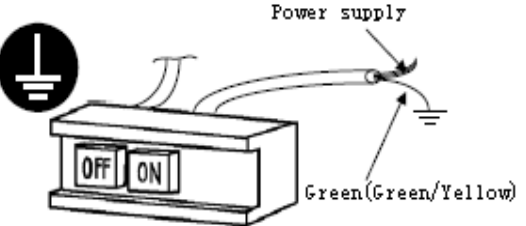
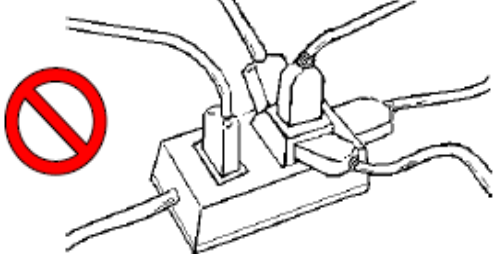
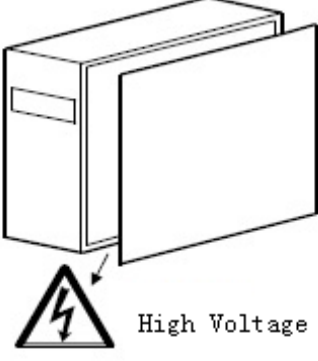
1.4 The Preventions on Usage

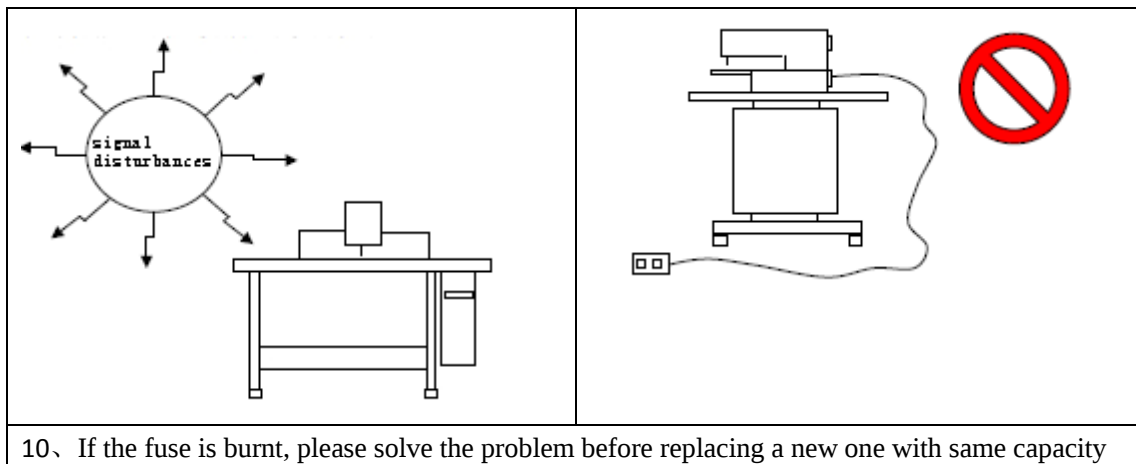


Warning

Warning

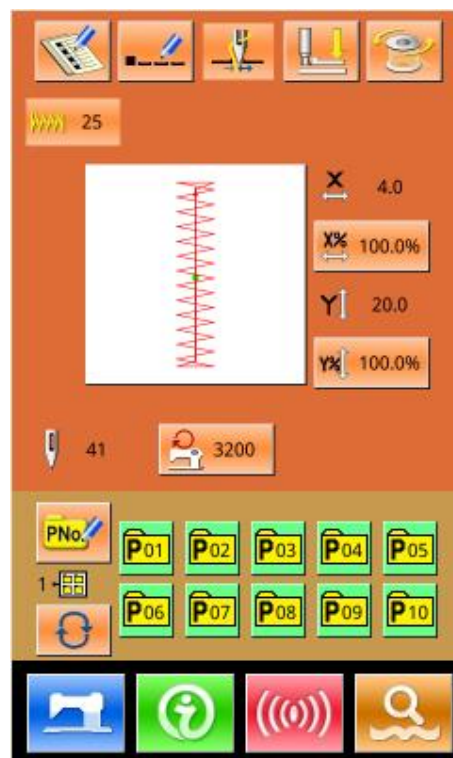
1、When you press [ON], leave the feet from pedal.	2、When you leave the machine, please turn it off.
---	---

	
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 
7、 After replacing the motor, please set the installation angle of main motor according to this documents	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
8、 Please be away from the machine with high cyclic disturbance	



1.5 Standardization

The button using the common figure can be understood by the users from different countries.



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.

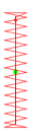
2.2 Basic Operation

① Turn on the power

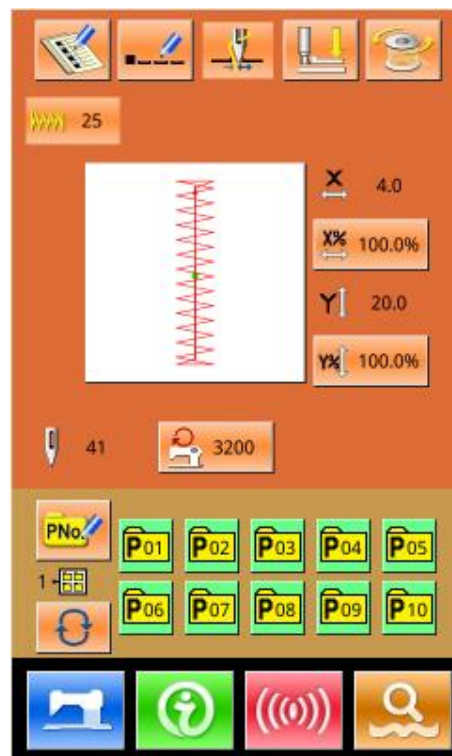
Turn on the power to display the data input interface.

② Select 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】.

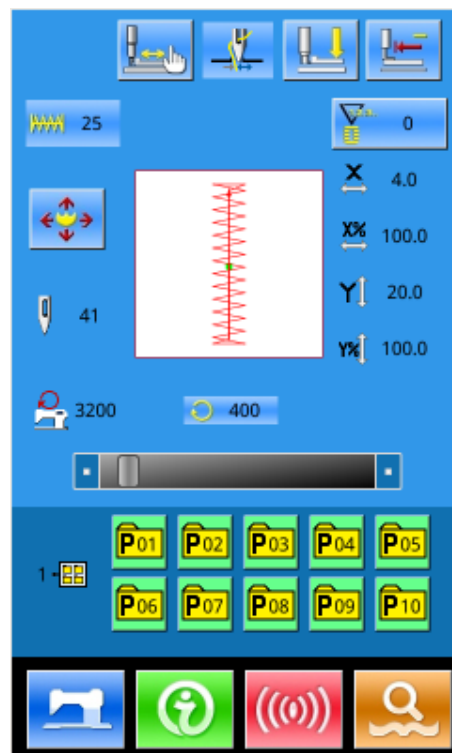


③ Set machine to Ready Sewing Status

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

④ Start Sewing

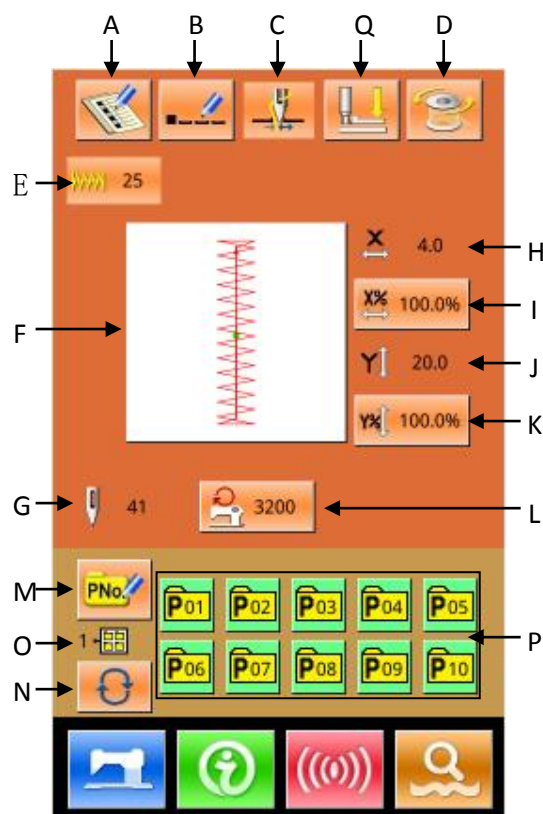
Set the sewing product to the presser position; operate the pedal to start the sewing machine, and sewing starts



2.3 Normal Pattern Operation

(1) Sewing Data Input Interface

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



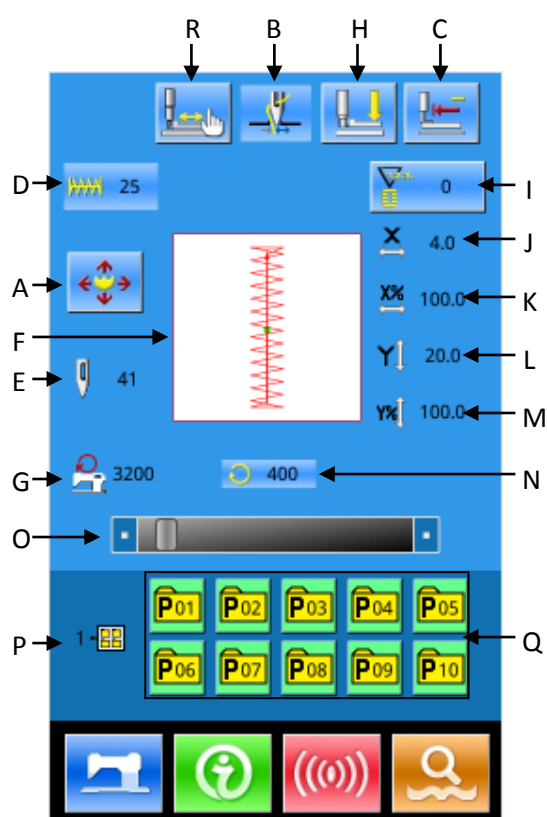
Function Key List: :

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. 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.

		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. This button is not displayed at initial status.

(2) Sewing 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  : Sewing Counter  : 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

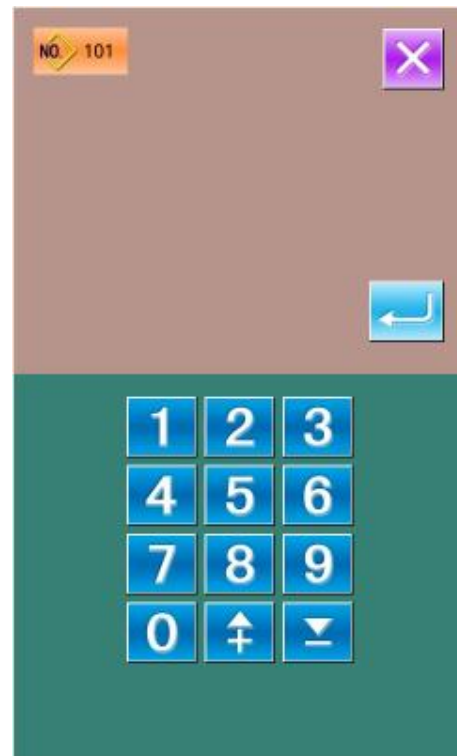
999 normal patterns can be registered for the most.

press  to enter the interface of Pattern Registration (shown as the right figure):

② 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 search the 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. After the operations, the system will return to the interface for inputting 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



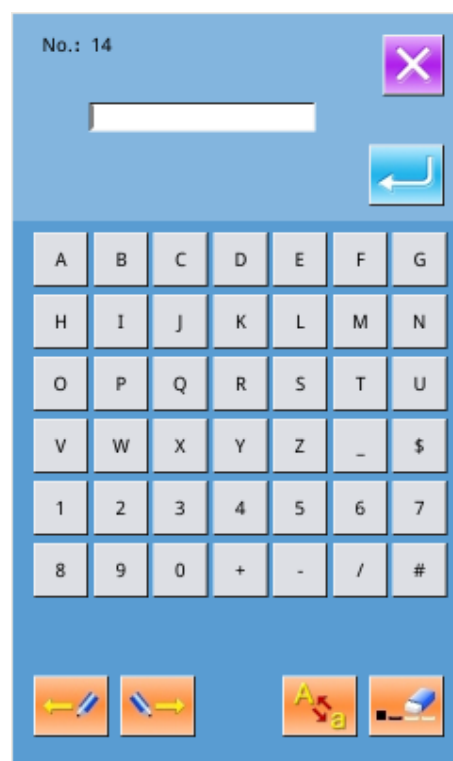
: Caps Locks



: Eraser

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

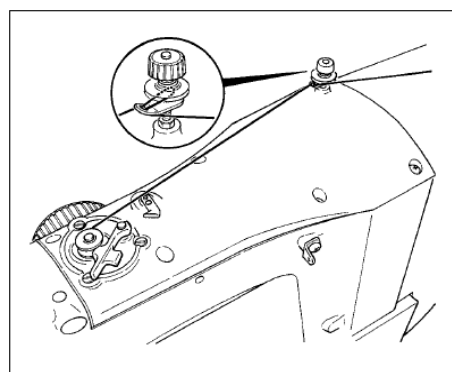
The position of figure can be determined by moving the icon, the Eraser is used to delete the figure



2.6 Winding

① Install 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

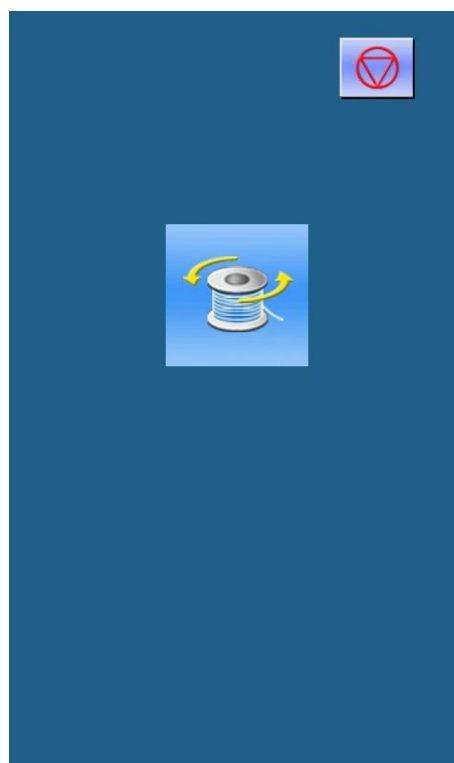
Step the start pedal, and then the sewing machine runs and starts winding bottom thread.

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

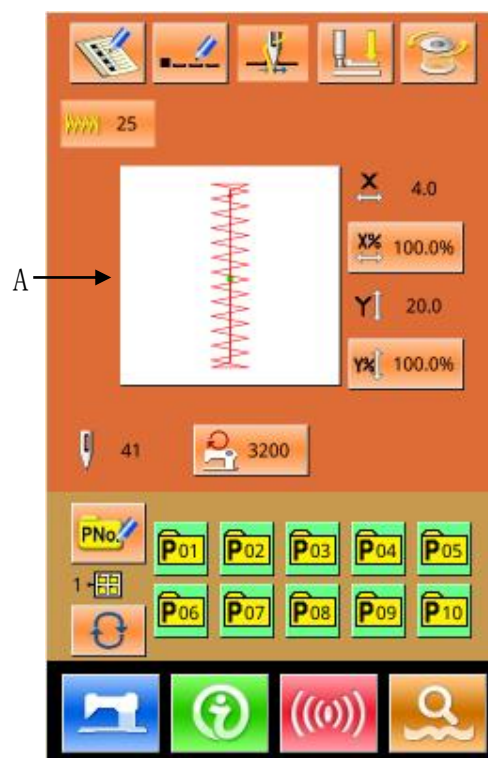
the  to display the sewing interface.



2.7Pattern 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

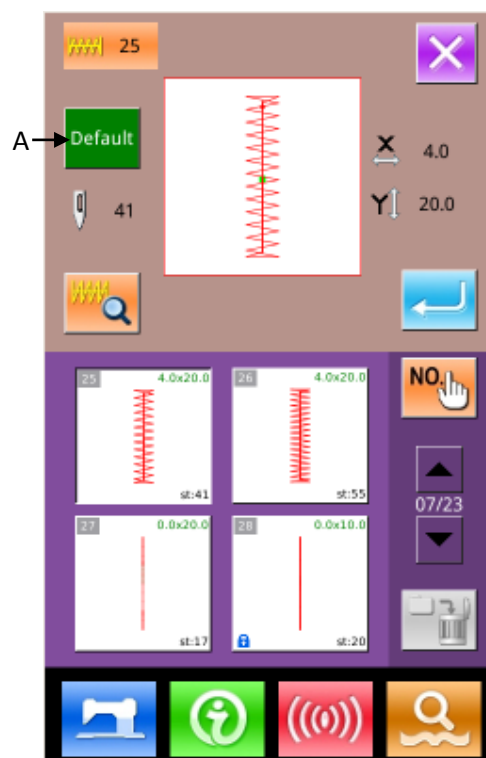
Click button A to shift between the basic patterns and user patterns, if the system has the normal patterns

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 finish 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



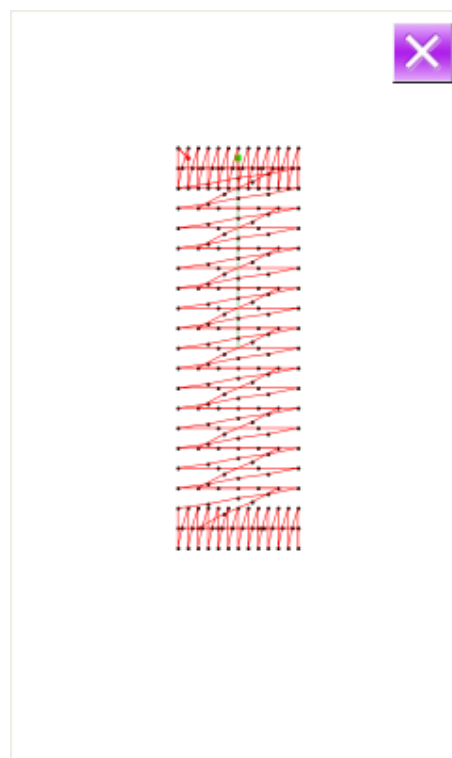
, the pattern will be deleted. However, the patterns registered to P pattern can't be deleted.

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

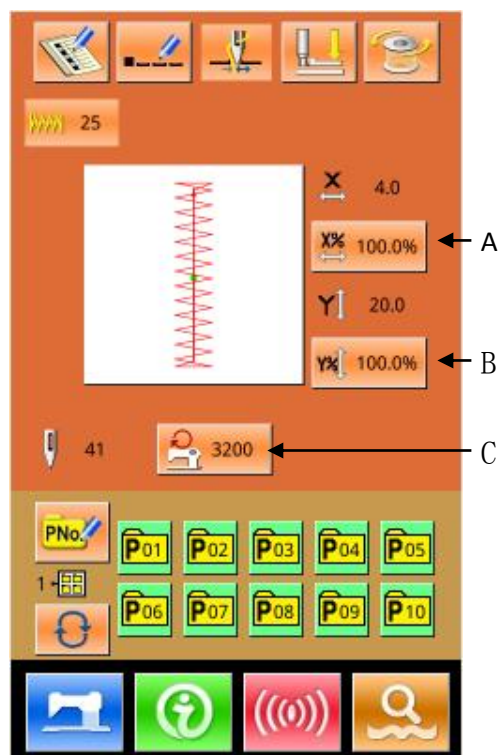
① Enter Interface for Setting the Sewing Data

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 of scale rate and the setting of actual size.

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



② Set 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

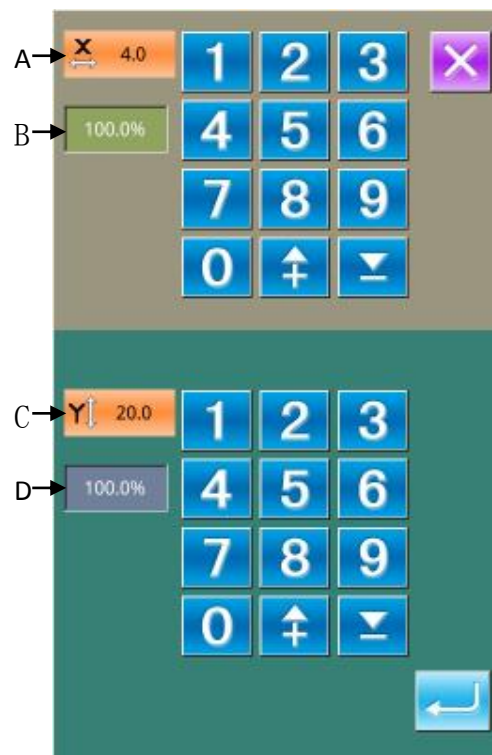
C: Y Actual Size

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.



2.9P 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

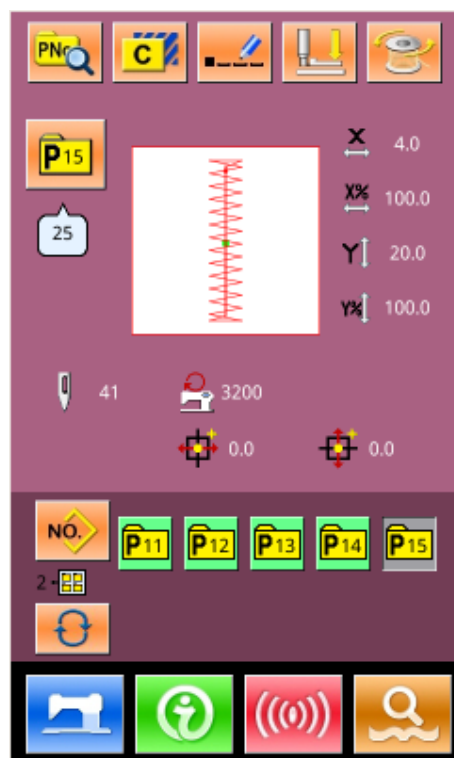
P pattern number can be registered into 5 file folders, and each folder can contain 10 P patterns

at most. Press  to select folder in order.



④Confirm Pattern Number

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

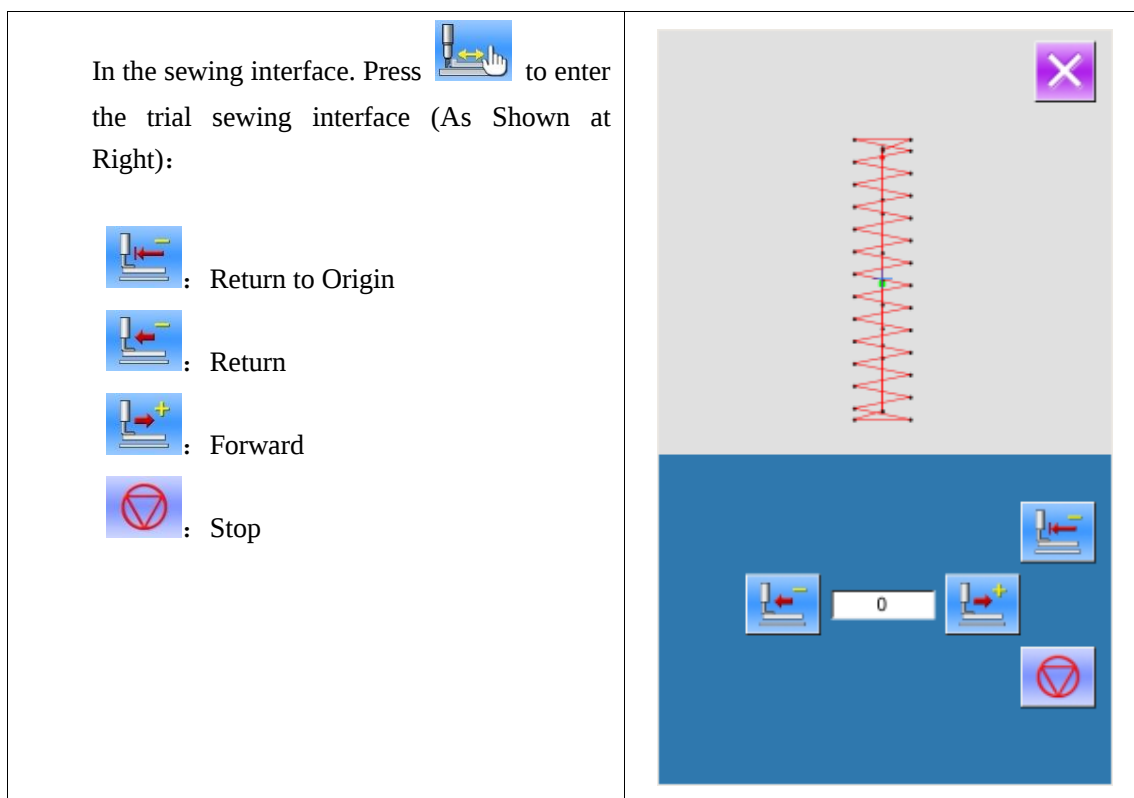


2.10 Trial Sewing

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



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

③ Display the counter interface

In the sewing interface, press 

() , the interface of counter setting

comes out.



: Sewing Counter



: No. of Pieces Counter

④ 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

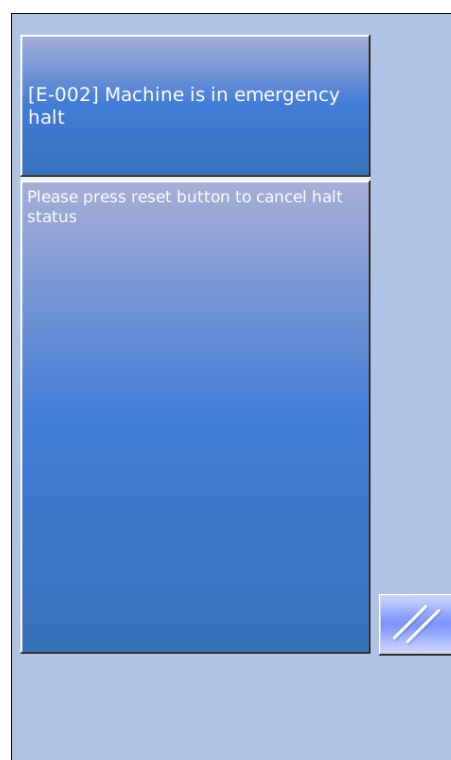
By setting parameter K280, user can set whether pause function is valid

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

①Release 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.



②Trimming

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.



② Set procedure and adjust the presser to re-sewing position

Press  to enter procedure setting interface.



: Backward feeding



: Forward feeding



: Return to Origin

Press  or  to move presser to the re-sewing position

③Restart sewing

Step pedal to restart sewing



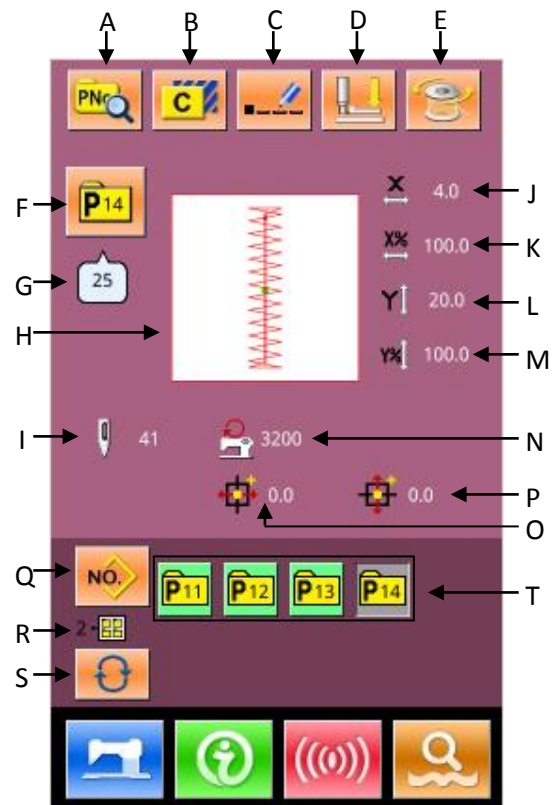
3 Operations on Prompt (P) Pattern

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

No.	Functions	Content
M	Y Scale Rate Setting	Display the Y scale rate of current pattern
N	Max Speed Limitation	Display the Max Speed
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

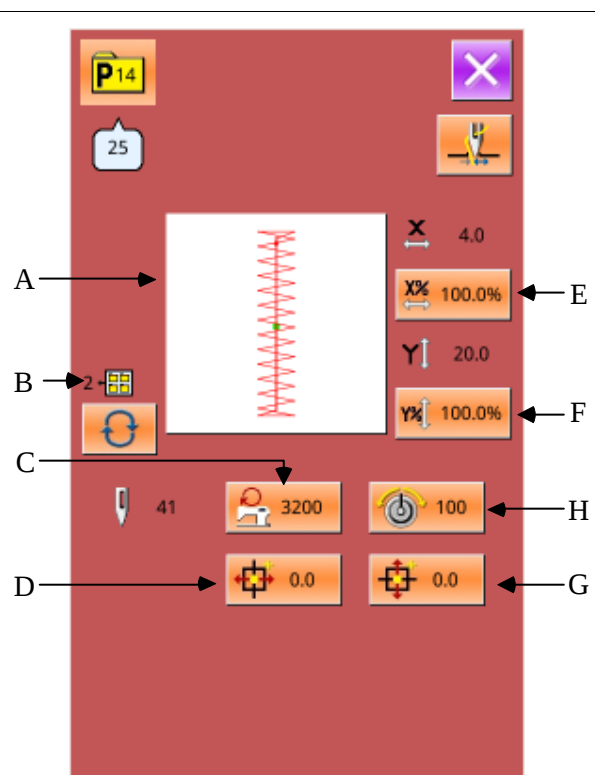
① Have Access to P Pattern Edition Interface

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	-30.0~30.0mm	0



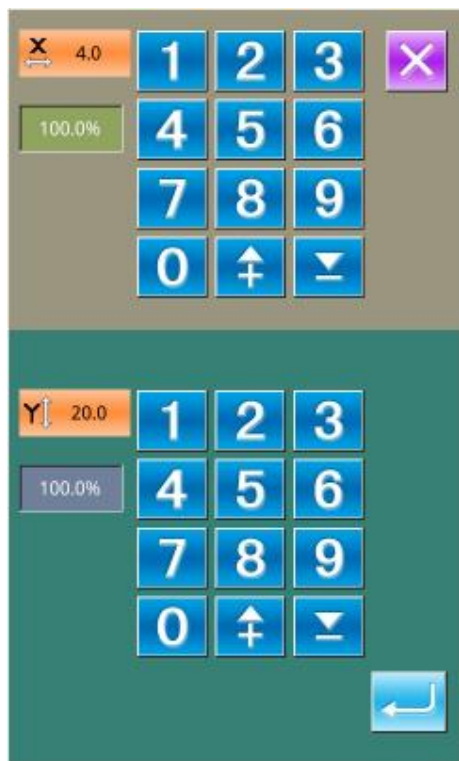
	Amount		
H	Thread Tension	0~200	100

③Confirm the Change of Data

Take the edition of “X Travel Amount” as example: With  ~  and keyboard or  , user can input the value. Press  to finish the operation.

④Quit the Edition

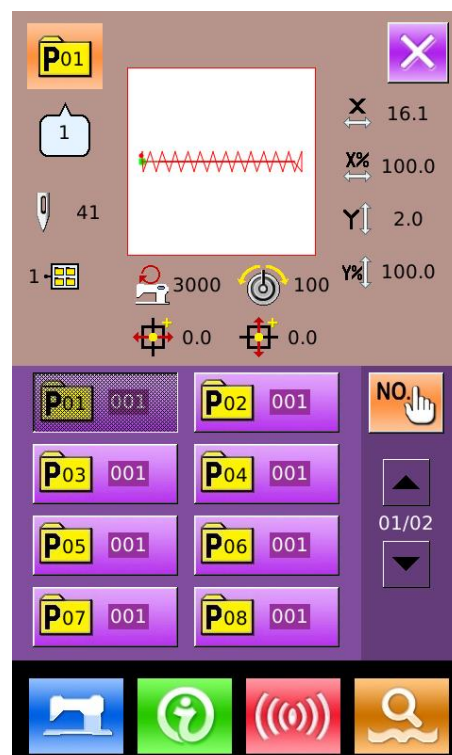
Press  to close P Pattern Edition Interface and the system will return to the Interface for Inputting Sewing Data



3.3 P Pattern Copy

①Select a Pattern to Be Copied

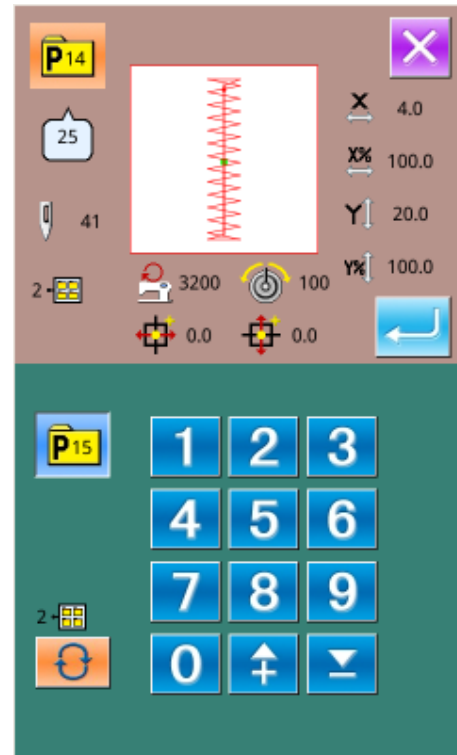
Press  to have access to P Pattern Copy Interface (as shown at right picture). Select the number of the pattern that needs copying among the registered ones, and then press



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



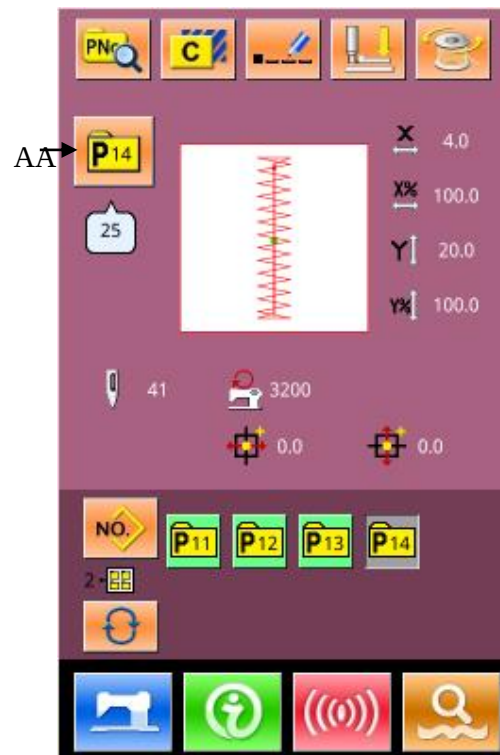
3.4 P Pattern Selection

① Have 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

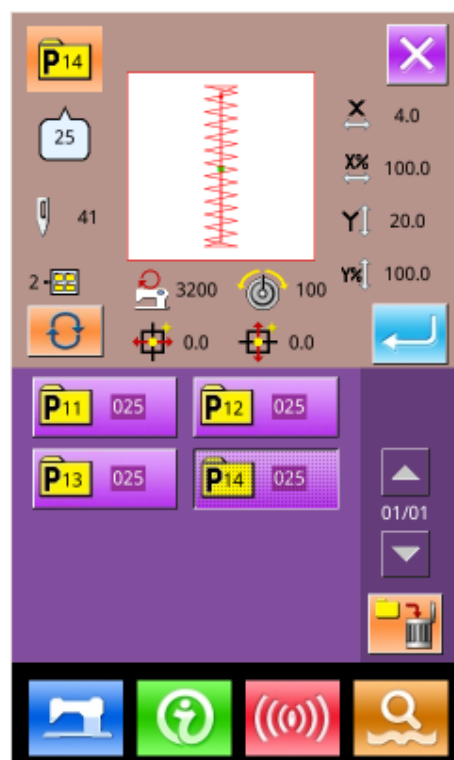
The relating information of the currently selected pattern is displayed at the upper side of the interface. When user presses  to shift the status of concealing the file folder number, the entire registered P patterns can be displayed.



③ Confirm the Selection of Pattern

The operation is same to that of normal pattern

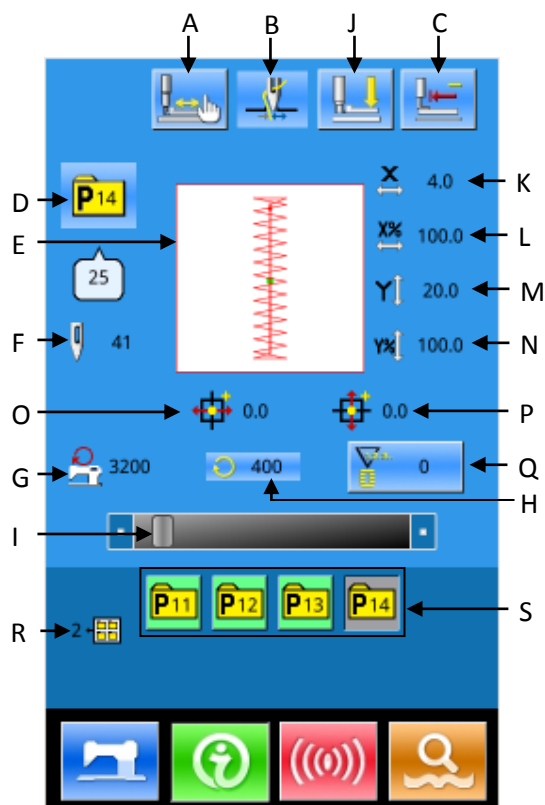
selection. Press  to end the selection



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:

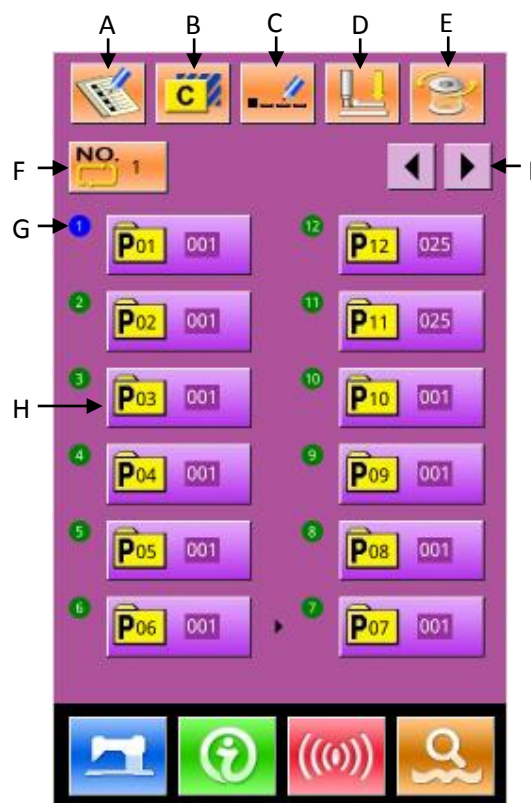
No.	Functions	Content
A	Trial Sewing	Press it to have access to Trial Sewing Interface, where user can determine the shape of f pattern.
B	Threading	Press it to lower the presser.
C	Return to Origin	Press it to have the presser return to the start point.
D	P Pattern Number Display	Display the number 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.  : Sewing Counter  : 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.

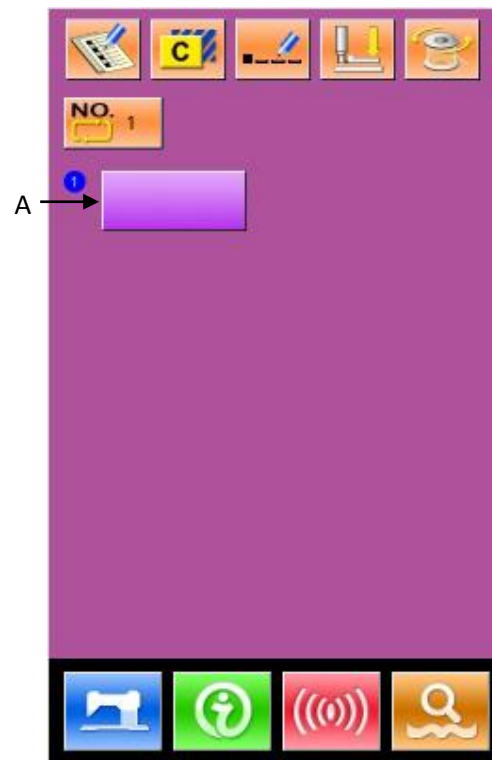
No.	Function	Contents
I	Page	30 C patterns can be registered at most, and 6 C patterns can be displayed on each page at most.
J	C Pattern Name	Display the Name of C pattern.

4.2 C Pattern Edition

① Have 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.

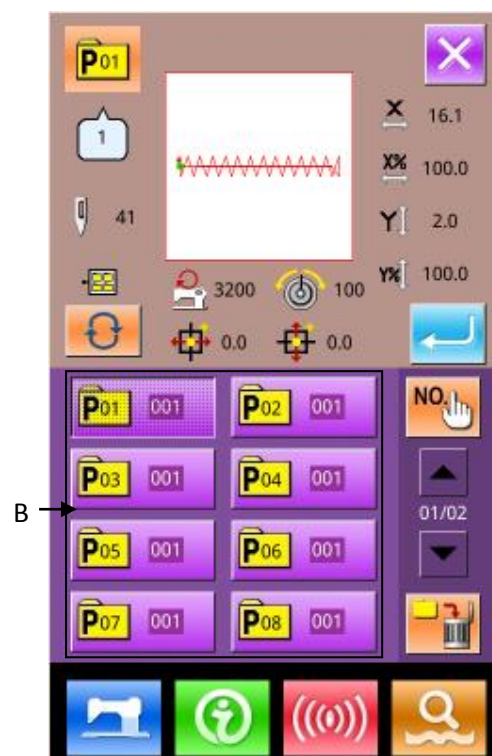
In initial status, because no sewing shape is registered to P pattern, the first one is displayed as blank



② Select Shape

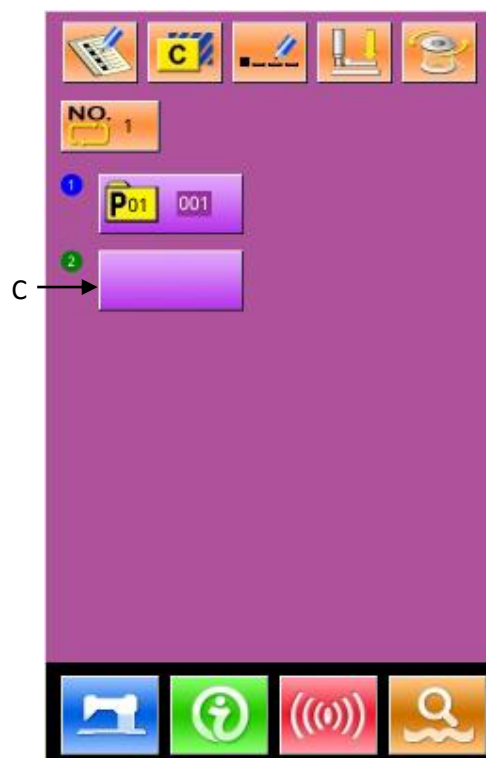
At C Pattern Edition Interface (the right figure), user can select the P Pattern (B)

for registration and then press  to finish the selection.



③ Repeat the Registration

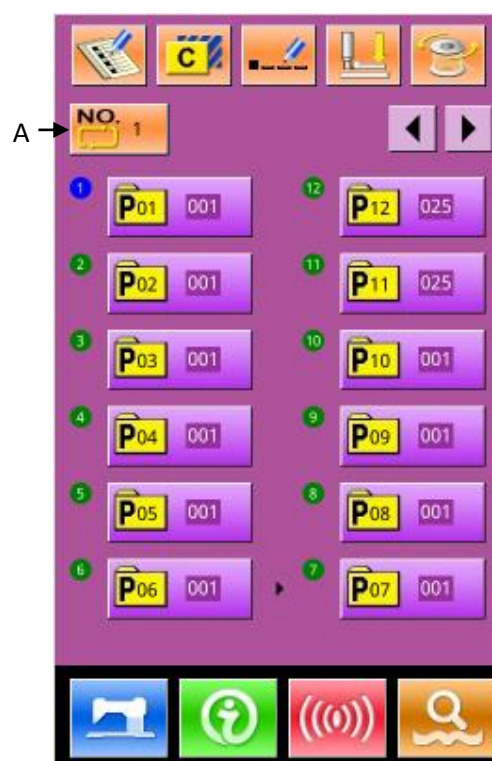
When the 1st pattern is registered, the Selection Key (C) for the 2nd pattern is displayed. Repeat the operations at above so as to register other patterns.



4.3 C Pattern Selection

① Have Access to C Pattern Selection Interface

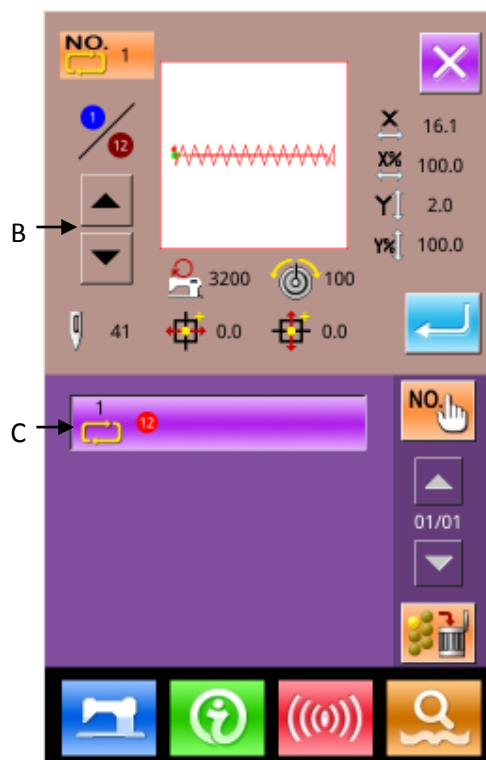
As shown on the right picture, user can have access to C Pattern Selection Interface by pressing Figure A.



②Select C Pattern Number

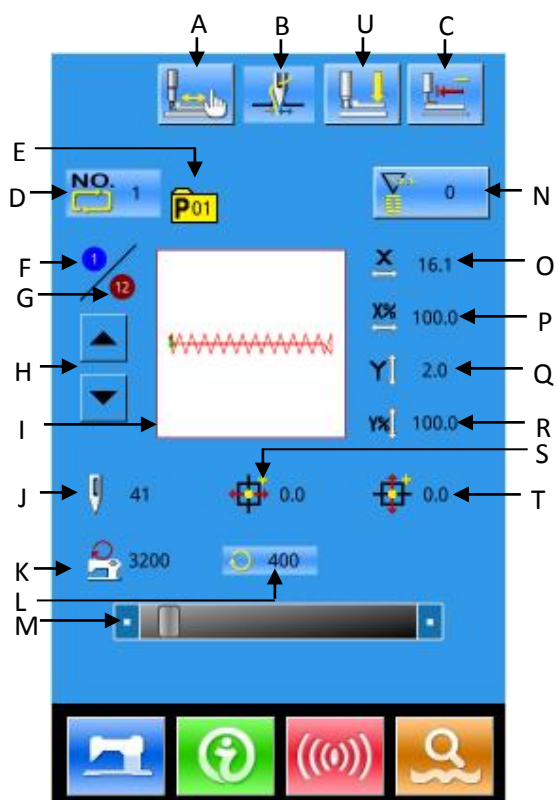
At C Pattern Selection Interface (the right figure), user can press B to change the data information of P patterns within the current C pattern in sequence.

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.  : Sewing Counter  : 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 .



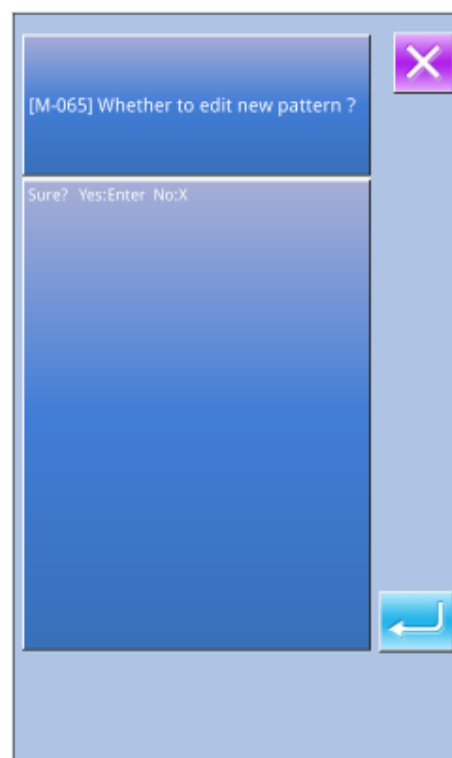
: Sewing Mode



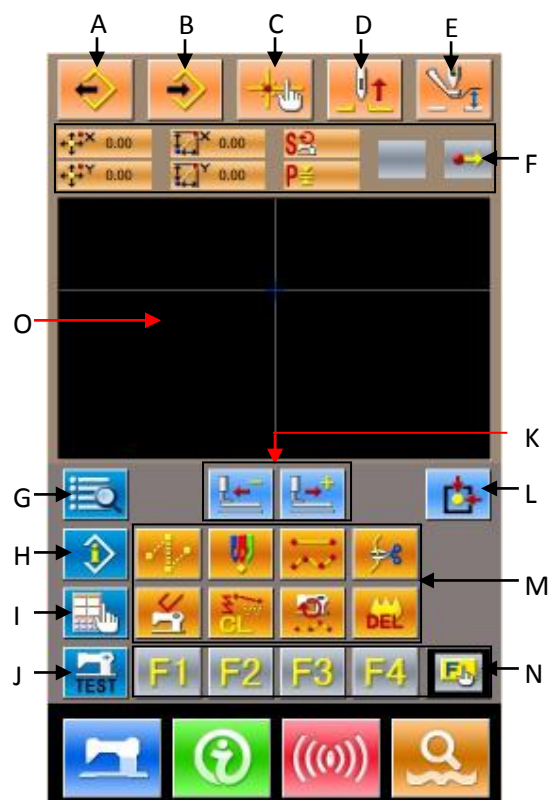
: Edition Mode



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.



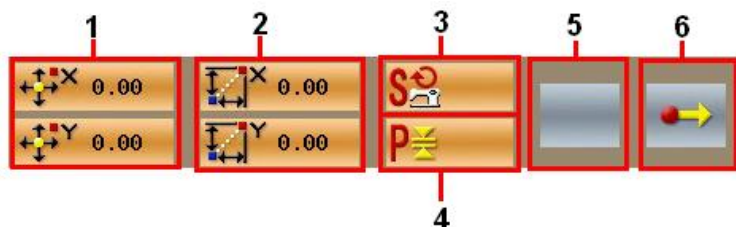
Press  to have access to Standard Interface for Pattern Edition, as shown in the right picture:



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

No.	Function	Contents
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
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

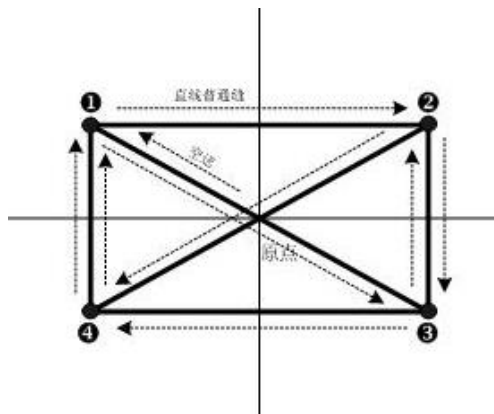


No.	Item	Content
1	Absolute Coordinate	The absolute coordinate of current needle position to the origin
2	Relating	The relating coordinate of current needle position

No.	Item	Content
	Coordinate	
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).
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:

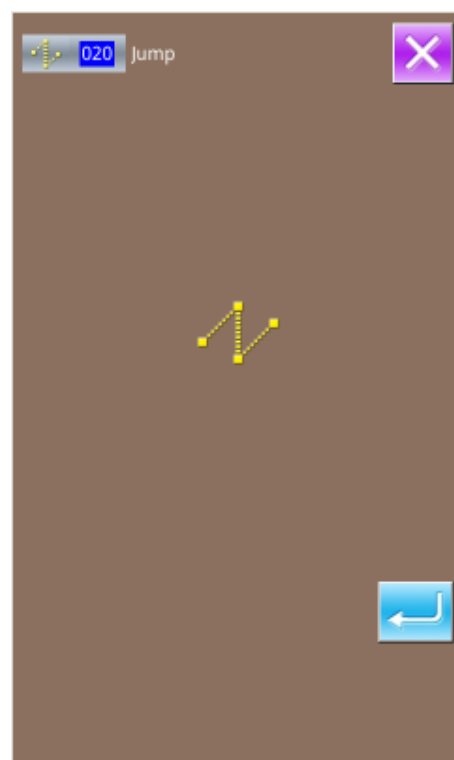
	X (mm)	Y (mm)
①	-40.00	25.00
②	40.00	25.00
③	40.00	-25.00
④	-40.00	-25.00

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

① 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

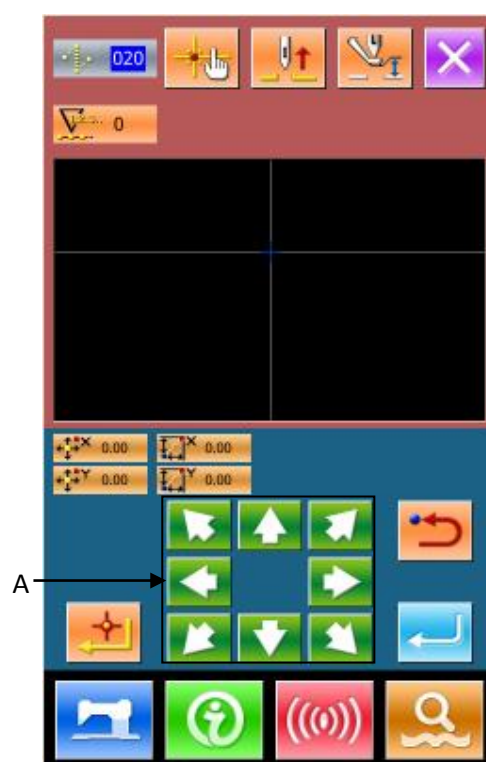


After user presses , the Interface for Locating the Empty Feeding Position will be displayed:

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

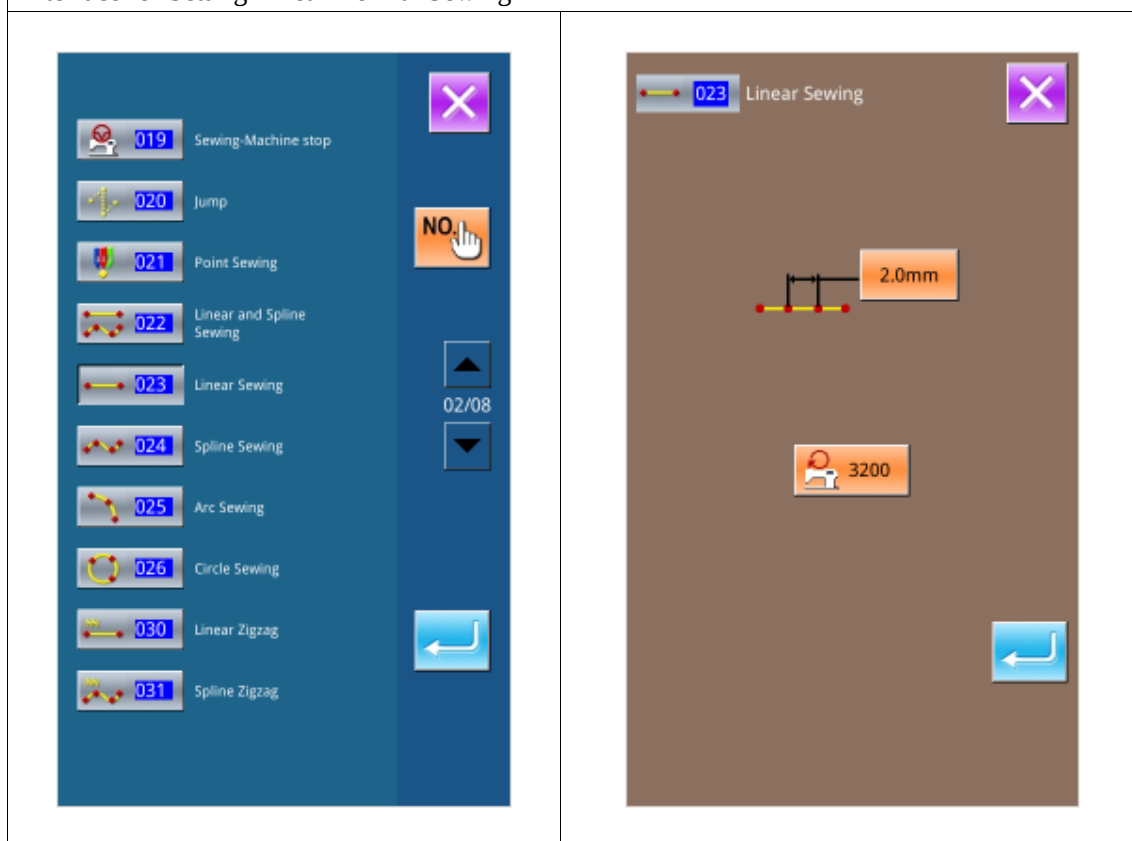
press  to save the settings. After that, the system will return to the Standard Interface for Pattern Edition and display the empty Feeding stitch





② 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

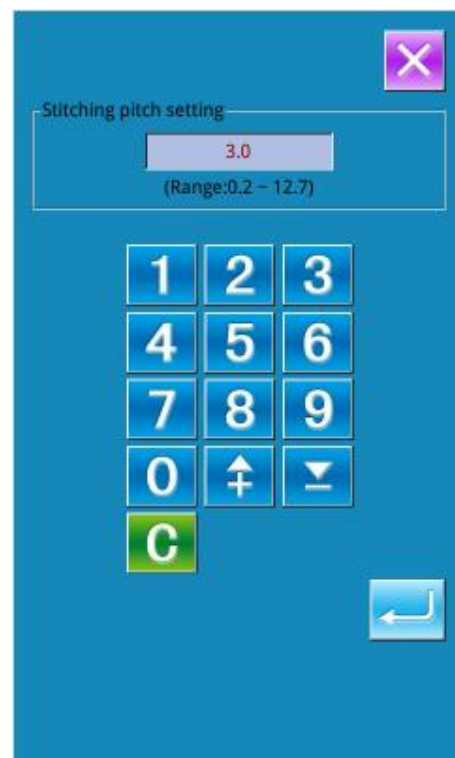


At Interface for Setting Linear Normal

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.



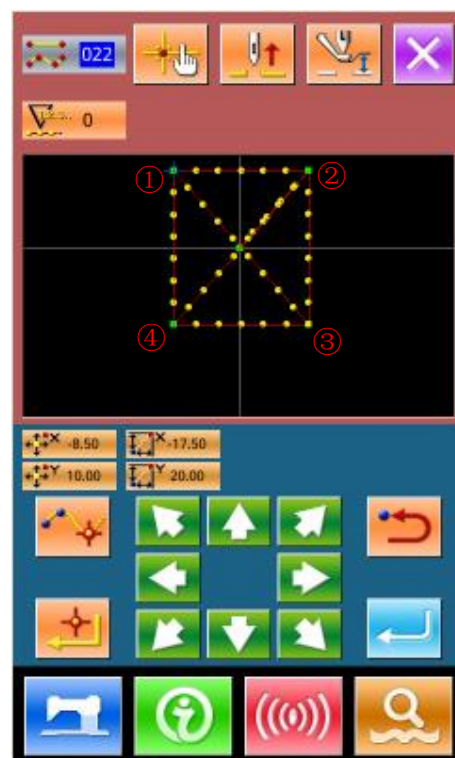
After confirming the value “3.0mm” as the length of sewing stitch, user can press  to have access to the Interface for Setting Linear Normal Sewing.

In that interface, user needs press Direction Keys to move the icon (where the needle locates) from **①** to **②**, and then press .

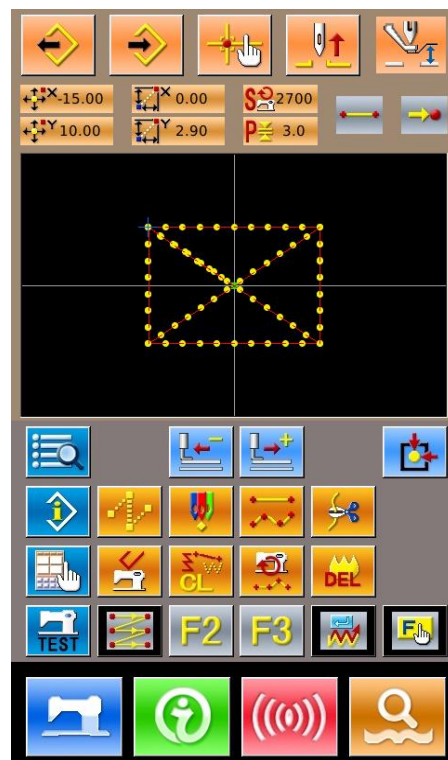
Repeat the above operations to move the icon in the order

of **② → ③ → ④ → ① → ③ → ② → ④ → ①**

, 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



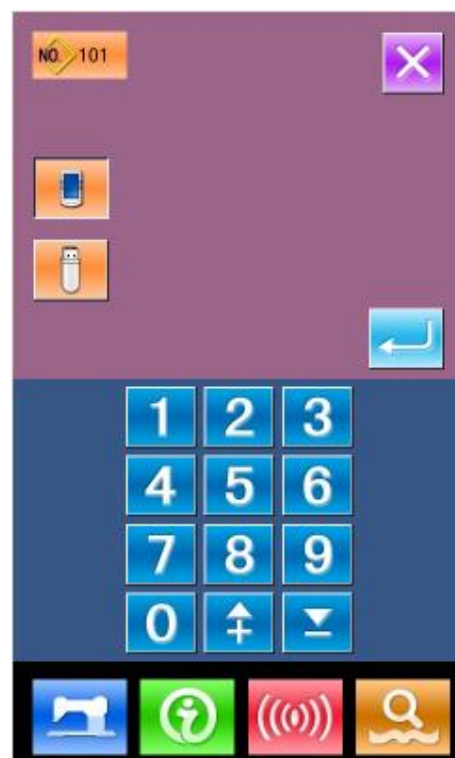
③ Save Pattern

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.

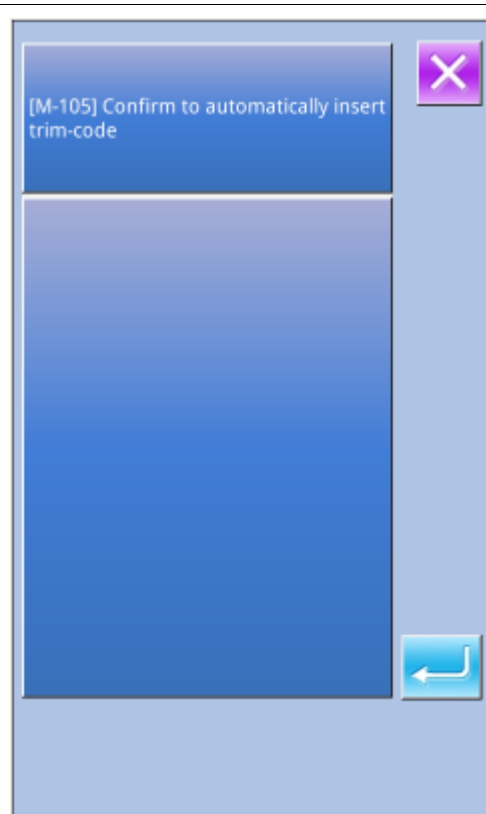


Press  to add automatic thread-trimming action;

Press  to cancel the insertion of automatic thread-trimming action

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

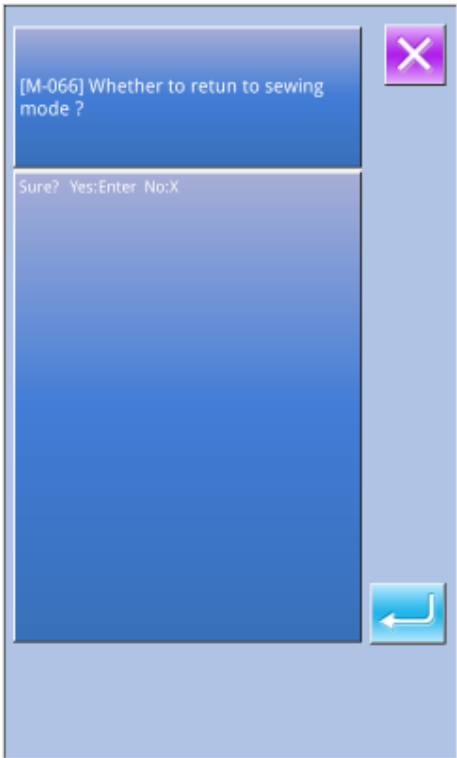
For the detailed operations and instructions of pattern edition, please refer to <SP510 Pattern-making Operation Manual>.



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

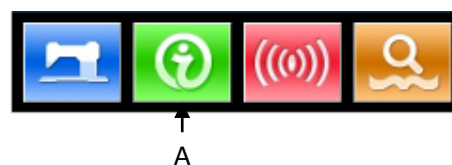
The Information Functions contain the following three functions:

- 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

① Display Information Interface

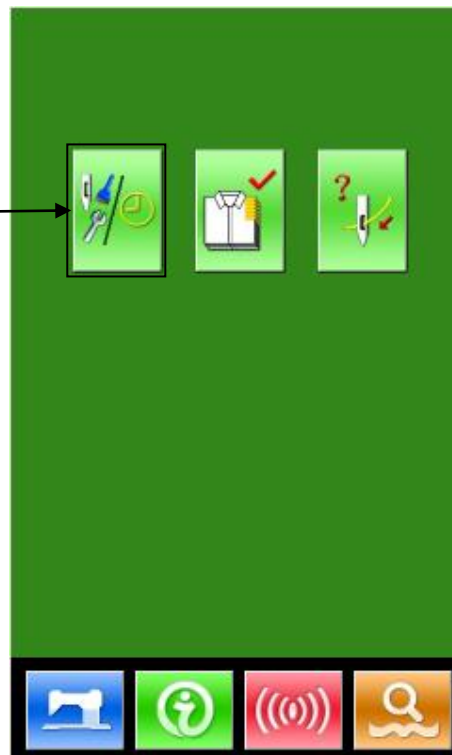
At Sewing Data Input Interface, user can Press Information Key (A) to activate the Information Interface.



②Display Maintenance & Repair Interface

Please press  (B) at Information Interface

B



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



: Needle Replacement (Thousand Stitches)



: Cleaning Time (Hour)



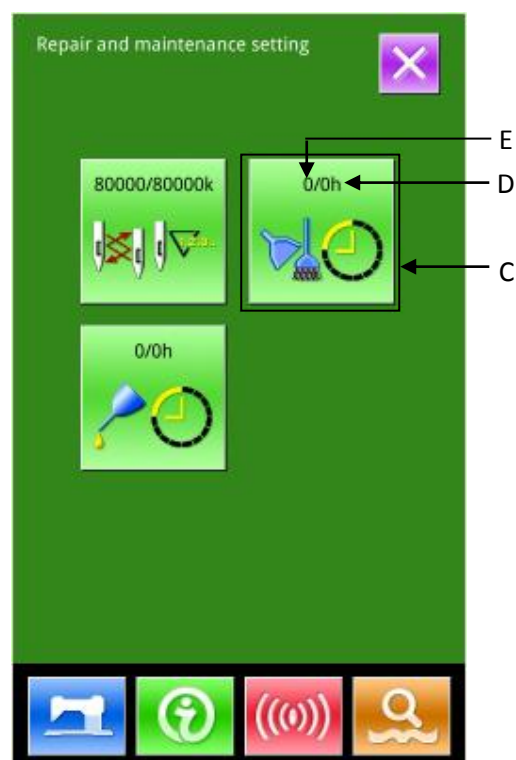
: Oil Replacement Time (Hour)

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

⑥ 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



⑦ Information Interface

At Maintenance level, there are 6 functions displayed as below



: Maintenance & Repair



: Production Control



: Threading



: Alarm Record



: Running Records



: Periodical Password

Please press Maintenance & Repair

Information Key  (B) to activate the interface.

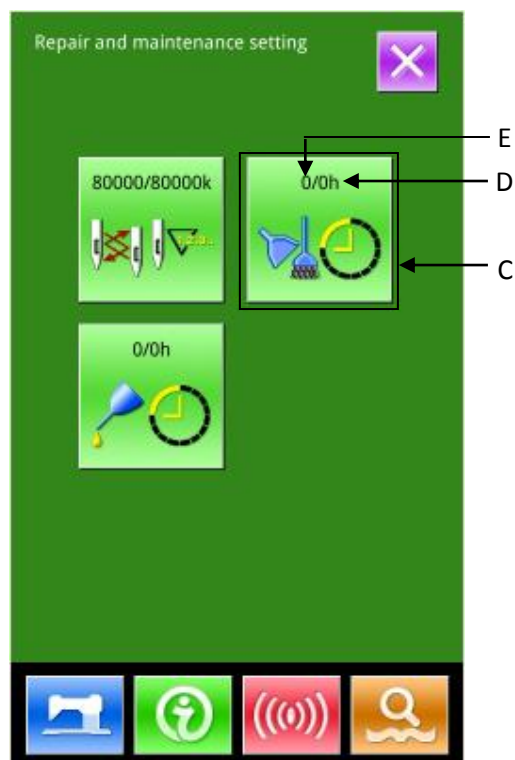


⑧ Setting of Maintenance & Repair

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



⑨ 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:

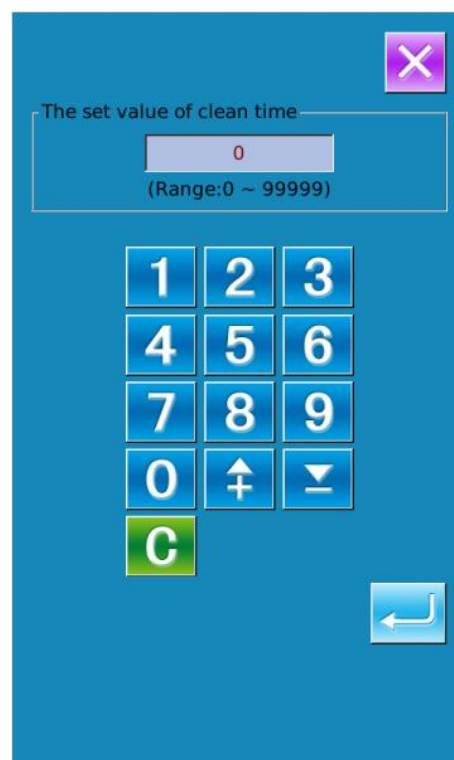
- ◆ Needle Replacement Time
- ◆ Cleaning Time
- ◆ Oil Replacement Time

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:

- Via Information Interface
- Via Sewing Interface

6.4.1 Via Information Interface

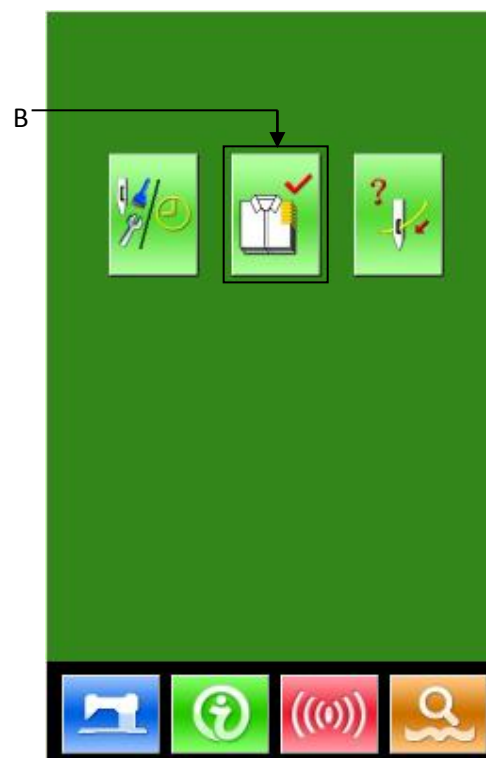
① Display the Information Interface

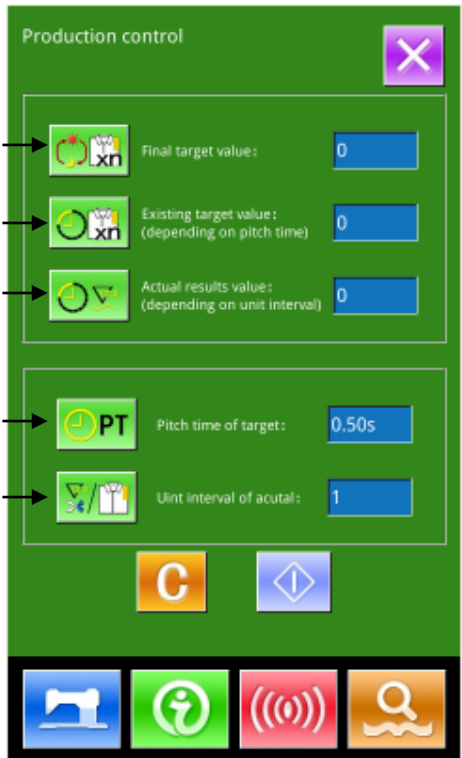
At Interface for Inputting Sewing Data, press Information Key (A) to activate the Information Interface.



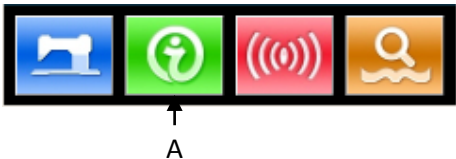
② Display the Production Control Interface

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	
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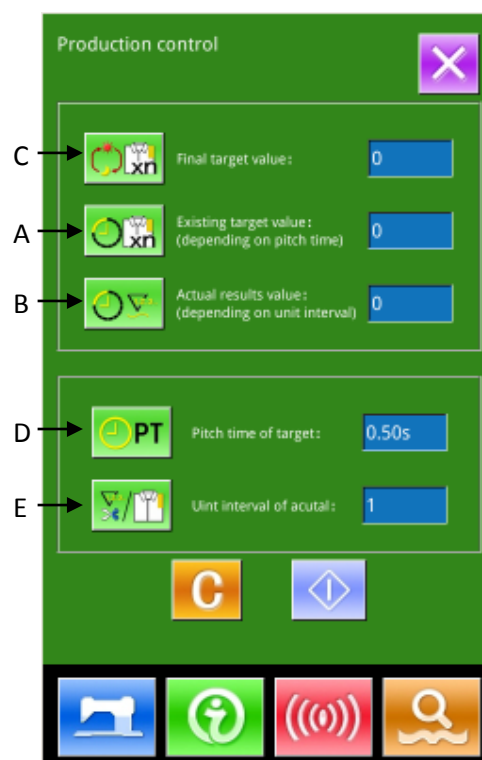
6.4.2 Via Sewing Interface

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 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 the Pitch 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.



⑩ 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.



⑤Start 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 turn 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]

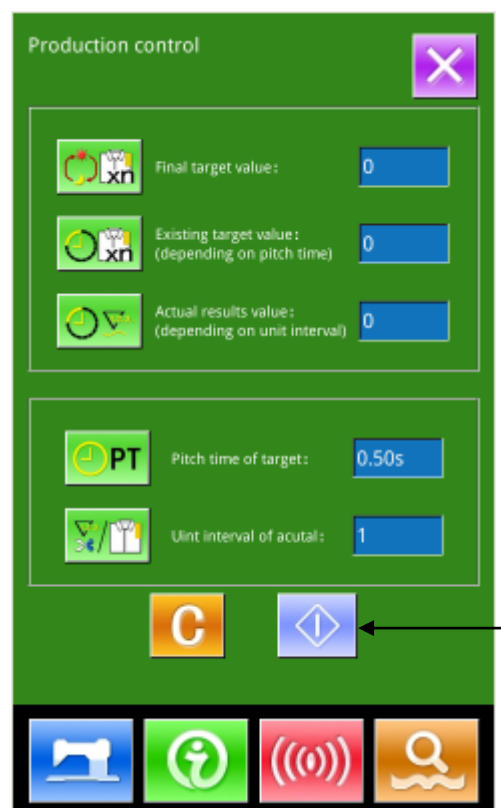
Actual Result Value: After entry from the “6.4.2 Via Sewing Interface”, the system will start count the actual value by adding 1 at finishing each piece

By setting the Target Value and the Actual Result Value, user can find out the change of productivity.

⑥Stop 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.

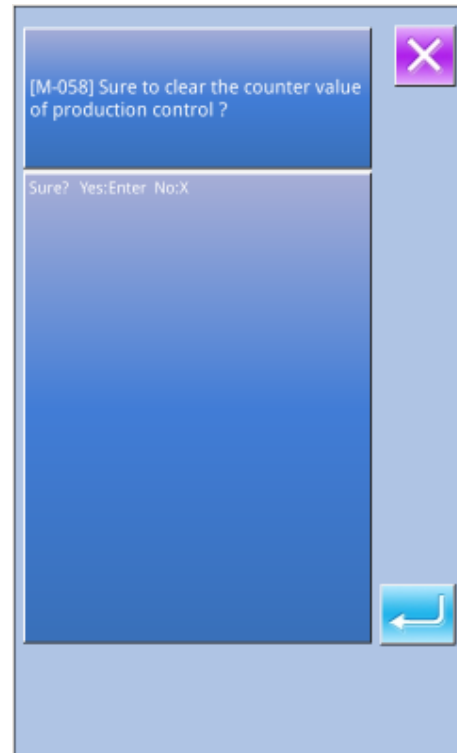
(Note: the clear key can only be displayed when the counter is stopped.)

After pressing , the Interface for Confirming Clearance is activated.

In the Interface for Confirming Clearance,

user can press  to confirm the

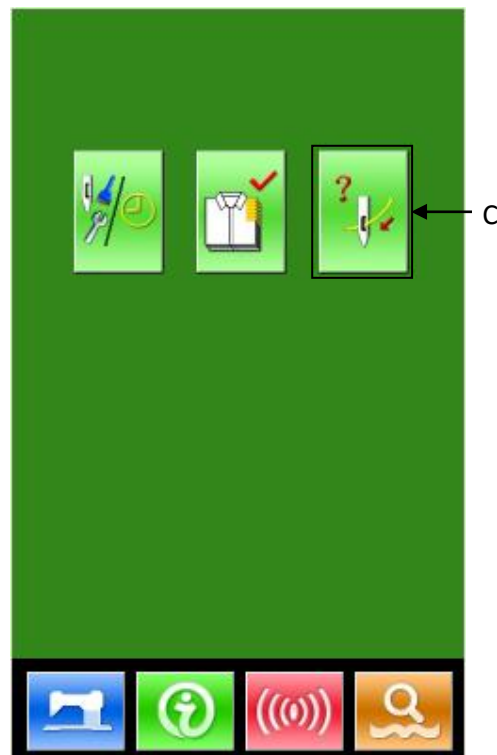
clearance. Press  to quit.



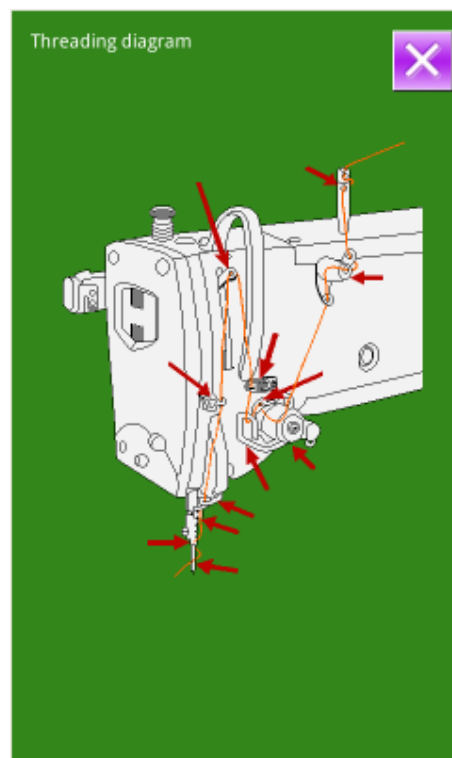
6.5 Display Threading Figure

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

- ④ At Maintenance Level, press  to inquire the alarm records.



⑤ Press  to check the records

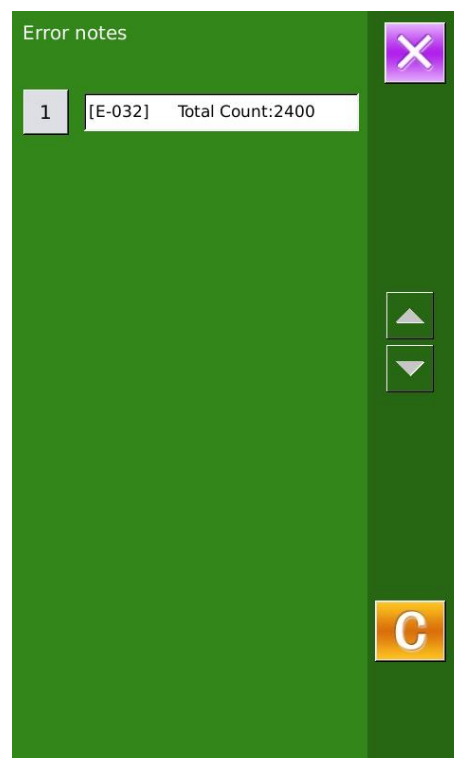
As in the picture, the warning information and the times of occurrence are displayed

Function of Keys:

A、 Press  or  to turn pages

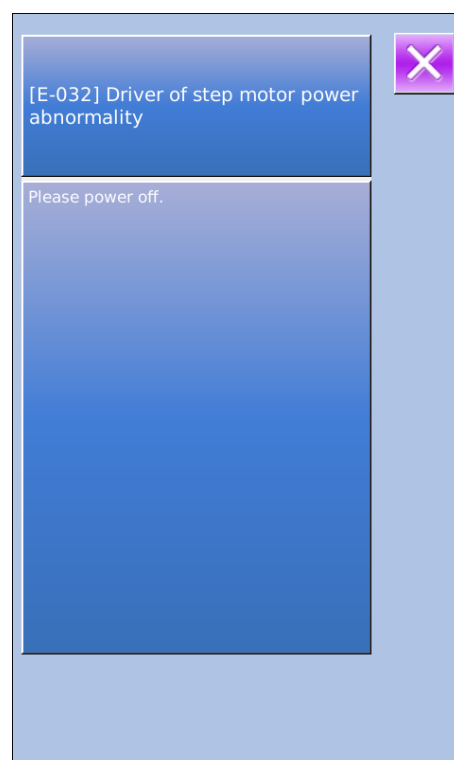
B、 Press  to quit the inquiry

C、 Press  to clear the filed record



⑥ 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

- ③ In the interface of maintenance level, press



to check the running information of the machine



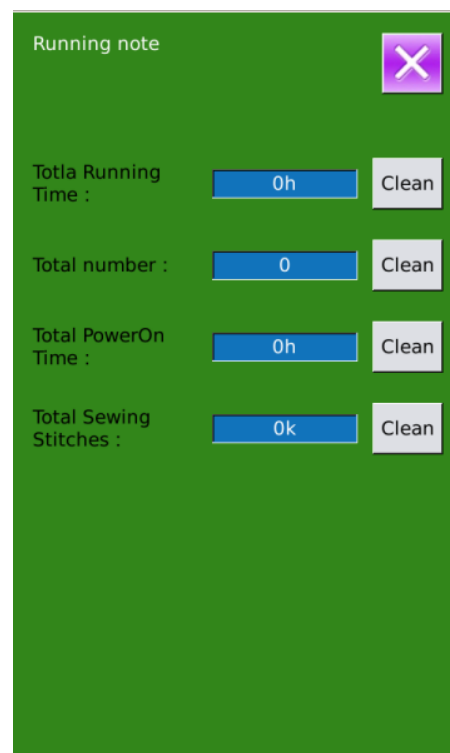
- ④ **The Running Records contain:**

- 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

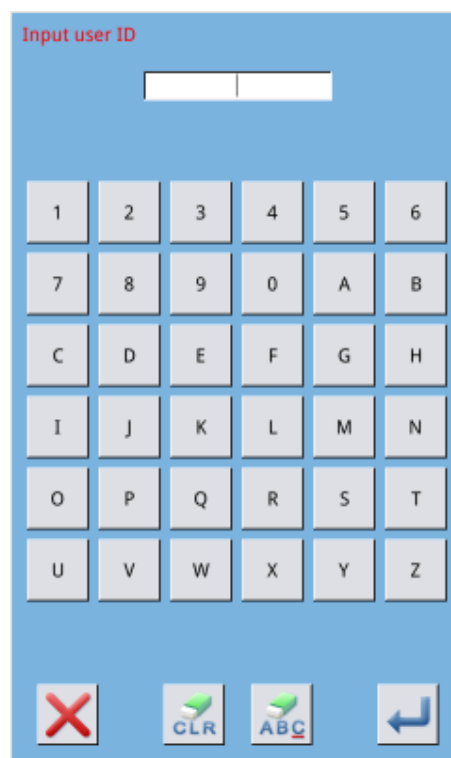
11) In maintenance level, Press  to set periodical password

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.



12) Press  To input User ID



13) Input the Correct Factory ID to enter the password setting interface

Procedure for setting the periodical password:

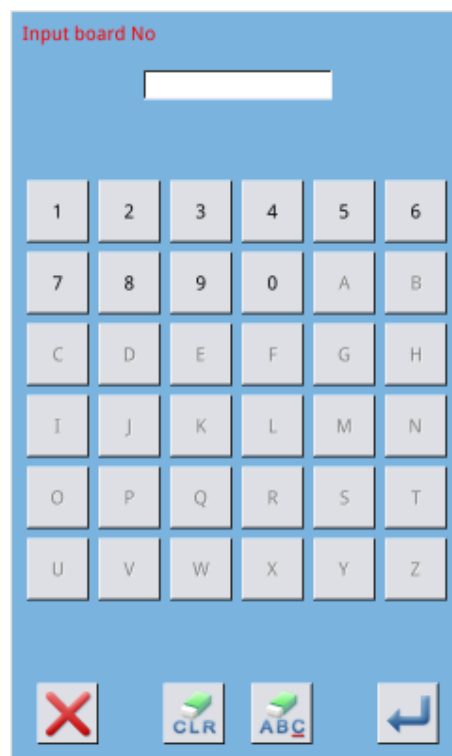
- B、Continue inputting other periodical passwords



14) 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



15) Input System Clock

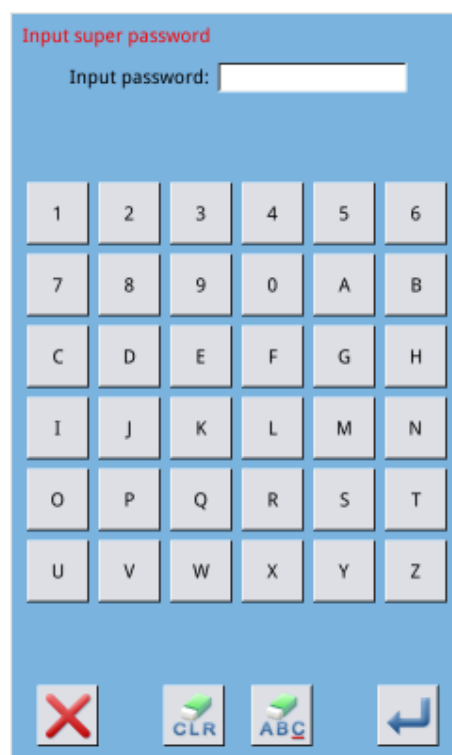
Press **【Clock】** to enter the interface for setting the system clock. And set the time.

**16) 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**



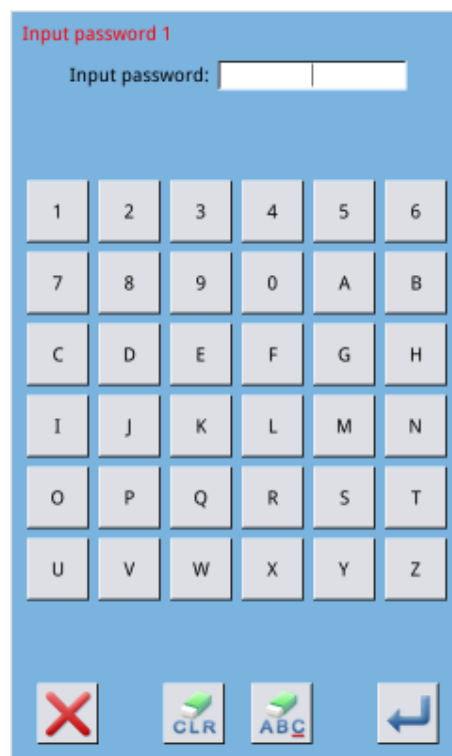
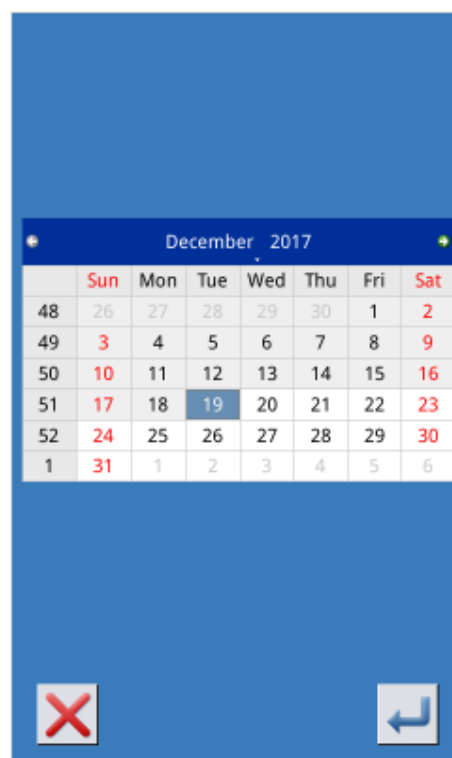
17) Input periodical password

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



18) Input other periodical password

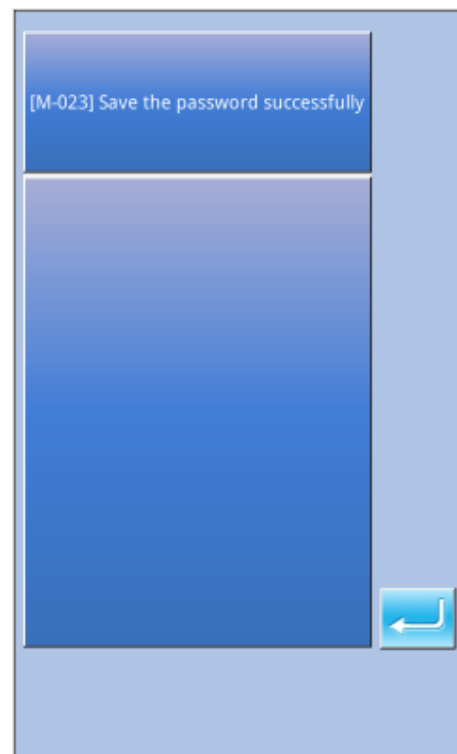
The setting of other periodical password is same to that in step ⑦. Please take the reference to that

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

**19) 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.



20) 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.

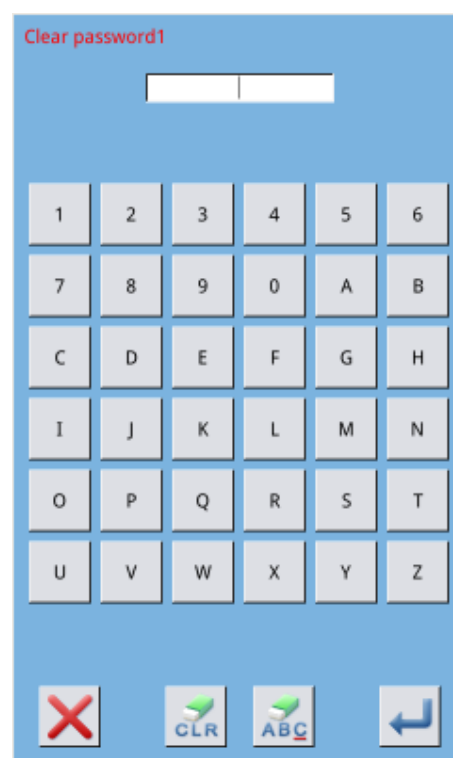
C、The system will display current clock and the activation dates

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.



2) 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 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/ [0-9][0-9][1-9].dsb
B/BA	[0-9][0-9][1-9].(1-599)/ [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 Operations

④ Display the Communication Interface

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

⑤ 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.

⑥ Press to quit the Communication



7.3 Pattern Transfer

⑦ Display the Communication Interface

In communication interface, press:

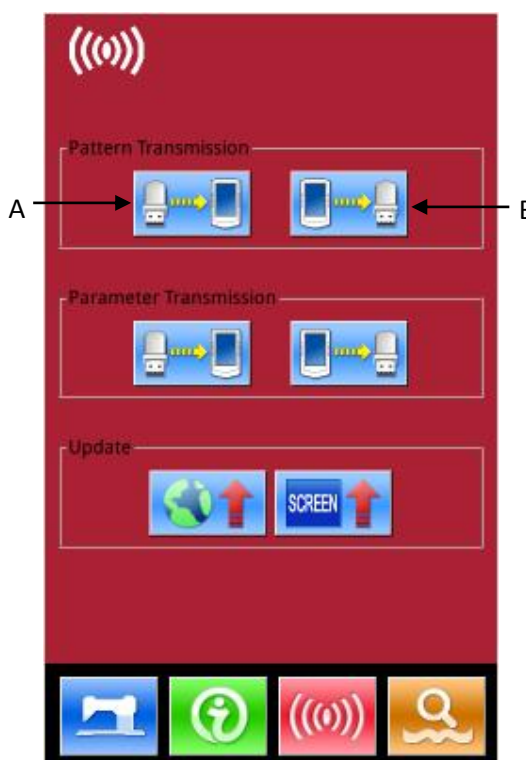
A: Input patterns from U Disk to Operation Panel

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	
⑧ 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。

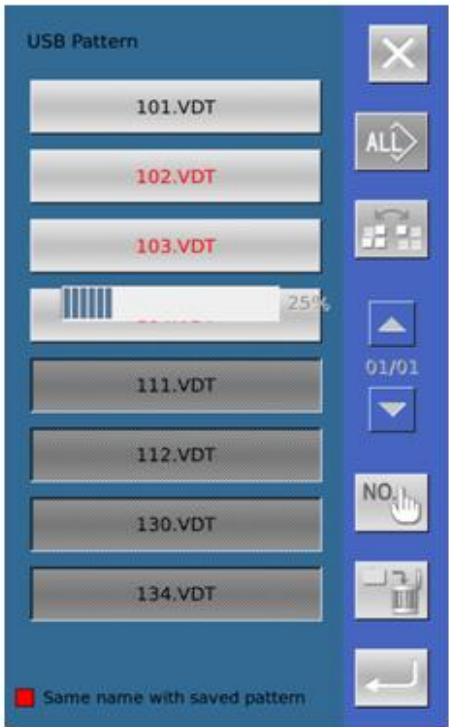


Figure 2

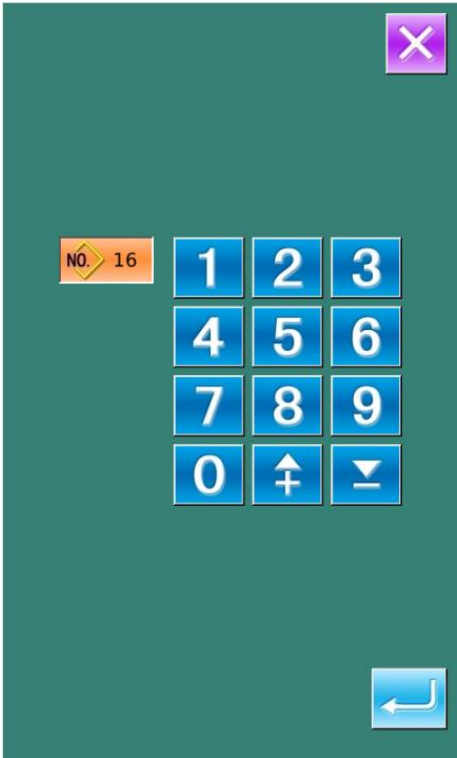


Figure 3

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.

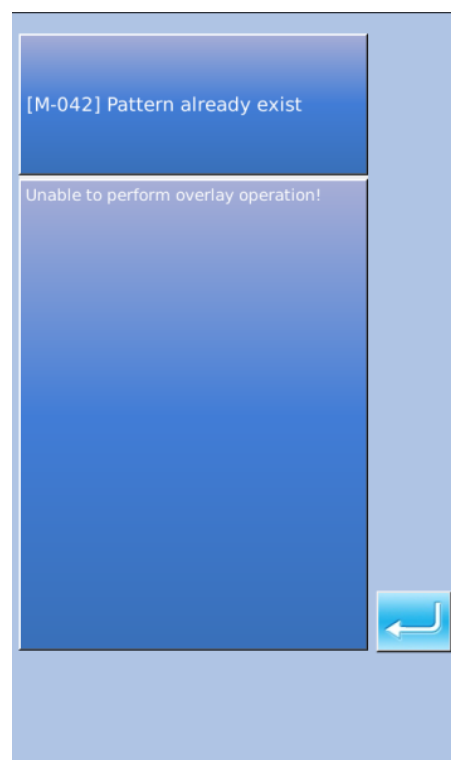


Figure 4

⑨ 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

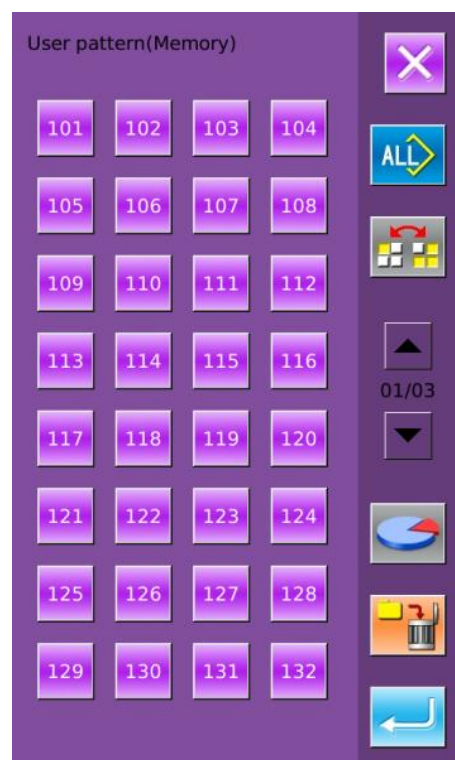
B、 Use these three methods to select patterns

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

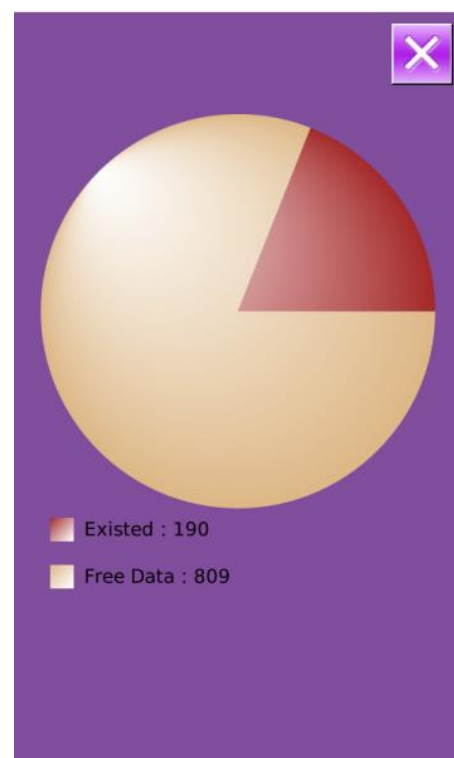
C、 Press  to delete the selected pattern

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

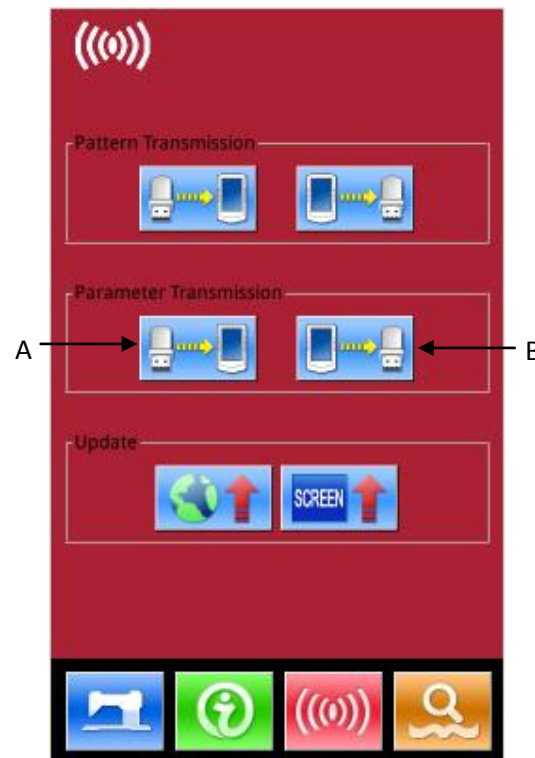
③ Display the Communication Interface

In communication interface, press:

A: Input parameters from U Disk to Operation Panel

B: Output parameters from Operation Panel to U Disk

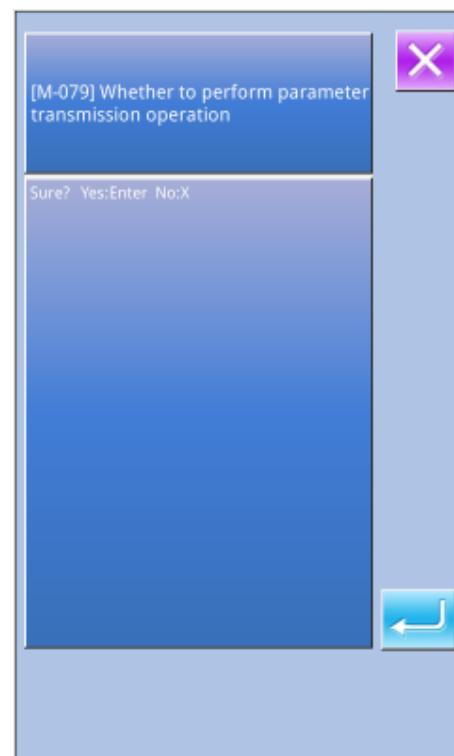
- ※ **When inputting patterns from U disk, user has to save the parameters into the DH_PARAM in the U disk with name ukParam.**
- ※ **When outputting patterns from operation panel, user has to save the parameters into the DH_PARAM in the U disk with name ukParam.**
- ※ **The parameter file is the binary file, which is operated on the control panel. User can not change that file manually on PC, or the file may be damaged**



④ Press Button A to Input Parameters from U Disk to Operation Panel

A、Press  to input the parameters and quit

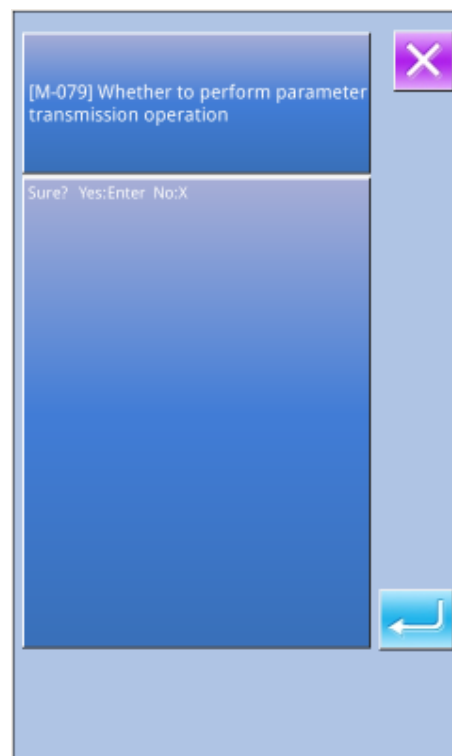
B、Press  to quit directly.



⑤ **Press Button B to Output Parameters to U Disk**

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

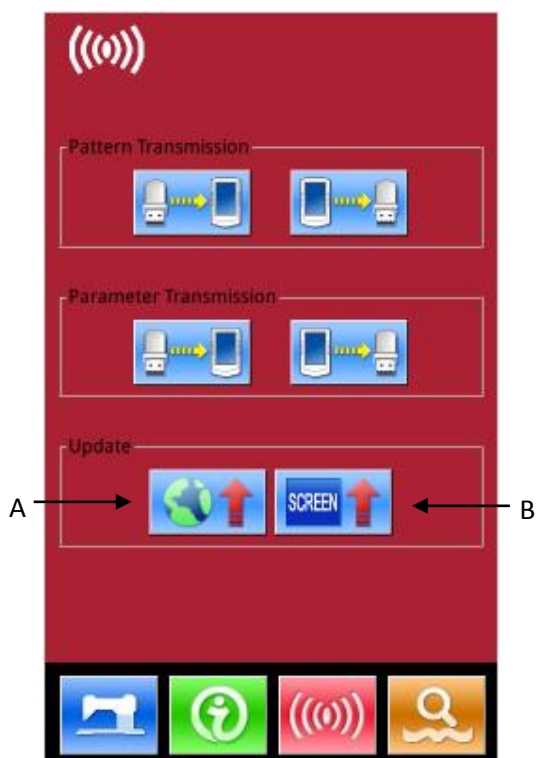
B、Press  to quit directly



7.5 Software Update

3) Display the Interface

In Communication interface, press A to enter Software Update Interface



4) Update Selection

The software update contains:

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

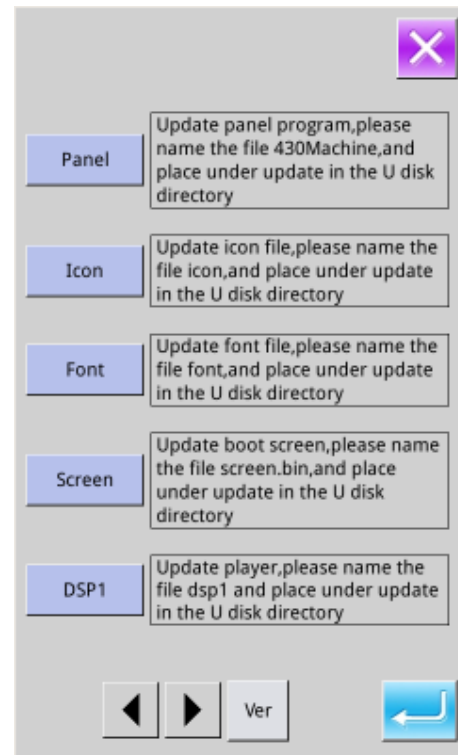
Press  and  to turn the page

A、Press  to finish the selected update and quit

B、press  to quit directly

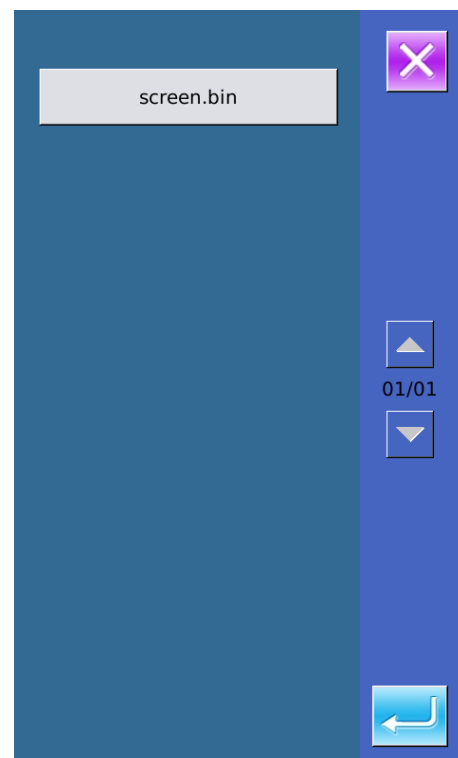
C、User can select several items for update at same time. The system will perform the update according to the order

E、After the update, please restart the machine.



4) 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.

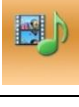


Mode Setting Level 2 Interface



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

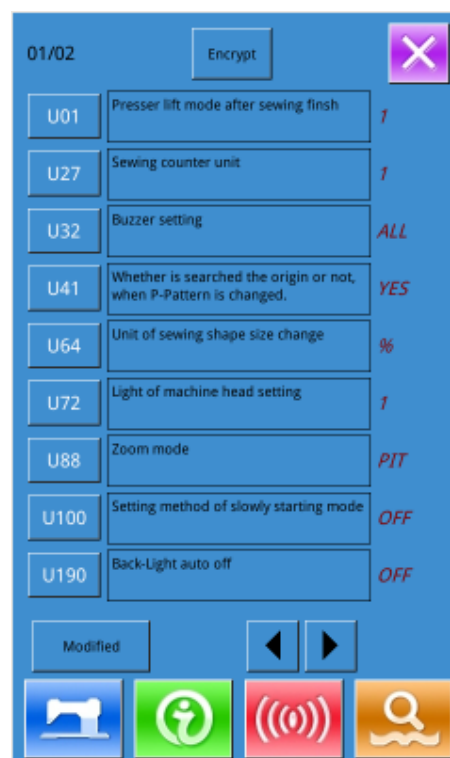
8.2 Level 1 Parameters Setting

④ Set Parameter

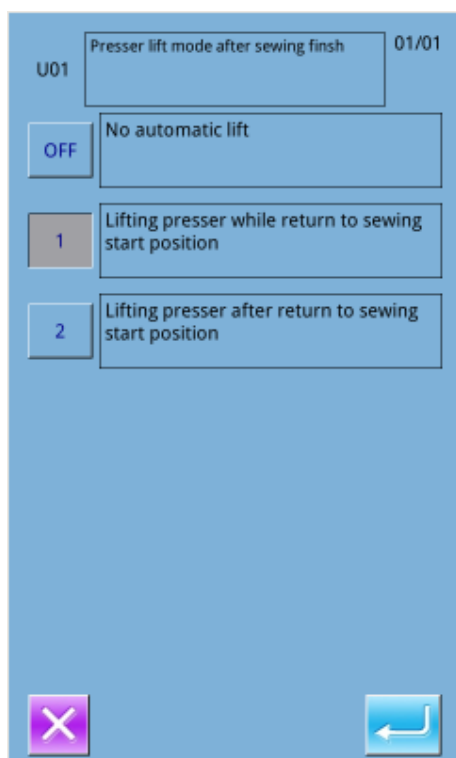
Select  to enter the interface of Level 1 parameter setting (shown as the figure at right).

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



⑤ 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

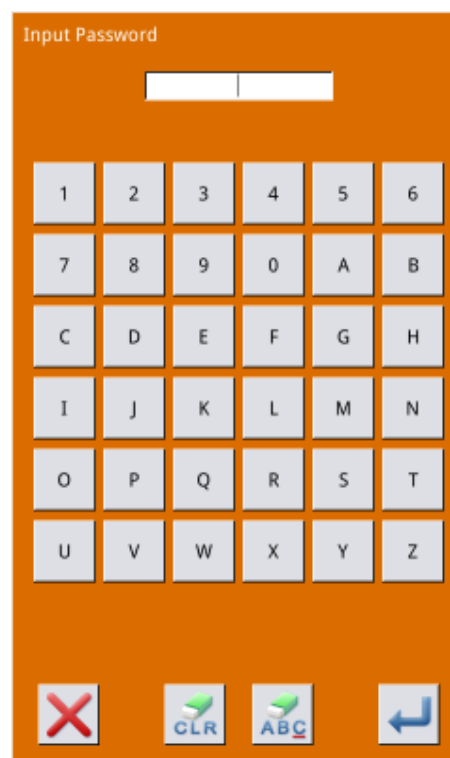
Select the parameter for encryption

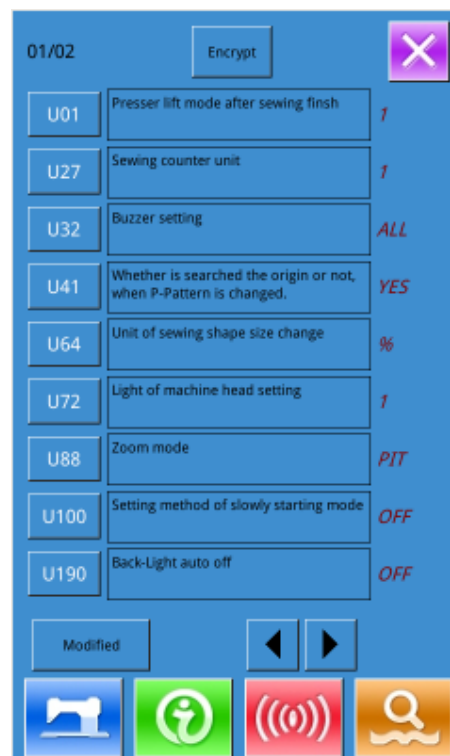
Press **【Select All】** to attach password to all the parameters

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





⑥ Check the changed parameter

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

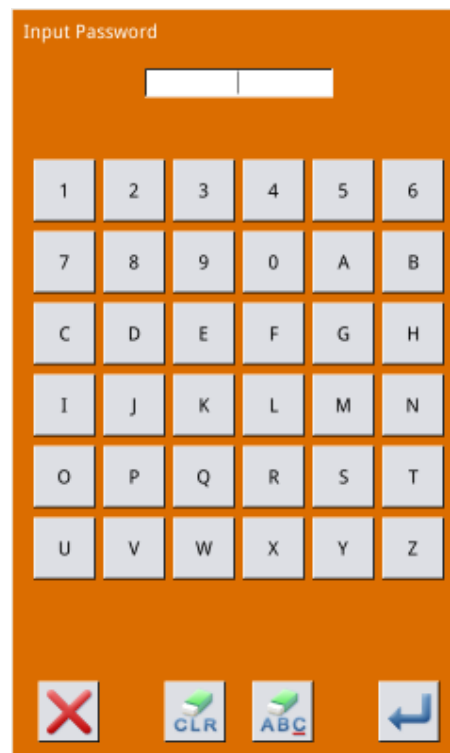
B、In the parameter setting interface, press **【 Modified 】** to check the changed parameters.

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.

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

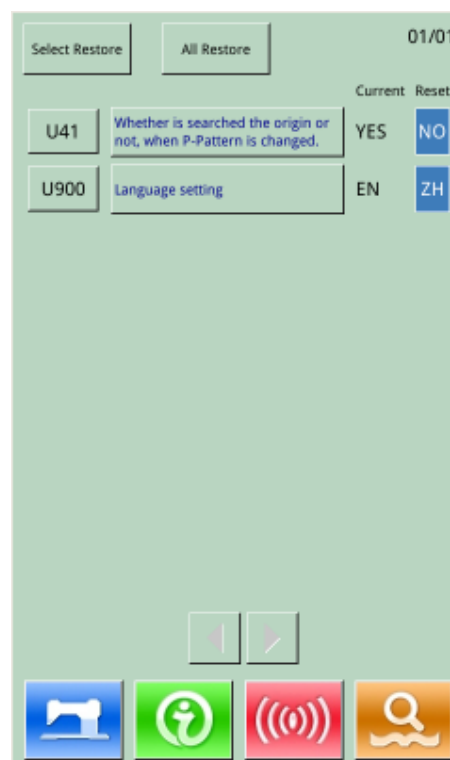
In that interface:

- 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 /Clamp up Method after sewing	off/1/2		1
U27	Counting Unit of the Sewing Counter	1~30	1	1
U32	Settings on Buzzer Sound OFF: Silence PAN: Operating Sound ALL: Operating Sound + Alarm	0: Silence 1: Operating Sound 2: Operating Sound + Alarm		2
U41	Search Origin at Shifting P Pattern Yes: Search No: Not Search	0: Yes 1: No		0
U64	Select Unit for Size Change %: Input Percentage SIZ: Input Actual Size	0: Input Percentage 1: Input Actual Size		0
U88	Scale Mode OFF: Forbidden PIT: Change at Stitch Pitch STI: Change at Stitch Number	0: Forbidden 1: Changes at Stitch Pitch 2: Changes at Stitch Number		1
U100	Setting of Slow Start	0: OFF		1

No.	Parameter	Range	Unit	Default value
	OFF: The start speed of stitches 1-5 will follow the Setting of parameter No.151~155 ON: Follow the settings of slow start	1: ON		
U190	Back Light Auto Off OFF: Not Auto Off ON: Auto Off	0: No 1: Yes		0
U191	Back Light Auto off Waitng Time	1~9	1m	3m
U192	Back Light Adjustment	20~100		100
U193	Modify the Counter Value OFF: Permit ON: Forbid	0: Permit 1: Forbid		0
U194	Operation at Reaching set value of Counter OFF: Stop Sewing ON: Continue Sewing	OFF : Stop Sewing ON: Continue Sewing		0
U195	Voice Column	30~63		50
U900	Language 0: Chinese 1: English	0: Chinese 1: English		0
U901	Set Language at Power-on OFF: No ON: Yes	0: OFF 1: ON		0

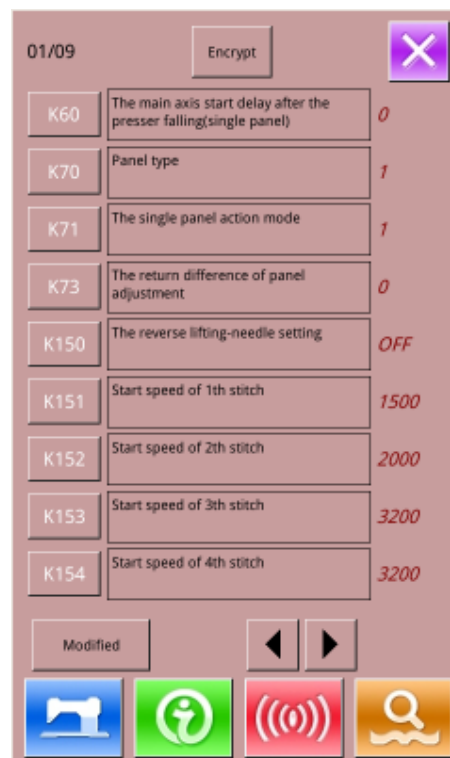
8.3 Level 2 Parameters Setting

⑤ 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.

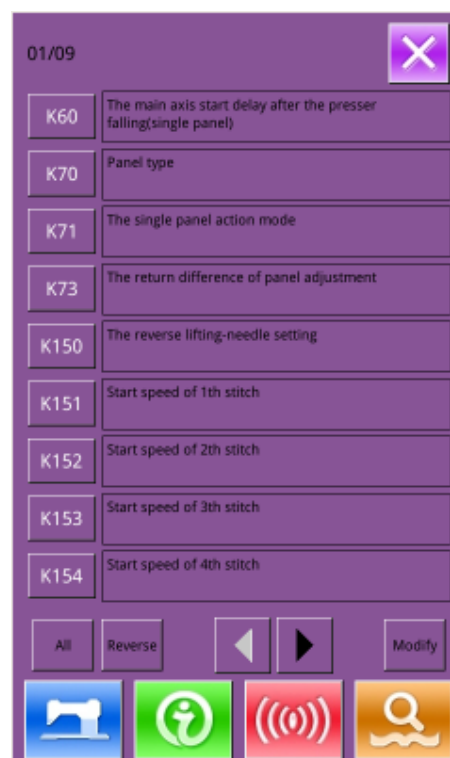
Press  to quit the setting interface



⑥ Parameter Encryption

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

Press  to quit parameter encryption interface

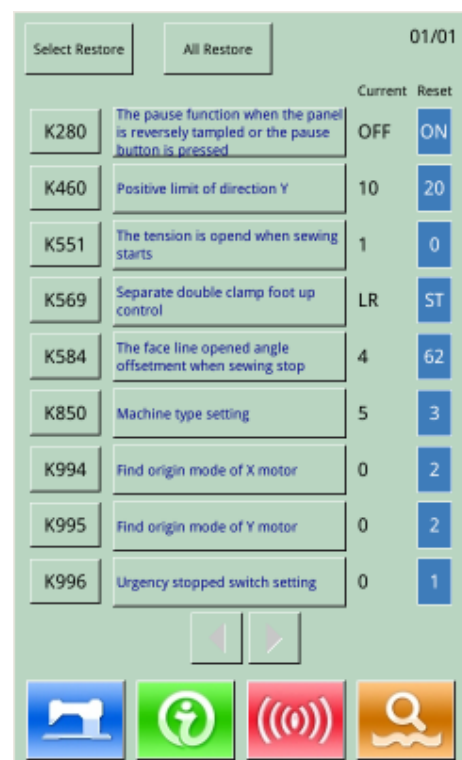


⑦ Check the changed parameters

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	Delay of main-shaft at lowering presser (Available at Single Pedal)	0~3000ms	10	0
K70	Pedal Type 1: Single 2: Double	1: Single 2: Double		2
K71	Single Pedal Action Mode (Effective at No.70 Para at 1) 1: 1 for releasing presser, 2 for sewing 2: 1 for lowering in half way, 2 for lowering to the bottom and sewing	1~2		1
K72	Double Pedal Action Mode (Effective at No.70 Para at 2) 1: Level 1 for releasing presser, then the press switch for sewing 2: Level 1 for lowering in half way, Level 2 for lowering to the bottom and sewing 3: Step the switch to lower the presser and start sewing	1~3	1	1
K73	Adjustment of Pedal Stroke	0~15	1	0
K150	Reverse and lift needle at main-shaft stop ON: Yes OFF: No	0: OFF 1: ON		0
K151	Speed of 1 st stitch at start	200~3200rpm	100	3200

No.	Parameters	Range	Unit	Default
K152	Speed of 2 nd stitch at start	200~3200rpm	100	3200
K153	Speed of 3 rd stitch at start	200~3200rpm	100	3200
K154	Speed of 4 th stitch at start	200~3200rpm	100	3200
K155	Speed of 5 th stitch at start	200~3200rpm	100	3200
K156	Speed of 5 th stitch before end	400~3200rpm	100	3200
K157	Speed of 4 th stitch before end	400~3200rpm	100	3200
K158	Speed of 3 rd stitch before end	400~3200rpm	100	3200
K159	Speed of 2 nd stitch before end	400~3200rpm	100	3200
k163	Max Sewing Speed	1200~3200	100	3200
K250	Detect origin at sewing finish ON: Yes OFF: No	0: OFF 1: ON		0
K251	Search Origin at Combination Sewing OFF: Not Search PAT: After each pattern CLC: After each cycle	0: OFF 1: PAT 2: CLC		0
K253	Method for entering to Sewing Ready 0: Step the pedal to level 2 (Double Pedal type is to step the start switch) 1: Press RESET 2: Press the special external input switch (Optional Input)	0~2	1	0
K260	Change Feeding Time -: Advance Feeding +: Delay Feeding	-30~30	1	0
K261	Change the feeding time of 1 st stitch at start -: Advance Feeding +: Delay Feeding	-30~30	1	0
K262	Change the feeding time of 2 nd stitch at start -: Advance Feeding +: Delay Feeding	-30~30	1	0
K263	Change the feeding time of 3 rd stitch at start -: Advance Feeding +: Delay Feeding	-30~30	1	0
K264	Change the feeding time of 3 rd stitch before end -: Advance Feeding +: Delay Feeding	-30~30	1	0
K265	Change the feeding time of 2 nd stitch before end -: Advance Feeding +: Delay Feeding	-30~30	1	0
K266	Change the feeding time of last stitch before end -: Advance Feeding +: Delay Feeding	-30~30	1	0
K270	Thread-breakage Detection Enable Off: Inactive On: Enabled *K270 only for Model ASC212	0: OFF 1: ON		0

No.	Parameters	Range	Unit	Default
K271	Ready position of Press/ Clamp ON: Area Center OFF: Sewing Start Position	0: OFF 1: ON		0
k274	Presser Lowering Speed -: Speed Down +: Speed Up	-5~2	1	0
K275	Presser Up Time -: Speed Down +: Speed Up	-5~2	1	0
K276	Presser Up Time at Sewing End -: Speed Down +: Speed Up	-5~2	1	0
K278	Presser Linkage Thread-stirring Operation Pulse Number	30~60	1	45
K280	Step Pedal Reversely or Press Emergency Stop Function: 1: ON 0: OFF	0、1		0
K281	XY Origin Search Speed	0~100	1	0
K282	Thread-stirring Delay	0~50	1	0
K399	Speed Limits ON: On OFF: Off	0: OFF 1: ON		0
K458	X+ Sewing Area Limites	0.0~40.0mm	1	40
K459	X- Sewing Area Limites	0.0~40.0mm	1	40
K460	Y+ Sewing Area Limites	0.0~30.0mm	1	30
K461	Y- Sewing Area Limites	0.0~30.0mm	1	30
K462	Thread-trimming Solenoid Close Current Level	0~45	1	10
K469	Setting of Tension ON: Set Common Tension for entire pattern OFF: Set Tension at Each Log-in	1: ON 0: OFF		0
K472	Setting of duel-section pedal	-30~30	1	0
K551	Upper Thread Tension at Sewing Start 0: Close 1~3: Open at set stitch number	0~3 Stitches	1	1
K560	Control Method of Tension Thread-catcher 0: Thread-catching Method 1: Thread-stirring Method	0or 1		1
K568	Adjustment of thread length at trimming the larger value means the longer thread	0~50	1	0
K570	PWM Control on Thread-trimming Solenoid Clode Curretn ON: With PWM Control OFF: Without PWM Control	1: ON 0: OFF		1

No.	Parameters	Range	Unit	Default
K571	PWM Time of Thread-trimming Solenoid Close Current	0~40	1	0
K572	Thread-trimming Function at Emergency Stop 0: No Trimming at Stop 1: Manual Trimming at Stop 2: Auto Trimming at Stop	0~2	1	1
K573	Activate 33V at thread-trimming solenoid close ON: Use 33V OFF: Use 24V	1: ON 0: OFF		0
K582	Fix Upper Thread Tension at Sewing Start ON: Effective OFF: Ineffective	1: ON 0: OFF		1
K583	Devation of upper thread tension angle at start	-150~150 Degree	1	0
K584	Devation of upper thread tension angle at finish	0~17 Degree	1	4
K585	Fix upper thread tension at start (1 st thread tension)	0~200	1	75
K587	Open upper thread tension at start (1 st thread tension)	0~300	1	0
K588	Open Time of Main Thread-clamp at Stop	0~50ms	1	35
K590	Thread Tension at Cutting	0~200	1	75
K591	Thread-trimming Angle (K95)	-10~10	1	0
K592	Thread-trimming Speed (K43)	200~700rpm	100	400
K593	Thread-stirring Speed Change	-3~3	1	0
K594	Needle Stop Position	-10~10 Degree	1	0
K596	Head Tilt Switch ON: Effective OFF: Ineffective	1: ON 0: OFF		1
K597	Thread-trimming Solenoid Close Time Compensation (430F)	-30~30	1	0
K598	Knife Action Method after trimming	-10~0	1	-4
K599	Head Emergency Switch ON: Effective OFF: Ineffective	1: ON 0: OFF		1
K756	Winding Speed Limits ON: Max 2000sti/min OFF: No Limits	1: ON 0: OFF		1
K850	Set Specification Code for the Cloth	3, 5, K, F, BUTN		F
K900	Restore to Default Setting			
K991	Reserved			0
K992	Reserved			0
K993	Reserved			0
K994	Reserved			0

No.	Parameters	Range	Unit	Default
K995	Reserved			0
K996	Reserved			0
K997	Stitch Number Setting for Thread Breakage Detection (only available to the machines with thread breakage detection function)	-100~100	0	0
K998	Reserved			0
K999	Reserved			0

8.4 Counter Setting

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

⑤ Counter Selection

Select Sewing Counter or No.of Pcs Counter

⑥ Set the Current Value and the Set Value of Counter

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

⑦ 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

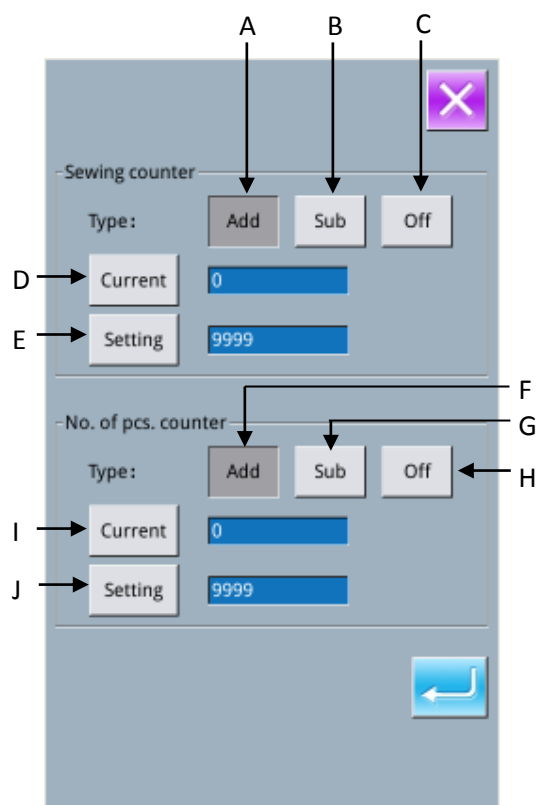
Sewing DOWN Counter:

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.

⑧ Turn Off Counter

At the selected counter type, press "Off" to turn off the counter

8.4.1 Functions

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 displayed. 32 pattern numbers are in each page. For locking a pattern, user only needs to press the pattern number. The selected pattern number will be displayed in dark.

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



8.8 Initialization

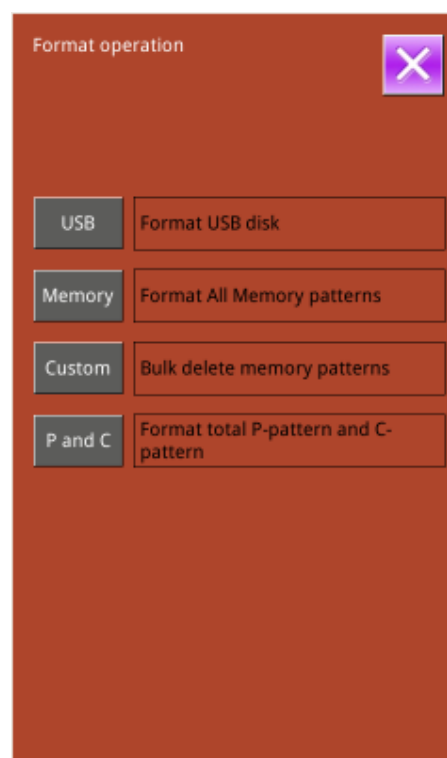
Press  to enter the interface for setting the keyboard lock.

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.

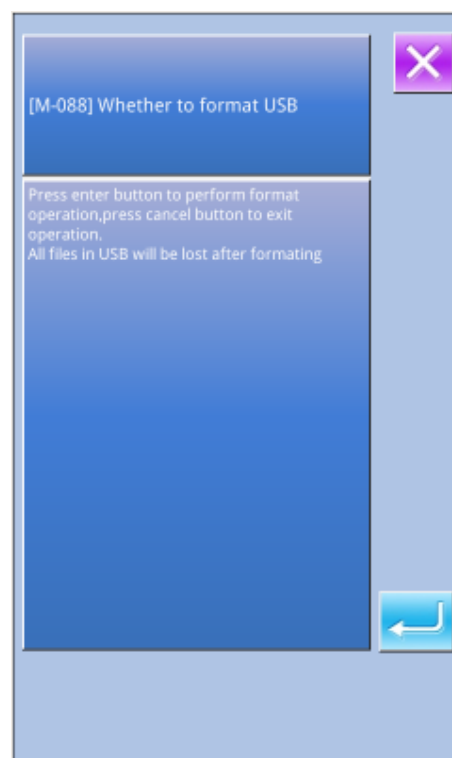
Press  to quit.



⑥ Press “USB” to Initialize U Disk Files

Press  to initialize all the U disk files

Press  to quit U disk initialization



⑦ Press “Memory” to initialize memory patterns

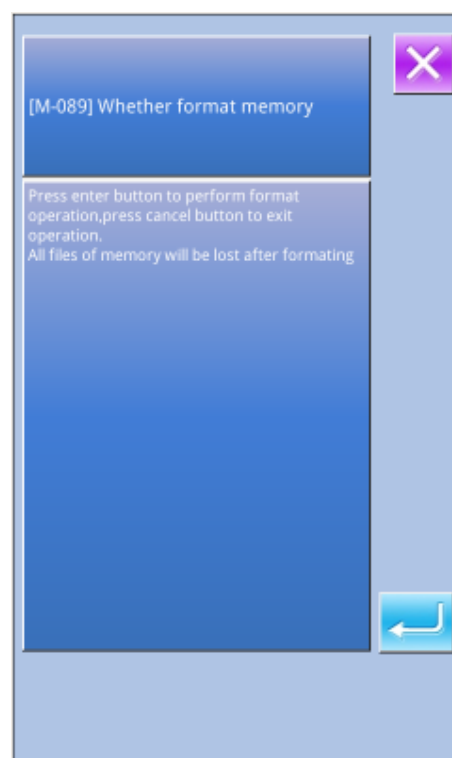
The following patterns can be initialized:

- 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!



⑧ 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

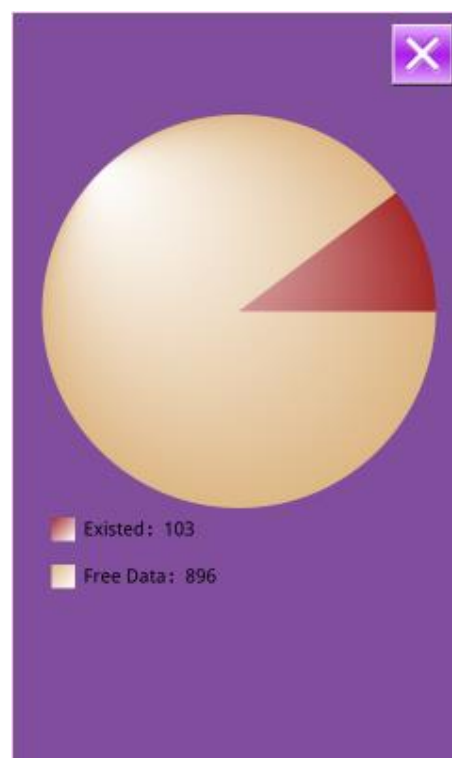
D. Press  to quit Initialization Interface



⑨ 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.

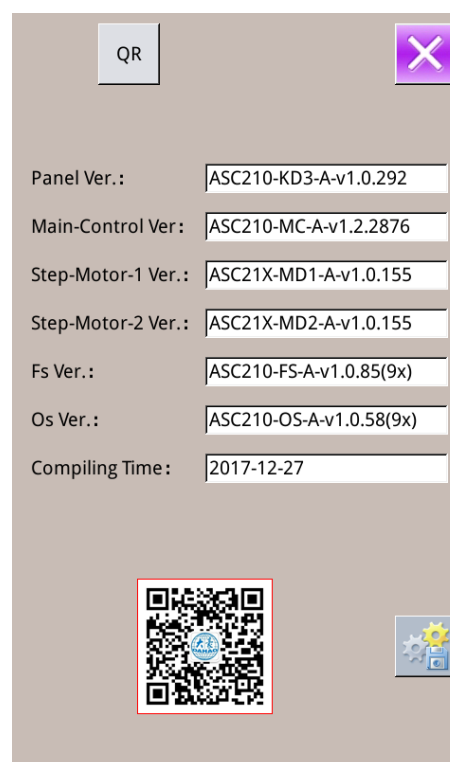


8.9 Software Version Inquiry

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.



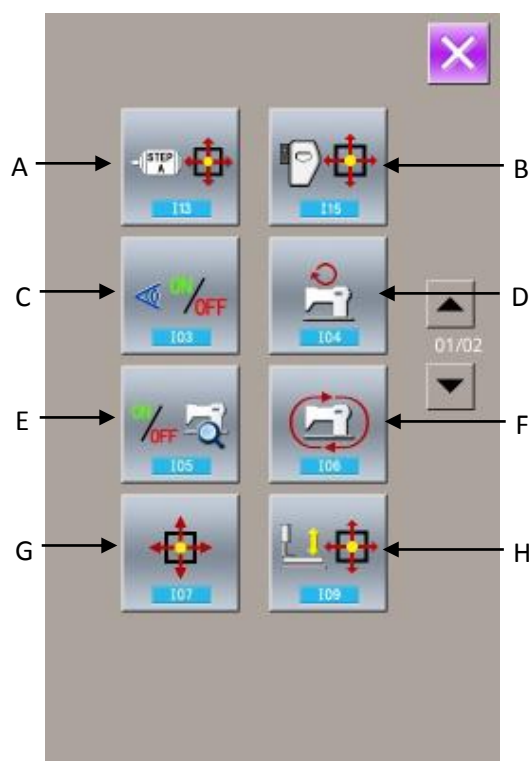
8.10 Test Mode

At Mode Setting Level 2 Interface, user can

press  to have access to the Test Mode Interface (as shown in right picture)

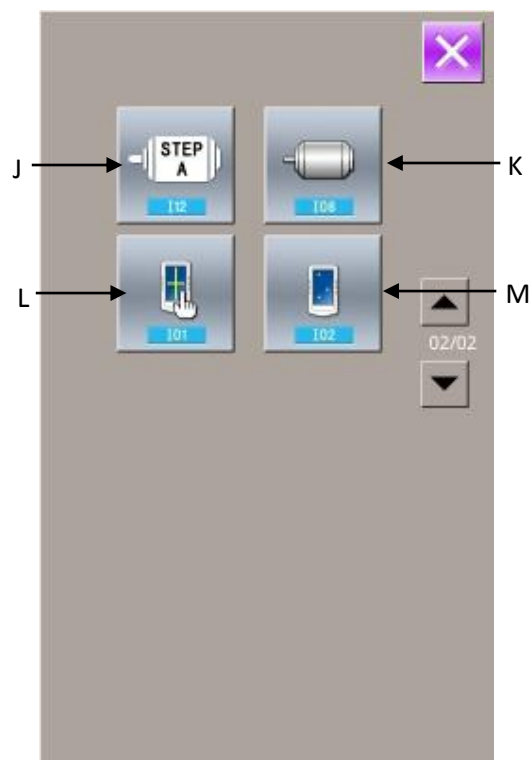
The following is the list of each figure

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 the interface for adjusting the stepping origin (as shown in right). User can press

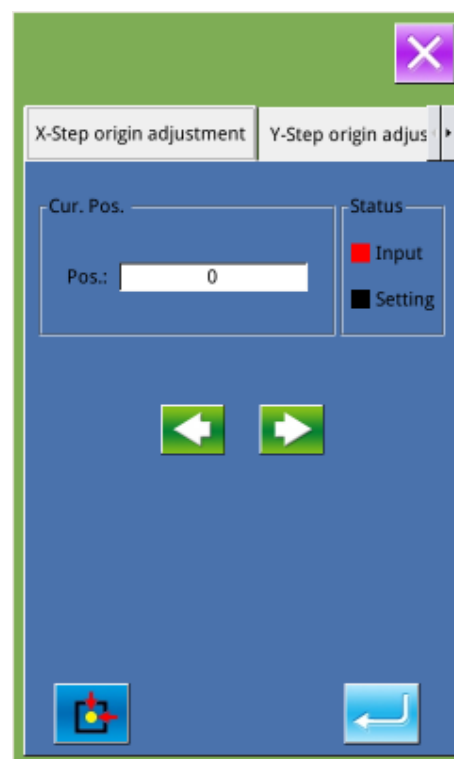
 to quit.

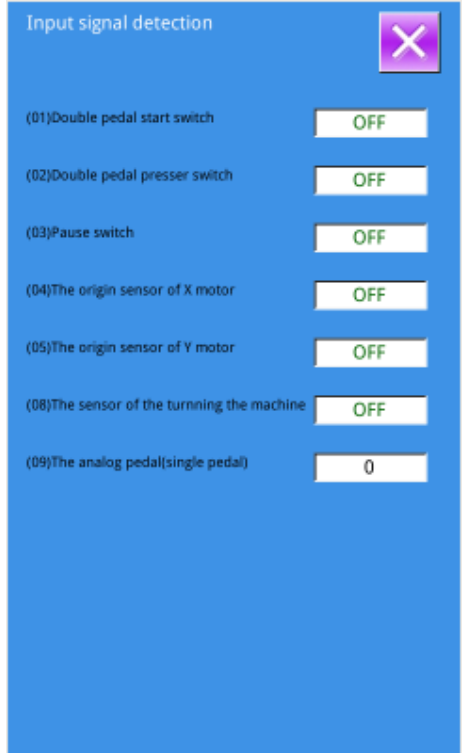
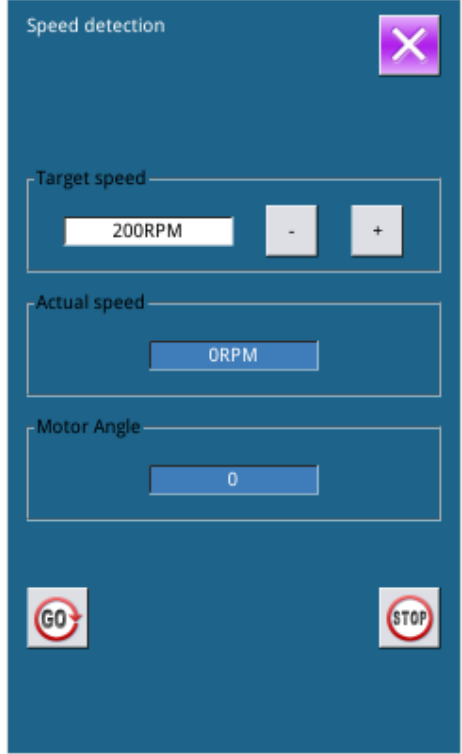
B、User can adjust the origin of the following motors in this interface:

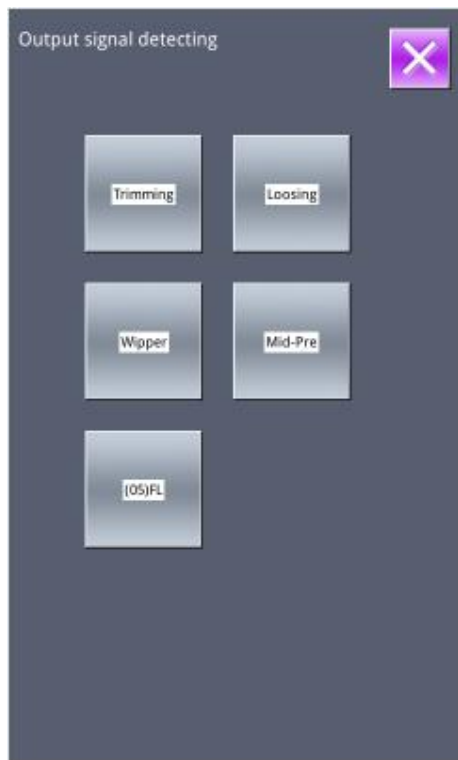
- X Stepping Motor
- Y Stepping Motor
- Presser Stepping Motor
- Intermediate Presser Stepping Motor

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	 The screenshot shows the 'Input signal detection' interface. It has a blue background and a purple close button in the top right. It lists nine items with their status: (01) Double pedal start switch: OFF; (02) Double pedal presser switch: OFF; (03) Pause switch: OFF; (04) The origin sensor of X motor: OFF; (05) The origin sensor of Y motor: OFF; (08) The sensor of the turning the machine: OFF; (09) The analog pedal(single pedal): 0.
(3) Speed Test ①Interface for Speed Test In the interface of Mode Inspection, Press  (I04 speed 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	 The screenshot shows the 'Speed detection' interface. It has a blue background and a purple close button in the top right. It displays 'Target speed' as 200RPM with minus and plus buttons. 'Actual speed' is shown as 0RPM. 'Motor Angle' is shown as 0. At the bottom, there are 'GO' and 'STOP' buttons.

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.	 The image shows a screen titled "Output signal detecting" with a close button (X) in the top right corner. Below the title, there are five buttons arranged in a grid: "Trimming" and "Loosing" in the top row, "Whipper" and "Mid-Pre" in the middle row, and "(05)FL" in the bottom row.

(5) Continuous Running

① Display the interface for continuous running

In the interface of Mode Inspection, Press



(IO6continuous running) to enter the interface of continuousrunning (as shown in right figure).

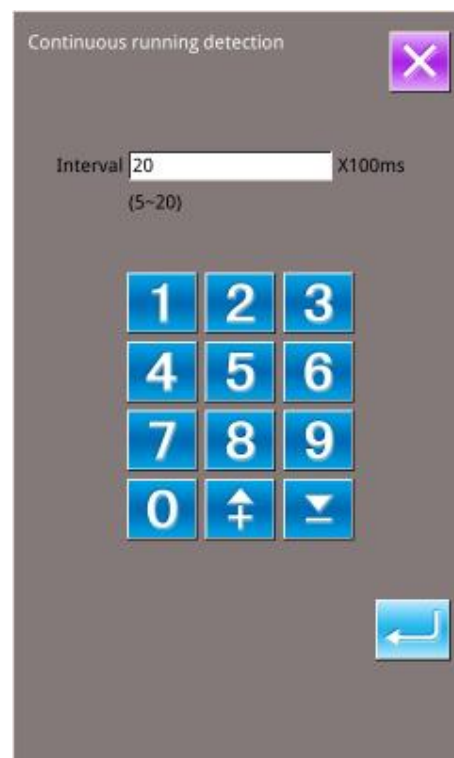
A: Action interval

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

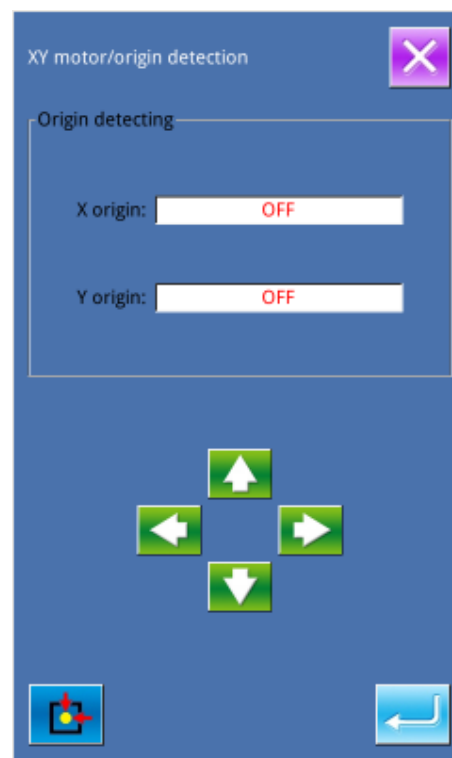


to search origin, the user will have to press to search origin at each entry to the I07 mode in future so that he could use direction keys to move XY motors. This is the manual adjustment of the XY origin. The coordinates displayed at left is the deviation value of the origin, while the coordinates displayed 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:

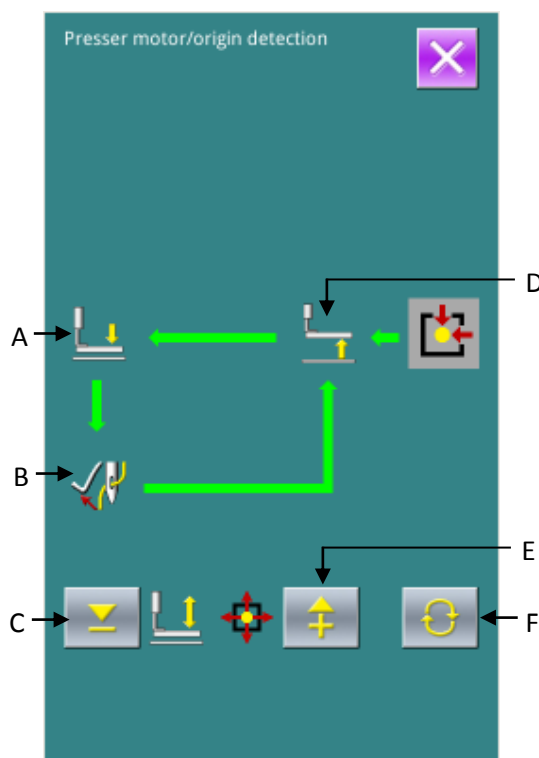
D: Presser Up Position

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.



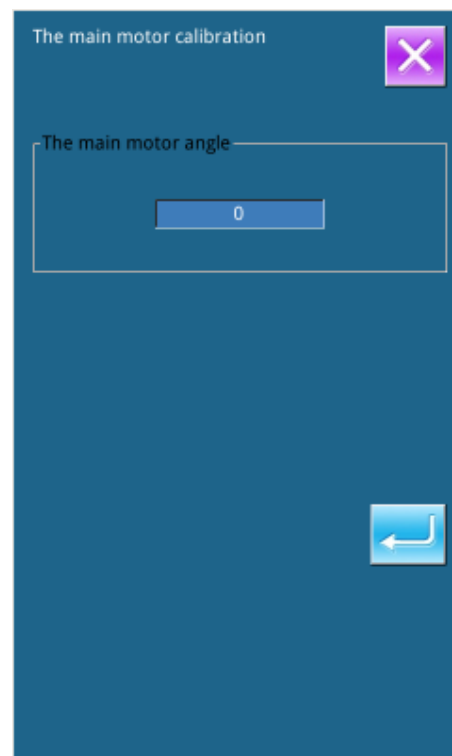
(8) Main Motor Correction

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 the current 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:

- 7) Pattern Registration
- 8) Pattern Naming
- 9) Scale Rate Setting
- 10) Max Speed Limitation
- 11) P Pattern Registration
- 12) Pattern Deletion

2、Normal Sewing Interface:

- 3) Frame-moving
- 4) Counter Setting

3、P Pattern Input Interface:

- 2) 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:

- 6) C Patten Registration
- 7) C Pattern Copy
- 8) C Pattern Naming
- 9) C Pattern Edition
- 10) Pattern Deletion

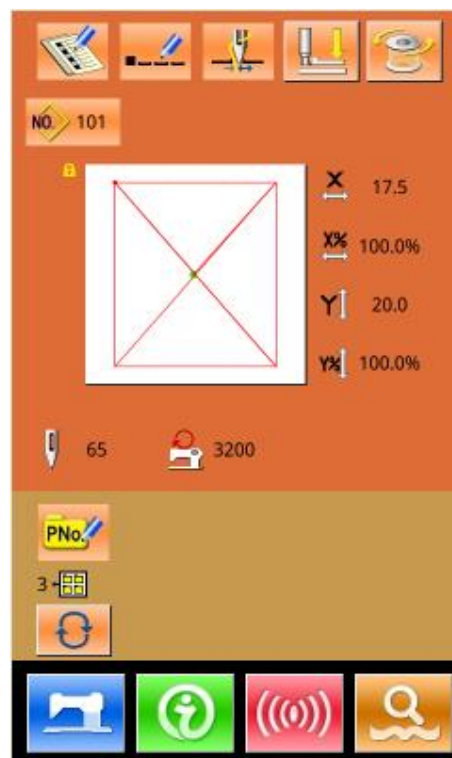
6、C Pattern Sewing Interface:

- 1) Counter Setting

7、parameter Setting Mode:

- 3) Level 1 Parameter
- 4) Level 2 Parameter
- 3) Counter edition
- 4) Test Mode

5) Pattern Lock Setting



8.12 Parameter Back-up

In 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

① Click any key among

The custom parameter01(No)

~

The custom parameter07(No)

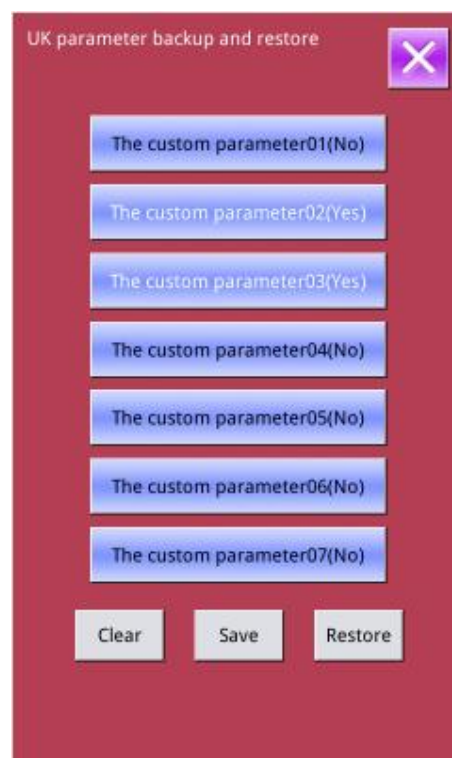
to set the position for saving the parameter. And then press 「Save」 to save that parameter.

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

The custom parameter02(Yes)

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



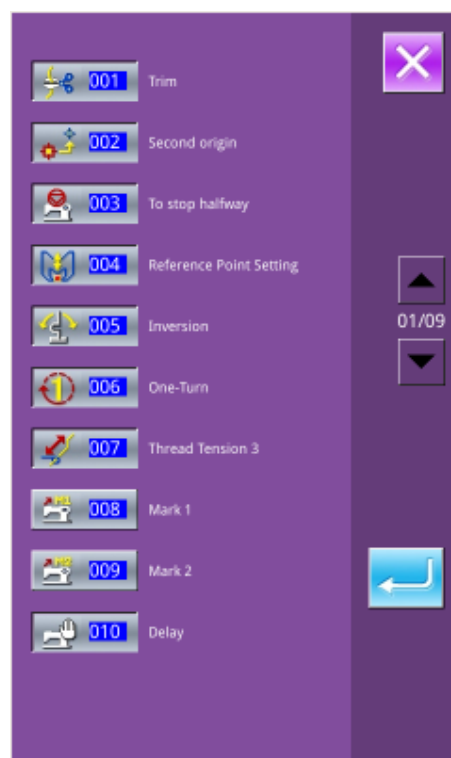
to activate the Interface for Setting Pattern Edition Parameters.

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.

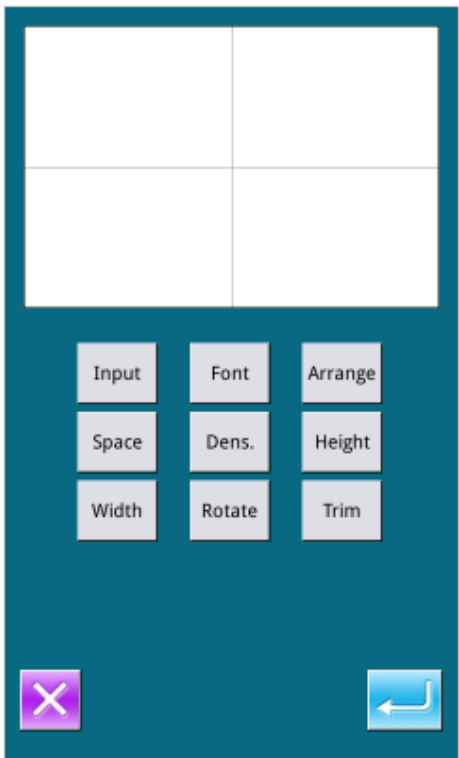


8.14 Letter Embroidery Editions

8.14.1Parameter Setting



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



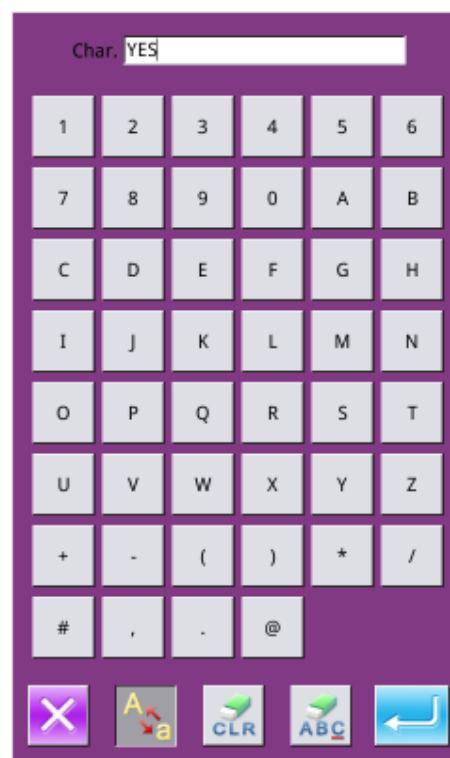
The interface shows a 3x3 grid of buttons: Input, Font, Arrange, Space, Dens., Height, Width, Rotate, and Trim. At the bottom are a purple 'X' button and a blue arrow button.

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; 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.

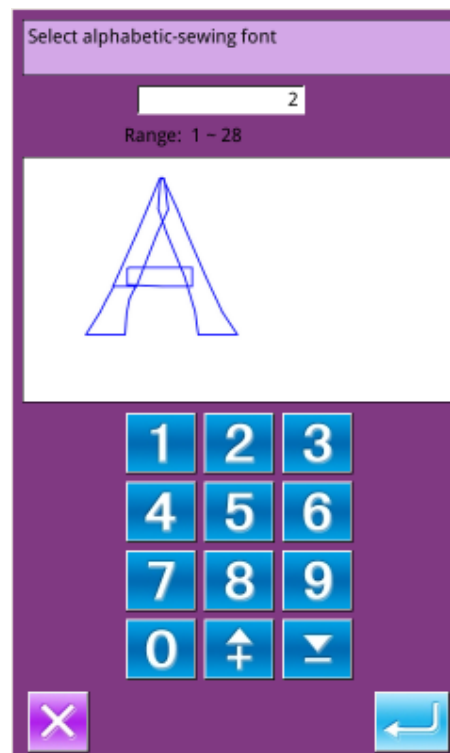


2、Select Font

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.

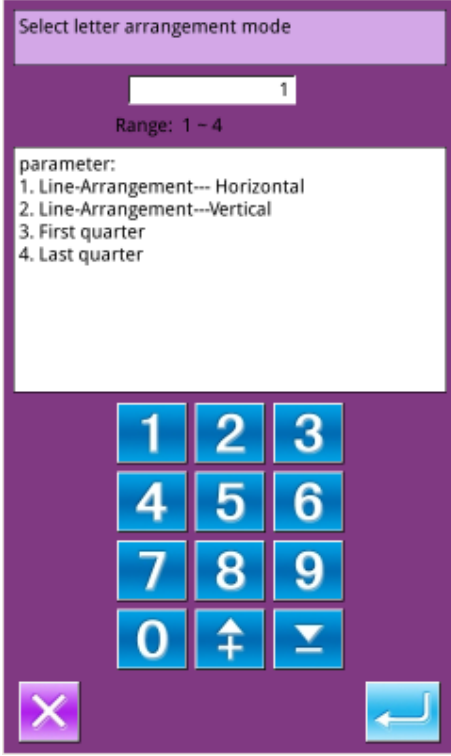
Press  to save it and quit.

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.



Select letter arrangement mode

1

Range: 1 - 4

parameter:

1. Line-Arrangement---Horizontal
2. Line-Arrangement---Vertical
3. First quarter
4. Last quarter

1 2 3

4 5 6

7 8 9

0 ↑ ↓

X ↩

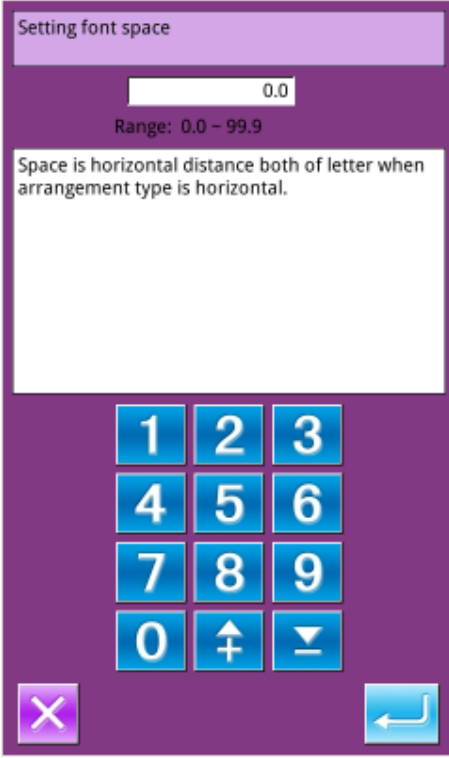
4、Letter Interval

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.



Setting font space

0.0

Range: 0.0 - 99.9

Space is horizontal distance both of letter when arrangement type is horizontal.

1 2 3

4 5 6

7 8 9

0 ↑ ↓

X ↩

5、Satin Density

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

Setting stitch density

100

Range: 50 - 200

Stitch density is more dense more setting val large.

1 2 3
4 5 6
7 8 9
0 ↑ ↓

X ←

6、Height Scale

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

Setting letter height

100

Range: 50 - 200

Letter height is zoom base on the font original size.

1 2 3
4 5 6
7 8 9
0 ↑ ↓

X ←

7、Width Scale

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

Setting letter width

100

Range: 50 - 200

Letter width is zoom base on the font original size

1 2 3
4 5 6
7 8 9
0 ↑ ↓

X ↩

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.

Setting rotate angle

0

Range: 0 - 359

Adjusting the letter arrangement by setting rotate angle when the arrangement type is line

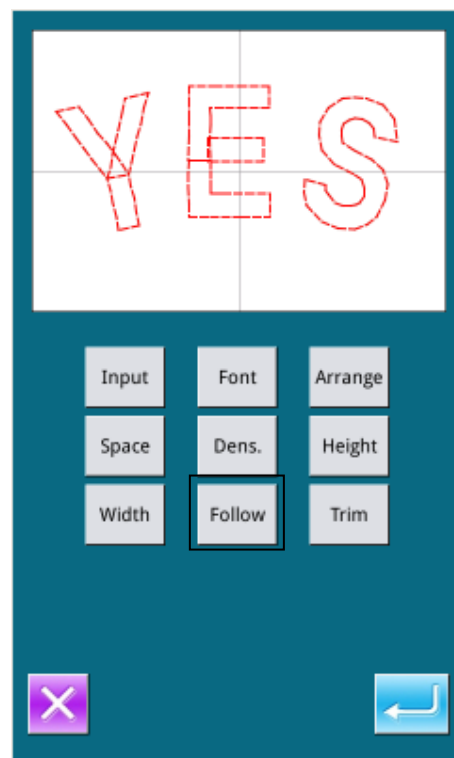
1 2 3
4 5 6
7 8 9
0 ↑ ↓

X ↩

9、Follow/ Not Follow

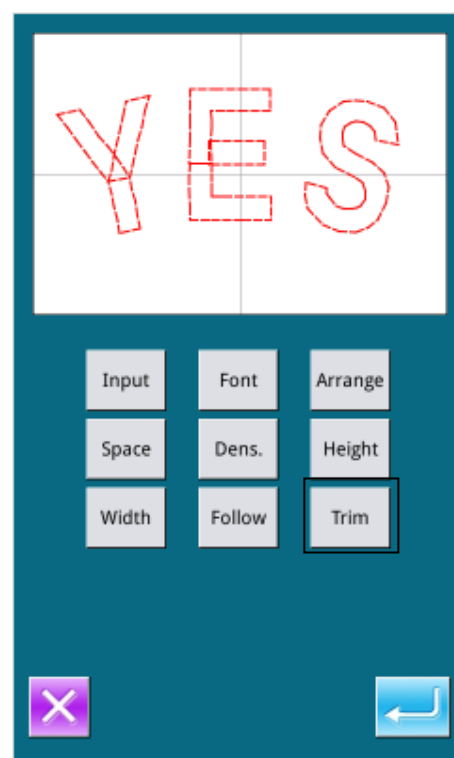
When the arrangement method is convex arc or the concave arc, this button will be used to set whether the letter rotates along with the arc. Press this button to shift between “Follow” and “Not Follow”.

【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.

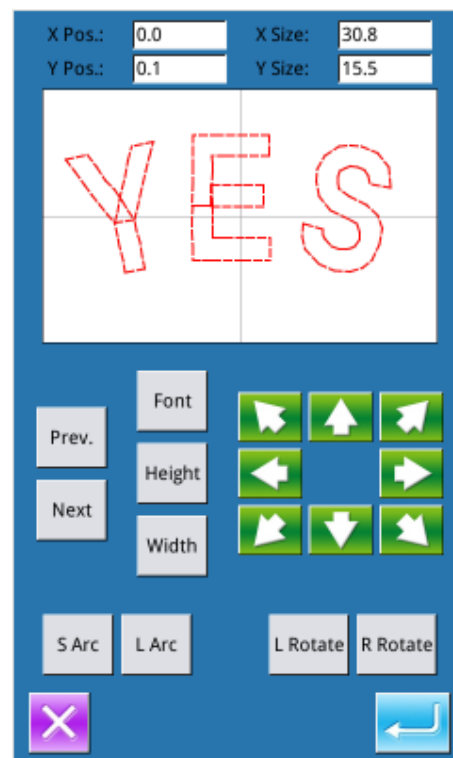


11、 Confirm the Pattern

Set the pattern for sewing and press

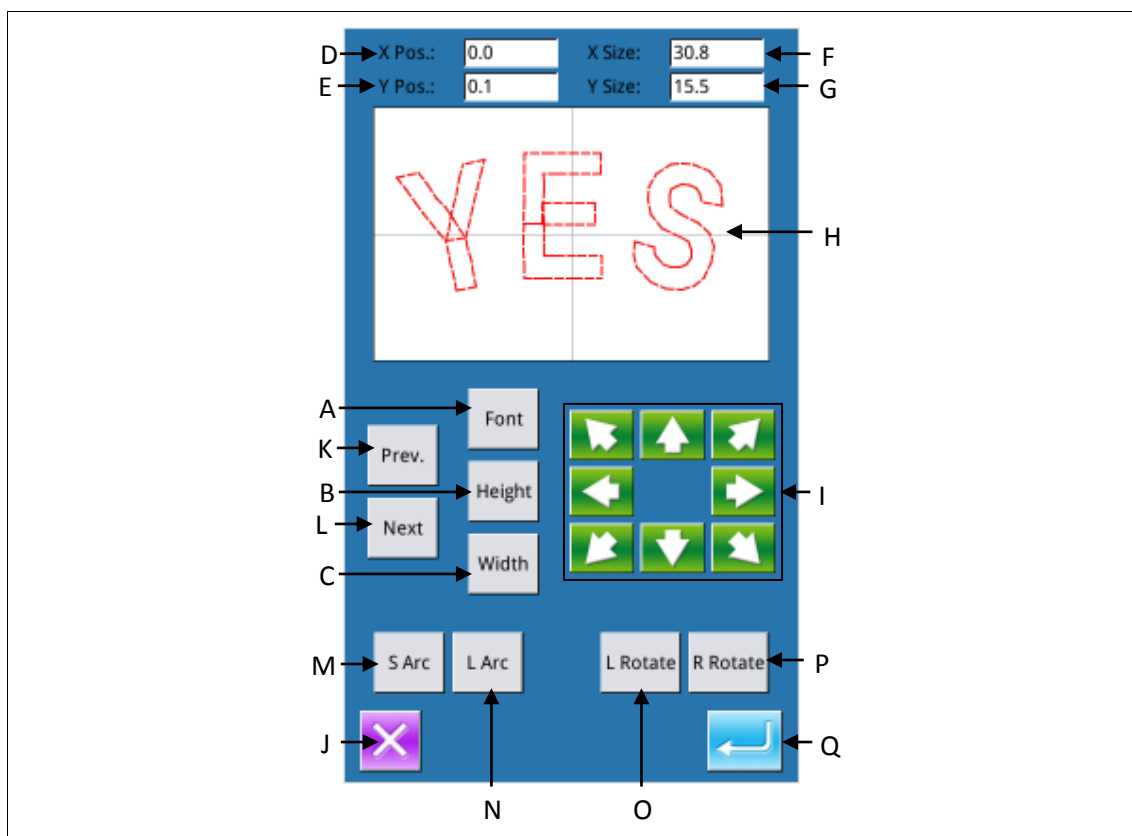


to enter the interface for adjusting the letter sewing pattern.

**8.14.2 Adjustment 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:

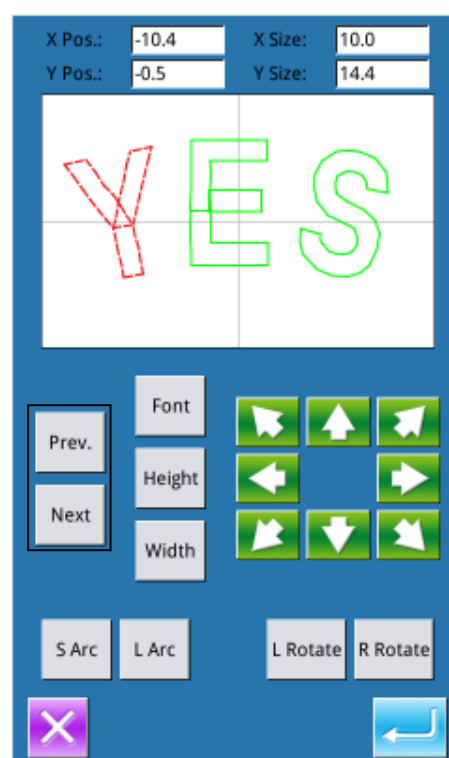
No.	Functions	Content
A	Font Selection	Change the font of the selected letter. The setting method is same to that in Parameter Setting
B	Scale in Height	Scale the height of the selected letter. The setting method is same to that in Parameter Setting
C	Scale in Width	Scale the width of the selected letter. 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 When the array method is arc, this button will display “Radian Down”. Pressing this button will reduce the radian of entire pattern. [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 When the array method is arc, this button will display “Radian Up”. Pressing this button will increase the radian of entire pattern. [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:

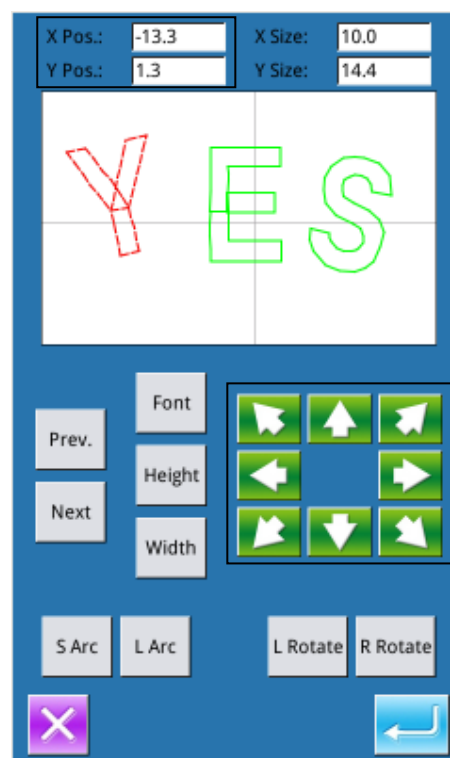
6、 Select Single Letter for Adjustment

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.



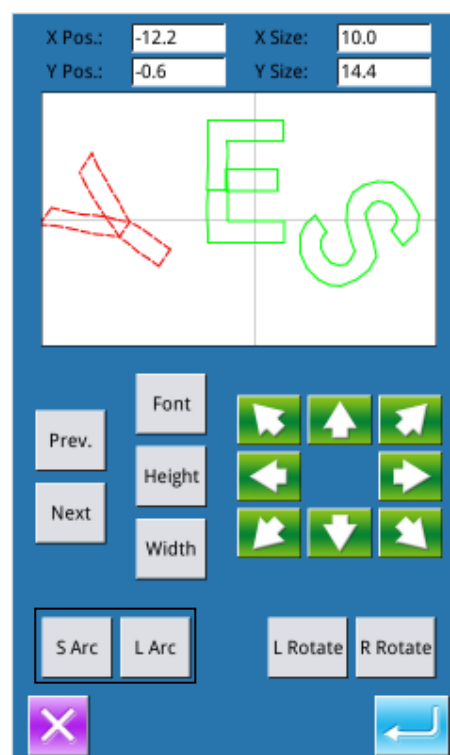
8、 Adjust the Rotating Angle of Entire Pattern

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

“Left Tilt”: Counterclockwise Rotation

“Right Tilt”: Clockwise Rotation

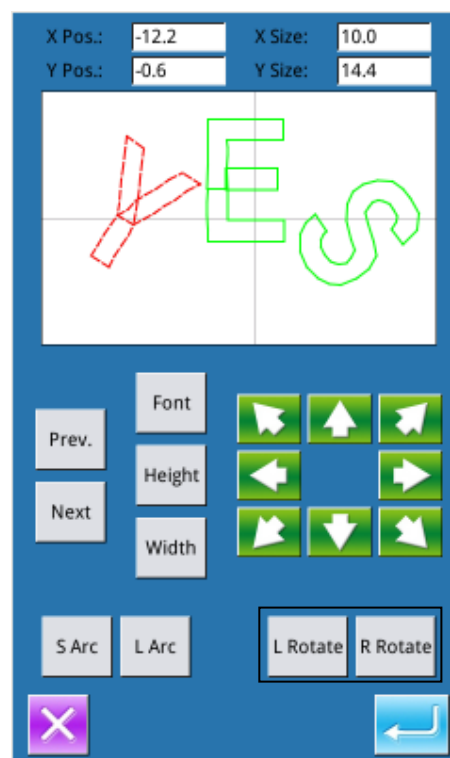
[Note]: When the array method is arc, these buttons will turn to “Radian Up”/ “Radian Down”, which are to adjust the radian of the entire pattern



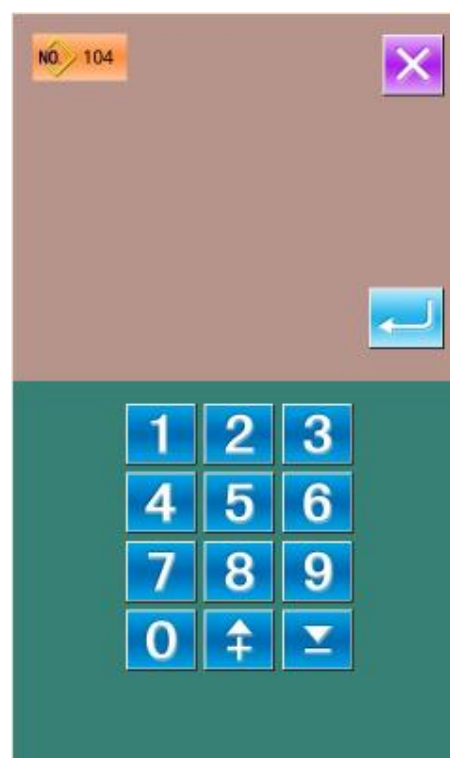
9、 Rotation of Single Letter

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

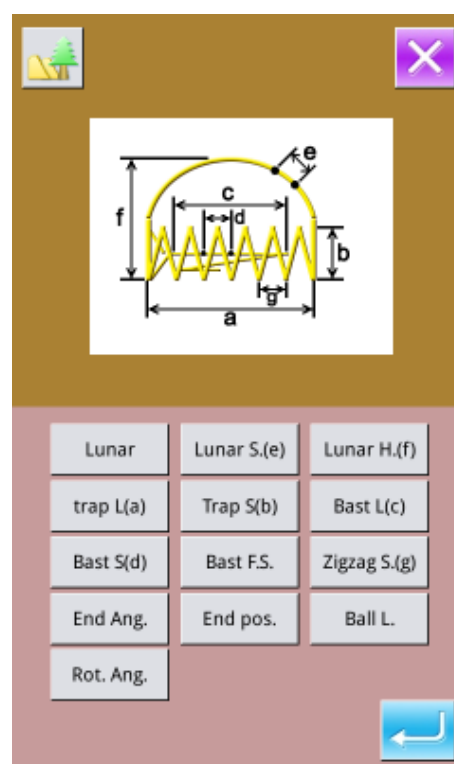
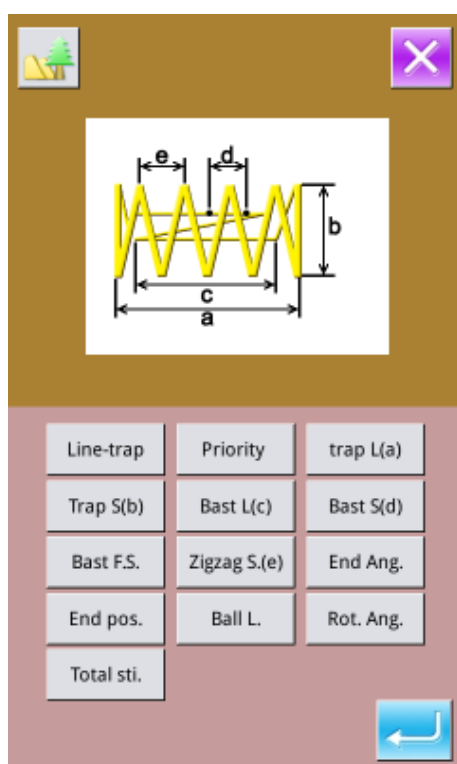
8.15.1 Setting of Model Input Function

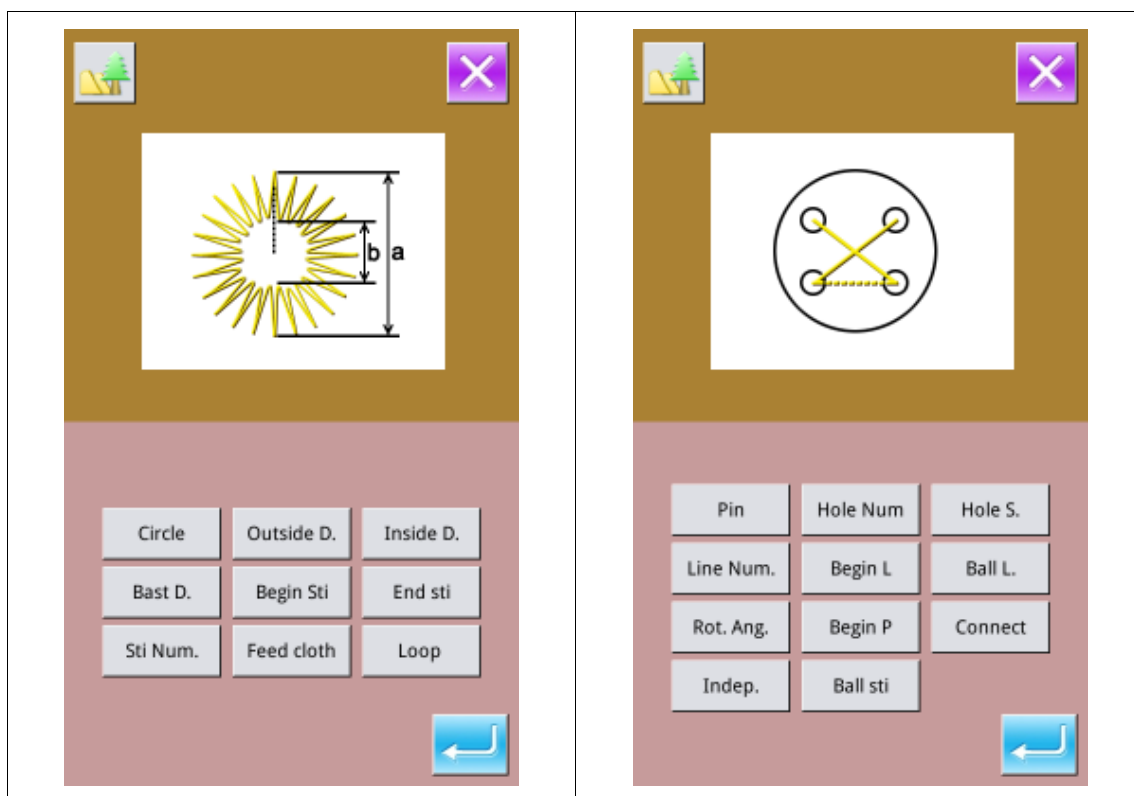


Press  to enter the interface for setting the model input. In the default setting, the displayed interface is the linear knotting input interface.

The model input function is easy for user to edit the knotting pattern. The system contains four model input methods, which are:

- Linear Knotting
- Semi-lunar Knotting
- Round Knotting
- Button-sewing Knotting





8.15.2 Linear Knotting Input

3. Select Linear Knotting Function

- The system will enter the linear knotting interface as default, as shown in figure 1.
- Select “Linear Knotting” in area C, then select “Model 1 (Linear Knotting)” in the model selection interface to edit the linear knotting

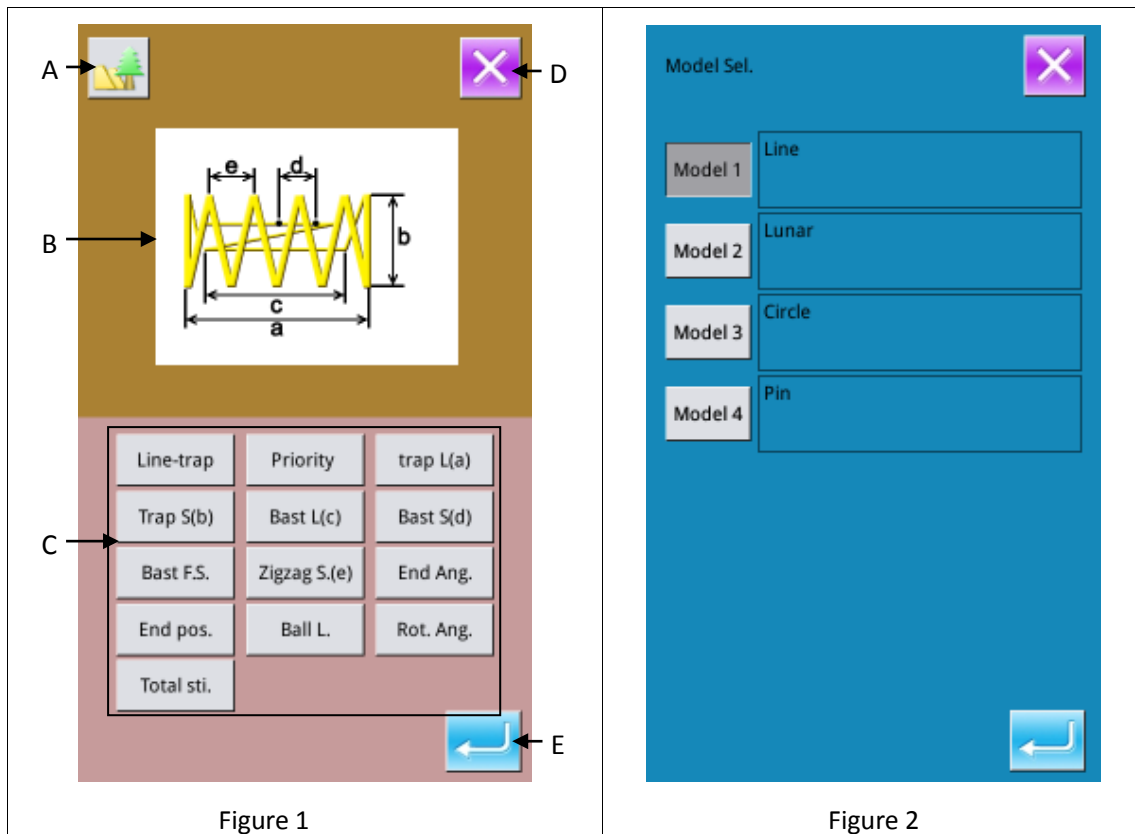


Figure 1

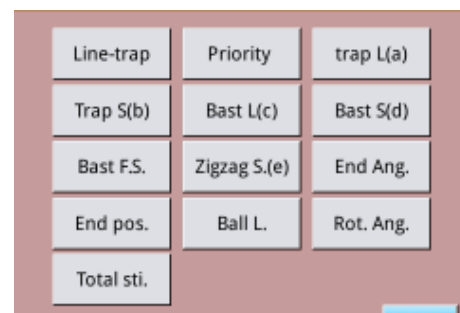
Figure 2

Function List:

Button	Function	Content
A	Knotting Shape Preview	Preview the shape
B	Knotting Shape Figure	Display the shape of the knotting and the parameter position
C	Parameter Setting	Set the parameters of the knotting shape
D	Quit	Quit the model input function
E	Confirm	Save the edited knotting pattern

4. Parameter Setting

In the area C at the knotting model edition interface, the system provides the area for inputting the parameters of the linear knotting, which is used to control the shape created.



Parameters:

No.	Parameter	Remarks
1	Priority Mode	By setting “Priority Mode”, user can select to ensure the stitch interval or the total stitch number at creating the patterns.
2	KnottingLength	Set the total length of the linear knotting pattern. The length of the pattern is the distance a in the figure 1, which determines the size of the pattern in X direction.
3	Knotting Stitch Interval	It is to set the height of the pattern. The height of the pattern is the distance b in the figure 1, which is the size of the pattern in Y direction
4	Bottom Sewing Length	This is to set the length of the bottom sewing, which is the distance c in figure 1. This is the size of the bottom sewing in X
5	Bottom Sewing Stitch Interval	This is the stitch interval at setting the bottom sewing, which is the distance d in the figure 1.
6	Bottom Sewing 1 st Stitch Interval	This is to set the stitch interval of the 1 st stitch in bottom sewing, which can be different from other stitch interval.
7	Zigzag Stitch Interval	This is the horizontal stitch interval in the zigzag within the knotting pattern, which is the distance e in the figure 1.
8	Stitch Angle at End Sewing	The stitch angle at the end sewing
9	Withdrawing Stitch Position	At setting the last stitch, this parameter determines the needle entry point is at either side or the center line in Y direction
10	Lock Stitch Length	Set the length of the last stitch
11	Rotation Angle	Set the rotating angle of the pattern, which can be set among 0, 90, 180 and 270
12	Total Stitch Number	Set the total stitch number of the knotting pattern. This value will be effective when the Priority Mode is set at “Stitch Number”, this value will be effective, or it will be invalid

8.15.3 Semi-lunar Knotting Input**1. Select Semi-lunar Knotting Function**

- Press the “Knotting Shape” and then select “Model 2 (Semi-lunar Knotting)” in the Model Selection interface, where user can edit the semi-lunar knotting, as shown in figure 1.

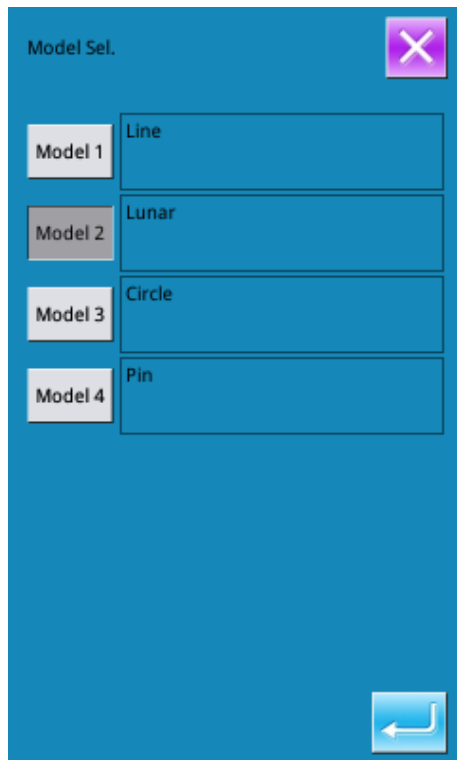


Figure 1

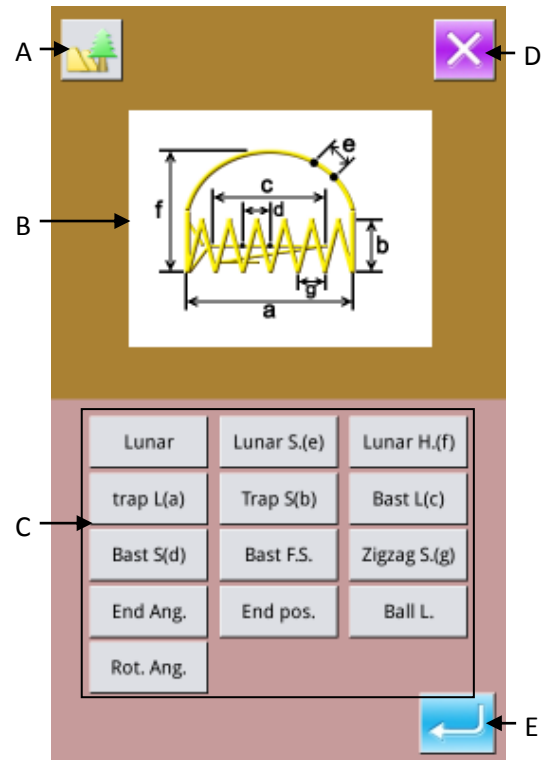


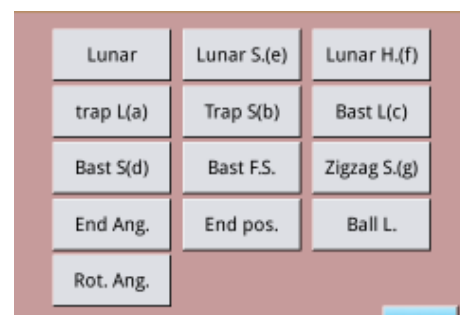
Figure 2

Function List:

Button	Function	Content
A	Knotting Shape Preview	Preview the shape
B	Knotting Shape Figure	Display the shape of the knotting and the parameter position
C	Parameter Setting	Set the parameters of the knotting shape
D	Quit	Quit the model input function
E	Confirm	Save the edited knotting pattern

2. Parameter Setting

In the area C at the knotting model edition interface, the system provides the area for inputting the parameters of the semi-lunar knotting, which is used to control the shape created.



Parameters:		
No.	Parameter	Remarks
1	Semi-lunar Stitch Interval	This is to set the stitch interval at the semi-lunar part, which is the distance e in the figure 2.
2	Semi-lunar Height	It is to set the height of the pattern. The height of the pattern is the distance f in the figure 2, which is the size of the pattern in Y direction
3	Knotting Length	Set the total length of the semi-lunar knotting pattern. The length of the pattern is the distance a in the figure 2, which determines the size of the pattern in X direction.
4	Knotting Stitch Interval	It is to set the height of the semi-lunar part. The height of the pattern is the distance b in the figure 2.
5	Bottom Sewing Length	This is to set the length of the bottom sewing, which is the distance c in figure 1. This is the size of the bottom sewing in X direction
6	Bottom Sewing Stitch Interval	This is the stitch interval at setting the bottom sewing, which is the distance d in the figure 2.
7	Bottom Sewing 1 st Stitch Interval	This is to set the stitch interval of the 1 st stitch in bottom sewing, which can be different from other stitch interval.
8	Zigzag Stitch Interval	This is the horizontal stitch interval in the zigzag within the knotting pattern, which is the distance g in the figure 2.
9	Stitch Angle at End Sewing	The stitch angle at the end sewing
10	Withdrawing Stitch Position	At setting the last stitch, this parameter determines the needle entry point is at either side or the center line in Y direction
11	Lock Stitch Length	Set the length of the last stitch
12	Rotation Angle	Set the rotating angle of the pattern, which can be set among 0, 90, 180 and 270

8.15.4 Round Knotting Input

3. Select Round Knotting Function

- Press the “Knotting Shape” and then select “Model 3 (Round Knotting)” in the Model Selection interface, where user can edit the round knotting, as shown in figure 1.

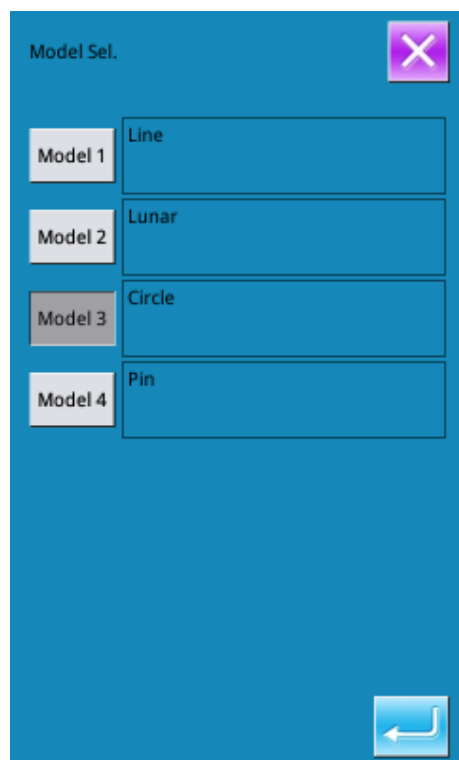


Figure 1

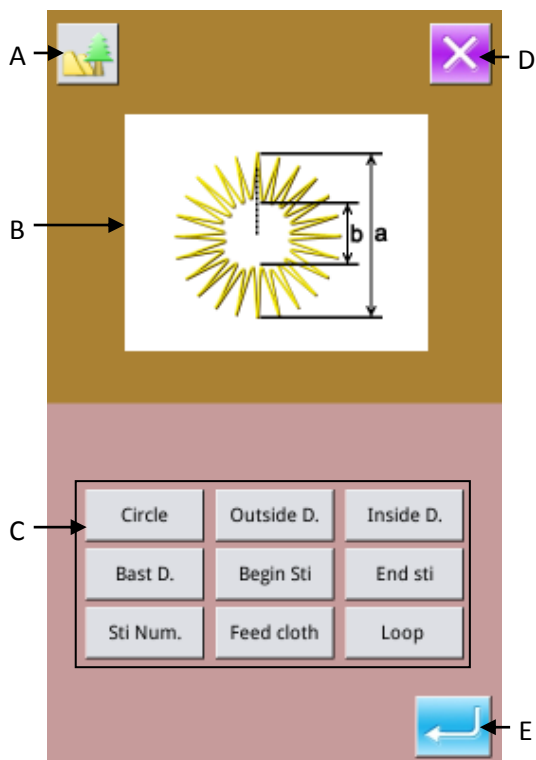


Figure 2

Function:

Button	Function	Content
A	Knotting Shape Preview	Preview the shape
B	Knotting Shape Figure	Display the shape of the knotting and the parameter position
C	Parameter Setting	Set the parameters of the knotting shape
D	Quit	Quit the model input function
E	Confirm	Save the edited knotting pattern

4. Parameter Setting

In the area C at the knotting model edition interface, the system provides the area for inputting the parameters of the Round knotting, which is used to control the shape created.



Parameters:

No.	Parameter	Remarks
1	External Diameter	It is to set the external diameter of the zigzag in the round knotting, which is the distance a . It determines the size of the entire pattern.
2	Internal Diameter	It is to set the internal diameter of the zigzag in the round knotting,
3	Bottom Sewing Diameter	It is to set the diameter of the bottom sewing in the round knotting
4	Start Lock Stitch	It is to set the lock stitch number at start, which can be set among 0~5 stitches
5	End Lock Stitch	It is to set the lock stitch number at end, which can be set among 0~5 stitches
6	Stitch Number	It is to set the needle entry point number in the round knotting
7	Start Feeding	It is to set whether to feed cloth at the sewing start
8	Cycle Number	It is to set the cycle number of the zigzag part on the round knotting, which will not affect the setting of stitch number.

8.15.5 Button Sewing Input

3. Select Button Sewing Function

- Press the “Knotting Shape” and then select “Model 4 (Button Sewing)” in the Model Selection interface, where user can edit the round knotting, as shown in figure 1.
- According to the number of button hole, the button sewing models are divided into 2-hole button, 3-hole button, 4-hole button and 5-hole button. The default setting is the 4-hole button model.
- The parameters of models are different according to the number of button holes.

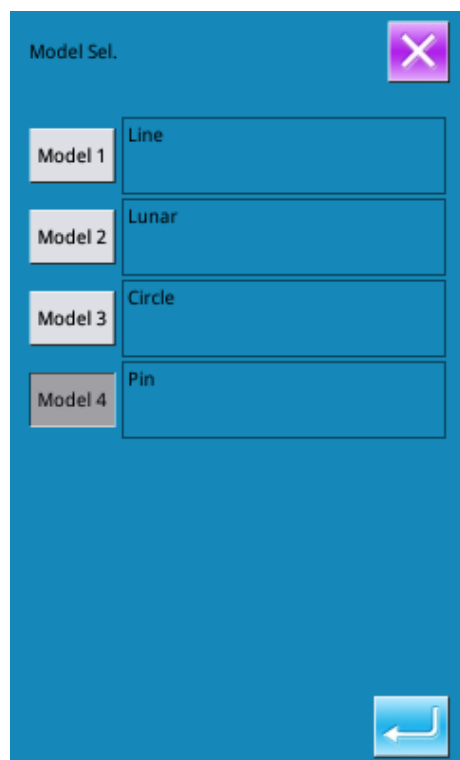


Figure 1

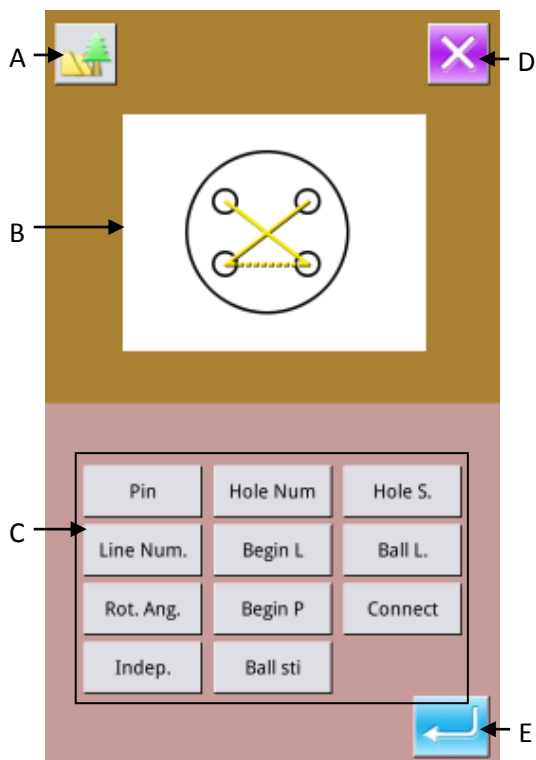


Figure 2

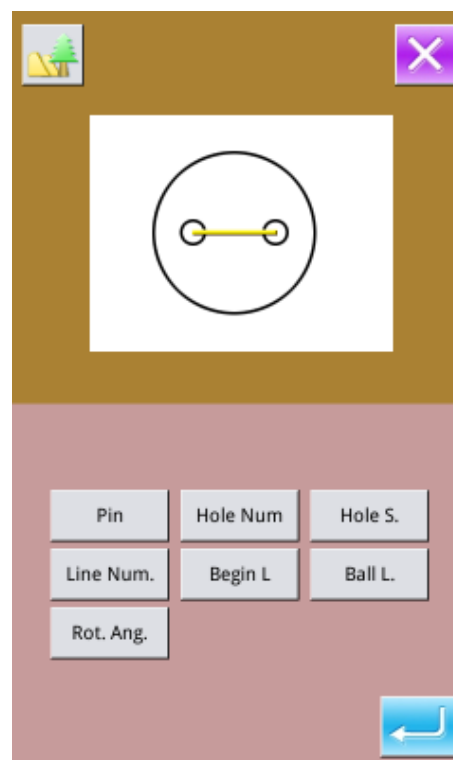
Function List:

Button	Function	Content
A	Knotting Shape Preview	Preview the shape
B	Knotting Shape Figure	Display the shape of the knotting and the parameter position
C	Parameter Setting	Set the parameters of the knotting shape
D	Quit	Quit the model input function
E	Confirm	Save the edited knotting pattern

4. Parameter setting

Parameters for 2-hole button

The parameters for 2-hole button and 3-hole button are shown at right.

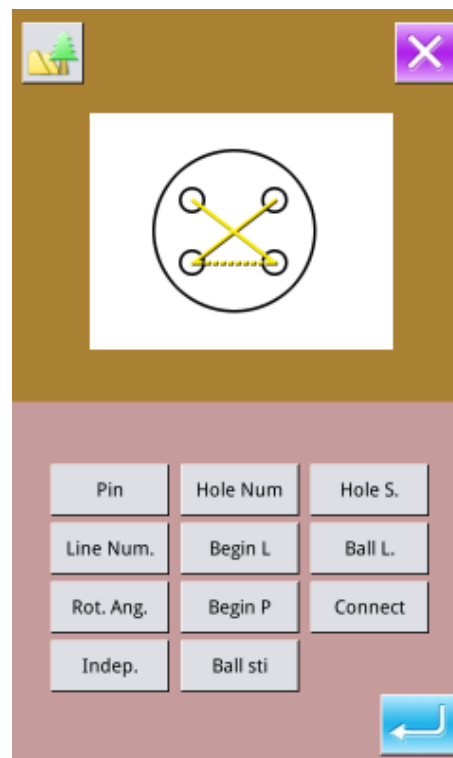


Parameters:

No.	Parameter	Remarks	
1	Hole Number	It is to set the number of hole on the button, which can be set at 2, 3, 4 or 5	
2	Hole Interval	It is the distance between the center of the two holes	
3	Thread Number between Holes	It is to set the thread numbers between the two button holes.	
4	Start Stitch Length	It is to set the length of the lock stitch at start	
5	Lock Stitch Length	It is to set the length of the lock stitch at end	
6	Rotation Angle	Set the rotating angle of the pattern, which can be set among 0, 90, 180 and 270	

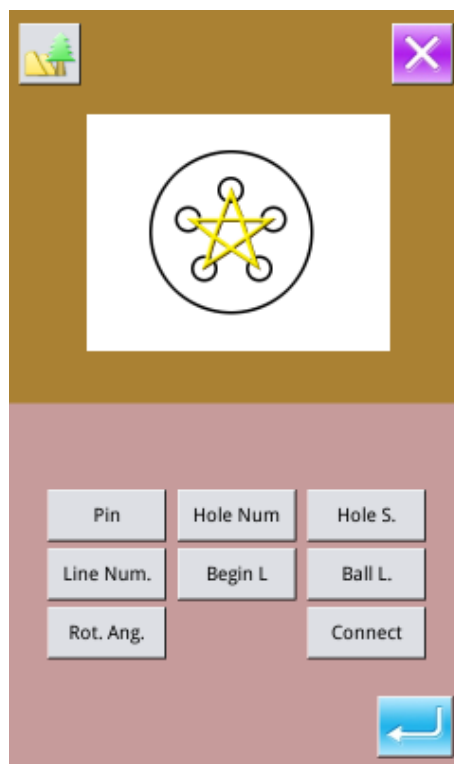
Parameters for 4-hole button

The parameters for 4-hole button are shown at right.



Parameters:

No.	Parameter	Remarks
1	Hole Number	It is to set the number of hole on the button, which can be set at 2, 3, 4 or 5
2	Hole Interval	It is the distance between the center of the two holes
3	Thread Number	It is to set the thread numbers between the two button holes.
4	Start Stitch Length	It is to set the length of the lock stitch at start
5	Lock Stitch Length	It is to set the length of the lock stitch at end
6	Rotation Angle	Set the rotating angle of the pattern, which can be set among 0, 90, 180 and 270
7	Start Position	It is to set the start sewing position (from Upper Left Corner or Upper Right Corner).
8	Connection Method	It is to set the sewing stitch types, which can be set at Cross and Parallel
9	Independent Stitch Form	It is to set the connection stitch when the machine moves the sewing stitch from one side to the other. It can be set at Empty Feeding or Sewing.

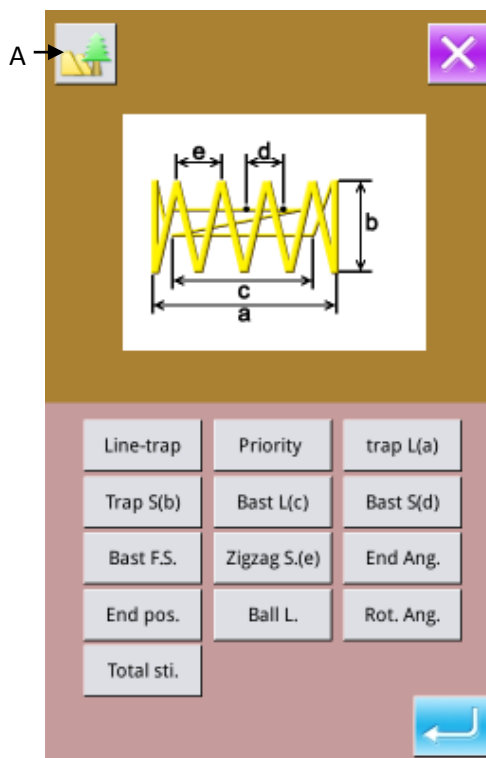
10	Lockstitch Number	Set the number of lock stitch at start/ end	
Parameters for Five-hole Button			
The parameters for 5-hole button are shown at right.			
Parameters:			
No.	Parameter	Remarks	
1	Hole Number	It is to set the number of hole on the button, which can be set at 2, 3, 4 or 5	
2	Hole Interval	It is the distance between the center of the two holes	
3	Thread Number	It is to set the thread numbers between the two button holes.	
4	Start Stitch Length	It is to set the length of the lock stitch at start	
5	Lock Stitch Length	It is to set the length of the lock stitch at end	
6	Rotation Angle	Set the rotating angle of the pattern, which can be set among 0, 90, 180 and 270	

7	Connection Method	It is to set the sewing stitch types, which can be set at Cross and Parallel	
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8.15.6 Preview of Knotting Pattern

We can take linear knotting pattern as an example:

- Press . Then the system will display the preview shape of the current knotting pattern, as shown at right.



- Press  to quit the preview interface and return to the edition interface of knotting pattern.

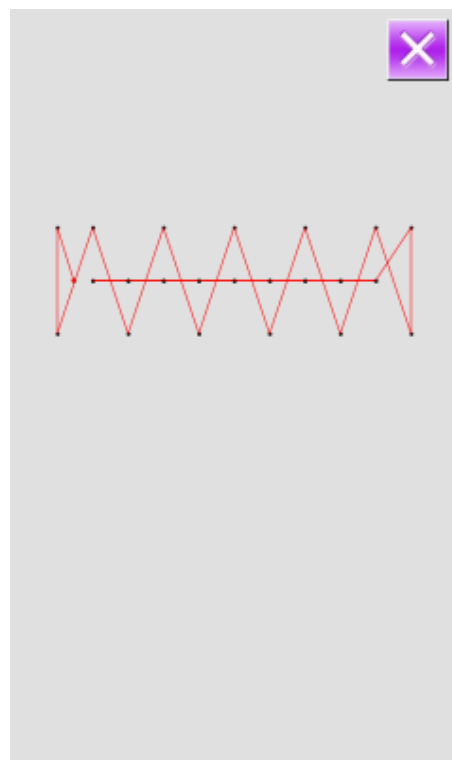
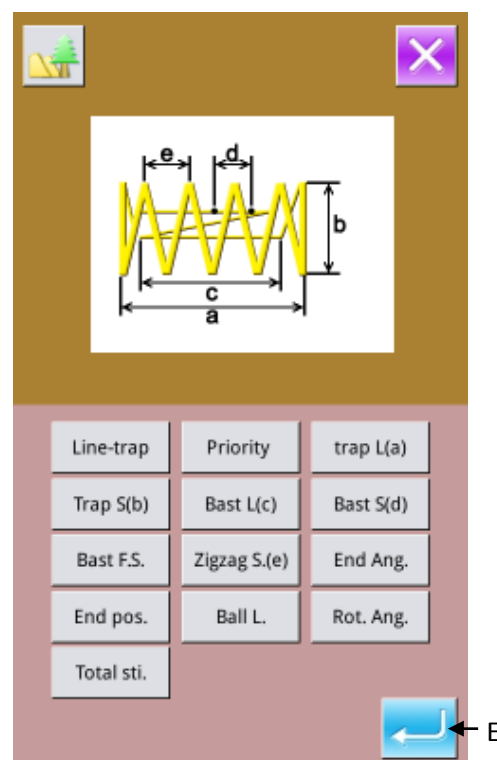


Figure 2

8.15.7 Save the Knotting Pattern

We also take linear knotting pattern as an example

- Press  to enter the interface for saving files



- The system will display the interface for inputting the file number, as shown in right.
- Input the file number for saving via the keyboard
- Press  to save files
- Press  to return to the edition interface of knotting pattern

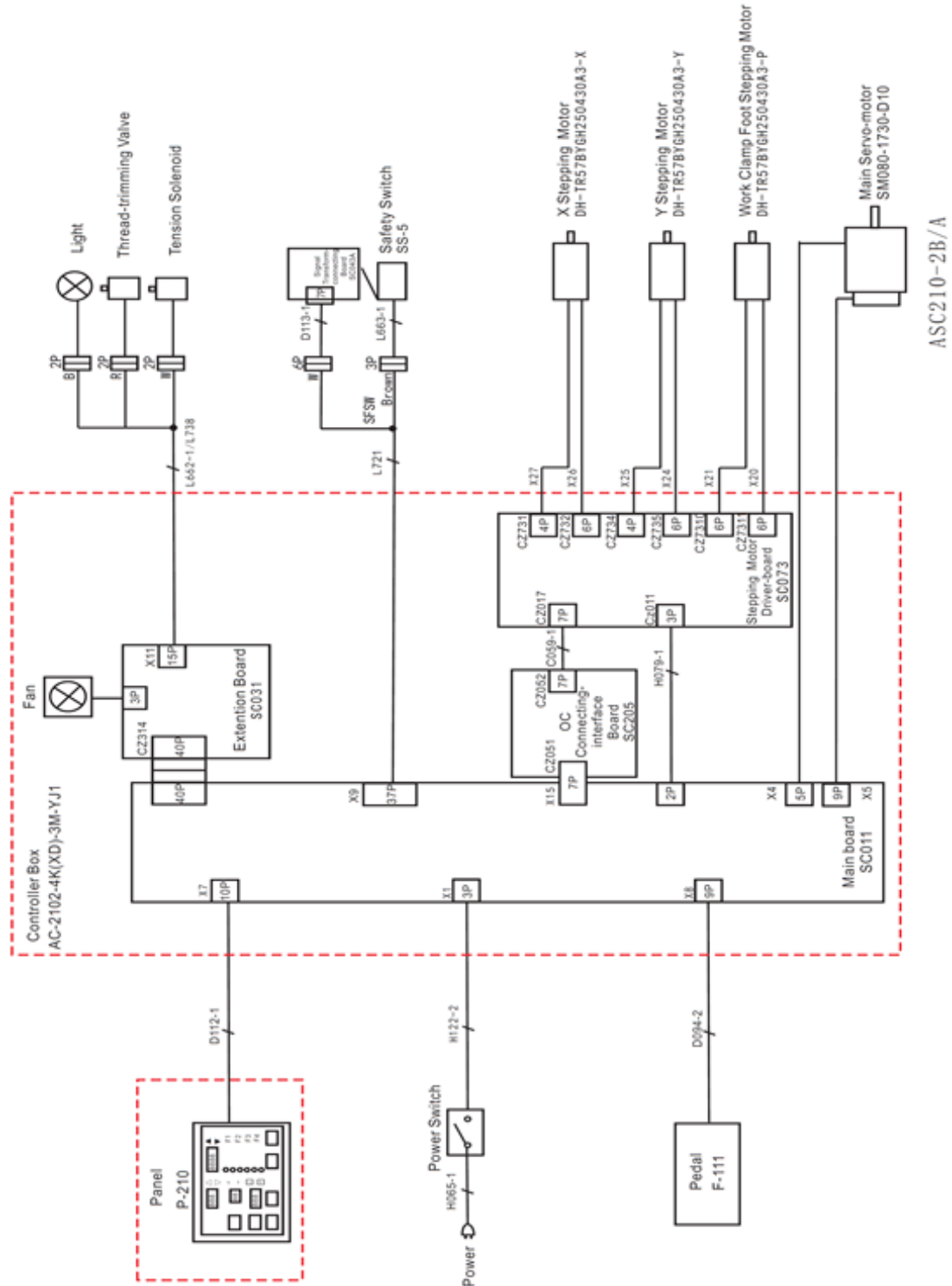


Figure 2

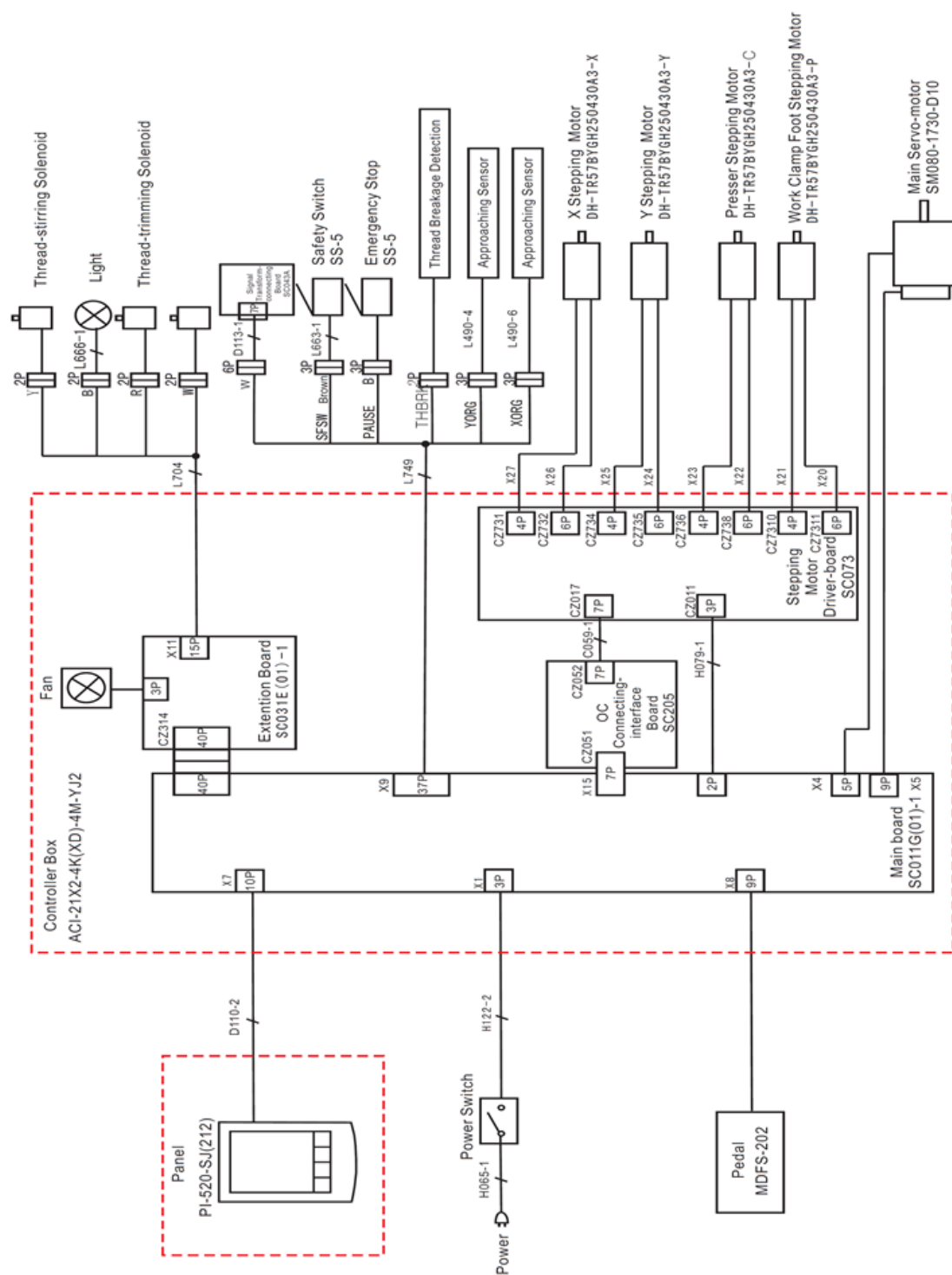
9 Appendix 1 Control System Principle

9.1 Control System Diagram

ASC210-2B-X(430D/438D)



ASC212-2E-SJ



9.2 External Connection of Control Box

The external cable socket has the corresponding number, and user needs check it carefully before plugging. Please refer to figure 1 & 2.

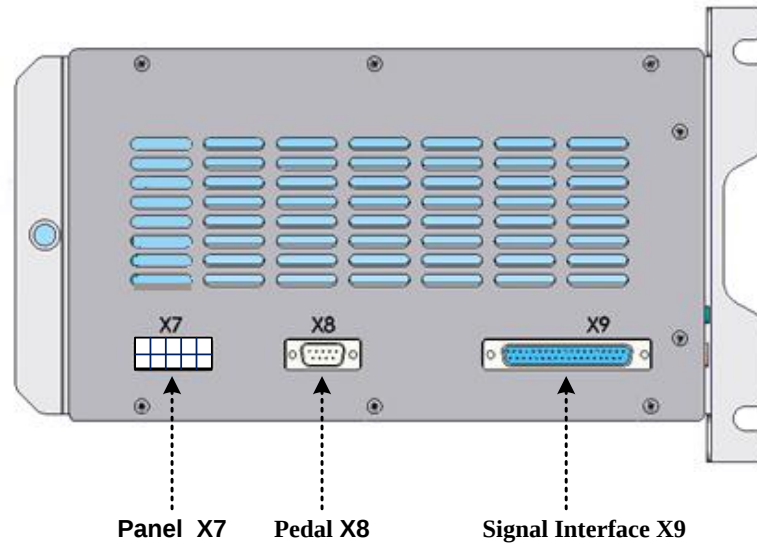


Figure 1

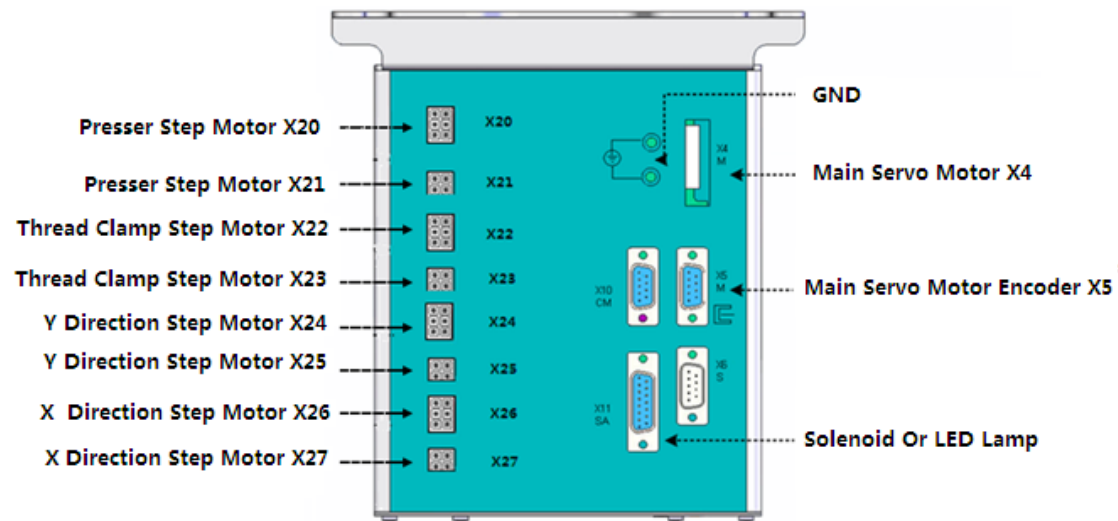


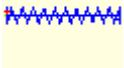
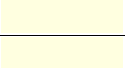
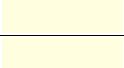
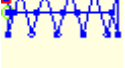
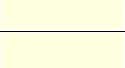
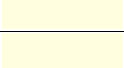
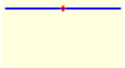
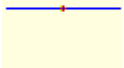
Figure 2

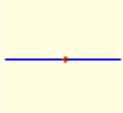
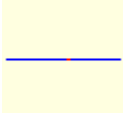
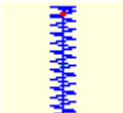
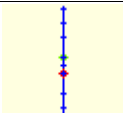
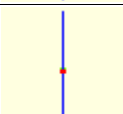
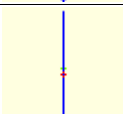
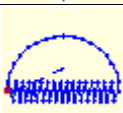
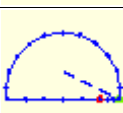
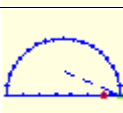
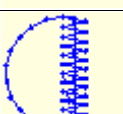
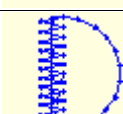
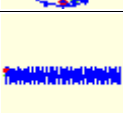
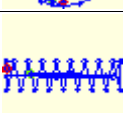
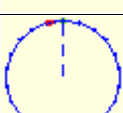
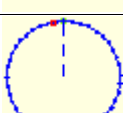
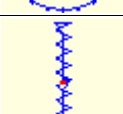
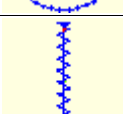
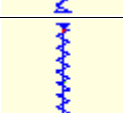
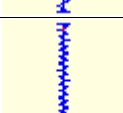
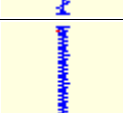
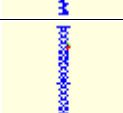
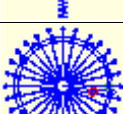
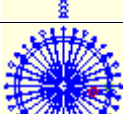
10 Appendix 2 Pattern List

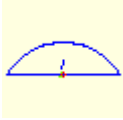
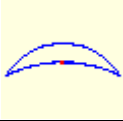
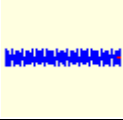
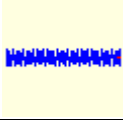
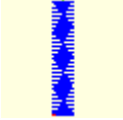
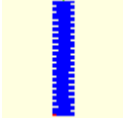
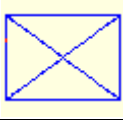
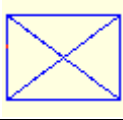
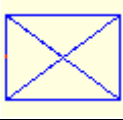
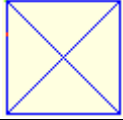
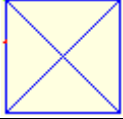
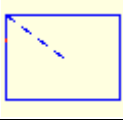
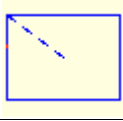
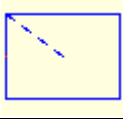
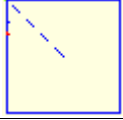
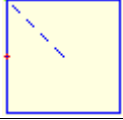
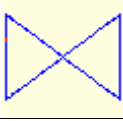
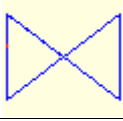
The following sewing patterns are the preset ones, which can be used according to the set specifications. (As long as user can confirm a pattern is within the working range of the presser and feeding plate, he could select that pattern for sewing)

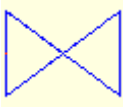
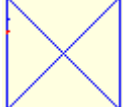
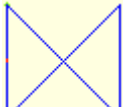
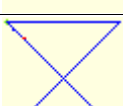
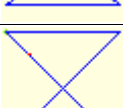
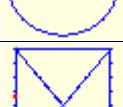
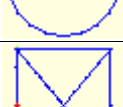
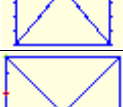
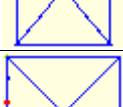
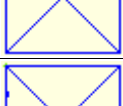
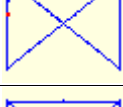
Please use the presser and the feeding plate that meet the needs of patterns. The sewing size is the size with scale rate at 100%.

● 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 ASC210. 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

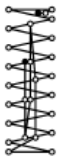
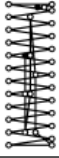
适用于厚重的布料 (-05)									
号码	花样	针数	尺寸 (mm)		号码	花样	针数	尺寸 (mm)	
			长度	宽度				长度	宽度
2		42	20	3	18		56	24	3
3		35	20	3	19		64	24	3
6		30	16	3	62		42	20	3
14		35	16	3	63		35	20	3
16		43	16	3	78		43	20	3
17		42	24	3	79		36	20	3

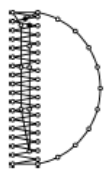
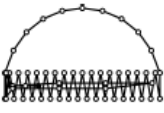
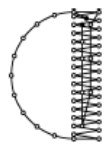
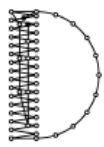
适用于厚重的布料（-05）									
号码	花样	针数	尺寸（mm）		号码	花样	针数	尺寸（mm）	
			长度	宽度				长度	宽度
80		31	16	3	83		43	24	3
81		36	16	3	84		57	24	3
82		44	16	3	85		65	24	3

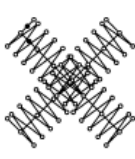
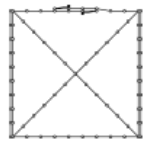
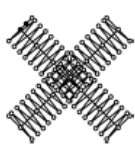
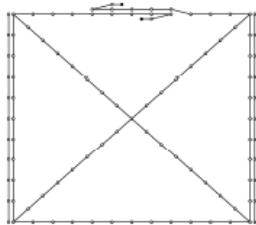
适用于针织布料 (-0K) 和女性内衣 (-0F)									
号码	花样	针数	尺寸 (mm)		号码	花样	针数	尺寸 (mm)	
			长度	宽度				长度	宽度
7		28	8	2	73		29	8	2
9		21	7	2	74		22	7	2
22		14	7	2	75		15	7	2
31 [※]		28	8	2	76 [※]		29	8	2
32 [※]		22	8	2	77 [※]		23	8	2
33 [※]		15	8	2					

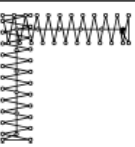
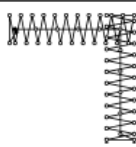
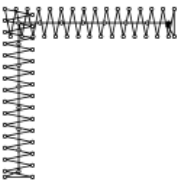
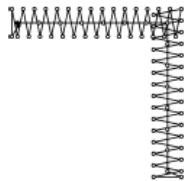
*the positions of start stitch and end stitch are at the center of the pattern

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 ASC210. 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 5			16	—	22		
※2 6			20	—	26		
※1 56			6	—	11	0	3.4
※3 7			6	—	12		
※3 23			10	—	16		
※3 8			12	—	18		
※3 9	3		5-5-5	—	21	2.6	2.4
※3 24			7-7-7	—	27		
※3 25			5-5-5	—	21		
※3 26			7-7-7	—	27		
※1 57	4		6-6	1	18	3.4	3.4
10			6-6	1	19		
※1			8-8	1	22		

58							3. 4	3. 4		
11			8-8	1	23					
12			8-8	3	25					
13			10-10	1	27					
27			12-12	1	31					
※4 14			6-6	0	24					
※5 36			6-6	0	24					
※4 28			8-8	0	28					
※5 37			8-8	0	28					
※4 15			10-10	0	32					
※5 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		
※3 34			10-10	1	27		
※3※4 22			6-6	0	24	2.4	3.4
※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.

※ 2 Don't use the button elevation spring.

※ 3 After 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-002	Machine in Emergency Stop Status 2	Press 
E-010	Emergency Switch not at Normal Position	Press 
E-011	Machine in Emergency Stop Status 2	Press 
E-016	Bad Connection of Emergency Switch at Power-on	Turn Off Machine
E-019	Emergency Switch Pressed at Ready Status	Self-recovery
E-025	Pedal at Level 2 at Power-on	Self-recovery
E-035	Pedal at Level 1 at Power-on	Self-recovery
E-036	Pedal at Level 3 or Unconnected at Power-on	Self-recovery
E-050	Head Tilt at Power-on	Turn off machine and erect head
E-051	Head Tilt before Ready	Turn off machine and erect head
E-052	Head Tilt at Ready	Turn off machine and erect head
E-053	Head Tilt after Ready	Turn off machine and erect head
E-054	Head Tilt at Sewing	Turn off machine and erect head
E-056	Stepping Error	Turn Off Machine
E-057	Stepping Error	Turn Off Machine
E-058	Stepping Error	Turn Off Machine
E-059	Stepping Error	Turn Off Machine
E-060	Stepping Error	Turn Off Machine
E-061	Stepping Error	Turn Off Machine
E-062	Stepping Error	Turn Off Machine
E-063	Stepping Error	Turn Off Machine
E-064	Stepping Error	Turn Off Machine
E-065	Stepping Error	Turn Off Machine
E-066	Stepping Error	Turn Off Machine
E-067	Stepping Error	Turn Off Machine
E-068	Stepping Error	Turn Off Machine
E-069	Stepping Error	Turn Off Machine
E-100	Not add oil at warning	Press 
E-101	Notice of Grease Warning at Certain Stitch	Press 
E-111	Needle Rod Position Wrong	Turn Off Machine
E-121	Trimmer Position Wrong	Turn Off Machine
E-131	Encoder Error or Unconnected	Turn Off Machine

NO.	Name of Malfunction	Solution
E-132	Motor Over-speed	Turn Off Machine
E-133	Motor Stop Position Error at Stop	Turn Off Machine
E-135	Motor Abnormal	Turn Off Machine
E-136	IPM Over-current 1	Turn Off Machine
E-137	IPM Over-current 2	Turn Off Machine
E-138	Motor Blockage 1	Turn Off Machine
E-139	Motor Blockage 2	Turn Off Machine
E-140	Stop Over-current	Turn Off Machine
E-141	Motor Overload	Turn off power and turn on power after a while. Then check the communication cable, mother board and the driving boards
E-142	Bus Voltage Error	Turn off power and turn on power after a while.
E-143	Current Abnormal	Turn Off Machine
E-200	X Origin Detection Error	Turn off machine. Check the driving circuit on the X stepping motor and the response signal from encoder.
E-201	X Correction Error	Turn off machine. Check the X feeding device
E-210	Y Origin Detection Error	Turn off machine. Check the driving circuit on the Y stepping motor and the response signal from encoder.
E-211	Y Correction Error	Turn off machine. Check the Y feeding device
E-217	Stepping Software Version Error	Turn off machine and check the stepping version
E-218	Step Driving Power Error	Turn off machine and check the driving board
E-219	Stepping Motor Over-current	Turn Off Machine
E-220	MD1 Stepping Over-current	Turn Off Machine
E-221	MD1 X not finish	Turn Off Machine
E-222	MD1 Y not finish	Turn Off Machine
E-223	MD2 Stepping Over-current	Turn Off Machine
E-224	MD2 x not finish	Turn Off Machine
E-225	MD2 Y not finish	Turn Off Machine
E-300	Presser Origin Detection Error	Turn Off Machine
E-301	Presser Motor Loss Step	Turn Off Machine
E-302	Trimmer Cover Position Error at Start	Turn Off Machine
E-400	Communication Error (between machine	Turn off machine and check the

NO.	Name of Malfunction	Solution
	and controller)	communication circuit
E-401	Stepping Motor Communication Error	Turn Off Machine
E-410	Communication Error (between mother board and stepping board)	Turn off machine. Without finishing the current task, the stepping board receives the new order from controller.
E-420	U Disk Unconnected	Press 
E-422	U Disk Load Error	Press 
E-424	No Space on U Disk	Press 
E-425	U Disk Write Error	Press 
E-427	Pattern in Cyclic Sewing is Deleted	Press 
E-428	Pattern Set in Program is Deleted	Press 
E-430	Cannot Save Pattern Data to Controller	Press 
E-450	Head Board E2PROM Load Error	Turn Off Machine
E-474	Memory Full	Press 
E-500	Pattern Over Range after Scale	Press 
E-501	Pattern Over Range	Press 
E-502	Over Max Stitch	Press 
E-510	Data Error	
E-511	Code Cannot Input to Program	Press 
E-512	Over Max Stitch Number	Press 
E-600	Upper Thread Breakage	Press 
关机	Bottom Thread-catching Motor Origin Detection Error	Turn Off Machine
E-692	Bottom Thread-catching Motor Position Error	Turn Off Machine
E-701	300V Too High	Turn Off Machine
E-702	300V Too Low	Turn Off Machine

NO.	Name of Malfunction	Solution
E-704	24V Too High	Turn Off Machine
E-705	24V Too Low	Turn Off Machine
E-706	24V Over-current	Turn Off Machine
E-710	IPM Over-current or Over-voltage	Turn Off Machine
E-254	Undefined Error	Press 

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.