ASC400

全自动模板机-触摸屏 E

Automatic Computerized Control System

2016-02

3007589

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。

Foreword

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 ready 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

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

1. Signs & Definitions of Safety Marks

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 injury. 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 (Black Circle) means "Must". The figure in the circle is the contents that have to be done. (Exp. The left figure is "Ground!")

2. Safety Matters for Attention

⚠ Danger	
	For opening the control box, please turn off the power and take away the plug from socket firstly, and then wait for at least 5 minutes before opening the control box. Touching the part with high voltage will cause the personal injury.
⚠ Caution	
Usage Environment	
	Try not to use this sewing machine near the sources of strong disturbance like high-frequency welding machine. The source of strong disturbance will affect the normal operation of the sewing machine.
	The voltage fluctuation shall be within 10% of the rated voltage. The large fluctuation of voltage will affect the normal operations of sewing machine, Therefore a voltage regulator is needed in that situation.
	Working temperature: 0℃~45℃. The operation of the sewing machine will be affacted 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 compressed gas shall be over the consumption required by the sewing machine. The insufficient supply of compressed gas will lead to the abnormal action of sewing machine.
	In case of thunder, lightning or storm, please turn off the power and pull plug out the socket. Because these weather factors will have 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 can the trained technicians perform the repair, maintenance and inspection of this sewing machine.
	For the repair, maintenance and inspection of the electrical component, please contact the professionals at the manufacturer of control system in 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

ASC400 系列工业缝纫机电脑控制系统，主轴电机采用具有世界先进水平的交流伺服控制技术驱动，具有力矩大、效率高、车速稳定和噪音低等特点。操作面板设计多样化可满足不同客户的配套要求；系统采用德国式结构设计，安装和维修方便快捷，系统控制软件可通过远程通讯升级，方便用户不断提高产品性能。

1.2 功能和指标参数

序号	控制器型号	ASC400 全自动模板机
1	缝制范围	X(左右)方向 Y（前后方向） 1000 x 750
2	最高缝纫速度	2500rpm（间距 3mm 以下时）
3	缝迹长度	0.1～12.7mm（最小分辨率 0.05mm）
4	压脚送布	间断送布（脉冲马达双轴驱动方式）
5	针杆行程	41.2mm
6	使用机针	DP×5、DP×17
7	外压脚上升量	最大 25mm（气动式最大 30mm）
8	中压脚行程	标准 4mm（0～10mm）
9	中压脚上升量	20mm
10	旋梭	半旋转倍旋梭
11	花样数据的记忆	U 盘
12	暂停功能	在缝制途中可以让缝纫机停止
13	放大、缩小功能	可以选择缝迹缝制花样时，可以独立地放大缩小 X、Y 轴。 1%～400%（0.1%单位）
14	放大、缩小方式	增减缝迹长度方式
15	缝纫速度限制	200～2500rpm（100rpm 单位）
16	花样选择功能	花样号选择方式
17	底线计数器	加数计数/减数计数方式（0～65535）
18	缝制计数器	加数计数/减数计数方式（0～9999）
19	第二原点的设定	用微动开关可以把缝制后的针位置移动到缝制范围内的任意位置设定为第 2 原点。
20	缝纫机马达	伺服马达
21	针杆上死点停止功能	缝制后，可以让针杆返回到上死点位置。
22	额定功率	600W
23	使用温度范围	0℃～45℃

24	使用湿度范围	35%～85% （无结露）
25	电源电压	AC 220V ± 10%；50/60Hz

※产品执行标准：QCYXDK0004—2016《工业缝纫机计算机控制系统》。

1.3 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。

1.4 操作方式

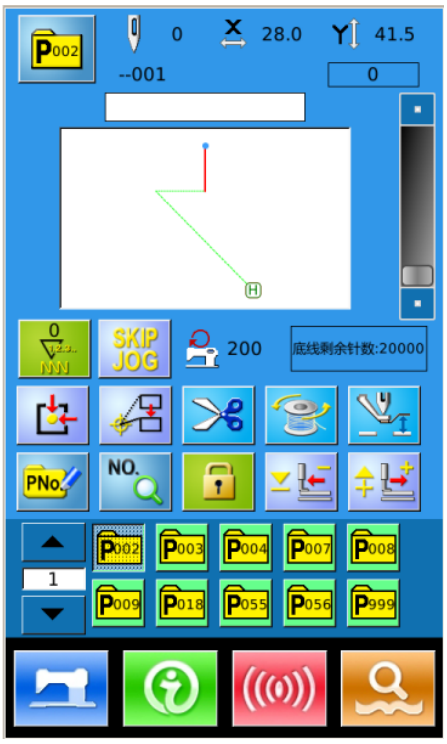
ASC400 触摸屏操作面板采用了业界先进的触摸操作技术，友好的界面以及便捷的操控都给用户的日常使用带来革新性的变化。用户可以使用手指或者其他物体点触屏幕，完成相应的操作。用户在使用过程中应该注意避免使用尖锐的物体触碰屏幕，以免对触摸屏造成永久性损伤

1.5 操作界面的介绍

1、模板机常用操作界面

（1）模板缝制界面

蓝色背景的为模板缝制界面，开机可直接进入。

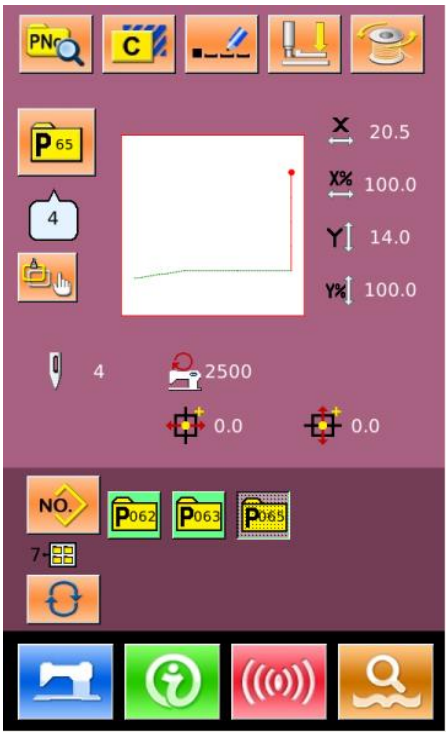


（2）模板花样数据输入界面

模板花样数据输入界面如右图紫色界面。

模板缝制界面下按下  键，即可进入模板花样数据输入界面。

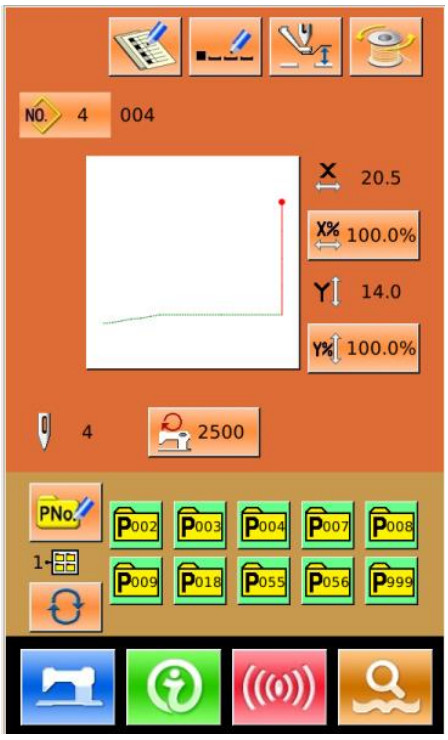
注:只有当U207参数为ON状态下，才能从模板缝制界面下切入到模板花样数据输入界面。（U207参数为设置模板花样数据输入界面是否显示）



（3）数据输入界面

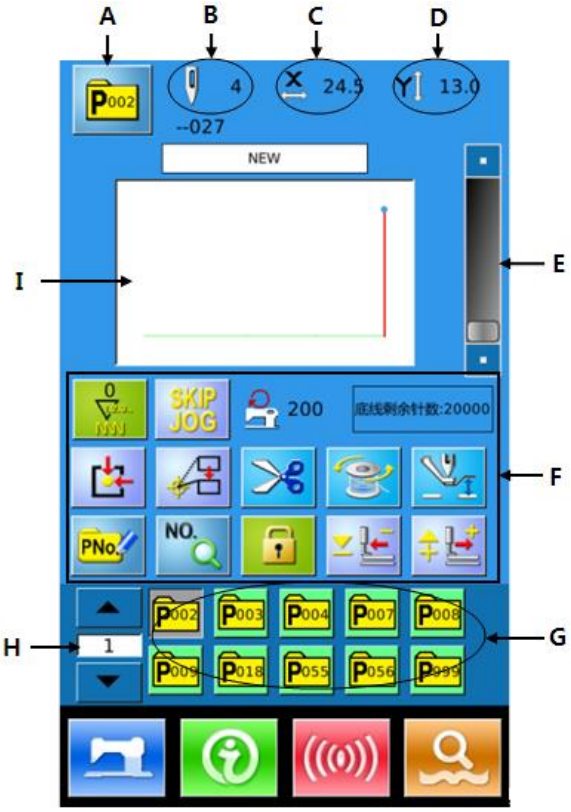
在模板花样数据输入界面下，按下

键，即可进入数据输入界面



2 模板机基本操作

2.1 模板机缝制界面基本功能介绍



序号	功能	内容
A	模板花样号码显示	显示当前模板花样号码。
B	花样针数显示	显示当前选择花样缝纫针数。
C	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。
D	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。
E	缝纫速度设置	可以变更缝纫速度。
F	各项功能参数编辑键	 ：底线计数设置（针数）  ：跳转功能  ：显示缝纫机当前转速。  ：显示底线剩余针数。

		 ：回原点键。  ：移动起缝点位置。  ：剪线。  ：绕线。  ：中压脚设置。  ：快捷花样（简称模板花样）登记。用于登记模板花样，最多登记 999 个。  ：查找花样。  ：小锁打开时，可手动切换花样，不可自动切换花样。小锁关闭时，可自动切换花样，不可手动切换花样。  ：压脚后退键。  ：压脚前进键。
G	模板花样选择	显示出已登记的模板花样，按下之后进入模板花样数据输入界面。
H	模板花样文件翻页键	切换模板花样组翻页键
I	缝制形状选择	显示为当前花样缝制形状

2.2 模板机基本操作流程

1、U 盘导入花样：用户首先要把缝制的模板花样，从 U 盘导入操作头。（或者直接通过操作头打版生成）。花样如何导入操作头参照如下操作：

U 盘导入花样

开机直接显示模板缝制界面（蓝色背景）按下  **进入通信界面（如右图），在此界面下可以进行U盘导入花样。**

A：从U盘向操作面板导入花样
B：将操作面板中保存的花样导出到U盘中

U盘中的花样命名方式：

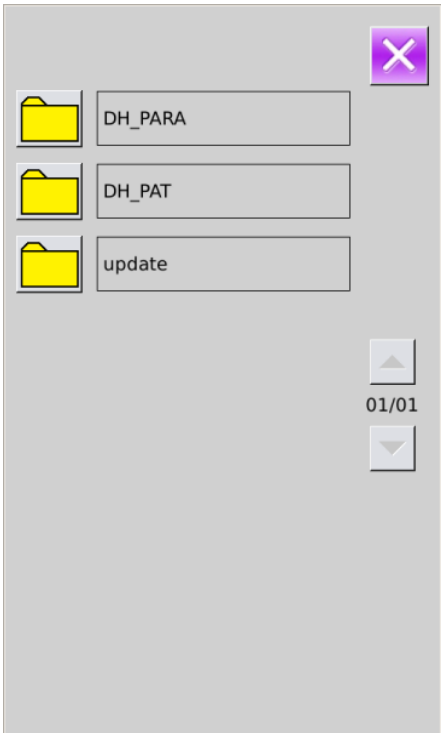
从U盘导入花样时，请遵守下面的规则命名。

U盘花样命名分标准格式和其他格式

标准格式：001~009.VDT

其他格式：PLT、DST、DSB、DXF、VDTD、3LD等等.

其他的命名格式不正确，系统不能识别。（默认情况下，文件名称也就是复制到操作面板后的花样名。可通过花样名查找确认花样位置）。



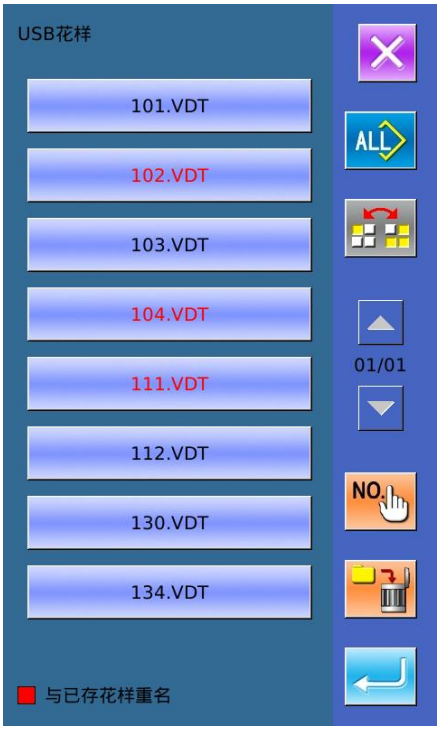
如图为U盘花样的目录

※ **从U盘导入花样时，可将花样文件保存在U盘的任何目录中**

※ **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**

※ **需要缝制的花样，放入U盘update目录下，通过U盘导入花样。**

点击某个存有花样的文件夹，进入U盘向操作面板导入花样界面。



：选择全部花样

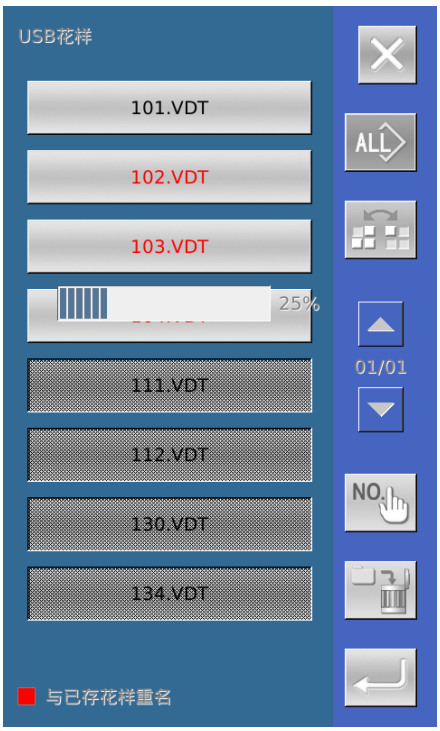

：反选操作

：输入保存号码（选择一个花样导入时可用）

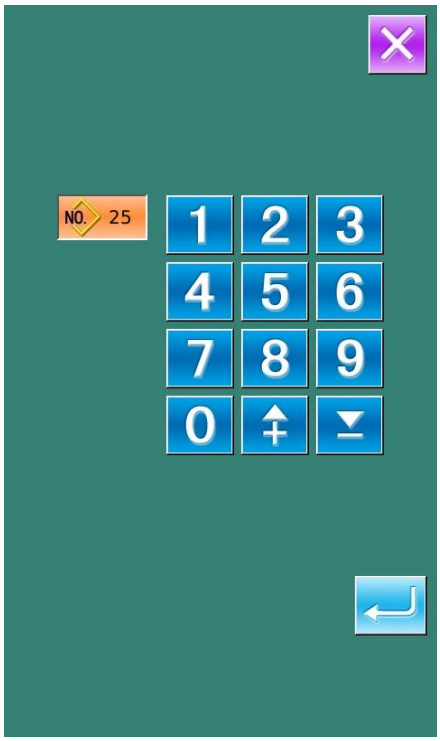

：删除花样

选中想要导入的花样，按下确定键  完成导入操作，导入操作面板后的保存位置与选择的花样号一致。

注：不能覆盖已存花样。



红色名字的花样文件不能导入，因为与操作面板中的已存**花样重名**，需要手动输入号码进入导入。



按下输入键 

进入号码输入界面，默认号码为当前空号，也可以手动输入目标号码，按下确定键后完成保存操作。

注：重名花样只能一个一个导入，选择多个花样时不能使用 

键。

2、新建模板花样

新建模板花样：导入的花样，仅仅是普通花样，还需要保存为模板花样（原 P 花样），花样号与用户需要的模板号一致。具体操作如下：

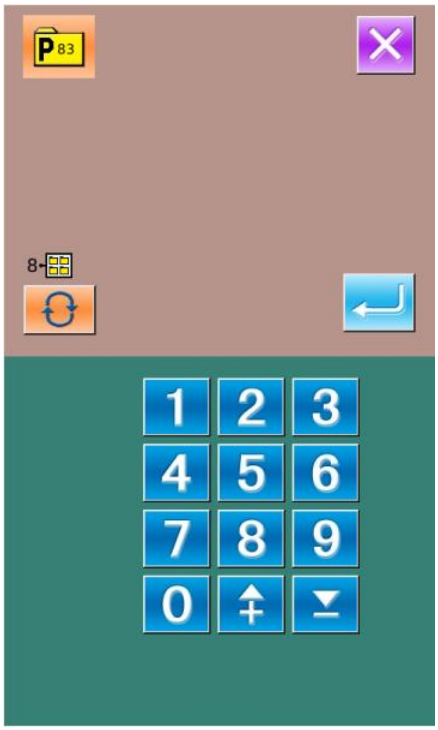
最多登记花样 999 个

按 

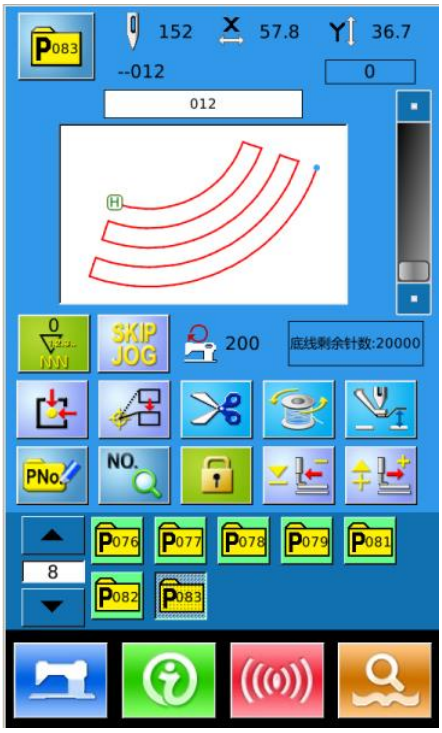
键 进入新建快捷花样界面。

选择常用普通花样 012：012,按  确定键完成操作。

按  确定键 将花样保存到快捷模板花样 083 号下。



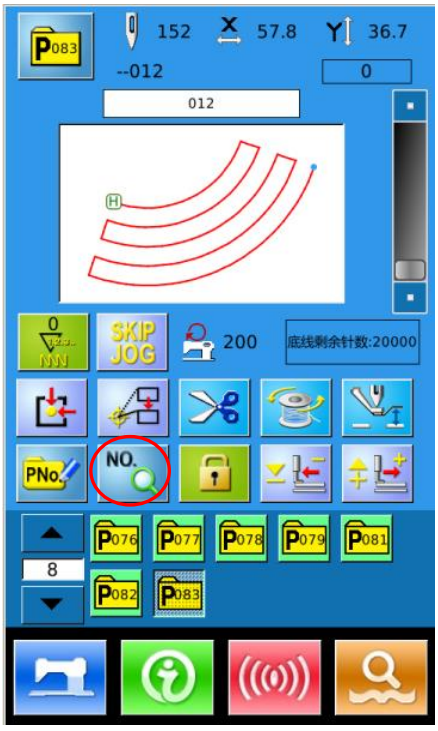
退出后，可见当前花样已经切换为 83 号模板花样。



3、查找模板花样

可通过查找功能，输入模板花样名称来查找模板花样，操作如下：

（5）查找按键使用说明



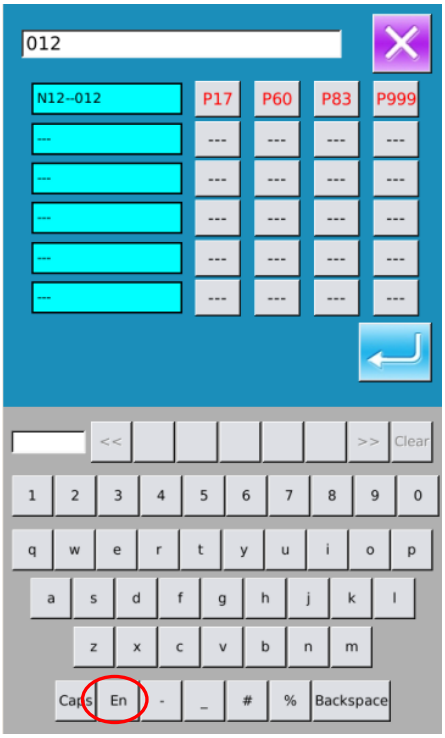
按 

键，进入查找界面，可通过模板号快速切换需要的模板花样。

注：多个花样可通过花样名查找确定模板号

按  键，进入高级查找界面。

可通过中英文切换，进行花样号或者花样中文名称查找。



4、修改起缝点

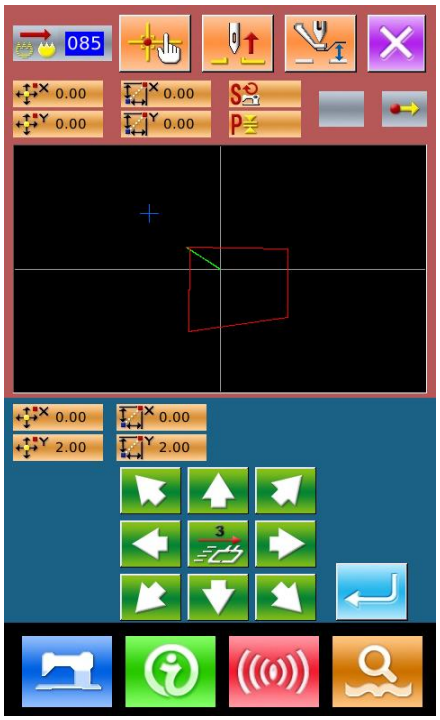
导入的花样如果位置与模板有差异，用户可以根据需要修改起缝点，进入起缝点修改模式如下操作：

基准按键使用说明

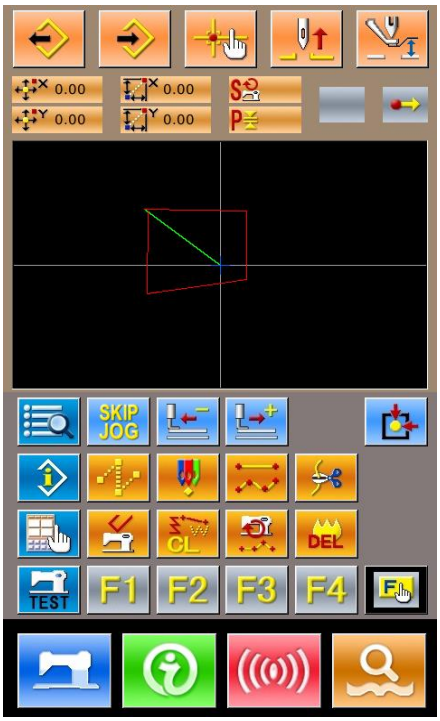
基准按键：移动起缝点位置。

按  基准键，进入界面，如图所示 。

按下移动键  ，可以将起缝点移动到指定位置。



按  确定键，完成操作。整个图形随之移动指定位置。



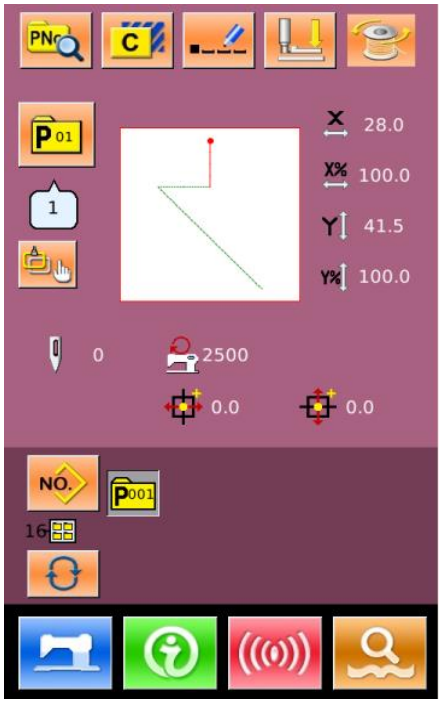
2.3 模板花样数据输入

模板花样，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。选用模板花样不需要每次设置相关参数。

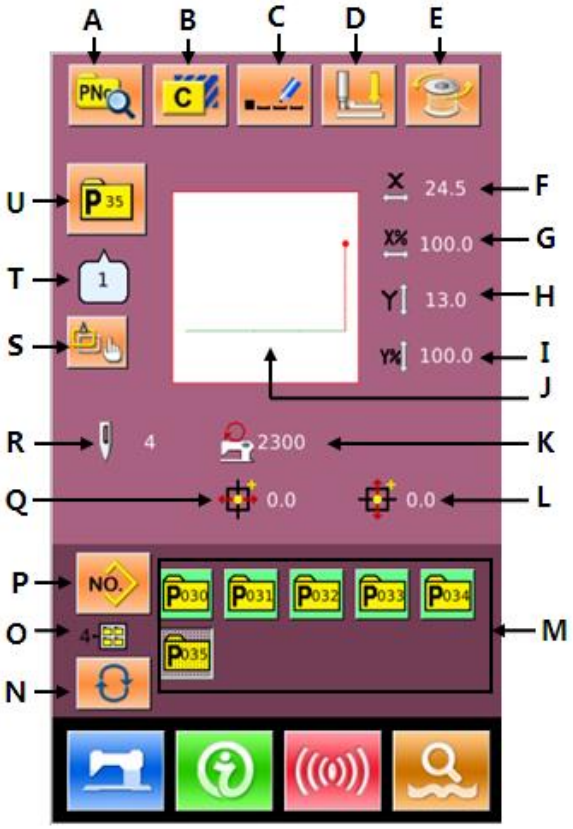
模板花样数据输入界面如右图所示。

最多可以登记 999 个模板花样。

注:只有当U207参数为ON状态下，才能从模板缝制界面下切入到 模板花样数据输入界面。(U207参数为设置P花样数据输入界面是否显示)



模板花样输入界面功能介绍：



序号	功能	内容
A	模板花样编辑	可以编辑模板花样内容。
B	模板花样复制	可以复制当前模板花样内容到一个空花样号码下。
C	花样命名	最多可以输入 32 个字符。
D	穿线	按下之后中压脚下降。
E	绕线	进入绕线界面。 按下一次准备键  之后方可绕线。
F	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。
G	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。
H	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。
I	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。
J	缝制形状选择	显示为当前花样缝制形状。
K	最高转速限制	显示最高转速限制值。
L	Y 方向偏移量显示	显示当前选择花样的 Y 方向偏移量。
M	模板花样选择	显示出已登记的模板花样。
N	模板花样文件夹选择	顺序切换模板花样文件夹号码。
O	模板花样文件夹号码显示	显示当前模板花样文件夹号码。
P	返回普通花样数据输入	返回到普通花样数据输入界面。
Q	X 方向偏移量显示	显示当前选择花样的 X 方向偏移量。

序号	功能	内容
R	花样针数显示	显示当前选择花样缝纫针数。
S	模板快捷键设置	K125 模板快捷键识别开关，K126 模板花样号段
T	缝纫形状号码显示	显示当前模板花样下引用的普通花样号码。
U	模板花样号码显示	显示当前选择花样号码。

2.4 模板花样编辑

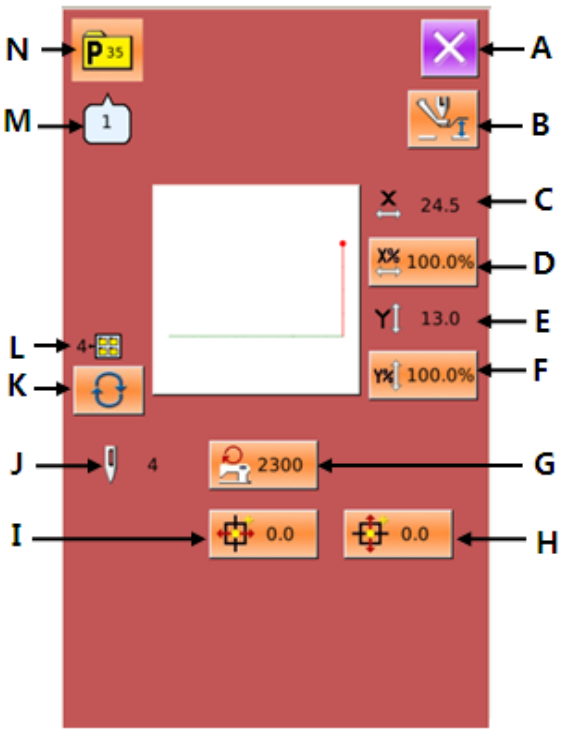
① 进入模板花样编辑界面

按下  进入模板花样编辑界面（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。

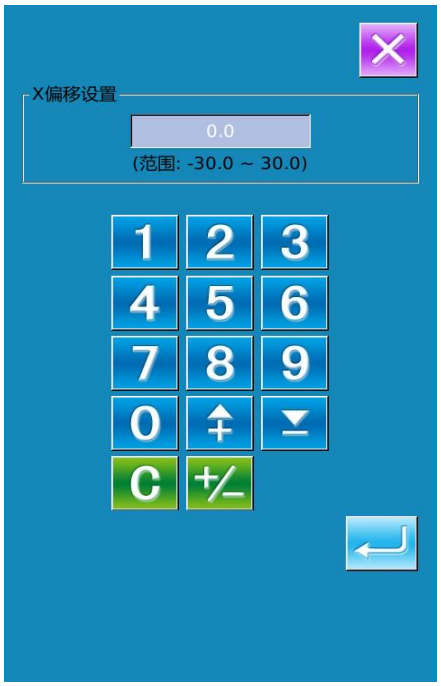
	项目	输入范围	初始值
A	退出键		
B	中压脚高度	0.0~8.0 mm	0
C	X实际尺寸值显示值		
D	X方向放大缩小率	1.0~400.0%	100.0%
E	Y实际尺寸值显示值		
F	Y方向放大缩小率	1.0~400.0%	100.0%
G	最高速度限制	200~2800rpm	2300rpm
H	Y方向偏移量	-30.0~30.0mm	0
I	X方向偏移量	-30.0~30.0mm	0
J	花样针数显示		
K	模板花样文件夹选择		
L	模板花样文件夹号码显示		
M	缝纫形状号码显示		



N	模板花样号码显示		

③ 确定数据变更

以设置X方向偏移量为例，通过数字键盘输入数值，按下确定键 完成操作。



④ 退出编辑

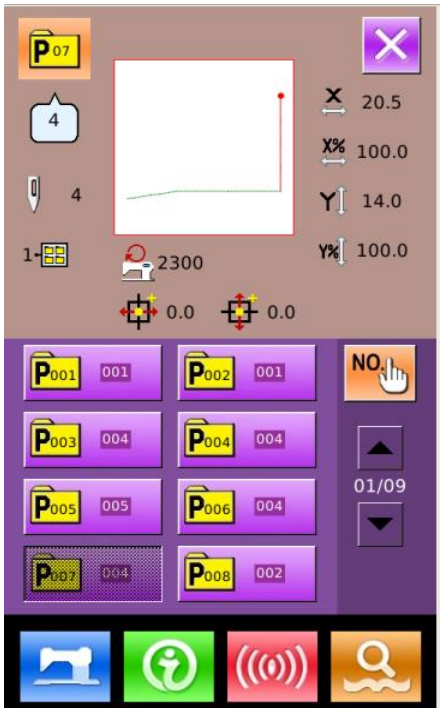
按下退出键 关闭模板花样编辑界面，返回数据输入界面。

2.5 模板花样复制

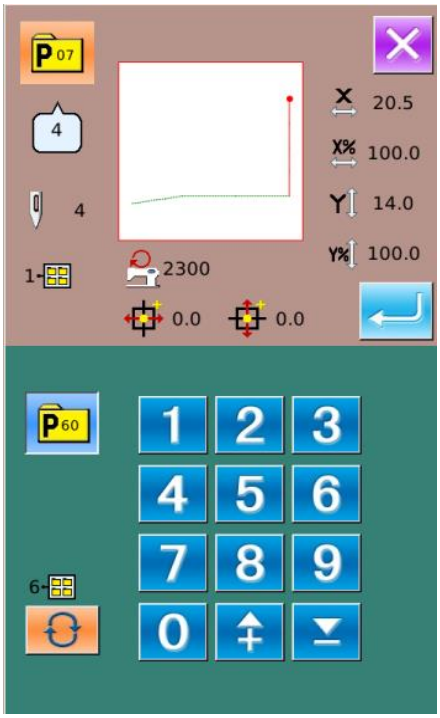
① 选择被复制花样

按下 进入模板花样复制界面（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



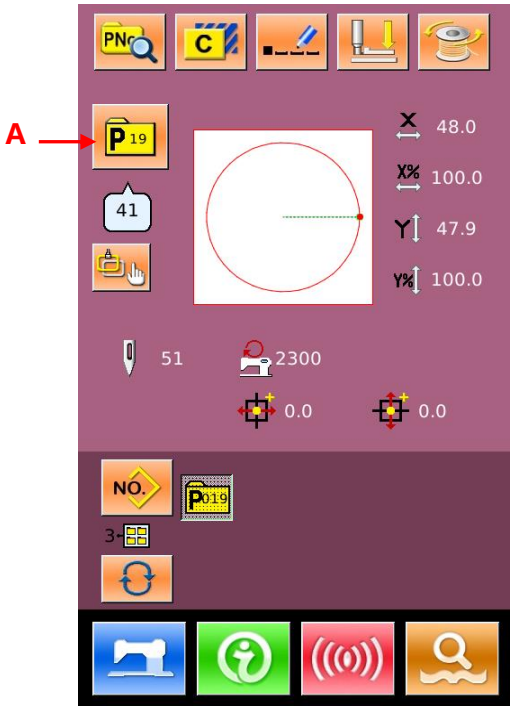
界面上方显示为被复制花样，通过数字键选择未登记的花样号码，已经登记的花样号码不能重复登记。

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，返回到模板花样复制界面。

2.6 模板花样选择

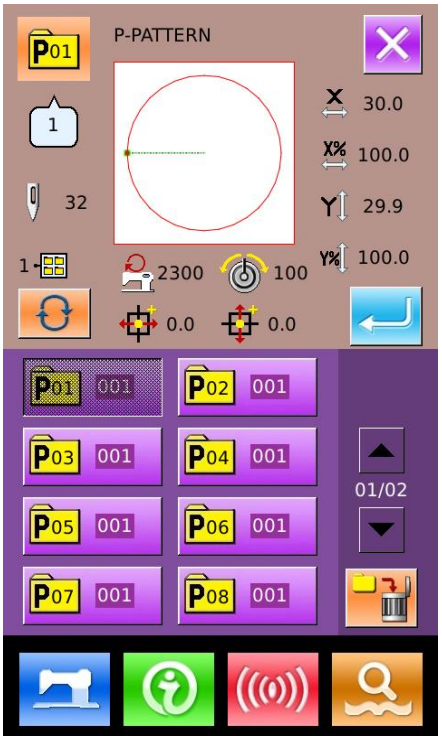
① 进入模板花样选择界面



如右图所示，按下图标 A，可以进入模板花样选择界面。

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，可以把已登记的模板花样全部显示出来。



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。

2.7 模板缝制界面功能键

（1）编辑当前模板花样按键说明

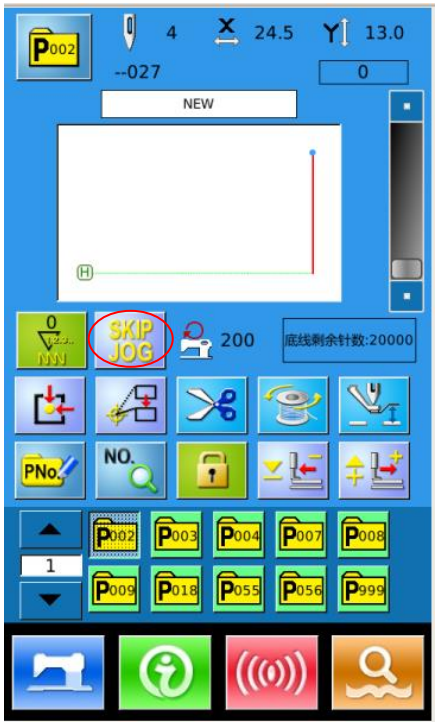
按 键后 进入引用普通花样选择界面，

任选某一花样，确定后如图所示，
将当前模板花样替换成所选的普通花样。

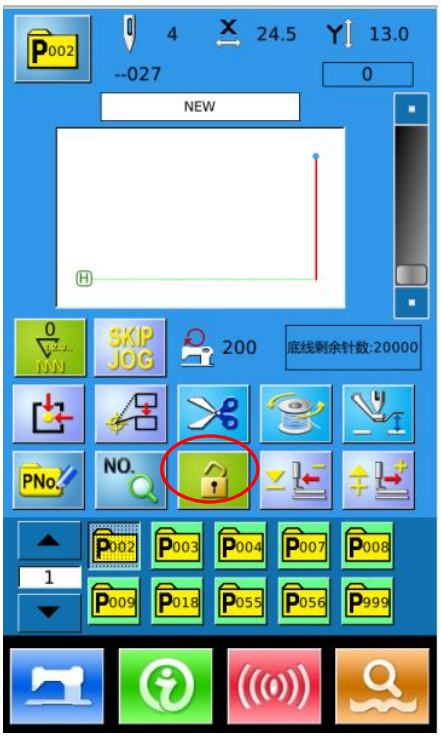
（2）跳转按键使用说明

跳转：压板移动到所输入针位位置。

按 SKIP JOG 键，进入跳转界面，输入跳转针数即可。



（3）锁定按键使用说明



锁定：锁定当前编辑花样，防止当前花样切换。

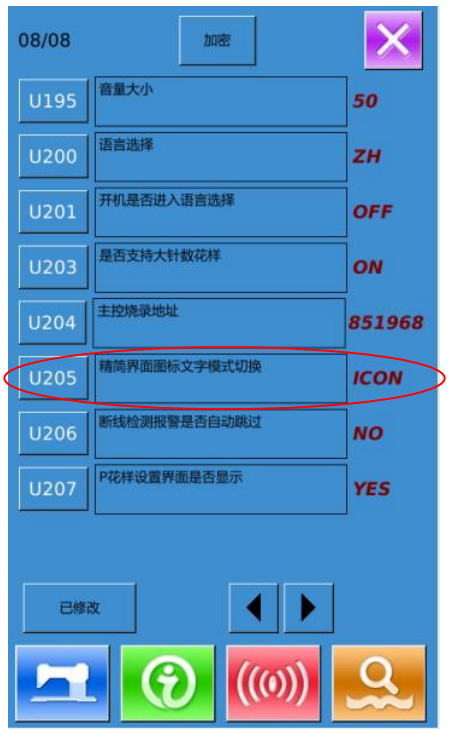
 ：可手动切换花样，不可自动切换花样。。

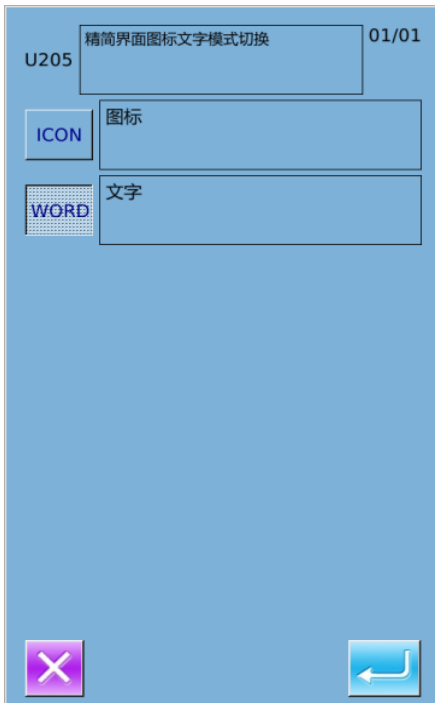
 :可自动切换花样，不可手动切换花样

（4）模板缝制界面图片文字模式切换

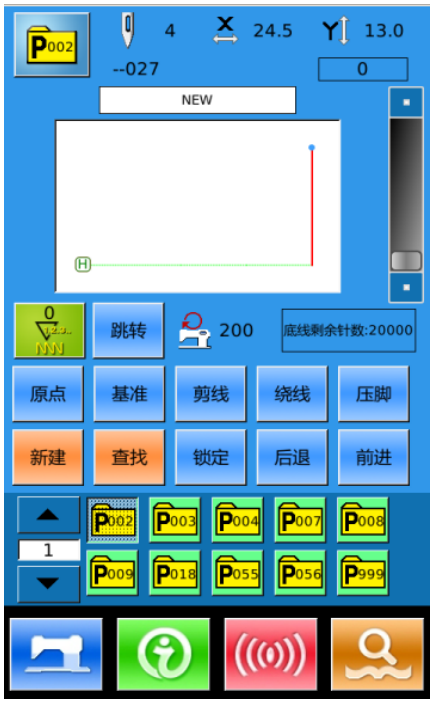
按  键进入功能界面，选择一级参数。

U205 参数为模板缝制界面图标文字模式切换参数。选择文字模式后，按下确认。模板缝制界面的功能按键由图标模式转换成为了文字模式。





模板缝制界面的功能键由图标转换成为文字模式。

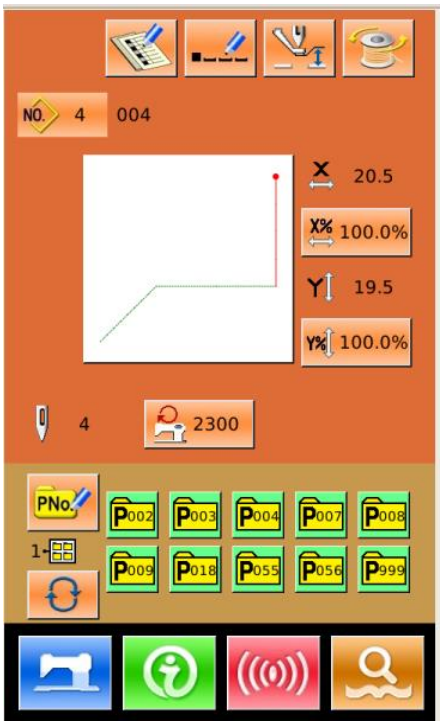


3 操作说明

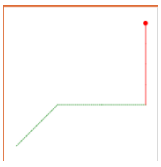
3.1 基本操作

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【2.4 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

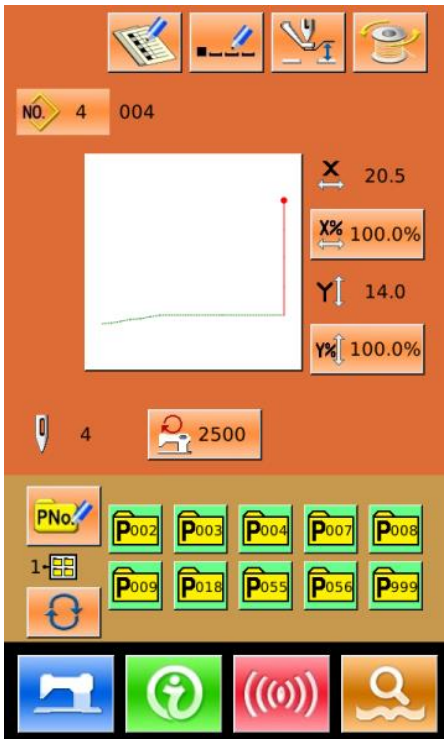
把缝制品安放到压脚部，踩踏板落下压脚，缝纫机启动，开始进行缝制。

3.2 普通花样操作

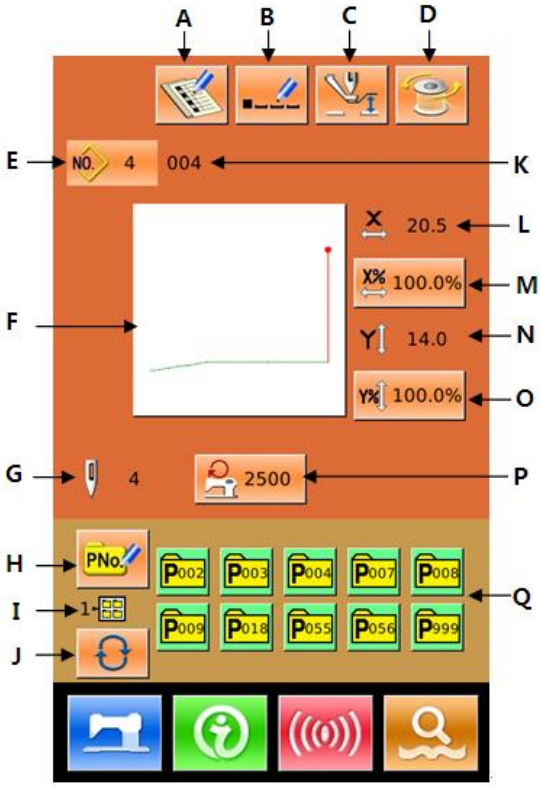
（1）缝制数据输入界面

在模板缝制界面(蓝色)下按下  键，先进入模板花样缝制界面 ，

在模板花样缝制界面（紫色）下按下  键，进入到数据输入界面（黄色界面），如右图所示



（2） 数据输入界面的功能介绍



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 32 个字符。
C	中压脚设定	进入中压脚高度设置界面。 按下一次准备键  之后方可进入。
D	绕线	进入绕线界面。 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	快捷花样(简称模板花样）登记	用于登记模板花样，最多登记 999 个。
I	模板花样文件夹号码显示	显示当前模板花样文件夹号码。
J	模板花样文件夹选择	顺序切换模板花样文件夹号码。
K	花样名称	显示当前选择花样名称。
L	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。
M	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。
N	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。
O	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。
P	最高转速限制	显示最高转速限制值，按下之后可进行设置。
Q	模板花样选择	显示出已登记的模板花样，按下之后进入模板花样数据输入界面。 初期状态不显示该按键。

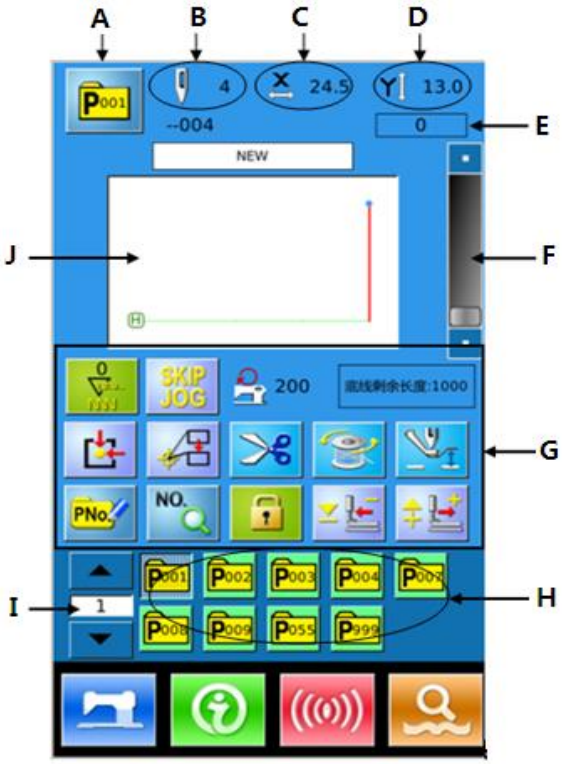
（3） 通用按键说明通用按键

序号	图标	功能
1		取消键 → 退出当前设定界面/数据变更时，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。
4		减键 → 向下减小数值。
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界面的切换。

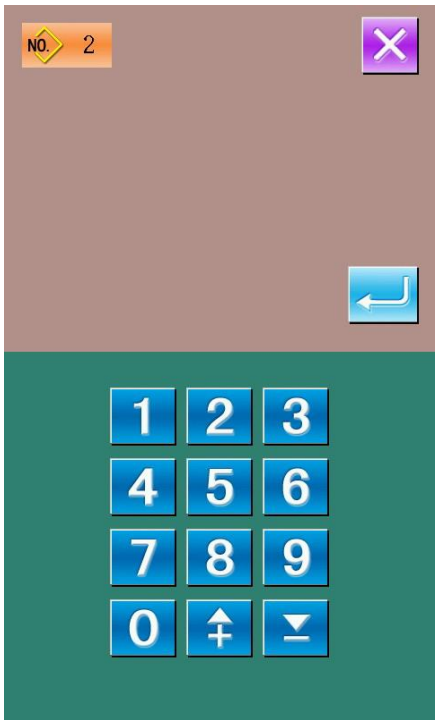
（4）缝制界面

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。**[详见 1.6 节操作界面功能介绍]**



3.3 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。

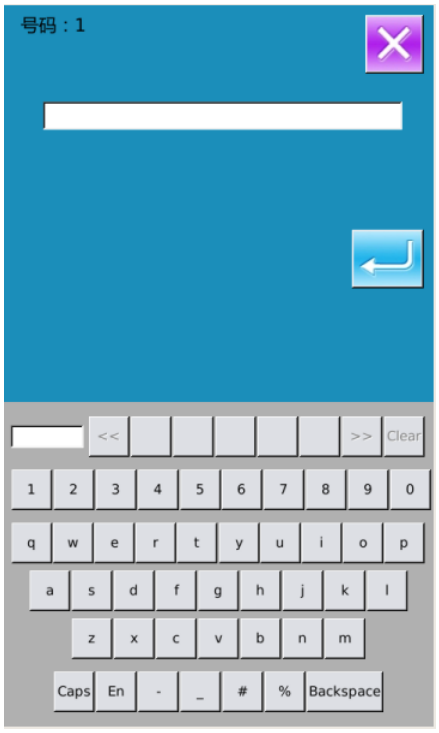
② 登记新花样

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。

3.4 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。用户自行输入花样名称，以数字、英文、中文命名。



En：英文输入模式，以英文命名花样名称，按下此键后转化成中文。

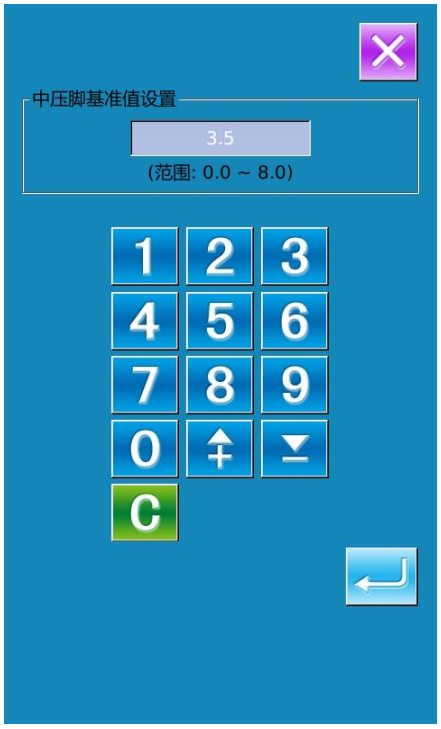
CN：中文输入模式，以中文命名花样。

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。

3.5 中压脚设置

按下 进入中压脚设置界面。

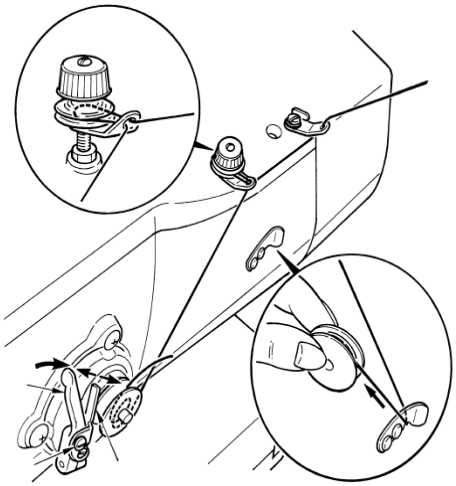


通过 0 ~ 9 十数字键盘或 、 键输入目标值，按下确定键 完成操作返回数据输入界面。

3.6 绕线

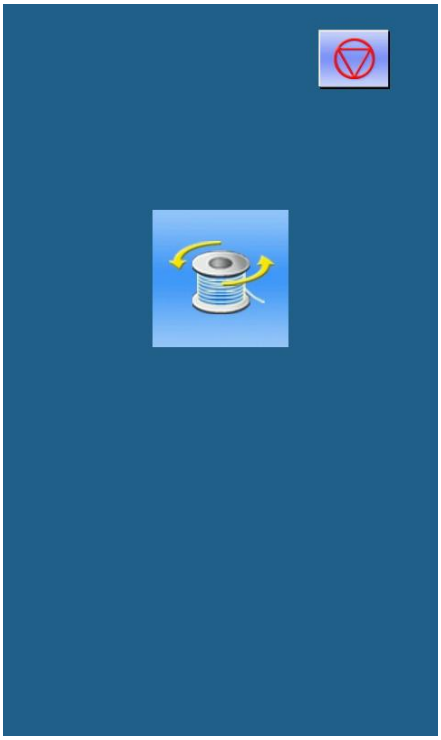
① 安装梭芯

把梭芯插进绕线轴。然后，请朝箭头方向按梭芯导向器（如右图所示）。



② 显示底线绕线界面

在数据输入界面上，按了绕线按键  之后，绕线界面被显示出来（如右图所示）。



③ 开始绕线

踩踏启动踏板之后，缝纫机转动，开始卷绕底线。

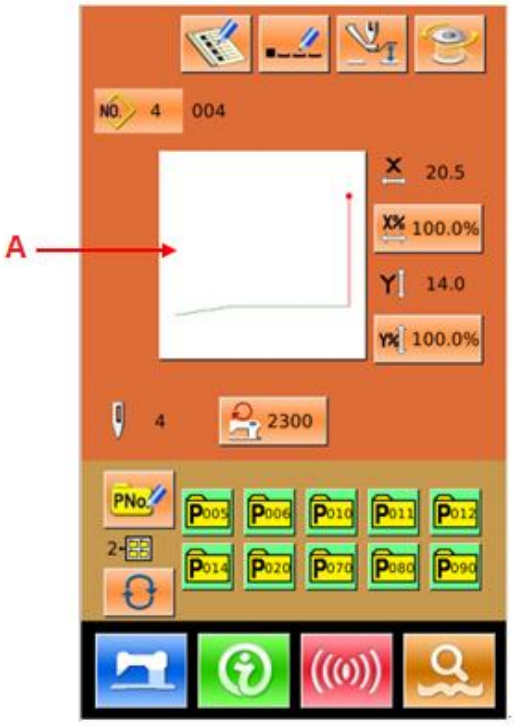
④ 停止缝纫机

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

3.7 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。



进入花样选择界面后，花样号码按顺序排列。

：花样预览

：输入号码查询花样

：花样删除

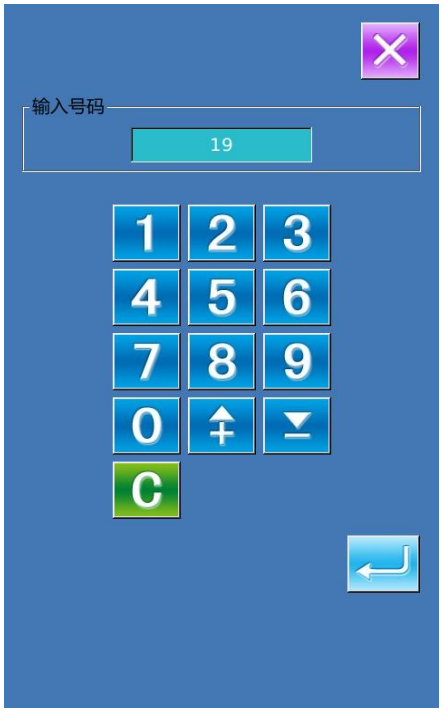
② 选择花样

每页可以显示16个花样号码，选中已登记的花样号码时，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。

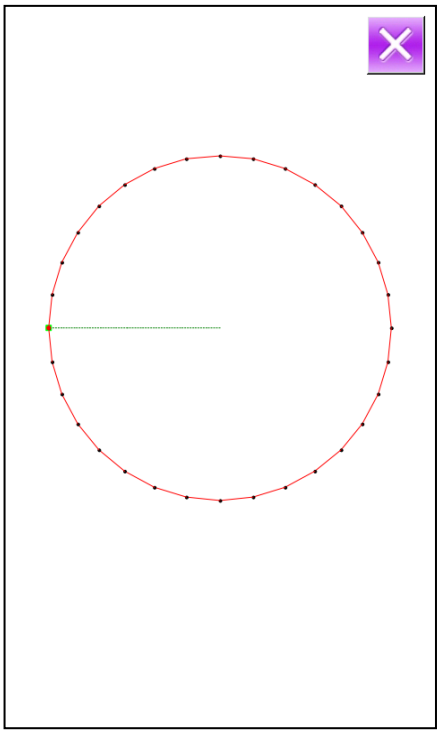


④ 花样删除

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。

⑤ 花样预览

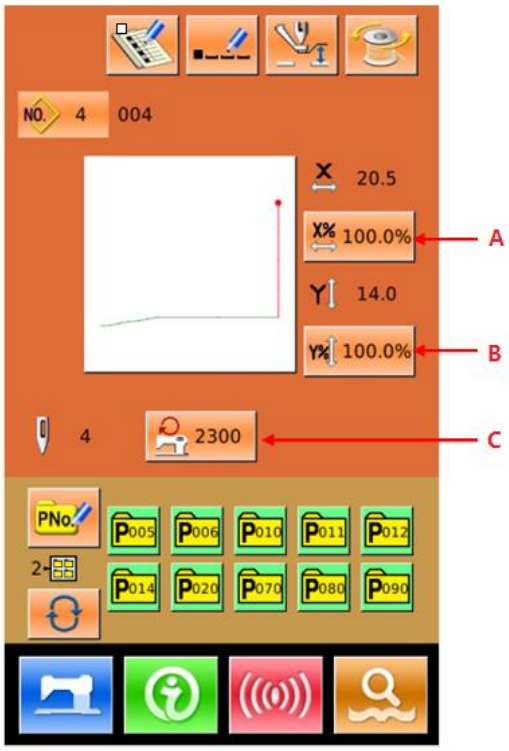
按下 
键可以全屏预览当前花样形状。



3.8 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。



	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	200~2500rpm	2300rpm

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。

② 缩放率设定

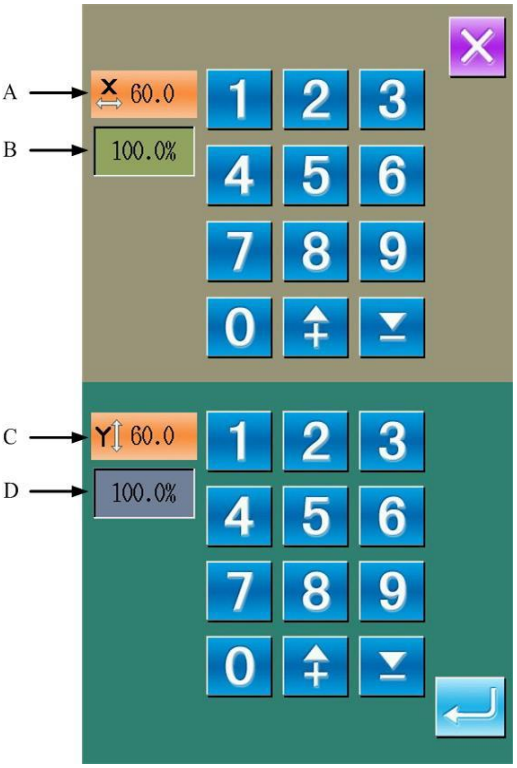
右图为放大缩小率设定界面，界面上方为X方向设置，下方为Y方向设置。

A：X方向实际值显示

B：X方向放大缩小率显示

C：Y方向实际值显示

D：Y方向放大缩小率显示



通过 0 ~ 9 十数字键盘或 、 键输入目标值，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。

3.9 模板花样登记

① 进入模板花样登记界面

在数据输入界面下按下 

进入模板花样登记界面，如右图。

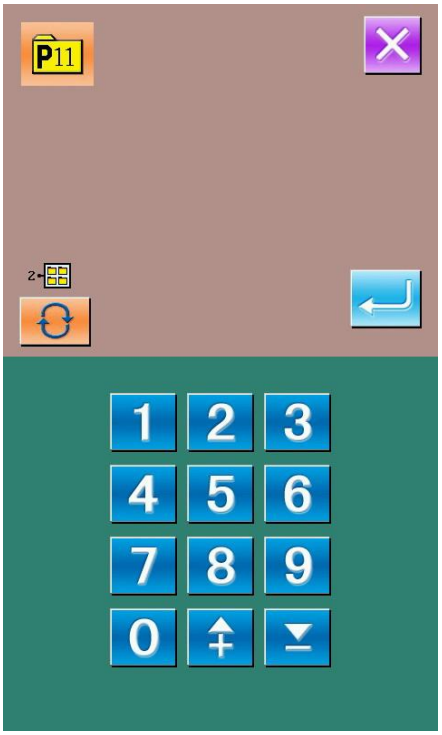
② 输入模板花样号码

通过数字键盘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

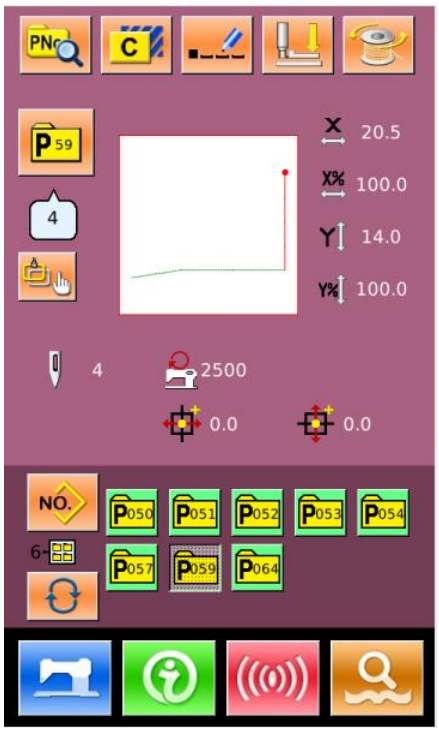
模板花样号码可以登记到 5 个文件夹里，每个文件夹最多保存 10 个模板花样。

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 之后完成模板花样登记操作，返回到模板花样数据输入界面。



3.10 计数器操作

① 显示计数器界面

在模板缝制界面中，按下（ ）键之后，计数器设定界面被显示出来。


：缝制计数器类型


：底线针数设置（长度）


：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  和 

可以设置计数器类型，并且设置其当前计数值。

3.11 急停

① 解除异常

缝制过程中，按下停止开关后，缝纫机中断缝制，停止转动，此时显示界面如右图所示。

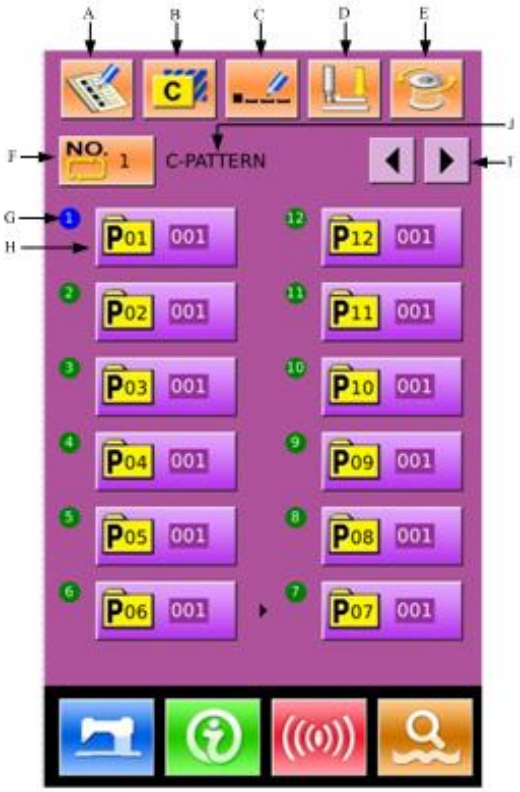
按下  解除异常。踩下启动踏板之后，继续缝纫。

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，由一组模板花样组成，最多可以输入 50 个模板花样。最多可以登记 50 个 C 花样。

参照【8.5 变换缝制类型】一节内容进入组合花样数据输入界面，如右图所示。



组合花样(C)数据输入界面

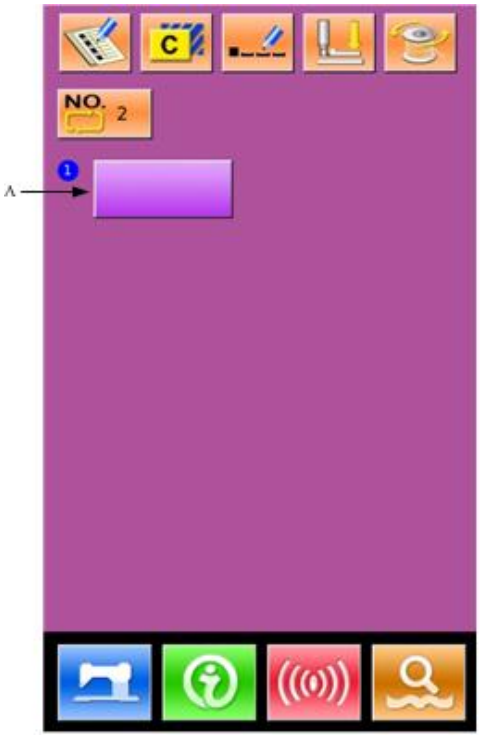
序号	功能	内容
A	C 花样登记	登记一个新组合花样。
B	C 花样复制	可以复制当前 C 花样内容到一个空花样号码下。
C	花样命名	最多可以输入 14 个字符。
D	穿线	按下之后中压脚下降。
E	绕线	进入绕线界面。 按下一次准备键 之后方可绕线。
F	C 花样号码选择	按键上显示当前选择花样号码，按下后进入 C 花样选择界面。
G	缝制顺序显示	显示当前选择花样的缝制顺序，蓝色显示为起始缝制图案。
H	C 花样图案选择	按下后进入 C 花样编辑界面，可以选择输入一个模板花样。
I	翻页键	C 花样图案最多可以登记 50 个，每页最多显示 12 个图案。
J	C 花样名称	显示 C 花样名称。

4.2 C 花样编辑

① 进入 C 花样编辑界面

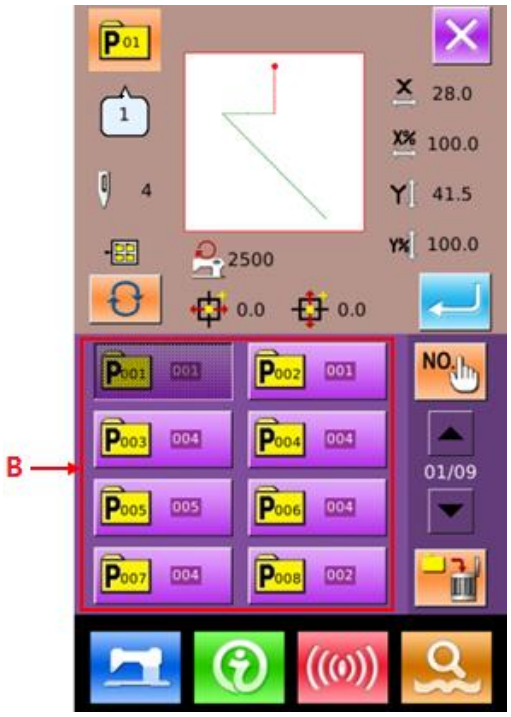
在 C 花样数据输入界面下，按下 A 可以进入 C 花样编辑界面。

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



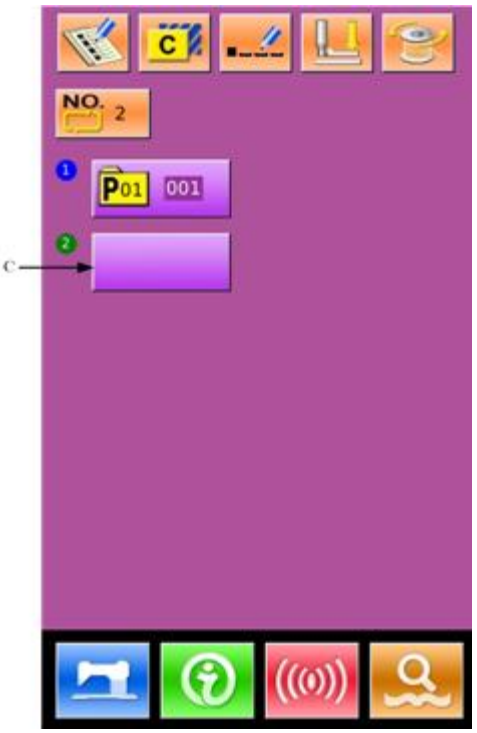
② 选择图案

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



③ 反复登记剩余图案

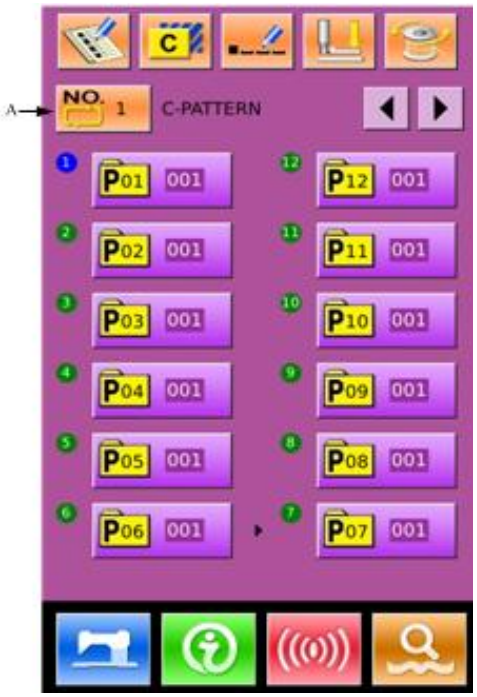
第一个图案登记确定之后，第二个图案选择键 C 被显示出来，操作同上，可以反复登记其它剩余图案。



4.3 C 花样选择

① 进入 C 花样选择界面

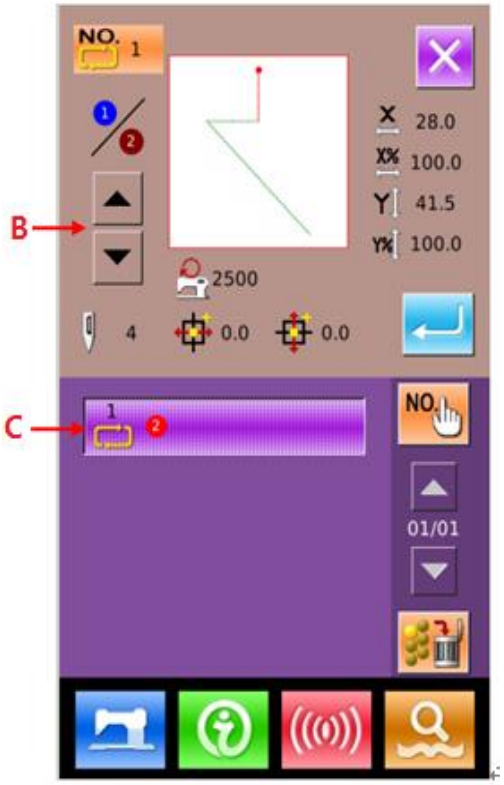
如右图所示，按下图标 A，可以进入 C 花样选择界面。



② 选择 C 花样号码

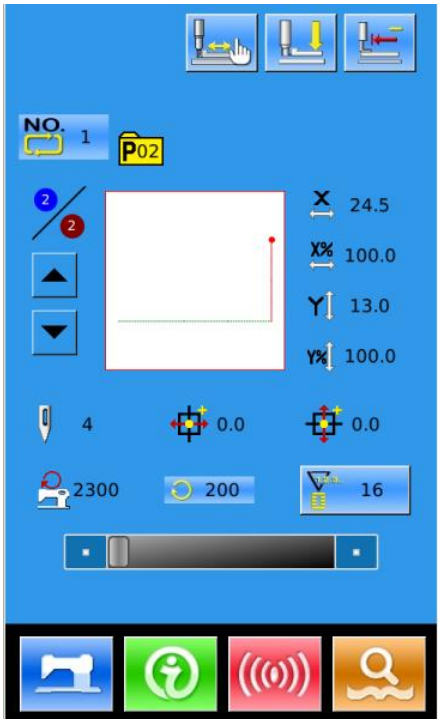
右图为 C 花样选择界面，按下 B 键之后，可以顺序变换当前 C 花样下输入的模板花样数据信息。

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。

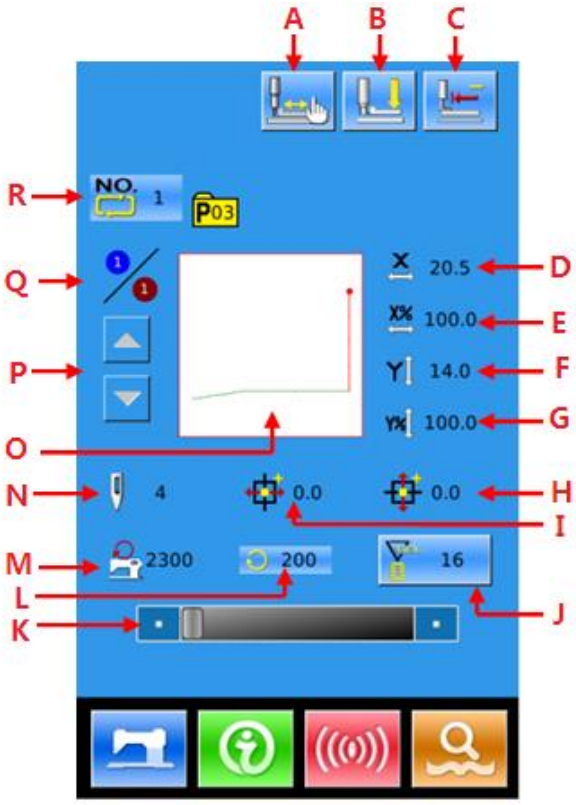


4.4 C 花样试缝

在 C 花样数据输入界面下，按下  进入试缝制界面（如右图所示）。



功能说明：

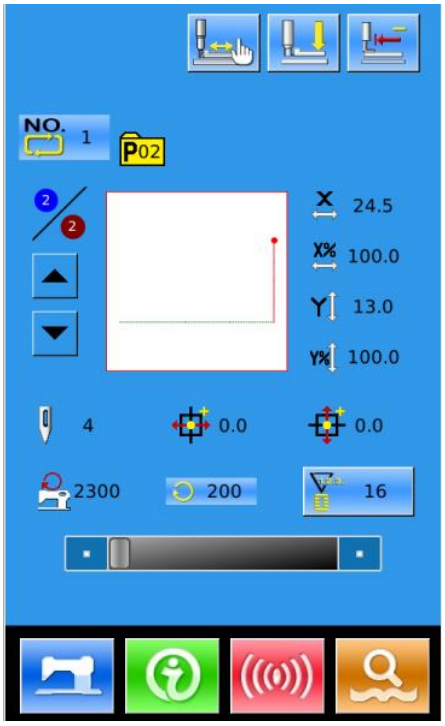


序号	功能	内容
A	抓线按键	选择抓线的有效/无效。受 U35 参数影响。  ：抓线无效  ：抓线有效
B	穿线	按下之后中压脚下降。
C	原点复位	按下后压脚返回始缝点。
D	X 实际尺寸值显示	显示当前缝纫登记形状的 X 方向实际尺寸值。
E	X 放大缩小率设定	显示当前缝纫登记形状的 X 方向放大缩小率。
F	Y 实际尺寸值显示	显示当前缝纫登记形状的 Y 方向实际尺寸值。
G	Y 放大缩小率设定	显示当前缝纫登记形状的 Y 方向放大缩小率。
H	Y 方向偏移量显示	显示当前缝纫登记形状的 Y 方向偏移量。
I	X 方向偏移量显示	显示当前缝纫登记形状的 X 方向偏移量。

序号	功能	内容
J	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
K	缝纫速度设置	可以变更缝纫速度。
L	缝纫速度显示	显示当前缝纫速度。
M	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。
N	花样针数显示	显示当前缝纫登记形状针数。
O	花样形状显示	显示当前缝制所登记的形状。
P	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。
Q	缝制顺序显示/登记总数显示	缝制顺序显示：显示当前缝制花样中的缝制顺序号。 登记总数显示：显示当前缝制花样所登记的图案总数。
R	C 花样号码显示	显示当前选择花样号码。

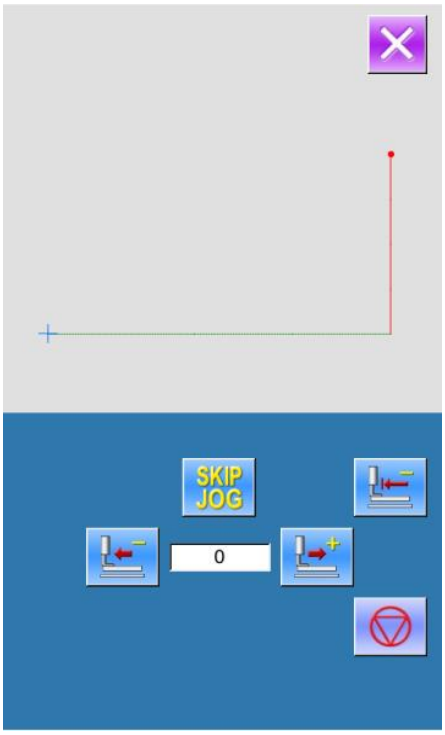
①试缝制界面

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，此时进入试缝制界面。



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）：



 ：返回原点

 ：压脚后退

 ：压脚前进

 ：停止

③ 开始试缝

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

按下返回原点键  后，机针返回原点且返回到缝制界面。

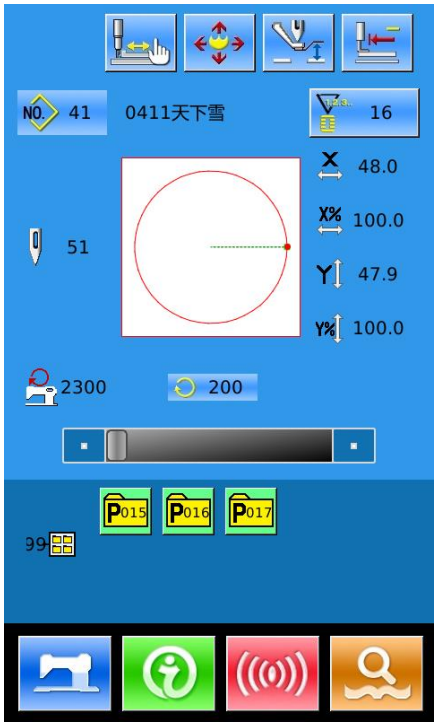
④ 结束试缝

按了取消键  退出试缝界面之后，返回缝制界面。花样形状没有在开始缝制位置或结束缝制位置时，踩脚踏开关后，可以从确认中途进行缝纫。

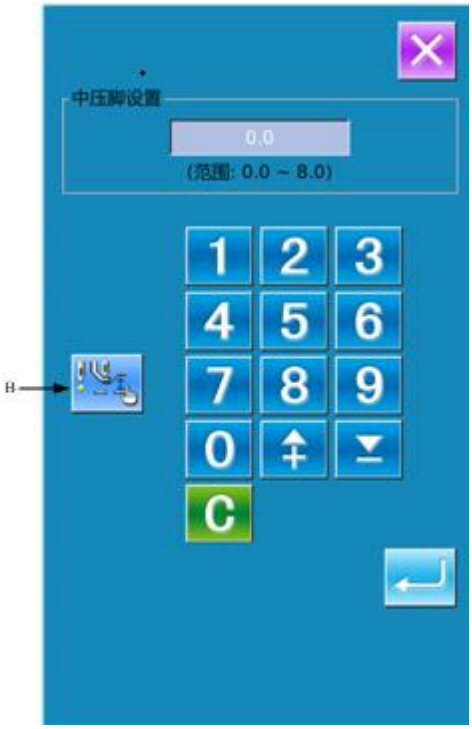
4.5 单针中压脚设置

① 进入单针中压脚设置

在运行界面(如右图)，点击中压脚设置(A)进入中压脚设置界面。



在中压脚设置界面(如右图)，点击单针中压脚设置(B)进入单针中压脚设置界面。



②单针中压脚值设定

点击 

之后，进入中压脚设置界面。设置方法同 3.5 节内容。

在外压脚下降的状态下，用  和  前进或后退一针。用  和  向后或向前移动到有中压脚命令的落针点。想要停止时，按下  。

按下返回原点  之后，移动到原点。

被显示的值为绝对值(中压脚基准值+ 中压脚增减值)。

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】。

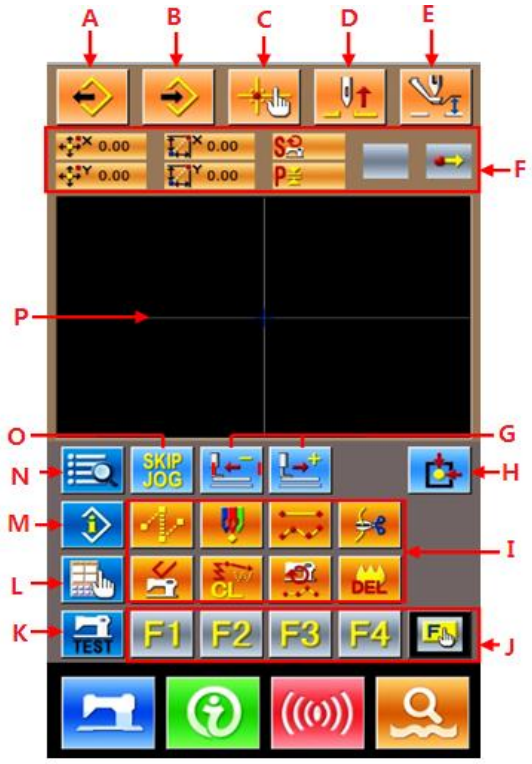
按下  键切换选择编辑模式和缝纫模式。

 ：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。

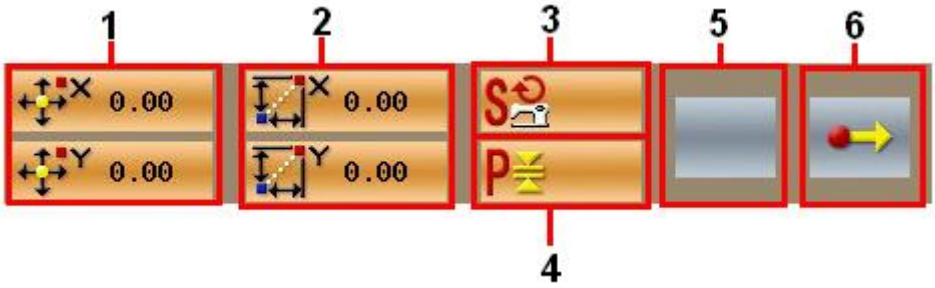
按下  后，进入花样编辑标准界面，如右图所示：



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	让机针返回到上死点
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	前进・后退送布	从现在的针位置移动一针（前进  ；后退  ）
H	原点复位	将现在的机针位置返回到原点。
I	功能按钮	1  ： 空送
		2  ： 点缝

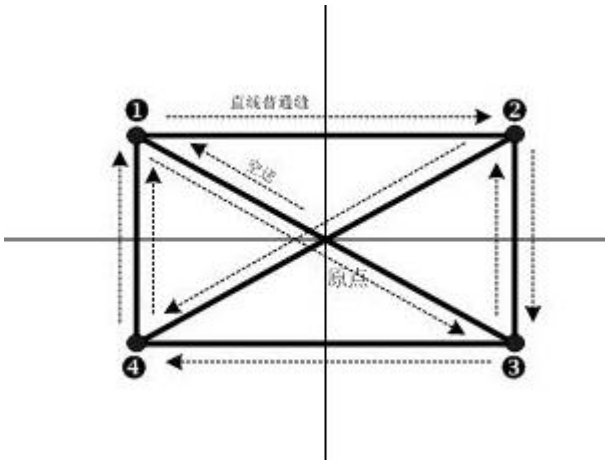
序号	功能	内容
		3  ：普通缝
		4  ：剪线
		5  ：消除机械控制命令
		6  ：要素删除
		7  ：缝制速度区间修改
		8  ：删除当前编辑的花样图案
J	功能快捷键	通过功能选择・设定（功能代码 112），可以把需要的功能分配到各按钮，作为功能快捷键使用。功能被分配后，表示功能的图标被显示到相应的按键上。
K	试缝	可以对当前编辑的花样进行试缝
L	显示设定	可以进行广角设定以及落针点显示设定等
M	信息显示	显示当前编辑花样的详细信息
N	代码一览表	显示所有可操作的编辑功能，详见【编辑功能一览表】
O	跳转	输入针数后跳转到指定针位
P	花样图案显示区域	显示花样图案。



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(剪线等)的图标。
6	落针种类	表示有关落针位置的种类。
		图案起点，表示是图案的起点位置(原点)。
		要素中途，表示是要素内的中途点 (即不是顶点也不是要素终端)
		顶点，表示是折线的顶点。
		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。



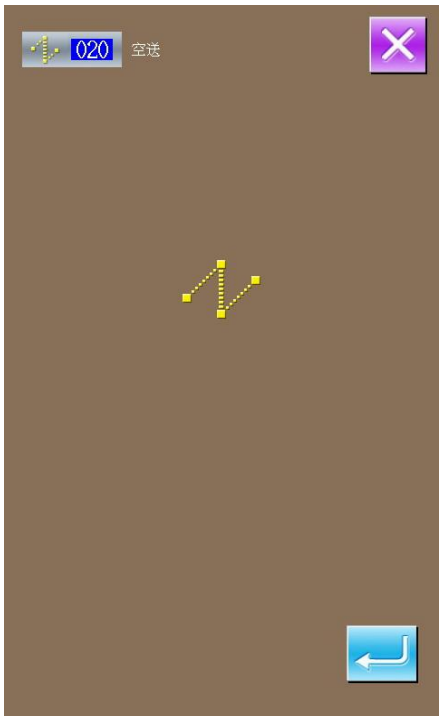
输入点：

	X (mm)	Y (mm)
❶	-40.00	25.00
❷	40.00	25.00
❸	40.00	-25.00
❹	-40.00	-25.00

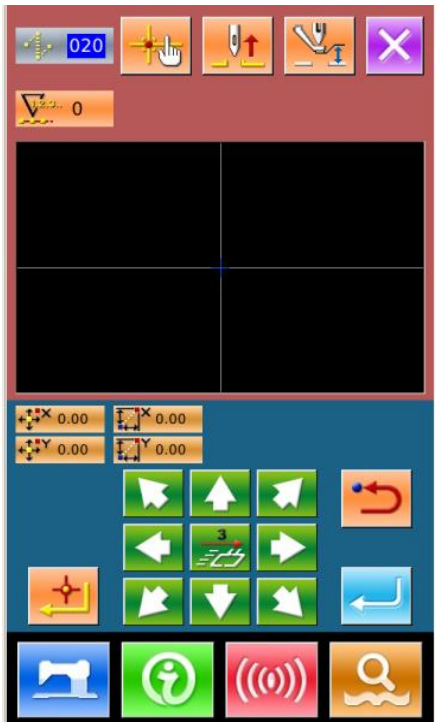
输入次序：如左图中虚线箭头所示。

① 空送的输入

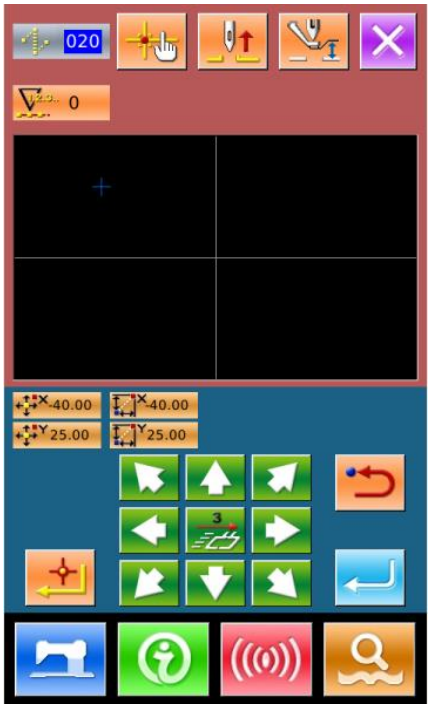
在花样编辑标准界面，按空送按钮  ，显示出空送设定界面：

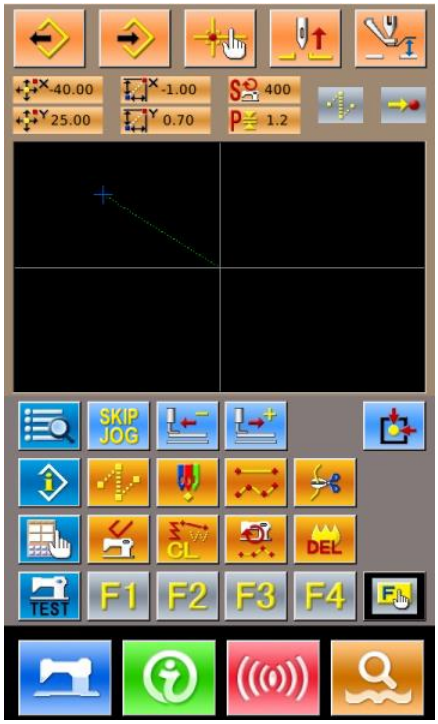


按确认键  后，显示出空送位置指定界面：



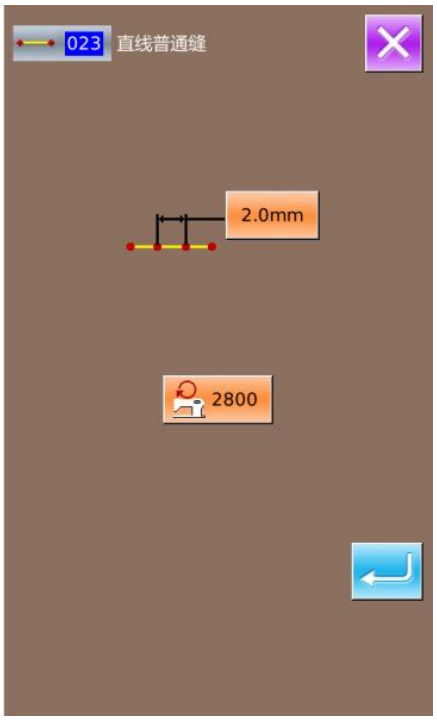
在空送位置指定界面，使用移动键  ，移动光标（机针位置）到（-40，25）处，按  按钮确定后，再按  键保存设置，退回到花样编辑标准界面并显示出空送针迹：





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：



在直线普通缝设置界面下，按缝迹长度设定按钮 

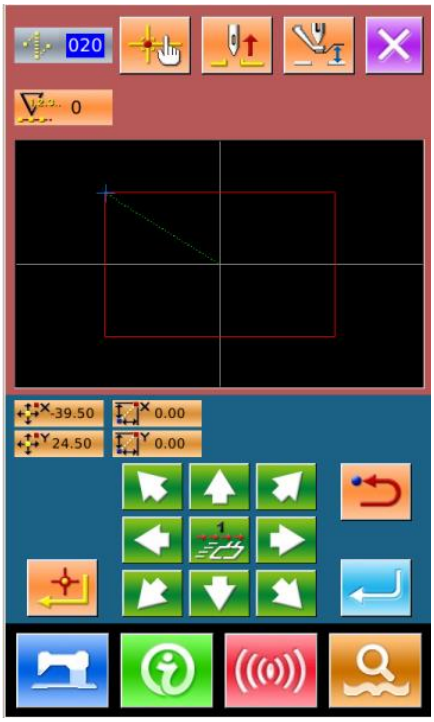
，进入缝迹长度设定界面，如右图所示。

依次按 

、 

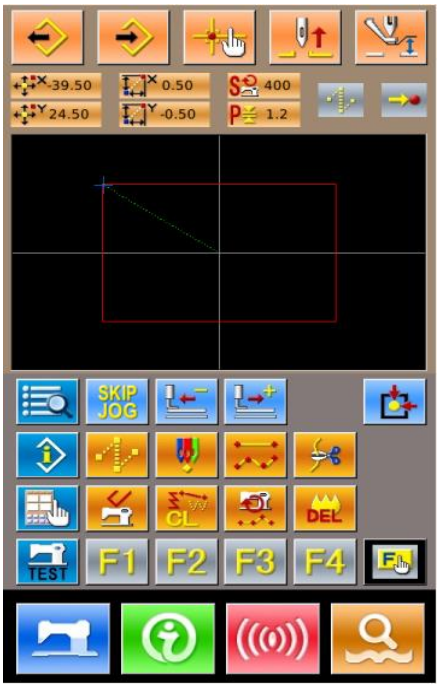
数字键，将缝迹长度变更为“3.0”，按确认键保存并退回到直线普通缝设置界面。

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，按移动键 
，将光标（机针位置）从❶处移动到❷处，然后按确定按钮 
。反复进行上述移动操作，将光标按照❷→❸→❹→❶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。

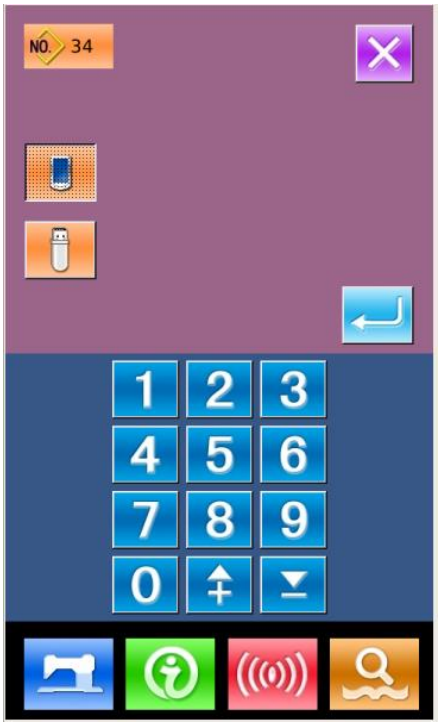


③ 保存花样

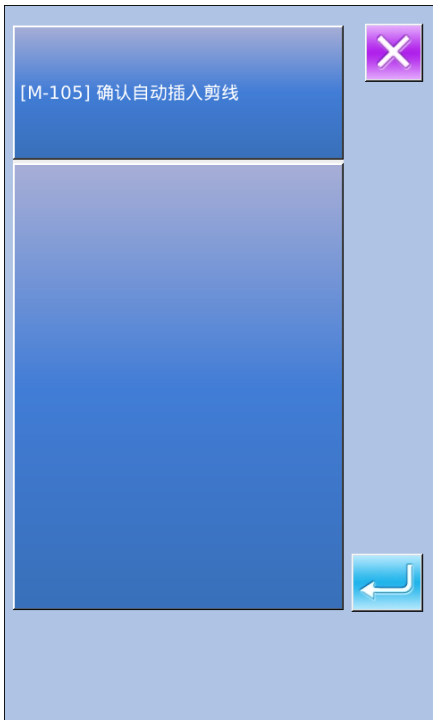
按  按钮，进入图案花样保存界面，保存编辑好的花样图案，如右图所示。

系统自动设定好样号码，用户也可以通过数字键盘输入希望值。

通过  和  按钮，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，是否自动插入剪线，如右图所示。



按  键自动加入剪线；按  键取消自动加入剪线。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  键会切换编辑和缝纫模式，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。

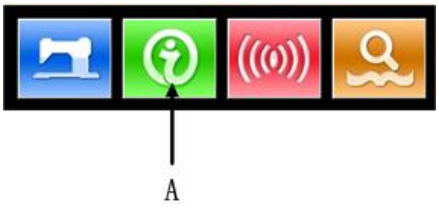
2）利用显示目标值和实际值功能，可以提高生产小组完成目标的意识，可以一目了然地确认进度。

3）显示穿线示意图。

6.1 维修检查信息

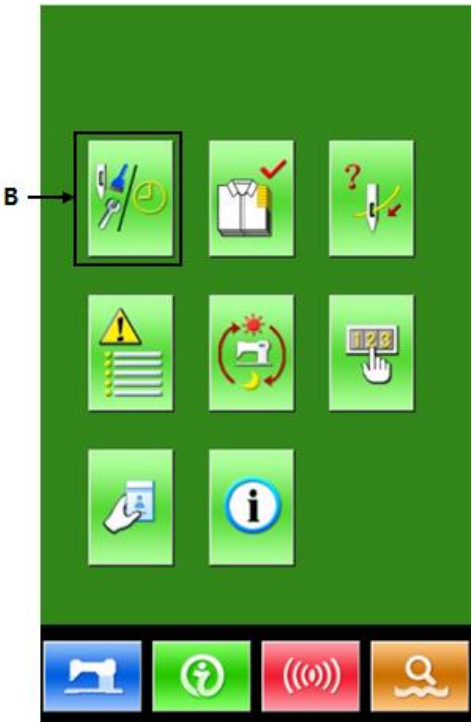
① 显示信息界面

在数据输入界面，按界面下方的信息按键（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）。



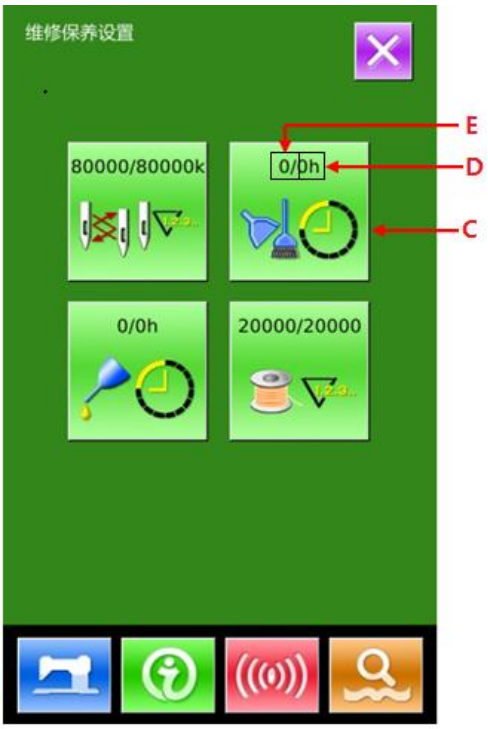
在保养维修信息界面上，有以下3 个项目的信息被显示出来。

 ：更换机针(千针)

 ：清扫时间(小时)

 ：机油更换时间(小时)

：底线计数值



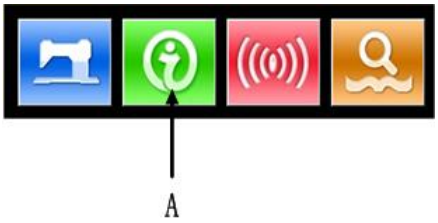
各项目显示在按键(C)，通知检修的间隔显示在D，更换的剩余时间显示在E。

另外，还可以清除更换的剩余时间。

6.2 输入维修保养时间

① 显示信息界面（维修人员等级）

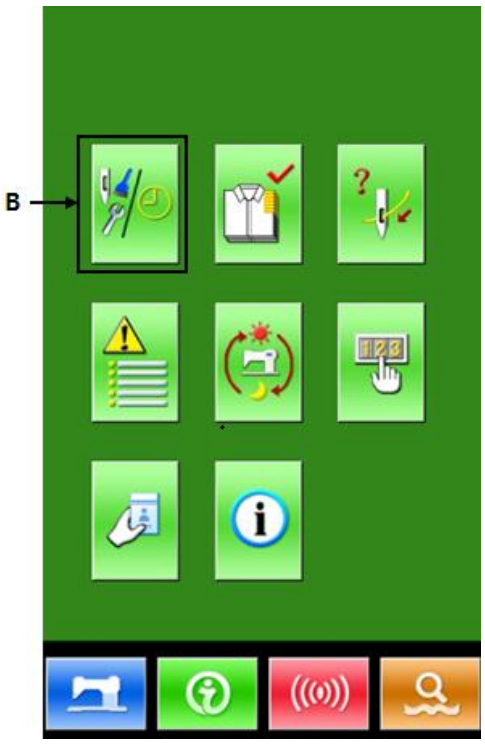
在数据输入界面，按信息按键（A）约3 秒钟之后之后，信息界面（维修人员等级）被显示出来。



维修人员等级时，有6个按键被显示出来。

② 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）。



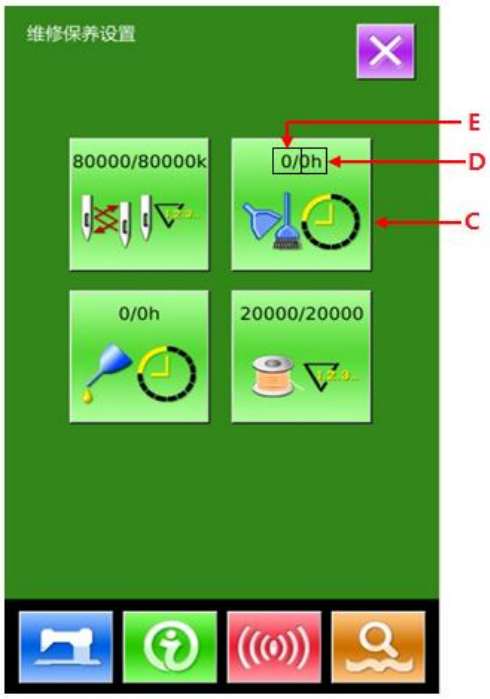
※ 维修人员等级时，有关下部显示的 3 个按键，说明如下：

 ：报警记录

 ：运转记录

 ：分期密码

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。按下想变更维修保养时间的项目按键(C)之后，相关输入界面被显示出来。



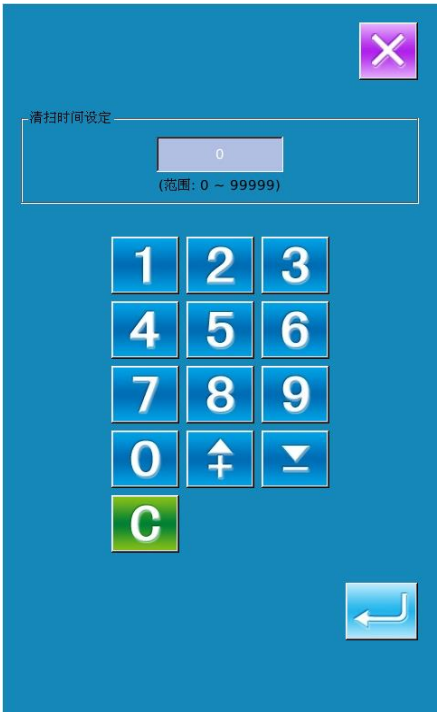
比如按下  键，则可以设置清扫时间。

③ 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。

通过数字键盘输入维修保养项的设定值。

按下确定键 确定输入。



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，请按确定键清除。在清除维修保养时间之前，每1 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 ：M052
- 清扫时间 ：M053
- •机油更换时间：M054

6.4 生产管理信息

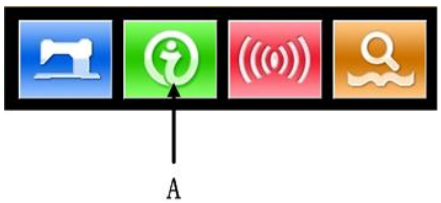
在生产管理界面上可以进行从开始到现在的生产件数，生产目标件数的显示等。生产管理界面的显示方法有以下2 种：

- 从数据录入界面显示
- 从缝制界面显示

6.4.1 从信息界面显示时

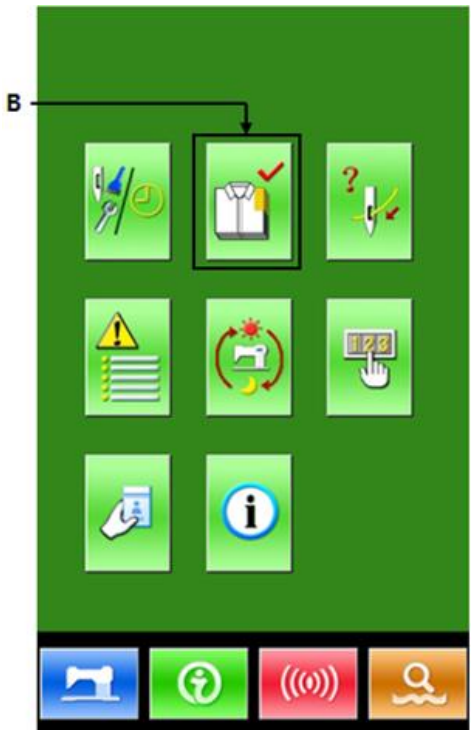
① 显示信息界面。

在数据输入界面按了开关部的信息键（A）之后，信息界面被显示出来。

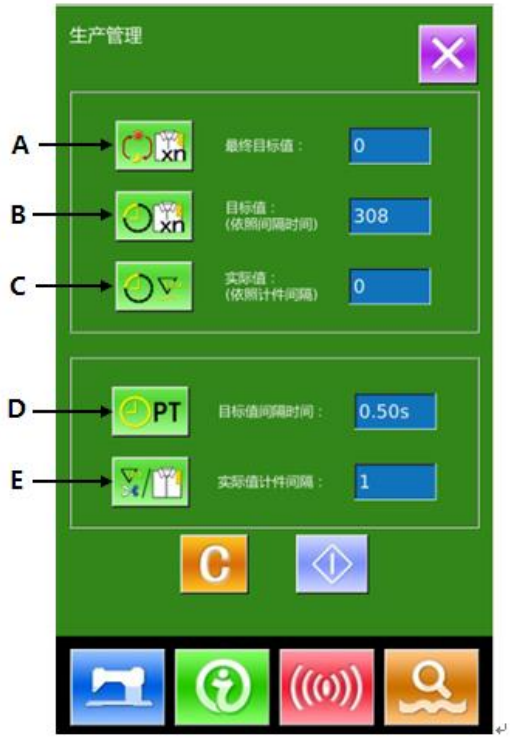


② 显示生产管理界面

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



生产管理界面显示有下列5 项目的信息:



A：最终目标值

设置最终目标的缝制件数。

B：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。

C：实际值

自动地显示已经缝制的件数。

D：目标值间隔时间

设置完成一个工序需要的时间（秒）。

E：实际计件间隔

设置实际完成一个工序的间隔。

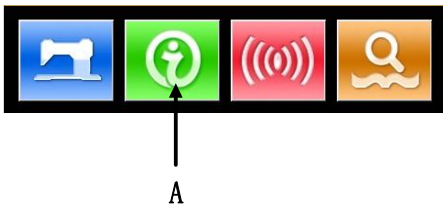
6.4.2 从缝制界面显示时

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。

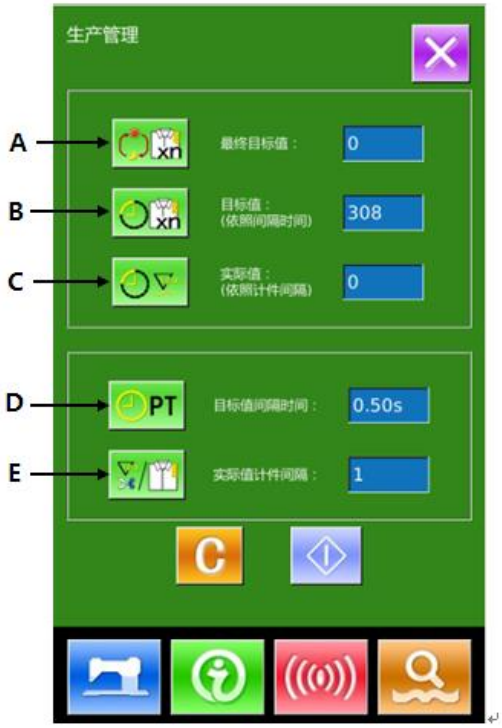


显示内容和功能与上节相同。

6.5 生产信息管理设定

① 显示生产管理界面。

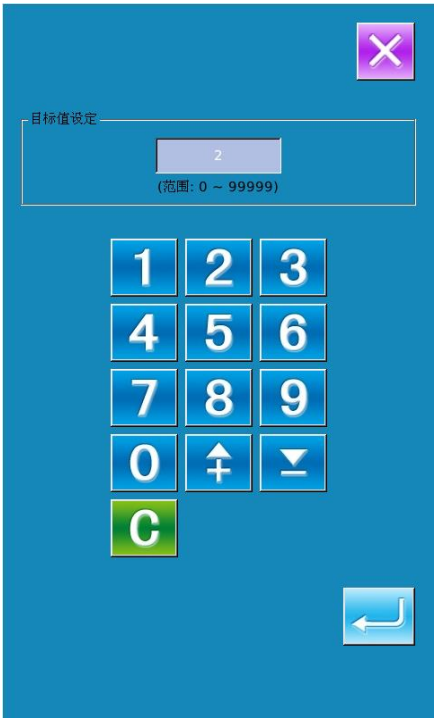
请参照 6.4节 生产管理信息，显示出生产管理界面。



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。

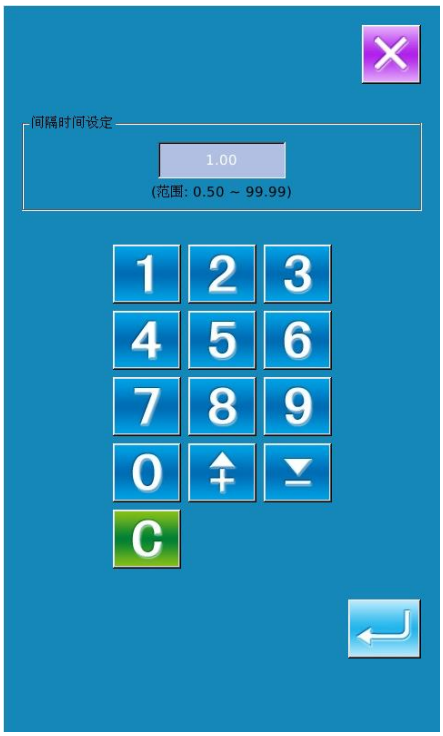
请输入目标数值，然后按下确定按键  。



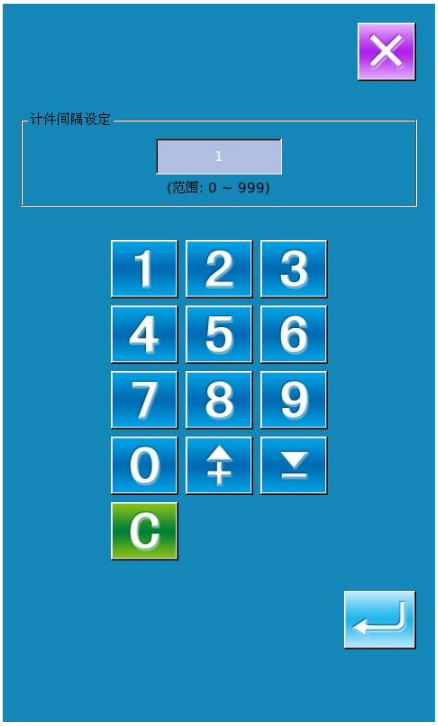
③ 输入间隔时间。

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。

请输入目标数值，然后按下确定按键  。



④ 输入计件间隔



然后，请输入平均1 工序的计件间隔。按了前页的切 次数按键  （E）之后，切线次数的输入界面被显示出来。

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：实际值按照【实际值计件间隔】设定的值，开始计件，每缝完一件增1。

通过设置目标值和实际值可以对比每缝一件的生产效率是提高了还是降低了。

⑥ 停止计数。

计数状态下，停止键  被显示出来。按了停止按键  之后，停止计数。停止后，在停止按键的位置显示出计数按键  。需要继续进行计数时，请再次按

计数按键 。

在按了清除按键 之前，计数的数值不被清除。

⑦ 清除计数值。

清除计数的值时，需要计数器为停止计数状态，按下清除按键 。

可以被清除的值为现在的目标值 和实际值

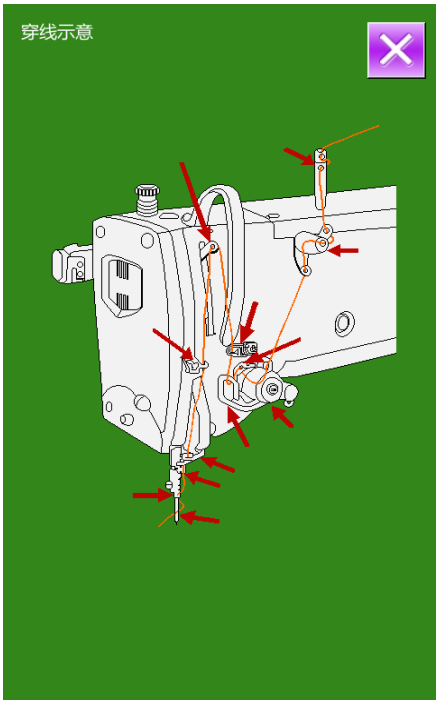
注：仅在停止计数状态时清除按键可以显示。

按下清除按键 之后，会显示提示信息如右图所示，按下确定按键 确认清除。

6.6 显示穿线图

信息界面按下穿线按键  （C）之后，上线图被显示出来。

穿线时，请参阅。



6.7 报警记录

维修人员等级时，按下  可以进入报警记录界面（如右图所示），界面中显示了系统发生的故障信息内容，序号越小表示该故障信息发生的时间越新。

另外还记录了每次报警发生时的生产计数。

可以通过  键或  键进行翻页，查看更多的报错信息。

按下  键会清除掉全部故障信息记录。

6.8 运转记录

维修人员等级时，按下  可以查询机器的运转信息。

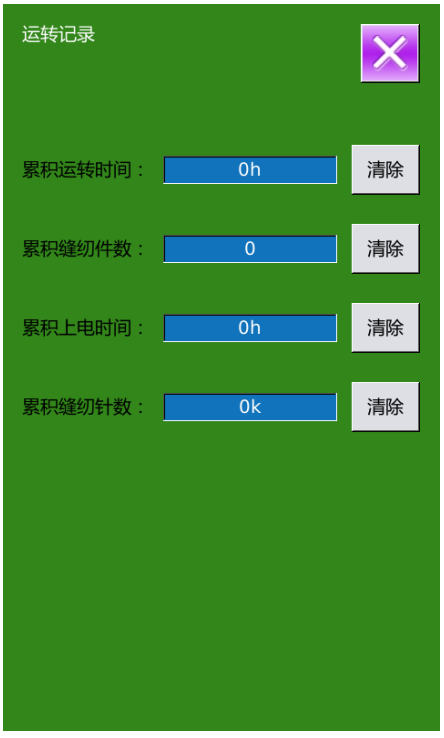
累积运转时间：记录机器累积运转时间（小时单位）

累积缝纫件数：记录机器累积缝制件数

累积上电时间：机器累积上电时间（小时单位）

累积缝纫针数：机器累积针数（1000 针单位）

按下“清除”键可以分别清除记录值。

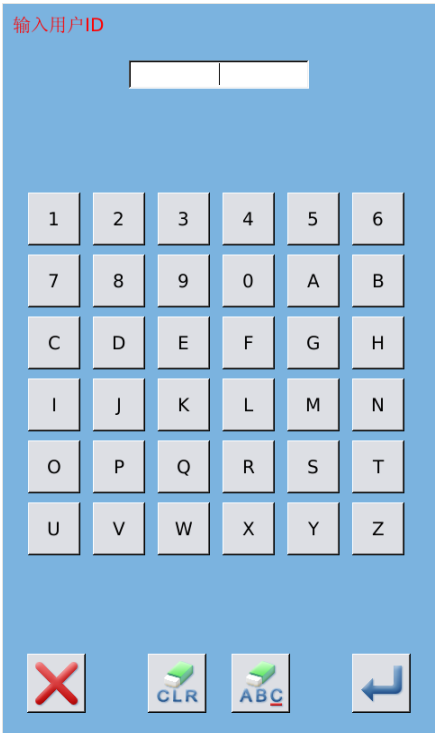


6.9 分期密码设置

1） 维修人员等级时，按下  可以设置分期密码

首先会显示输入用户 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。



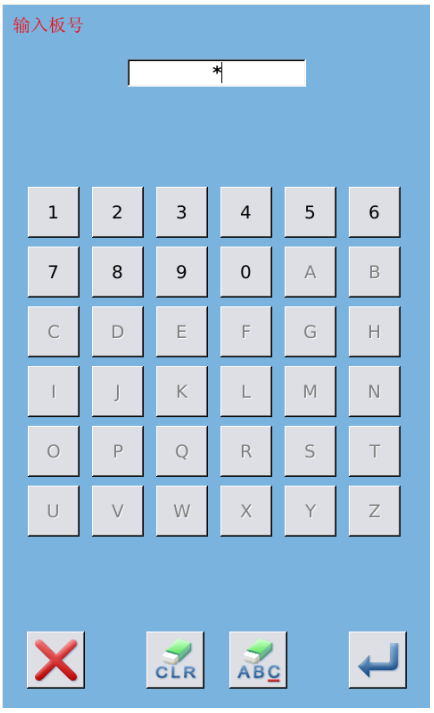
2) 输入正确的厂家 ID 后，进入密码设置界面

设置密码前需要先设置板号和系统时钟。

3) 输入板号

按下【板号】键，进入板号输入界面，输入板号后，按下确定键  完成输入。

※ 板号为四位，范围 0~9999



4) 输入系统时钟

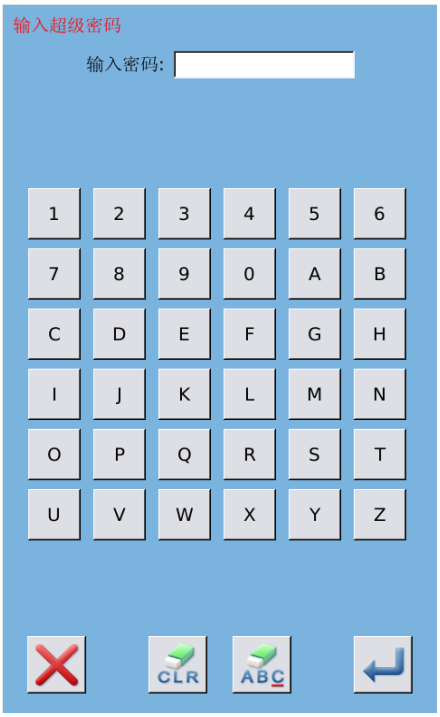
按下【时钟】键，进入系统时钟设置界面，确定系统时钟

5) 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



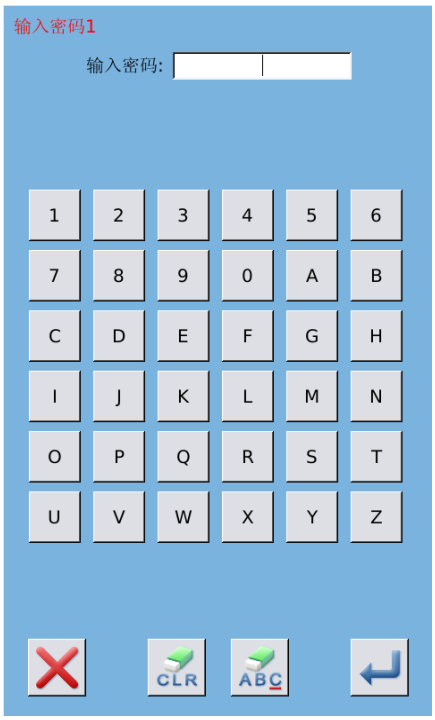
6) 输入分期密码

按下【密码-1】键，进入第一期密码设置界面，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**

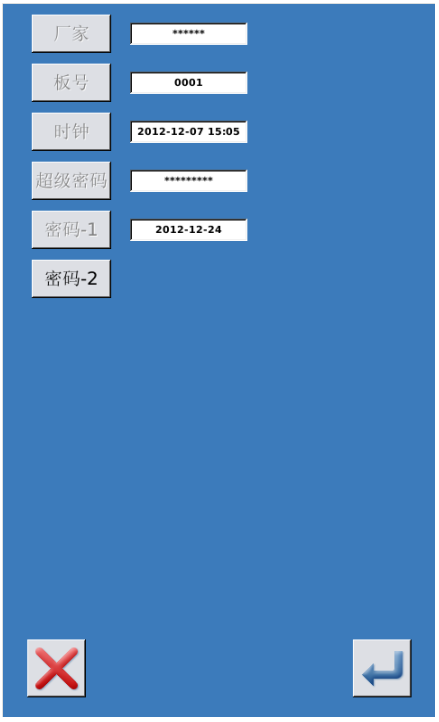
※ **密码输入要求确认，两次密码必须一致**



7) 输入其他的分期密码

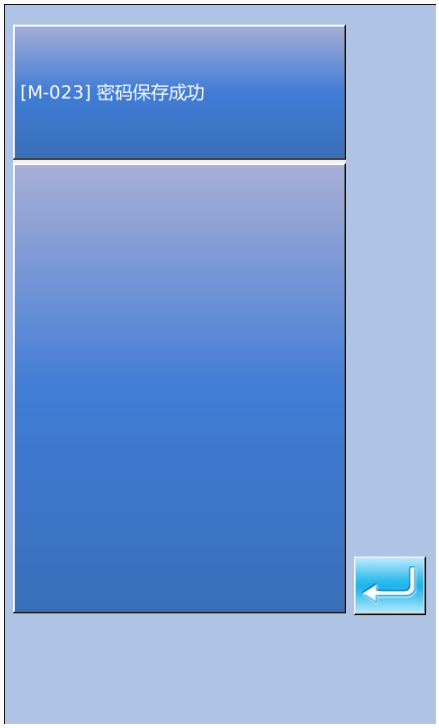
其他分期密码的设置和⑦相同，参考⑦的设置

※ **下一个有效日期必须大于上一个有效日期**



8) 保存密码

密码输入完成后，按确定键 保存。密码保存成功后，会显示如右图所示提示信息。



9) 主动清除密码

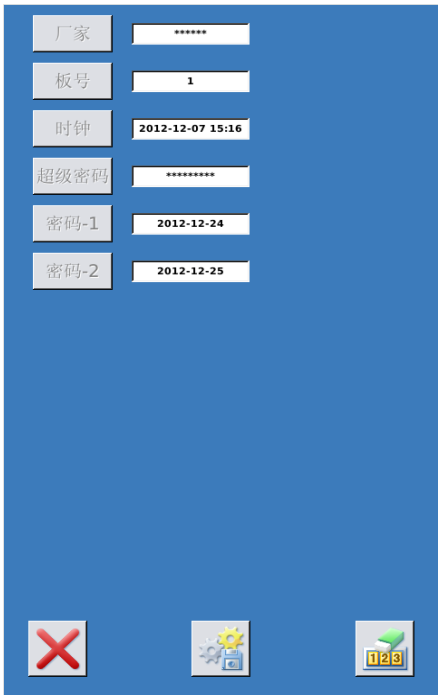
主动清除密码是指在分期密码发作前主动清除密码的设置。

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



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，则清除全部密码。

密码清除后会以红色文本形式显示，如果全部密码清除完毕，则自动退出，返回到信息主界面。

10) 密码发作

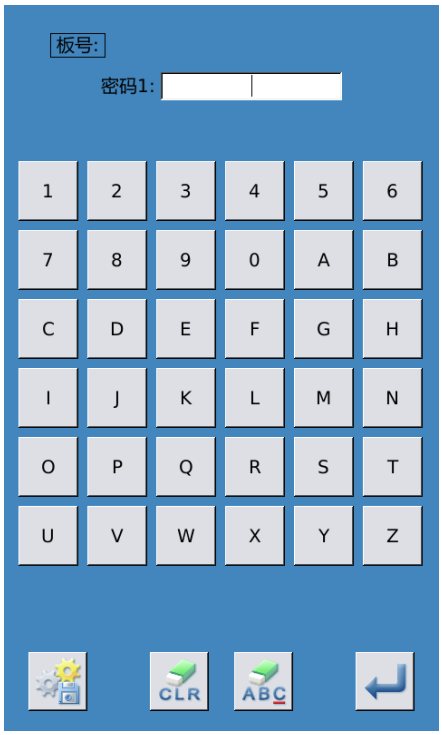
如果系统设置了密码，则使用至密码发作日期时，会遇到密码发作。

此时若继续使用，必须输入有效密码。

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。



6.10 员工智能打卡

在信息界面，如 6.4 节介绍。

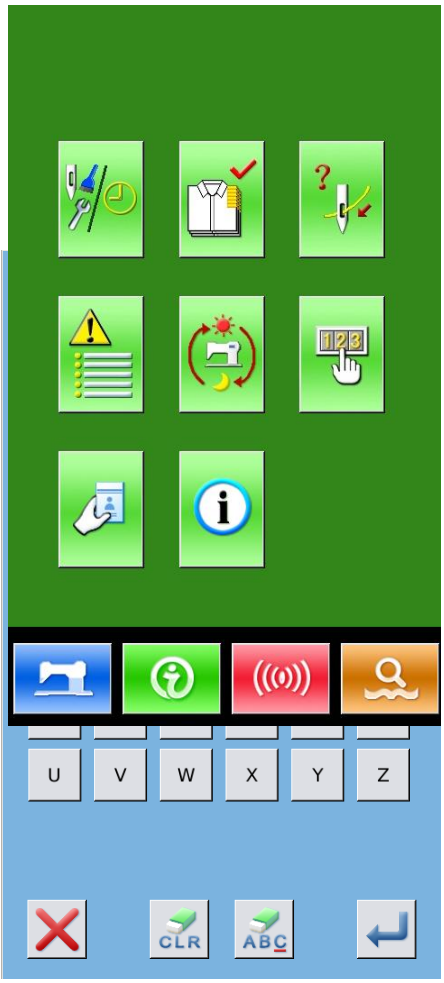
用户点击  键，可进入智能打卡界面，如右下图所示。

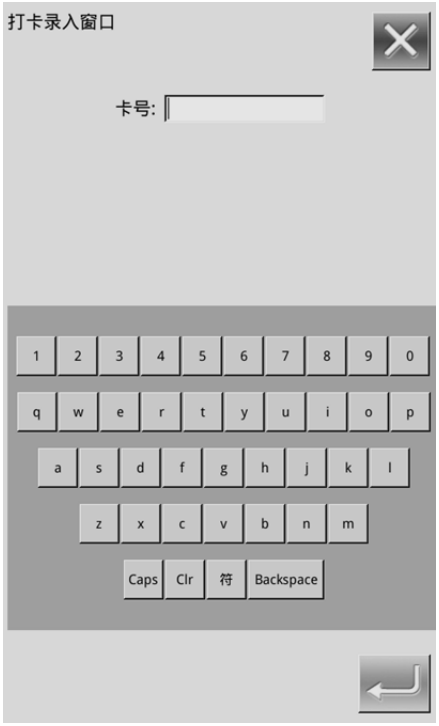
如果网络正常连接，员工录入自己的工号，点击确定键可以将自己的信息发送给服务器。

如果智能工厂服务器保存有相关的员工信息，此时员工的相关工作统计会记入服务器。

管理人员通过智能工厂客户端查询相关工作统计可以轻松结算员工产量、工资等信息。

注意：带 WIFI 功能的面板才能正常使用该功能。





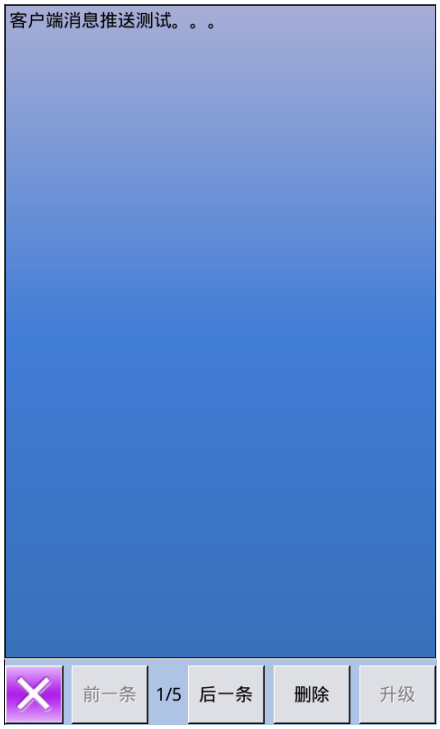
6.11 推送消息

在信息界面，如 6.4 节介绍。

维修人员等级时，按下  可以进入推送消息记录界面，如右下图所示。

如果管理人员曾经通过智能工厂客户端发送过推送消息，此界面会显示最近的一条消息内容。

通过“前一条”，“后一条”，“删除”键可对推送消息进行翻页、删除操作。


客户端消息推送测试。。。
前一条
1/5
后一条
删除
升级

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：

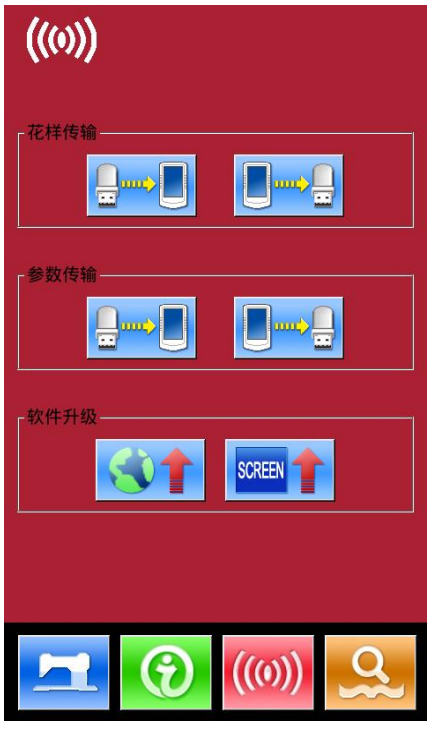
数据类型	标准格式
VDT	[0-9][0-9][1-9].vdt
DXF	[0-9][0-9][1-9].dxf
DST/DSB	[0-9][0-9][1-9].dst/ [0-9][0-9][1-9].dsb
B/BA	[0-9][0-9][1-9].(1-599)/ [0-9][0-9][1-9].(600-999)
PAT	[0-9][0-9][1-9].pat

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：

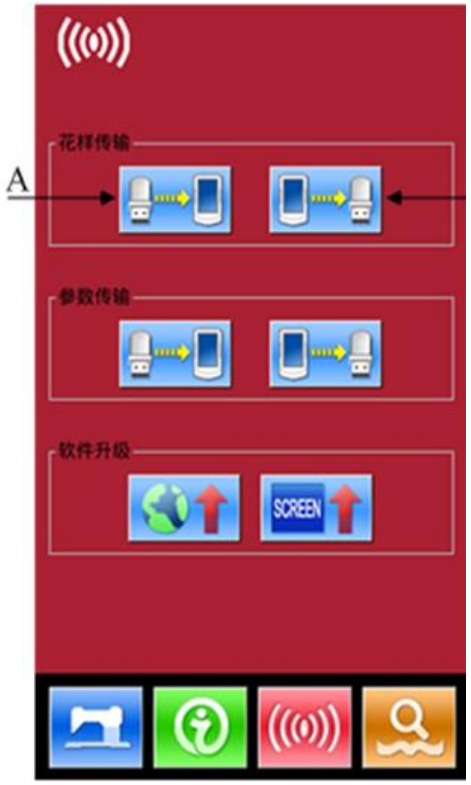
- 花样传输
- 参数传输
- 软件升级

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



A：从U盘向操作面板导入花样

B：将操作面板中保存的花样导出到U盘中

※ 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

举例：

正确的文件命名： 100.vdt、102.dst

其他的命名方式不正确，系统不能识别。

默认情况下，文件名称也就是复制到操作面板后的保存位置。

7.3.1 U 盘花样导入操作

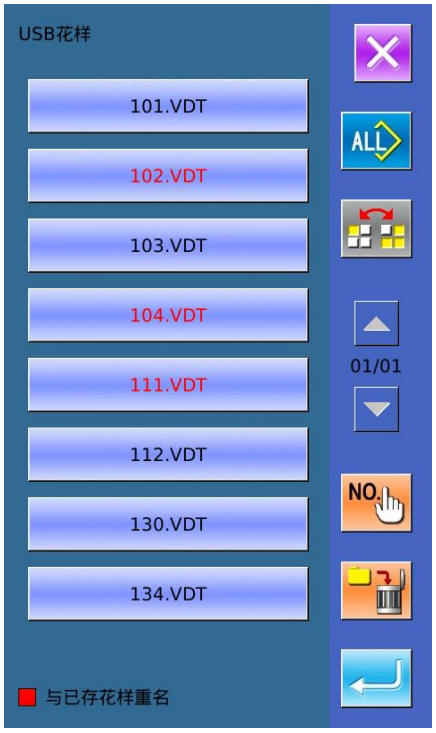
按  （A）键，进入U盘向操作面板导入花样界面。

 ：选择全部花样

 ：反选操作

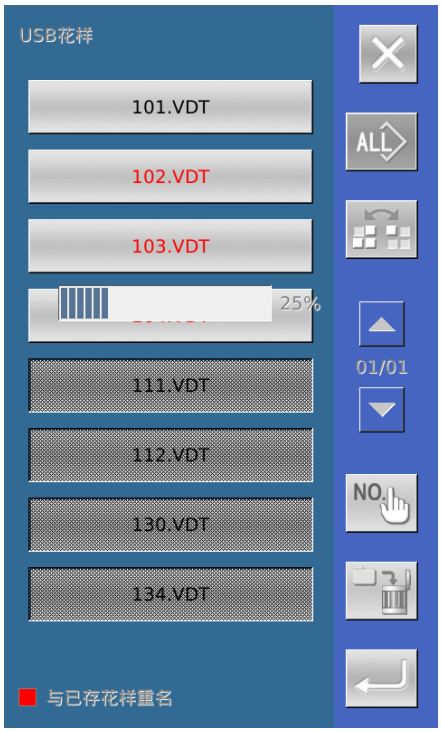
 ：输入保存号码（选择一个花样导入时可用）

 ：删除花样

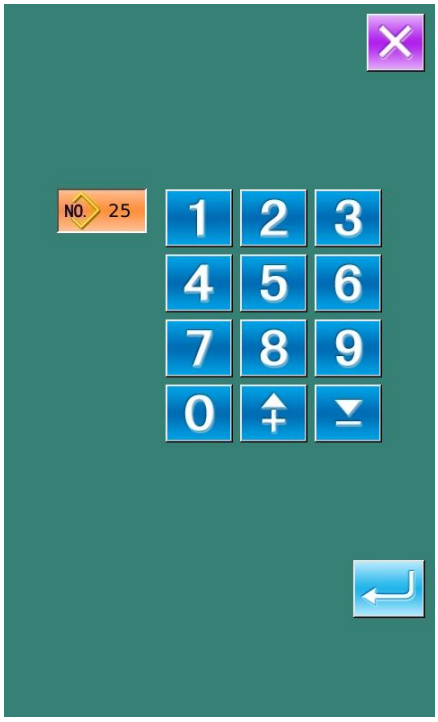


选中想要导入的花样，按下确定键  完成导入操作，导入操作面板后的保存位置与选择的花样号一致。

注：不能覆盖已存花样。



红色名字的花样文件不能导入，因为与操作面板中的已存花样重名，需要手动输入号码进入导入。



按下输入键 

进入号码输入界面，默认号码为当前空号，也可以手动输入目标号码，按下确定键后完成保存操作。

注：重名花样只能一个一个导入，选择多个花样时不能使用 

键。

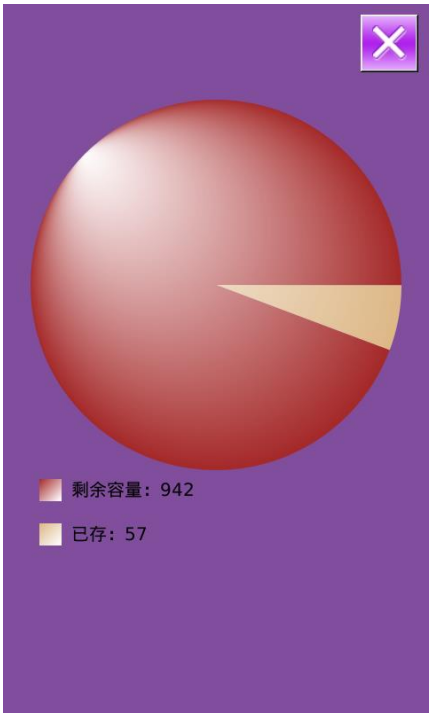
7.3.2 操作面板花样导出操作

按下  （B）键，进入操作面板花样导出界面。

选择想要导出的花样号，按下确定键  完成操作。

也可以在当前界面下批量删除花样。

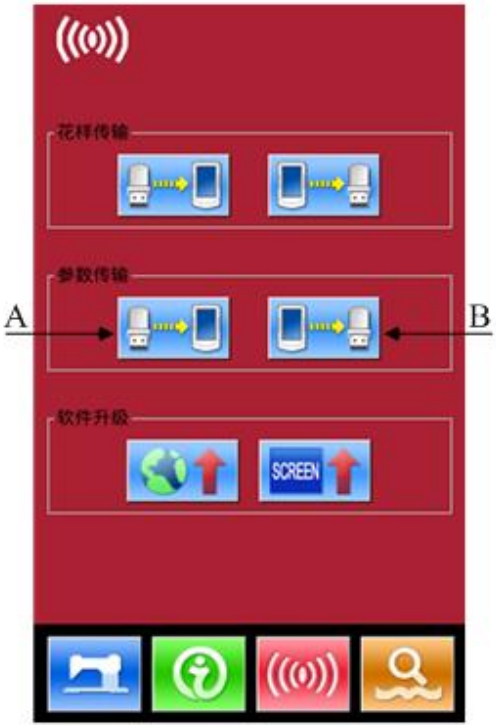
在该界面下，按  键可以查询内存花样剩余空间。



7.4 参数传输

① 显示通信界面

A：从U盘向操作面板导入参数
B：将操作头中保存的参数导出到U盘

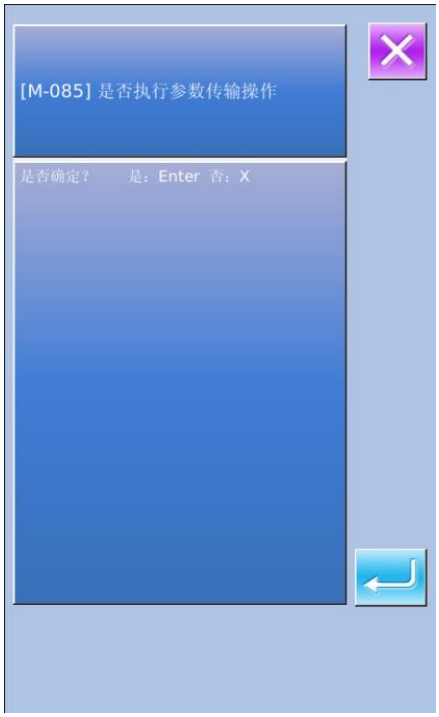


※ 从U盘导入参数时，请将参数文件保存在U盘的DH_PARA目录中，并命名为：ukParam

※ 从操作面板导出参数时，导出的参数文件保存在U盘的DH_PARA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面板上完成，不要手动修改文件，以免影响使用。

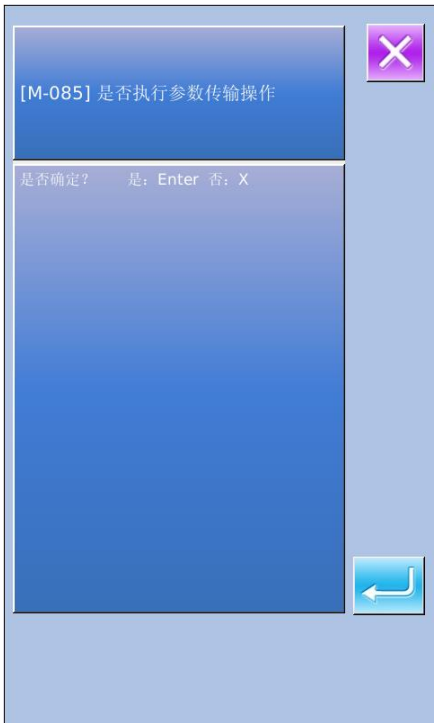
② 按A键，完成从U盘向操作头导入参数



A、按确定键  完成从 U 盘向操作面板导入参数并退出。

B、按退出键  直接退出。

③ 按B键，完成操作面板的参数导出到U盘中



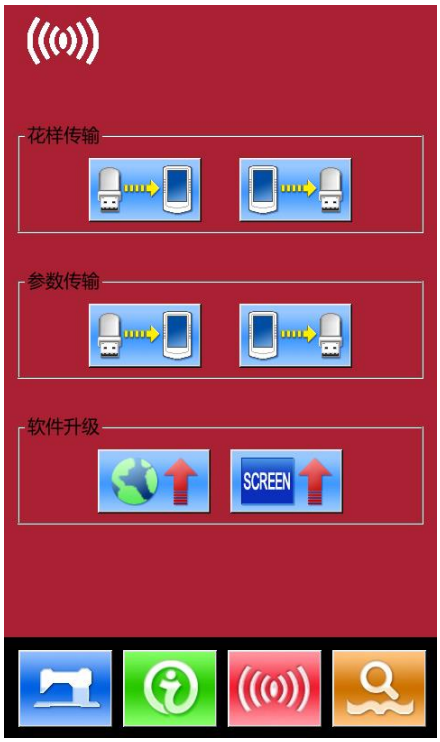
A、按确定键  完成从操作面板向U盘导出参数并退出。

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  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
- 显示字库
- 开机画面
- 视频文件
- 播放器

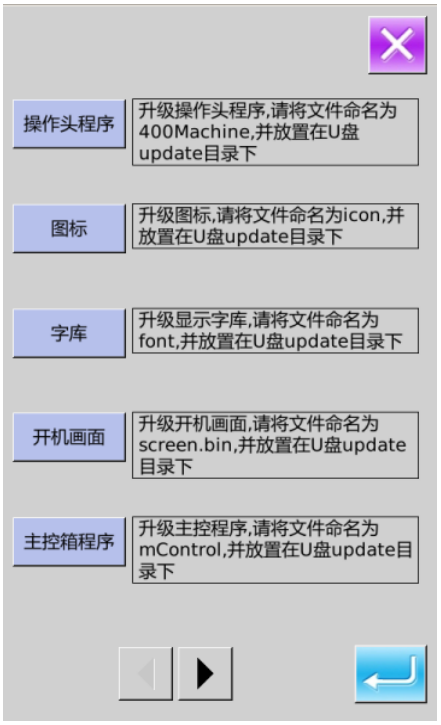
按  和  键进行翻页。

A、按确定键  完成选中功能的升级并退出。

B、按退出键  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，需要关机重启。



8 模式和参数设置

8.1 进入模式和参数设置

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。

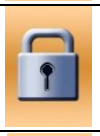
长按  键 3 秒可以进入设置模式等级 2 状态，长按 6 秒可以进入设置模式等级 3 状态。

设置模式等级 1

设置模式等级 2

设置模式等级 3

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		花样编辑	可以进入花样编辑。
5		快捷参数设置键	可设置用户常用参数
6		批量删除花样	可以批量删除花样
7		针距设置	可以改变当前花样针距长度
8		字母绣编辑	进行字母绣设置。
9		格式化	进入格式化功能。
10		软件版本查询	查询当前软件版本。
11		键盘锁定	可以锁定一些设定项功能。
12		检测模式	针对机器外设和液晶进行检测。
13		参数备份还原	可以对当前参数进行备份和恢复。

序号	图标	功能	内容
14		编辑参数开关	可以对编辑下参数进行打开或关闭操作。
15		二级参数设置	进行二级（K）参数设置。

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）。

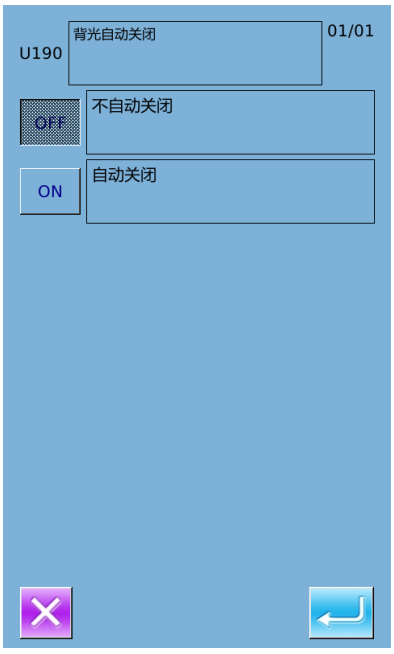
按  键退出参数设置界面。

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，参数设置分为输入型和选择型，举例如下：

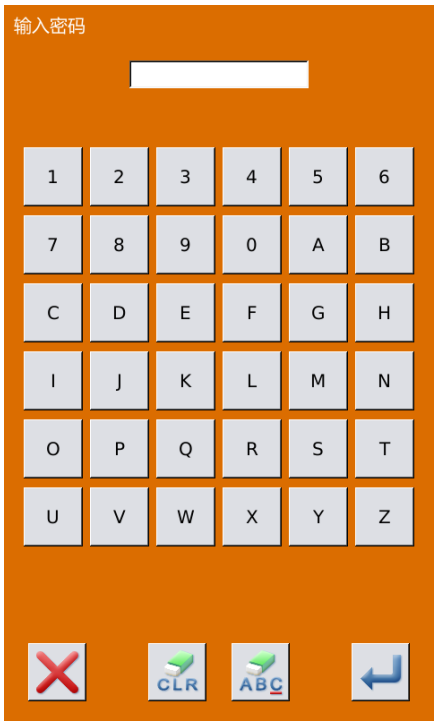
选择 U191，进入界面（输入型）

选择 U190，进入界面（选择型）



② **参数加密**

按【加密】键后， 进入密码输入界面。



※ 按 CLR 全部清除输入内容。

※ 按 ABC 每按一次删除一个字符。

※ 默认密码为厂家 ID。

输入正确的密码后，进入参数加密界面。选择要加密的参数，按下参数号码即可。

※ 按【全选】，全部参数加密。

※ 按【反选】，反向选择参数加密。

※ 按【改密】，修改密码，默认是厂家 ID。

按退出键 退出加密功能。

③ 查询已修改参数

如果有参数修改，在参数设置界面会显示【已修改】按键。

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。

A、 首先要求输入密码，输入正确的密码后进入已修改参数查询界面。

B、在已修改参数查询界面下，可以查询所有修改过的参数列表。在该界面下：

※ 按【还原所有】按键，将修改参数全部恢复为出厂值。

※ 点按参数名称键，例如【背光自动关闭】，再按【选择还原】将选中的参数恢复为出厂值，支持复选操作。

※ 按参数号码键，例如【U190】，能够进入参数设置界面，可以重新设置参数数值。

※ 按模式键  ，退出该界面。

8.2.1 一级参数表

序号	参数	设定范围	编辑单位	出厂设置
U01	最高缝制速度	200~2800	100rpm	2500rpm
U02	第一针启动速度 有抓线时	200~2800	100rpm	600rpm
U03	第二针启动速度 有抓线时	200~2800	100rpm	900rpm
U04	第三针启动速度 有抓线时	200~2800	100rpm	1200rpm
U05	第四针启动速度 有抓线时	200~2800	100rpm	1500rpm
U06	第五针启动速度 有抓线时	200~2800	100rpm	1800rpm
U07	第一针的线张力 有抓线时	0~200	1	200
U08	切线时的线张力设定	0~200	1	0
U09	切线时的线张力切换相位	-6~4	1(4°)	0
U10	第一针的启动速度 无抓线时	200~1500rpm	100rpm	300rpm
U11	第二针的启动速度 无抓线时	200~2700rpm	100rpm	500rpm
U12	第三针的启动速度 无抓线时	200~2700rpm	100rpm	800rpm
U13	第四针的启动速度 无抓线时	200~2700rpm	100rpm	1200rpm
U14	第五针的启动速度 无抓线时	200~2700rpm	100rpm	1800rpm
U15	第一针的线张力 无抓线时	0~200	1	0
U16	启缝时的线张力切换相位 无抓线时	-5~2	1	-5
U25	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：OFF：无蜂鸣音 1：PAN：操作盘音 2：ALL：操作盘加报警		2
U33	设定抓线的放开针数	1~7	1	4
U34	抓线器的抓线延时时相	-10~0	1(4°)	0
U35	抓线开关控制 ON ：允许	0：允许 1：禁止动作		1

序号	参数	设定范围	编辑单位	出厂设置
	OFF：禁止			
U36	选择送布动作时相 在收线不良情况下设定一方向	4~12	1(4°)	4
U37	缝制结束后压脚状态	0：始缝移动后，压脚上升 1：缝制结束后立即上升 2：始缝移动后，操作踏板上升		0
U38	自动加工完成后压板抬起	0：ON：压脚上升 1：OFF：禁止压脚上升		0
U39	缝制结束后是否检索原点（非组合缝）	0：OFF：无原点检索 1：ON：有原点检索		1
U40	设定组合缝制时的原点检索	0：OFF：无原点检索 1：PAT：每一图案结束后 2：CLC：每一循环结束后		0
U41	中途停止命令下可选择停止时的压脚状态	0：压脚自动上升 1：通过压脚开关上升		0
U42	机针停止位置	0：UP：上位置 1：DEAD：上死点		0
U46	是否允许剪线	0：ON：允许 1：OFF：禁止切线		0
U48	设置起缝点复位路径	0：直线复位 1：图案返回 2：原点检索		0
U49	绕线速度设置	200~2800	100rpm	1600rpm
U51	拨线开关是否打开	0：OFF：关闭 1：ON：打开		1
U64	尺寸变更单位	0：%：输入百分比 1：SIZ：输入实际尺寸		0
U68	线张力设定时的线张力输出时间	0~20s (0：无张力输出)	1	0
U69	抓线的弯曲位置	-10-10	1	0
U70	抓线位置	0：标准（前方位置） 1：后方位置		0
U71	断线检测	0：OFF：无效 1：ON：有效		0
U72	断线检测时缝制开始的无效针数	0~15	1	8

序号	参数	设定范围	编辑单位	出厂设置
U73	断线检测时缝制中途的无效针数	0~15	1	5
U81	外压脚控制-脚踏开闭	(电磁压脚) 0：1 段 1：2 段行程(通过压脚 SW 压脚最下降) 2：2 段行程(通过启动 SW 压脚最下降启动) 3：2 段行程(通过压脚 SW1 压脚中间、最下降、上升) 4~99：1 段 (气动压脚) 0：一体压脚 1：左右分离压脚，无左右优先 2：左右分离压脚，从右到左顺序 3：左右分离压脚，从左到右顺序 4：一体行程 5：左右分离左行程，无左右优先 6：左右分离左行程，从右到左的顺序 7：左右分离左行程，从左到右的顺序 8~99：一体压脚	1	0
U82	外压脚控制-中途停止时开闭	(电磁压脚) 0：1 段 1：2 段行程(通过压脚 SW 压脚最下降) 2：2 段行程(通过启动 SW 压脚最下降启动) 3：2 段行程(通过压脚 SW1 压脚中间、最下降、上升) 4~99：1 段 (气动压脚) 0：一体压脚 1：左右分离压脚，无左右优先	1	0

序号	参数	设定范围	编辑单位	出厂设置
		2：左右分离压脚，从右到左顺序 3：左右分离压脚，从左到右顺序 4：一体行程 5：左右分离左行程，无左右优先 6：左右分离左行程，从右到左的顺序 7：左右分离左行程，从左到右的顺序 8~99：一体压脚		
U84	踏板 SW1 锁定	0：OFF：无 1：ON：有		1
U85	踏板 SW2 锁定	0：OFF：无 1：ON：有		1
U86	踏板 SW3 锁定	0：OFF：无 1：ON：有		1
U87	踏板 SW4 锁定	0：OFF：无 1：ON：有		1
U88	放大缩小模式	0：OFF：禁止 1：PIT：间隔增减 2：STI：针数增减		1
U89	移动模式	0：禁止 1：平行移动 2：后设第二原点		2
U91	滚珠轨道补正动作	0：OFF 无 1：ON：有		0
U94	原点检索时是否选择上死点	0：OFF：否 1：ON：是		0
U97	暂停-切线方式	0：AUT：自动切线 1：MAN：手动(通过再将停止 SW 进行切线)		1
U101	主马达 XY 传送同步控制	0：2700rpm /3.0mm 1：2200rpm 3.0mm 2：1800rpm /3.0mm 3：1400rpm /3.0mm		0

序号	参数	设定范围	编辑单位	出厂设置
U103	中压脚控制	0：无（下降固定） 1：有（运转时、通过缝制数据下降） 2：有（送布前进、后退时下降）		1
U104	中压脚下降同步	0：缝纫机机头启动之前 1：与最后的外压脚同步		0
U105	中压脚/拨线器拨线位置	0：中压脚上拨 1：中压脚上拨（中压脚最下降位置） 2：中压脚下拨		0
U108	气动压力检测	0：OFF：无 1：ON：有		1
U129	机针冷却有无	0：OFF：无 1：ON：有		0
U132	注油间隔时间	0~65535	1	30
U133	注油工作时间	0~65535	1	700
U190	背光自动关闭	0：OFF：不自动关闭 1：ON：自动关闭		0
U191	背光自动关闭等待时间	1~9 分钟	1	3
U192	液晶背光亮度调节	20~100	1	100
U193	禁止计数器被修改	0：OFF：允许修改 1：ON：禁止修改		0
U194	计数器达到设定值时的缝纫机操作	0：OFF：停止缝纫 1：ON：可继续缝纫		0
U195	音量大小	30~63	1	50
U200	语言选择	0：ZH：中文 1：EN：英文 2：TU：Türk 3：HAN：한국어		0
U201	开机是否进入语言选择	0：OFF：否 1：ON：是		0
U203	是否支持大花样针数	0：OFF：否 1：ON：是		1
U204	主控烧录地址	0：0XA0000：655360		3

序号	参数	设定范围	编辑单位	出厂设置
		1：0XB0000：720896 2：0XC0000：786432 3：0XD0000：851968 4：0XE0000：917504		
U205	模板缝制界面（精简界面）图标文字模式切换	0：ICON：图标 1：WORD：文字		0
U206	断线检测报警是否自动跳过	NO:否 YES:是		0
U207	模板花样（P 花样设置界面）设置界面是否显示	NO:不显示 YES:显示		1
U208	模板识别时间点	0：不受压板状态影响 1：在压板落下后进行识别		0
U209	网络设定	OFF:关闭 On：打开		0
U210	油盒注油时间设置	0-9000	1	84

8.3 二级参数设置

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）。操作方法参照一级参数设置。

8.3.1 二级参数表

序号	参数	设定范围	编辑单位	出厂设置
K03	夹线器类型选择	0：M：机械夹线器 1：E：电子夹线器	1	0
K04	动框曲线选择	0~9	1	0
K06	物料类型选择	0：薄料； 1：中料； 2：厚料	1	0
K07	物料厚度选择	0~15	1	0
K08	回原点速度	0~9	1	2
K09	回起缝点速度	0~9	1	2
K10	空送速度	0~9	1	2
K11	打版移框速度	1~3	1	3
K13	松线电磁铁打开电流	0~255	1	0
K14	X 轴传感器安装位置	0：L:左侧 1：R:右侧	1	0
K18	缝制起始针加固方式设置	0：不加固 1：第一针加固 2：前几针加固 3：曲折缝加固		2
K19	起缝加固针数	-4~4	1	-2
K20	结束针加固方式设置	0：不加固 1：结束针前 0.1mm 处加固一针 2：结束时加固针距相同的两针 3：结束时加固针距相同的三针 4：结束时加固针距相同的四针		3
K21	K1-X 轴起缝动框微调	-120-120	1	0
K22	K1-Y 轴起缝动框微调	-120-120	1	0
K23	K1-X 轴动框微调	-120-120	1	0
K24	K1-Y 轴动框微调	-120-120	1	0
K25	K1-Y 轴动框微调	-120-120	1	0
K26	K0-Y 动框微调	-120-120	1	0
K27	X 轴动框时间	-20-20	1	0
K28	Y 轴动框时间	-20-20	1	0
K29	起缝前两针夹线器是否打开	0：OFF:关闭 1：ON:打开		0
K30	空送前夹线器是否打开	0：OFF:关闭 1：On：打开		0
K31	暂停输入选择	0：无效		1

序号	参数	设定范围	编辑单位	出厂设置
		1：有效 2：暂停后通过暂停开关来切线或者通过踏板来启动		
K42	切线找原点位置微调	-500~500	10	0
K43	切线速度	200~800rpm	10	240
K52	电磁拨线器-打开输出时间	10~500ms	10ms	50ms
K53	电磁拨线器-关闭推迟时间	10~500ms	10ms	80ms
K54	上死点停止时的拨线输出时相选择	0：UP：上位置 1：DEAD：上死点位置		0
K56	移动界限+X 方向	0~2000mm	1	1500
K57	移动界限-X 方向	0~2000mm	1	1500
K58	移动界限+Y 方向	0~1000mm	1	0
K59	移动界限-Y 方向	0~1000mm	1	750
K60	三级踏板使能	0：OFF：无效 1：ON：有效		0
K61	主轴电机停车角度	30~80	1	53
K67	拨线器输出时的线张力输出	0：OFF：无输出（保持切线张力） 1：MAX：最大输出		0
K74	电磁/气动压脚选择	0：MAG：电磁压脚 1：AIR：气动压脚		1
K75	气动压脚下降推迟时间	0~1000ms	10ms	100
K92	平时原点检索/原点复位线路选择	0：STD：标准 1：REV：反转 2：Y2X：Y 轴→X 轴 3：X2Y：X 轴→Y 轴 4：2Y：只动 Y 轴		0
K93	反转时原点检索/原点复位线路选择	0：STD：标准 1：REV：反转 2：Y2X：Y 轴→X 轴 3：X2Y：X 轴→Y 轴		0
K95	正向切线时相	-2~2	1	0
K98	空送布命令-顶点休止时间	0~100ms	10ms	20
K110	翻转装置和伸缩压脚控制	0：OFF：无 1：ON1：有 2：ON2：伸缩压脚伸出		0
K112	伸缩压脚伸出延时	0~255ms	1	25

序号	参数	设定范围	编辑单位	出厂设置
K113	伸缩压脚抬起延时	0~255 ms	1	0
K114	伸缩压脚下降延时	0~255 ms	1	0
K115	缝制过程中伸缩压脚位置	0：上 1：下		0
K122	画笔 X 轴偏移	-500~500	1	0
K123	画笔 Y 轴偏移	-500~500	1	0
K124	画笔移动速度	1~9	1	1
K125	模板识别使能开关	0：关闭 1：打开		1
K127	X 轴电机转向	0：正 1：反		1
K128	Y 轴电机转向	0：正 1：反		0
K129	模板识别设备	0：SEN5：5 路传感器 1：SEN8：8 路传感器 2：BAR：条码扫描设备		3
K130	照明灯亮度调节	0~100	1	50
K131	暂停出错时有误抬压脚	0：无 1：有		0
K132	电机工作方式	0：闭环 1：开环		0
K135	断线传感器触发方式	0：低电平 1：高电平		1
K136	底线报警设置	0：缝制中报警 1：提前报警		0
K137	开机是否直接进入可缝制状态	0：否 1：是		1
K138	二次启动设置	0：关闭 1：打开		1
K140	空送中急停响应设置	OFF:关闭 ON:打开		1
K141	报错信号输出	0：OFF:不输出 1：1 路输出 2：3 路输出		0
K142	中压脚电机借口	0：X21 1：X23		0
K143	抓线抓紧位置	0~100	1	20
K144	X 轴步距角补偿	-30~30	1	0

序号	参数	设定范围	编辑单位	出厂设置
K145	Y 轴步距角补偿	-30~30	1	0
K146	中压脚类型	0：MOTO:电机 1 1：AIR:气动 2：MOTO2：电机 2		0
K147	Y 轴齿轮间隙补偿值	0~30	1	0
K148	拐点降速时的速度设置	200~2000	100	1000
K149	X 轴齿轮间隙补偿值	0~30	1	0
K165	吹气功能使能	0：OFF：关闭 1：ON：打开		0
K166	吹气时间	10~200	1	10
K167	断线后辅助压脚动作	0：UP：辅助压脚抬起 1：DOWN：辅助压脚落下		0
K168	起缝加固速度选择	0：第一针速度 1：前五针速度		1
K169	机型选择	范围：0~4 0：标配机型 1：中配机型 2：高配机型 3：自动机型 4：10070 机型	1	1
K171	机头板 CZ137 功能选择	0：PEN：记号笔 1：BLOW：机针吹气		0
K172	起缝原地加固针数	0~2	1	0
K173	中压脚随动高度	0~255	1	2
K174	中压脚下降起始角度	0~359	1	54
K175	中压脚下降结束角度	0~359	1	126
K176	中压脚上升起始角度	0~359	1	270
K177	中压脚上升结束角度	0~359	1	18
K178	抓线吸风时间	0~30	1	3
K179	结束第一针转速	200~2800	100	1800
K180	结束第二针转速	200~2800	100	1200
K181	结束第三针转速	200~2800	100	800
K182	结束第四针转速	200~2800	100	400
K183	切刀同步延时	0~255	1	4
K200	恢复出厂参数			

8.4 计数器设置

按下  进入计数器设置界面（如右图所示）。

缝制计数器：每缝制 1 件缝制物，计数器加/减 1。

计件计数器：每缝制 1 循环，计数器加/减 1。

计件计数器主要是针对 C 花样计数的，如果使用其他缝纫类型，计件计数器和缝制计数器作用相同。

1）计数器数值设置

当前值：按下后可以设置计数器当前值。

设定值：按下后可以设置计数器设定值，设定值为 0 时，计数器不起作用。

2） 计数器类型设置

加：设置为加计数器类型，当当前值达到设定值时会提示报警。

减：设置为减计数器类型，当当前值为 0 时会提示报警。

关闭：关闭计数器功能。

注 1：参数【U193】设置为“禁止修改”时不能够进入该界面。

注 2：参数【U194】设置为“可继续缝纫”时计数器当前值溢出后不报警，会自动恢复为目标值（加计数器恢复为 0，减计数器恢复为设定值）。

8.5 变换缝制类型

按下  进入缝制类型选择界面（如右图所示）。

 ：普通缝

 ：循环缝

确定缝制类型之后，按下确定键  结束。按  之后，显示出选择的缝制类型的数据输入界面。

8.6 进入花样编辑

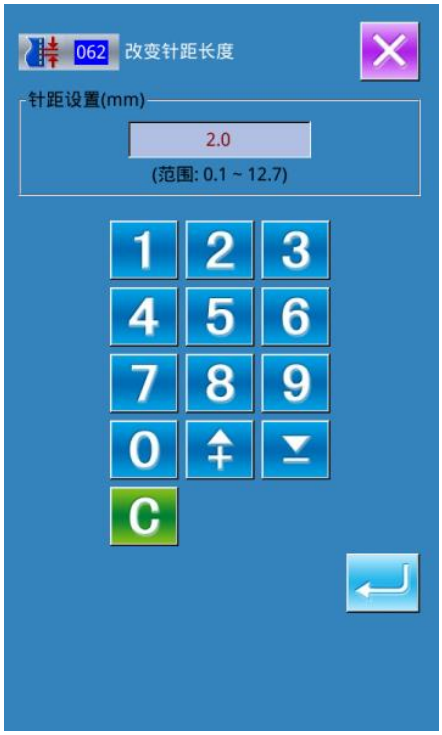
按下  ，如下两种图标会互相切换，选择对应的模式，再按  即可进入花样编辑模式。

具体操作请参照【5 花样图案编辑】内容。

 ：缝纫模式

 ：编辑模式

8.7 针距设置



按下  ，进入针距设置界面 ，用户可自行设置针距大小，针距可调值的范围：（0.1~12.7）mm.

点击确定键后，当前花样将按照设置值重新生成新花样。

8.8 格式化

按下  进入格式化功能界面。在该界面下，可以完成：

A、 U 盘格式化

B、内存花样格式化

C、P 和 C 花样格式化

按下相应的功能键，进入相关界面。

1）按“USB”键，进入 U 盘格式化

按确定键格式化 U 盘，按退出键退出返回。

2）按“内存”按键，格式化内存花样

按确定键格式化内存，按退出键退出返回。

执行格式化内存操作后会删除全部花样，包括模板花样和 C 花样，然后重新加载出厂花样。

※ 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！

3） 模式界面下，进入批量删除功能（删除花样功能并入此节）

按下  进入批量删除界面。在该界面下，会显示操作面板中已保存的所有普通 N 花样，并显示出与模板花样之间的关联信息，点按相应的按键完成批量删除功能。

4） 按“P 和 C”键，删除全部模板花样和 C 花样

按确定键  删除全部模板花样和 C 花样，按退出键  退出返回。

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。

 ：将当前版本信息保存至 U 盘根目录下。

8.10 键盘锁定

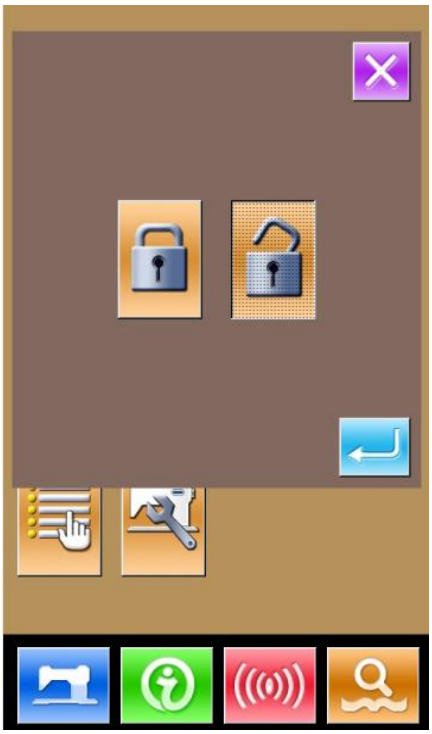
在设置模式等级 2 下，按下  进入键盘锁定设置界面。

1）键盘锁定操作

 ：未设定键盘锁定状态

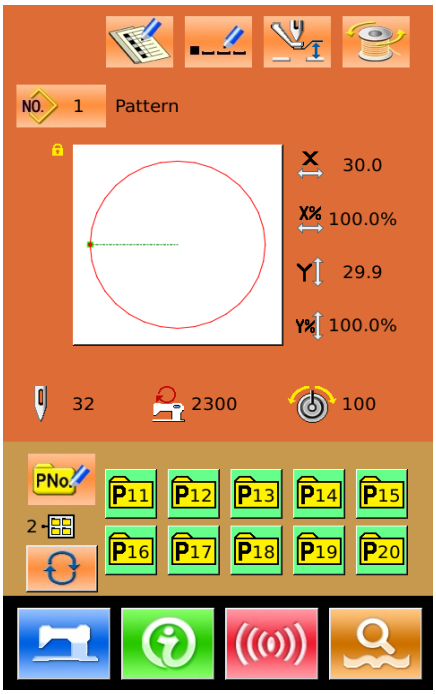
 ：已设定键盘锁定状态

选择  ，按下确定键  完成键盘锁定操作。



2）键盘锁定状态显示

关闭参数设置模式界面，返回数据输入界面，如右图所示。可以看到花样号码下方有一个显示键盘锁定状态的图标 。



3）键盘锁定范围

1、普通缝数据输入界面：	● 花样登记
	● 花样命名
	● 放大缩小率设置
	● 最高转速限制
	● 模板花样登记
2、普通缝缝制界面：	● 计数器设置
	● 线张力设置
3、模板花样输入界面：	● 模板花样编辑
	● 模板花样复制
	● 模板花样命名
4、模板花样缝制界面：	● 计数器设置
5、C 花样数据输入界面：	● C 花样登记
	● C 花样复制
	● C 花样命名
	● C 花样编辑
6、C 花样缝制界面：	● 计数器设置
7、参数设置模式：	● 参数 1 级
	● 参数 2 级
	● 计数器编辑
8、检测模式	检测模式

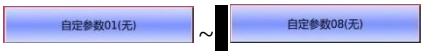
8.11 参数备份还原

在设置模式等级 3 下，按  键进入参数还原备份界面，如右图所示：

清除键：清除全部已经保存的自定参数

保存键：保存当前参数

恢复键：恢复当前参数

① 点击  其中任意一键，以确定参数保存位置，然后点击「保存」键进行保存。

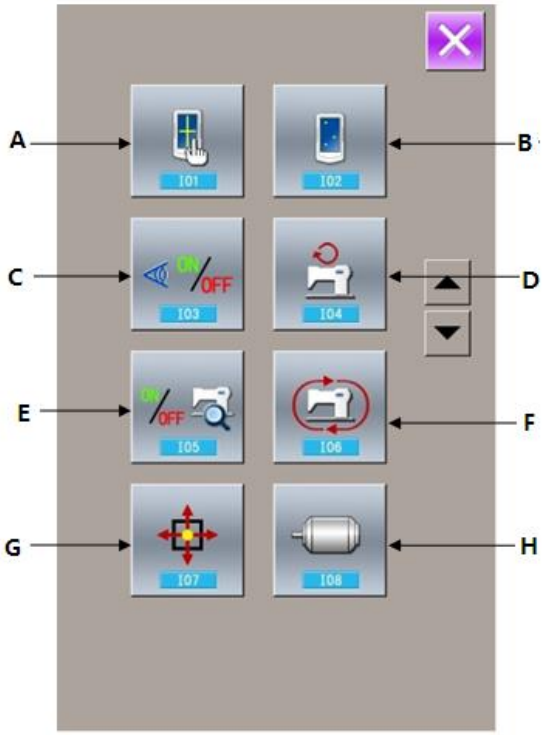
② 观察「自定参数 xx（有/无）」键显示内容，如果括号内显示为「有」的则表示该位置上存储了用户参数。例如  。

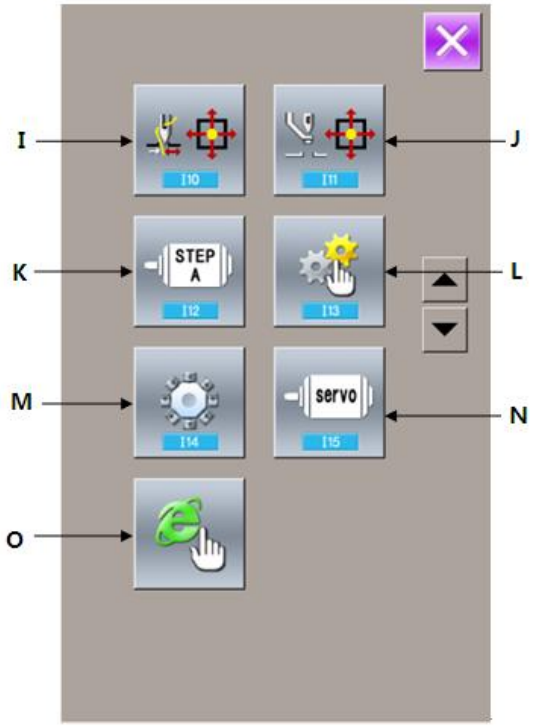
③ 选择已经存储参数的自定参数键，按下「恢复」键就会重新加载相应的参数设定值。

④ 按下「清除」键会清除全部已存参数。

8.12 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）。通过上下翻页键  和  翻页。





各图标功能说明详见下表：

序号	名称
A	I01 触摸屏校正
B	I02 液晶显示检测
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	I07 XY 马达原点检测
H	I08 主轴马达校正
I	I10 抓线马达/原点传感器检测
J	I11 中压脚马达/原点传感器检测
K	步进电机电流设置
L	主轴参数配置
M	自动旋梭/切刀专用参数
N	伺服参数
O	联网设置

1）触摸屏校正

检测模式界面下按下触摸屏校正键 

（I01 触摸屏校正），此时会显示「确定进入触摸屏校正模式？」提示信息，按下确定键  进入触摸屏校正功能。

需要进行 5 点的校正，最好采用触摸笔一类工具点击画面中的十字光标，校正结束后会显示提示信息显示本次操作是否成功。

【注】校正过程中请务必按照十字光标指示位置进行确定，否则会导致校正结束后无法正常使用触摸屏。

2）液晶检测

在检测模式界面按下 

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

3）输入信号检测方法

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

ON：表示开启

OFF：表示关闭

（1）启动开关（踏板）

（2）压脚开关（踏板）

（3）暂停开关

（4）断线检测

（5）X 马达传感器

（6）Y 马达传感器

（7）压脚电机原点传感器

（8）压脚电机传感器

（9）抓线电机原点传感器

（10）抓线电机传感器

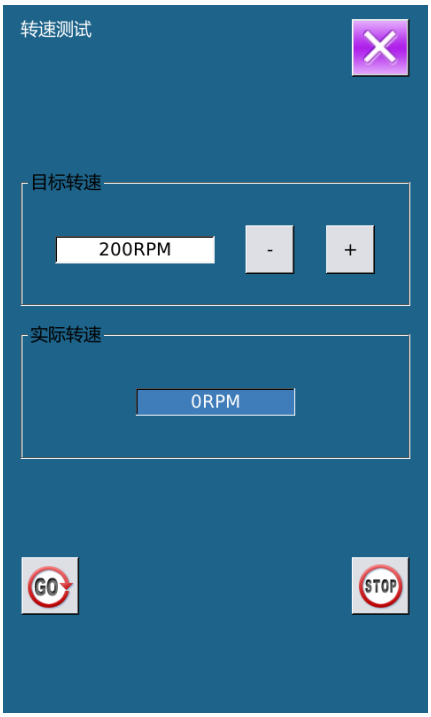
（11）中压脚电机原点传感器

（12）机头倒置开关

4）转速测定

① 显示转速测定界面

在检测模式界面按下  （I04 转速测定）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。



② 转速测定设置

通过  和  可以设置主轴马达转速，按下准备键  后，主轴马达会以已设定的转速旋转。此时，实际测得的转速会显示在实际转速输入栏。

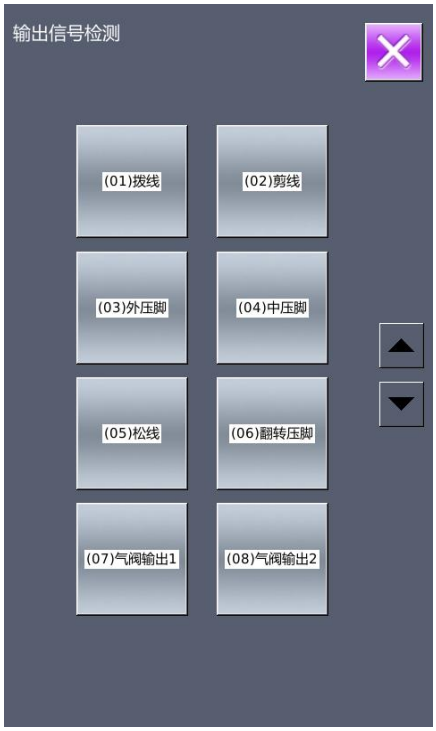
按下停止键  ，则机器停止运转。

按下退出键  返回到上一级画面。

5）输出检测方法

在检测模式界面按下  （I05 输出检测）键进入输出检测界面（如右图所示），在该界面下可以检测电磁铁的输出状态。

（1）拨线
（2）剪线
（3）外压脚
（4）中压脚
（5）松线
（6）翻转压脚
（7）气阀输出 1
（8）气阀输出 2



按下相应图标可以各个外设的输出状况。

6）连续运转

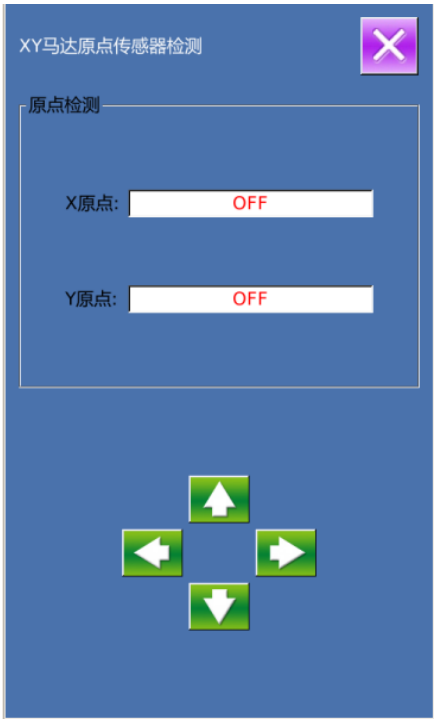
① 显示连续运转界面

在检测模式界面按下  （I06 连续运转）键进入连续运转界面（如右图所示）。

② 连续运转设置

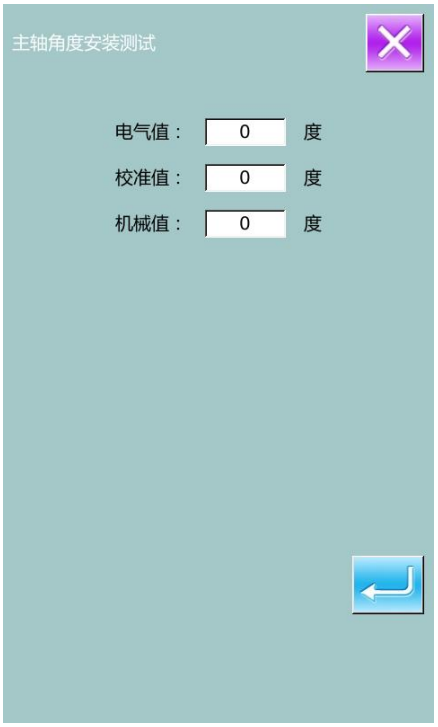
点击动作间隔输入栏或收针原点检测输入栏，通过数字键盘输入想要设定的数值，然后按下确定键  并返回到数据输入界面再按下准备键  ，踩下脚踏板即开始连续运转。

7）XY 马达原点传感器检测



在检测模式界面按下  （I07XY 马达原点检测）键进入输出检测界面（如右图所示），在该界面下通过方向键驱动马达移动，可以显示出传感器的 ON/OFF 状态。

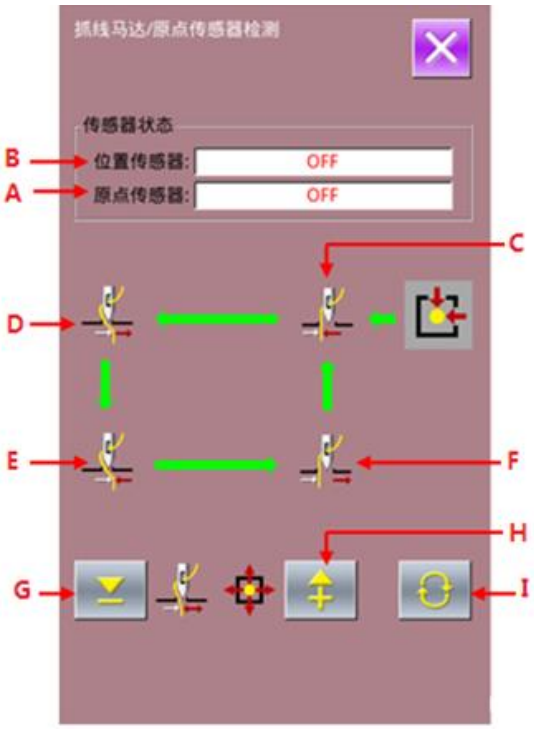
8）主轴马达校正



在检测模式界面按下  进入主轴马达校正界面，如右图所示。

在当前界面下拆下主轴马达，旋转手轮将缝纫机针杆摇到最高点，用手拧主轴联轴结使显示的电气角度值在 30 度范围内，重新装好主轴马达，然后按下确定键  。

9）抓线马达/原点传感器检测



根据抓线原点传感器的状态，A 位置显示抓线原点传感器的 ON/OFF 状态。

根据抓线传感器状态，B 位置显示抓线传感器的 ON/OFF 状态。

通过  和  ，压脚/切线电机以 1 个脉冲 1 个脉冲进行驱动。另外，按下  可驱动压脚/切线电机到下述的定位置，显示该位置的图形为阴影。

C：待机位置（身前）

D：线弯曲位置

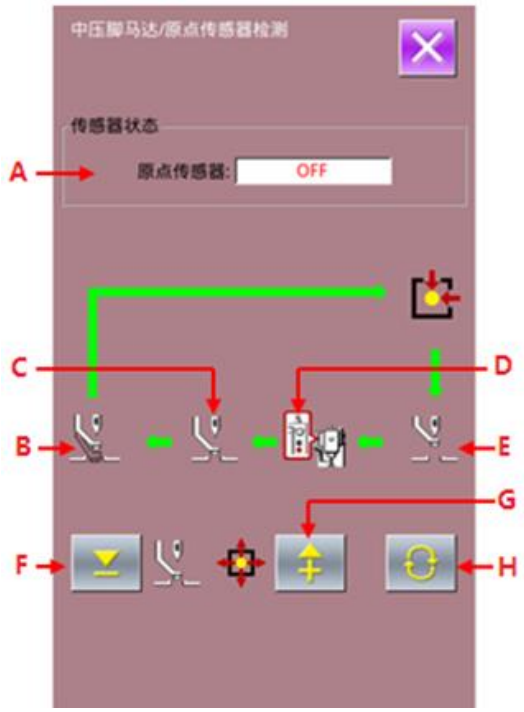
E：夹线位置

F：退避位置（里侧）

通过启动 SW 进行抓线电机的原点检索。

注：用启动开关进行抓线电机原点检索之后，变为有效

10）中压脚马达/原点传感器检测



根据中压脚原点传感器的状态，A 位置显示中压脚原点传感器的 ON/OFF 状态。

通过  和  ，压脚/切线电机以 1 个脉冲 1 个脉冲进行驱动。另外，按下  可驱动压脚/切线电机到下述的定位置，显示该位置的图形为阴影。

B： 中压脚杆调整位置

C： 下降时的下位置高度=0mm 的位置

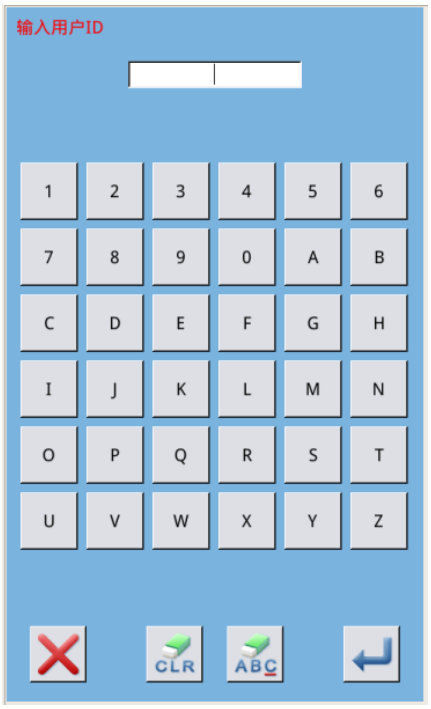
D： 相位确认位置

E：下降时的下位置高度=7mm 的位置

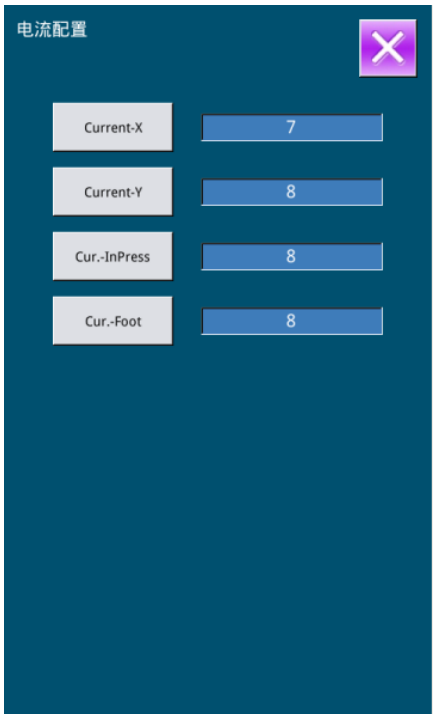
通过启动 SW 进行中压脚电机的原点检索。

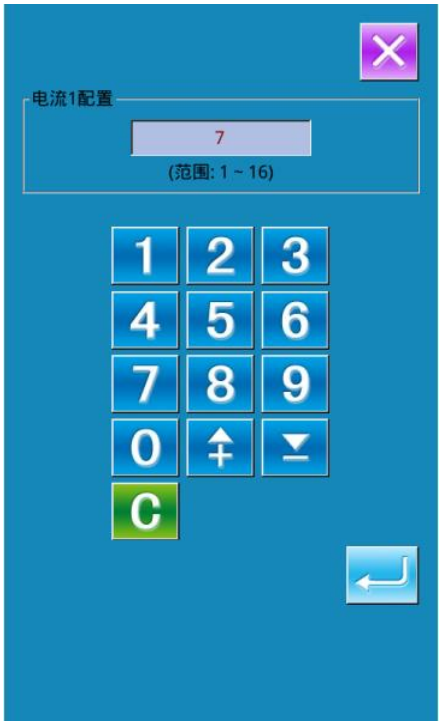
11）电流配置

进入电流配置检测后，先输入用户 ID, 之后进入电流配置界面。



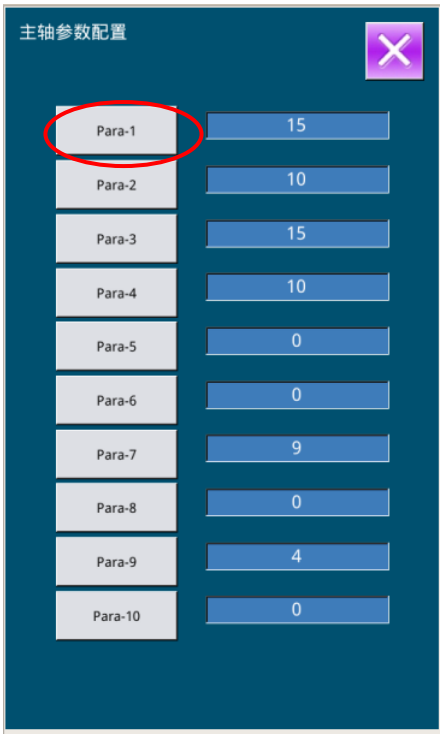
电流配置会显示几个相应马达设置值，按下相应的马达设置按钮后，即可进入设置马达值得界面。





12）主轴参数配置

进入主轴参数配置界面后，也可设置相应主轴参数，按下 Para-1 按钮后，进入设置界面后，就可以设置主轴参数值。



13）自动旋梭/切刀专用参数

序号	参数	设定范围	编辑单位	出厂设置
K150	旋转切刀使能	OFF:关闭 on：打开		
K151	自动换梭使能	OFF:关闭 on：打开		
K152	切刀旋转后等待时间	0～20000	1	10000
K153	切刀抬升后等待时间	0～20001	1	3000
K154	切刀速度档位	1～10	1	3
K155	切刀电机工作电流档位	1～10	1	4
K156	机头对接位置修正补偿	-127～127	1	0
K157	换梭对接位置修正补偿	-127～127	1	0
K158	前后抓紧气缸到位延时	0～20000	1	2000
K159	夹紧气缸到位延时	0～20000	1	500
K160	抓臂电机工作电流档位	1～10	1	5
K161	换梭停止位置	0:梭盘侧 1：机头侧		
K162	换梭方式	0:底线报警后手动换梭 1:底线报警时自动换梭		
K163	换梭启缝方式	0：手动启动 1：自动启动		
K164	空梭芯处理方式	0：放回梭盘 1：放收纳盒		
K184	旋转切刀零位角度设置	0～360	1	0
K185	直线切刀使能	0：OFF：关闭 1：ON：使能		0
K186	直线切刀下降高度	0～360	1	230
K187	直线切刀摆动幅度	10～100	1	31
K188	直线切刀同步延时	0～50	1	0

在检测模式界面按下  进入自动旋梭检测界面，如右图所示。

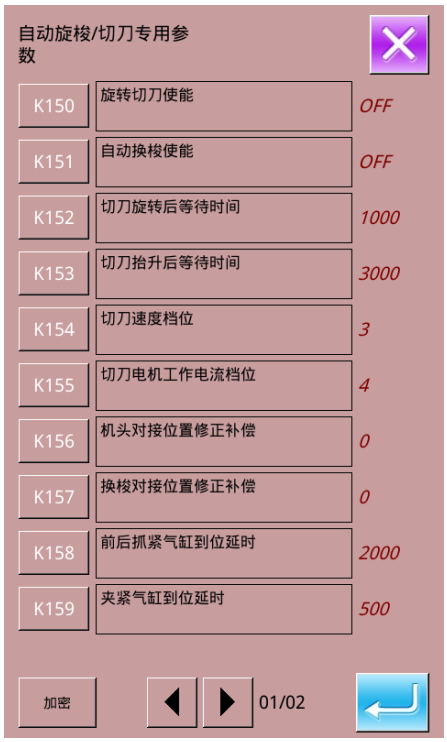
首先是自动旋梭的专用参数设置。设置完毕点击确定键进入旋梭检测界面。

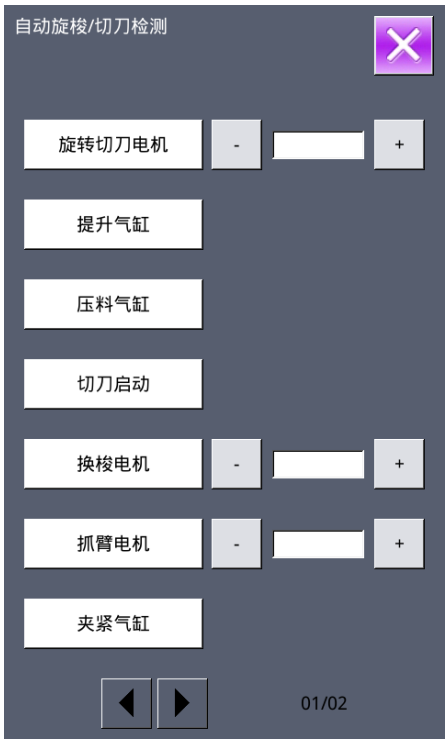
自动旋梭检测分为

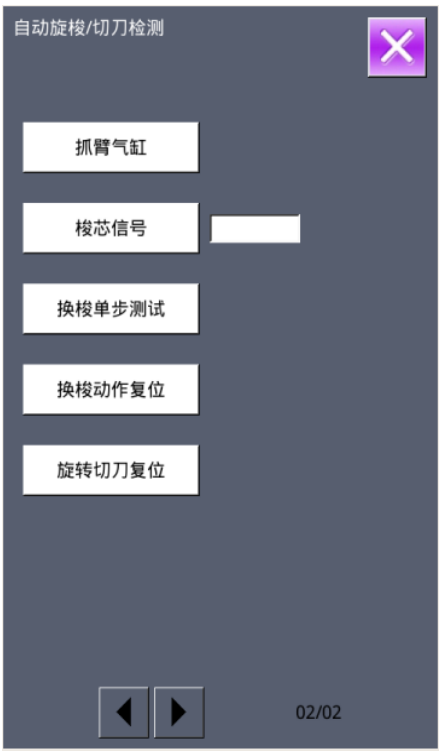
- 旋转切刀
- 提升汽缸
- 压料汽缸
- 切刀启动
- 换梭电机
- 抓臂电机
- 夹紧气缸
- 抓臂气缸
- 锁芯信号
- 换梭单步测试
- 换梭动作复位
- 旋转切刀复位

其中，电机检测项可通过点击该项按键选择此项检测后，再点击加减键检测电机动作。

气缸和复位动作项点击该项按键，即可检测动作。







14）伺服专用参数

序号	参数	当前值	复位值
伺服 01	xy_br_x_7_Kpp	0	40
伺服 02	xy_br_x_7_Kps	0	5
伺服 03	xy_br_x_7_Kis	0	5
伺服 04	xy_br_x_7_UiMax	0	120
伺服 05	xy_br_x_7_Kff	0	127
伺服 06	xy_br_x_6_Kpp	0	40
伺服 07	xy_br_x_6_Kps	0	5
伺服 08	xy_br_x_6_Kis	0	5
伺服 09	xy_br_x_6_UiMax	0	80
伺服 10	xy_br_x_6_Kff	0	120
伺服 11	xy_br_x_5_Kpp	0	40
伺服 12	xy_br_x_5_Kps	0	5
伺服 13	xy_br_x_5_Kis	0	5
伺服 14	xy_br_x_5_UiMax	0	120
伺服 15	xy_br_x_5_Kff	0	125
伺服 16	xy_br_x_4_Kpp	0	30
伺服 17	xy_br_x_4_Kps	0	5
伺服 18	xy_br_x_4_Kis	0	5
伺服 19	xy_br_x_4_UiMax	0	90
伺服 20	xy_br_x_4_Kff	0	127
伺服 21	xy_br_x_3_Kpp	0	50

伺服 22	xy_br_x_3_Kps	0	5
伺服 23	xy_br_x_3_Kis	0	5
伺服 24	xy_br_x_3_UiMax	0	40
伺服 25	xy_br_x_3_Kff	0	127
伺服 26	xy_br_x_2_Kpp	0	50
伺服 27	xy_br_x_2_Kps	0	7
伺服 28	xy_br_x_2_Kis	0	5
伺服 29	xy_br_x_2_UiMax	0	20
伺服 30	xy_br_x_2_Kff	0	100
伺服 31	xy_br_x_1_Kpp	0	50
伺服 32	xy_br_x_1_Kps	0	7
伺服 33	xy_br_x_1_Kis	0	5
伺服 34	xy_br_x_1_UiMax	0	20
伺服 35	xy_br_x_1_Kff	0	80
伺服 36	xy_br_x_0_Kpp	0	20
伺服 37	xy_br_x_0_Kps	0	3
伺服 38	xy_br_x_0_Kis	0	5
伺服 39	xy_br_x_0_UiMax	0	20
伺服 40	xy_br_x_0_Kff	0	0
伺服 41	xy_br_x_7_Kpp	0	50
伺服 42	xy_br_x_7_Kps	0	5
伺服 43	xy_br_x_7_Kis	0	5
伺服 44	xy_br_x_7_UiMax	0	20
伺服 45	xy_br_x_7_Kff	0	127
伺服 46	xy_br_x_6_Kpp	0	40
伺服 47	xy_br_x_6_Kps	0	5
伺服 48	xy_br_x_6_Kis	0	5
伺服 49	xy_br_x_6_UiMax	0	50
伺服 50	xy_br_x_6_Kff	0	127
伺服 51	xy_br_x_5_Kpp	0	40
伺服 52	xy_br_x_5_Kps	0	5
伺服 53	xy_br_x_5_Kis	0	5
伺服 54	xy_br_x_5_UiMax	0	50
伺服 55	xy_br_x_5_Kff	0	125
伺服 56	xy_br_x_4_Kpp	0	50
伺服 57	xy_br_x_4_Kps	0	5
伺服 58	xy_br_x_4_Kis	0	5
伺服 59	xy_br_x_4_UiMax	0	50
伺服 60	xy_br_x_4_Kff	0	120
伺服 61	xy_br_x_3_Kpp	0	40
伺服 62	xy_br_x_3_Kps	0	7
伺服 63	xy_br_x_3_Kis	0	5
伺服 64	xy_br_x_3_UiMax	0	80

伺服 65	xy_br_x_3_Kff	0	127
伺服 66	xy_br_x_2_Kpp	0	40
伺服 67	xy_br_x_2_Kps	0	5
伺服 68	xy_br_x_2_Kis	0	5
伺服 69	xy_br_x_2_UiMax	0	50
伺服 70	xy_br_x_2_Kff	0	120
伺服 71	xy_br_x_1_Kpp	0	50
伺服 72	xy_br_x_1_Kps	0	7
伺服 73	xy_br_x_1_Kis	0	5
伺服 74	xy_br_x_1_UiMax	0	60
伺服 75	xy_br_x_1_Kff	0	80
伺服 76	xy_br_x_0_Kpp	0	20
伺服 77	xy_br_x_0_Kps	0	3
伺服 78	xy_br_x_0_Kis	0	5
伺服 79	xy_br_x_0_UiMax	0	20
伺服 80	xy_br_x_0_Kff	0	0
伺服 81	xy_bl_Kpp	0	10
伺服 82	xy_bl_Kps	0	3
伺服 83	xy_bl_Kis	0	5
伺服 84	xy_bl_UiMax	0	20
伺服 85	xlyr_Kpp	0	50
伺服 86	xlyr_Kps	0	5
伺服 87	xlyr_Kis	0	5
伺服 88	xlyr_UiMax	0	20
伺服 89	xlyr_Kpp	0	50
伺服 90	xryl_Kps	0	5
伺服 91	xryl_Kis	0	5
伺服 92	xryl_UiMax	0	20
伺服 93	xryl_time	0	10

在检测模式界面按下 

进入伺服参数设置界面，如右图所示。

共 93 个伺服参数。修改某项参数设置后可通过“发送”键发送给主控。

或者通过“读取”键读取主控参数值，存入操作头中。

15）网络设置

在检测模式界面按下 
进入网络设置界面，如右图 2 所示。

如果网络参数打开，可通过如下操作连接服务器。

服务器 IP 需要输入给定的 IP 地址，机器 ID 需要从厂家获取。点击确定键保存相关信息。

然后点击“扫描”进入热点扫描界面，如右图 3，如果扫描到特定热点。点击选择该热点后输入 WIFI 密码即可开始连接。

返回 IP 设置界面后，通信状态栏会显示出此时的连接状态，比如正在连接、认证成功等等。

需要注意的是，机器 ID 需要智能工厂管理人员在客户端录入相关的信息才能生

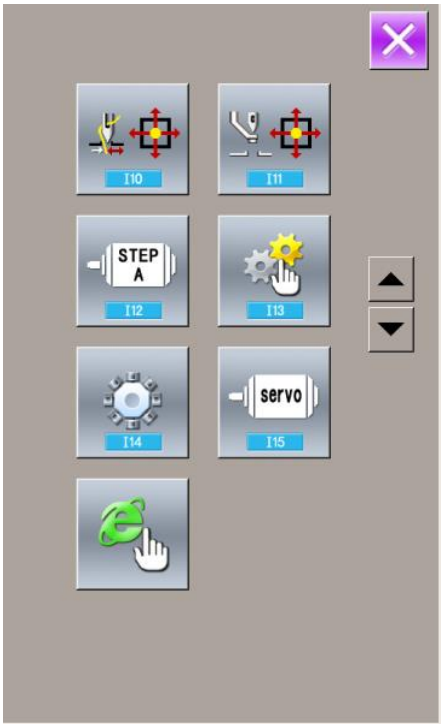


图 1

效。生效后，服务器才能记录机器对应的生产信息、花样信息等等。

如果与服务器建立正常连接，右图 2 的 IP 地址栏、AP 名称栏、mac 地址栏均会显示出相关的信息，如右图 4 所示。而且底部的通信状态会显示出“已认证”的提示。

图 2

图 3

图 4

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。

9 附录 1

9.1 报警信息一览表

故障号	故障名称	复位方法
E001	脚踏板未在中央位置	自恢复错误
E002	机器进入急停状态	按复位键
E004	主电压（300V）过低	关机
E005	主电压（300V）过高	自恢复错误
E007	IPM 过压或过流	关机
E008	辅助设备电压（24V）过高	关机
E009	辅助设备电压（24V）过低	关机
E010	气阀短路或风扇堵转	关机
E011	X 电机超速故障	关机
E012	X 电机超差故障	关机
E013	编码器故障或未连	关机
E014	电机运行异常	关机
E015	超过缝制区域	关机
E016	针杆上位置异常	按下确定键
E017	断线检测错误	按下确定键
E018	剪线刀位置异常	关机
E019	急停开关未在正常位置	自恢复错误
E020	步进版本错误	关机
E023	抓线位置异常	关机
E024	操作盘与缝纫机错误连接	关机
E025	X 原点检测异常	关机
E026	Y 原点检测异常	关机
E027	压脚原点检测异常	关机
E028	抓线原点检测异常	关机
E029	中压脚原点检测异常	关机
E030	步进驱动器通讯异常	关机
E031	步进电机过流	关机
E032	步进驱动电源异常	关机
E034	异常电流	关机
E035	IPM 过流 1	关机
E036	IPM 过流 2	关机
E037	电机堵转 1	关机
E038	电机堵转 2	关机
E039	电机超速	关机

故障号	故障名称	复位方法
E040	停车过流	关机
E041	电机过载	关机
E042	母线电压异常	关机
E043	Y 电机超速故障	关机
E044	Y 电机超差故障	关机
E045	底线不足	更换底线设定值已到达,请更换底线
E046	中压脚电机过流	请关闭电源
E047	Y 电机过流	请关闭电源
E048	气压不足	自恢复错误
E049	换梭机械臂电机原点信号错误	更换底线设定值已到达,请更换底线
E050	换梭电机原点信号错误	更换底线设定值已到达,请更换底线
E051	梭盘为空	检查梭盘检测器，装填梭盘
E052	写驱动器程序失败	关机
E053	X 电机大电流	关机
E054	Y 电机大电流	关机
E055	快走曲线计算错误	关机
E056	SPI 通信结束码异常	关机
E057	SPI 通信校验失败	关机
E058	快走接收数据异常	关机
E059	x 电机堵转	关机
E060	y 电机堵转	关机
E061	X 电机指令覆盖	关机
E062	Y 电机指令覆盖	关机
E063	X 电机快走指令覆盖	关机
E064	Y 电机快走指令覆盖	关机
E065	动框曲线计算异常	关机
E066	X 电机过流	关机
E067	抓线电机过流	关机
E068	旋转切刀电机原点位置异常	关机
E069	急停坐标位置异常	关机
E070	停车等待超时	关机
E071	切刀电机超差	关机
E254	未定义错误	按下确定键 

9.2 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	
M-015	U 盘中没有发现花样数据	
M-016	至少输入一个字母	字母绣打版需要至少输入一个字母！
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	其否确定？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	其否确定？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	其否确定？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	其否确定？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	其否确定？是：enter 否：X

M-056	确定清除更换机油计数值	其否确定？是：enter 否：X
M-057	确定清除清扫时间计数值	其否确定？是：enter 否：X
M-058	确定清除生产管理计数值	其否确定？是：enter 否：X
M-059	确定清除累积运转时间？	其否确定？是：enter 否：X
M-060	确定清除累积缝纫件数？	其否确定？是：enter 否：X
M-061	确定清除累积上电时间？	其否确定？是：enter 否：X
M-062	确定清除累积缝纫针数？	其否确定？是：enter 否：X
M-063	确定清除累积过流次数？	其否确定？是：enter 否：X
M-064	确定清除累积停车错误次数？	其否确定？是：enter 否：X
M-065	是否编辑新花样？	其否确定？是：enter 否：X
M-066	是否返回缝制模式？	其否确定？是：enter 否：X
M-067	是否还原所有设定	其否确定？是：enter 否：X
M-068	是否还原选择项目	其否确定？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	其否确定？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	确定键确认，退出键取消

	数据！	
M-114	请关机	当前操作结束，请重新启动机器
M-115	禁止修改计数器	当修改时，请关闭设定
M-116	是否恢复出厂设置	确定键执行操作，取消键退出操作
M-117	是否清除全部自定参数	是否确定？是：enter 否：X
M-118	花样计算错误	
M-119	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-120	超出设定值范围	
M-121	外压脚在上	当前操作需要落下外压脚后执行!
M-122	不能进行正确操作	
M-123	USB 盘不存在	请插入包含 mp3 文件的 USB 盘
M-124	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
M-125	更换底线	更换底线设定值已到达，请更换。
M-126	确定清除底线计数值？	是否确定？是：enter 否：X
M-127	底线不足	请更换底线，按下确定键后重新计数
M-128	模板花样不存在	请退出后，按回原点键并更换模板花样
M-129	花样名文件与花样不匹配	按确定键后重新加载,花样越多,耗费时间越长
M-130	升级主控文件长度错误	
M-131	升级主控擦除校验错误	
M-132	升级主控写校验错误	
M-133	升级主控结束校验错误	
M-134	是否保存为新花样	确定键执行操作，取消键退出操作。\n" 保存为新花样后,原花样不再改变
M-135	网络连接失败	
M-136	打卡成功	
M-137	打卡失败	
M-138	确认修改网络功能，请关闭电源后	网络功能将在系统重启后

	重启	加载
M-139	油盒注油提醒	请检查大油盒油量，并注入适当的油
M-140	保养油脂提醒	请检查各保养部件，并添加适当的油脂(具体操作请参考保养手册)
M-141	升级步进结束校验失败	

10 附录 2

10.1 电控箱安装尺寸

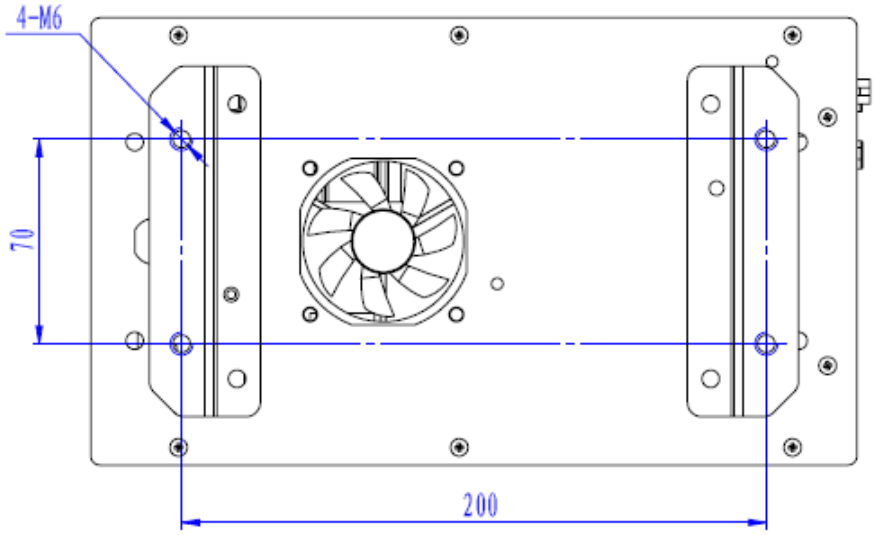


图 1 四孔安装尺寸图

10.2 操作箱安装尺寸

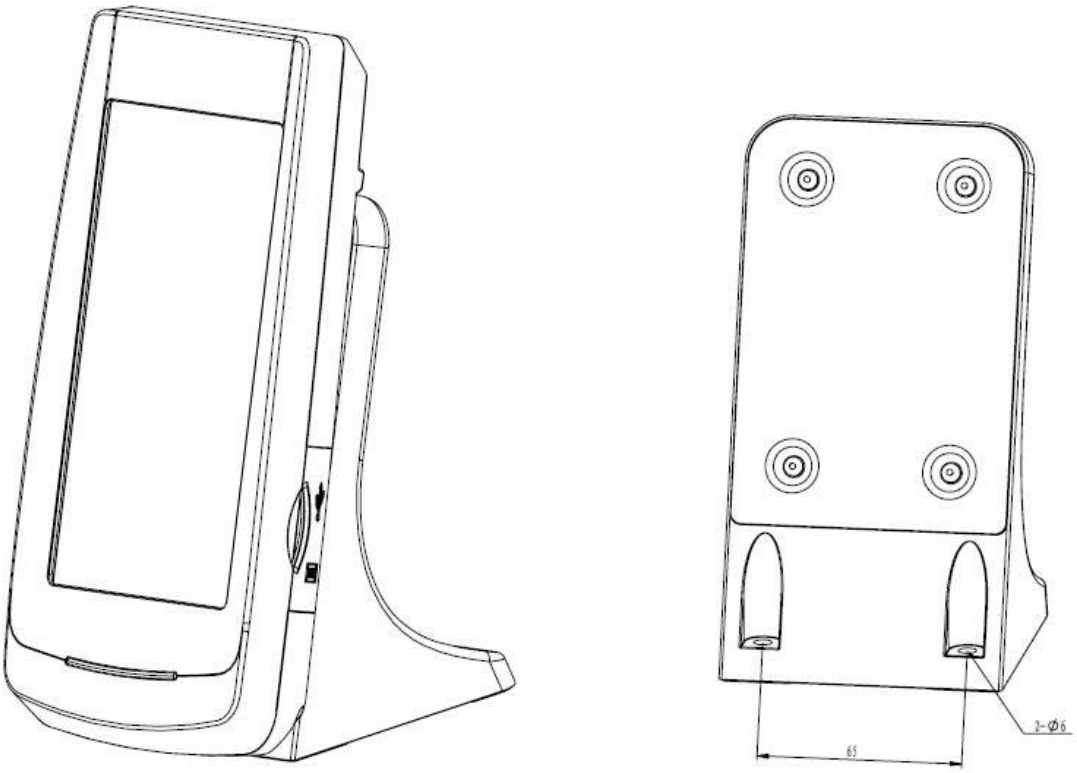
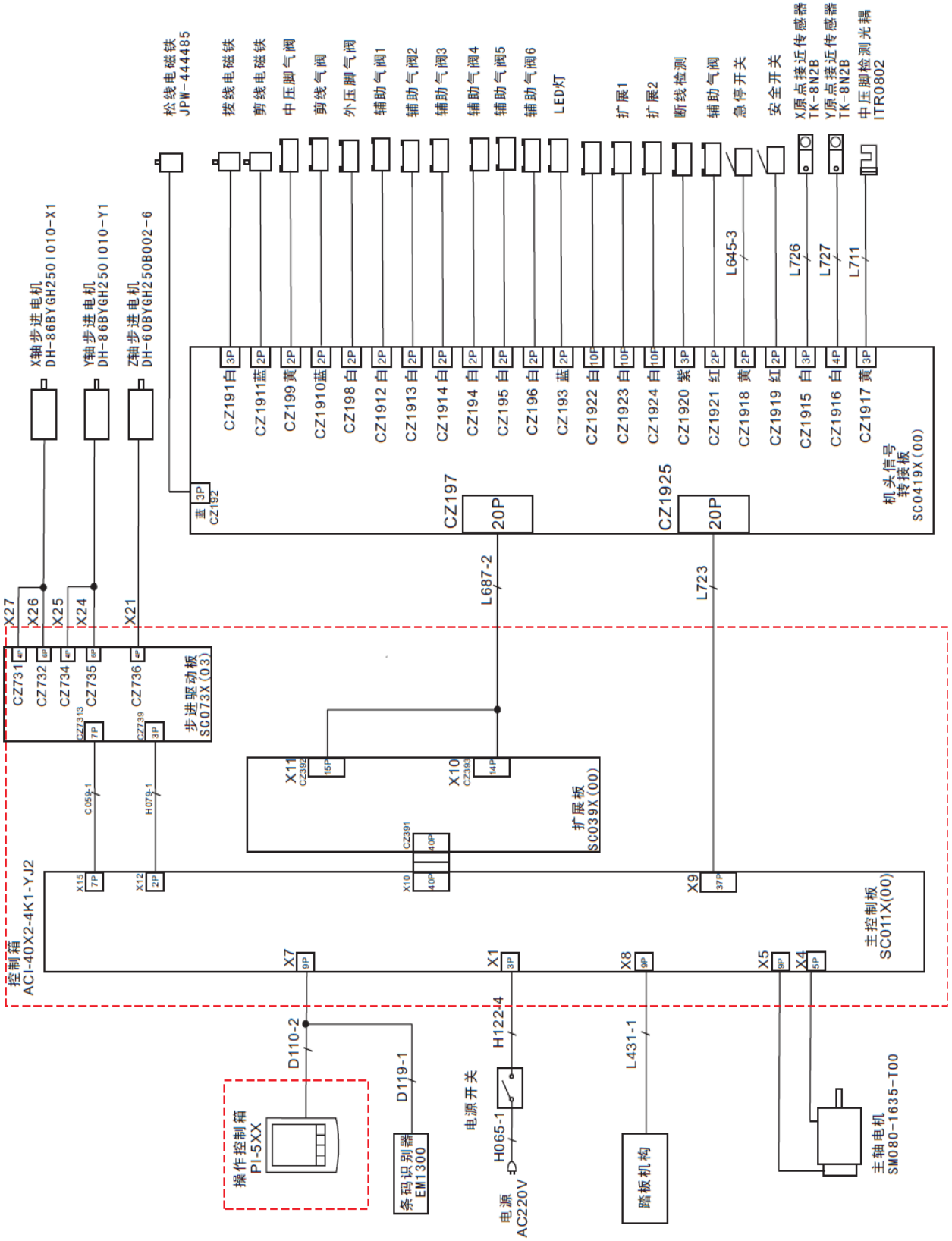


图 2 操作箱安装尺寸图

10.3 ASC400-2E-B-MBJ 中捷模板机系统框图



1 General Introduction

1.1 General

ASC400 Series Computerized Control System for Industrial Sewing Machines: 1) Adopt the world leading AC servo control technology on main shaft motor, which features high torque, good efficiency, stable speed and low noise; 2) Diversified design of control panel can meet the special requirements of users on assembling ; 3) System adopts German style structure, which offers easy installation and repair to users; 4) The control software can be updated through remote communication, which helps users to improve the function of products constantly.

1.2 Functions & Specifications

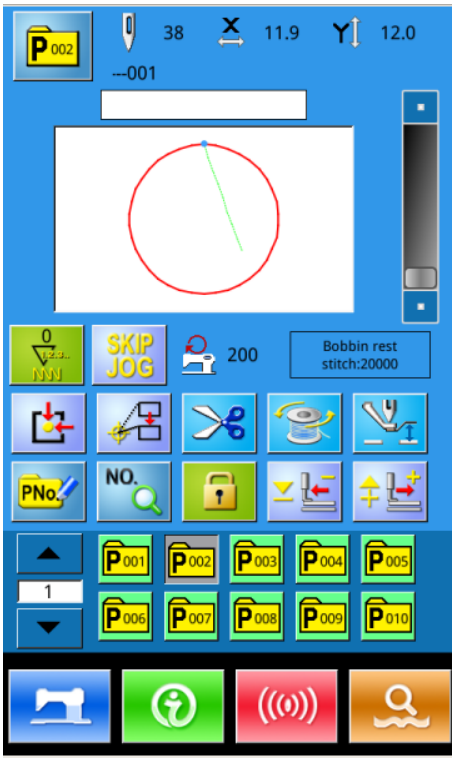
NO.	Type of Controller	ASC400 Computerized Control System for Pattern Sewing Machine
1	Sewing Range	X(Left/Right) Y（Front/Back） 1000 x 750
2	Max Sewing Speed	2500rpm（when sewing pitch is below 3mm）
3	Stitch Length	0.1～12.7mm（Min. Resolution : 0.05mm）
4	Presser Feeding Motion	Intermittent Feed (2-shaft drive by stepping motor)
5	Stroke of Needle Bar	41.2mm
6	Needles	DP×5、DP×17
7	Lift of Feeding Frame	Max 25mm（Pneumatic type: Max 30mm）
8	Intermediate Presser Stroke	Standard 4mm（0～10mm）
9	Lift of Intermediate Presser	20mm
10	Shuttle	Double-capacity semi-rotary hook
11	Memory of Pattern Data	U Disk
12	Pause Function	Used to stop machine during the sewing
13	Scale Function	Enable a pattern to be enlarged or reduced in X or Y direction individually when sewing a pattern Scale: 1%～400%（adjust 0.1% in each step）
14	Scale Method	Method for changing the length of each sewing stitch
15	Limitation of Sewing Speed	200～2500rpm（change 100rpm in each step）
16	Function for Selecting Pattern	Pattern Number Selection Method
17	Bottom Thread Counter	Up/Down Method（0～65535）
18	Sewing Counter	Up/Down Method（0～9999）
19	Setting of 2nd Origin	Use manual switch to move the needle to a random position within the sewing range and set that position as 2nd origin.

20	Sewing Motor	Servo Motor
21	Function of stopping needle at highest position	After the completion of sewing, the needle can be brought up to its highest position.
22	Power Consumption	600W
23	Operation Temperature Range	0℃～45℃
24	Operation Humidity Range	35%～85% （No Dew Condensation）
25	Line Voltage	AC 220V ± 10%；50/60Hz

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

1.3 Standarization

The function keys are using the publicly-known figures, which are recognizable to users at every country.



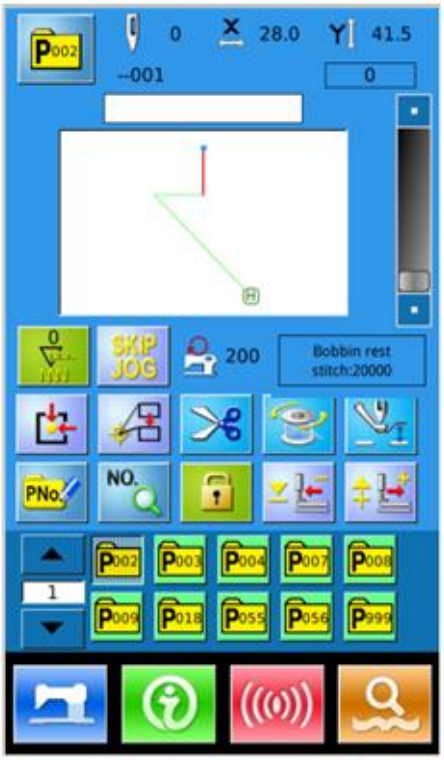
1.4 Operation Method

By adopting the advanced touching operation technology, user-friendly interfaces and easy operation, the panel of ASC400 brings a revolution to the regular usage. Touching the panel with their fingers or other objects, users can finish the corresponding operations. However, during their usage, users should avoid touching the screen with the sharp objects so as to prevent the touching screen from suffering permanent damage.

1.5 Introduction of the Operation Interface

（1）P Pattern Sewing Interface

User can enter the P pattern sewing interface with blue background directly after starting the machine.

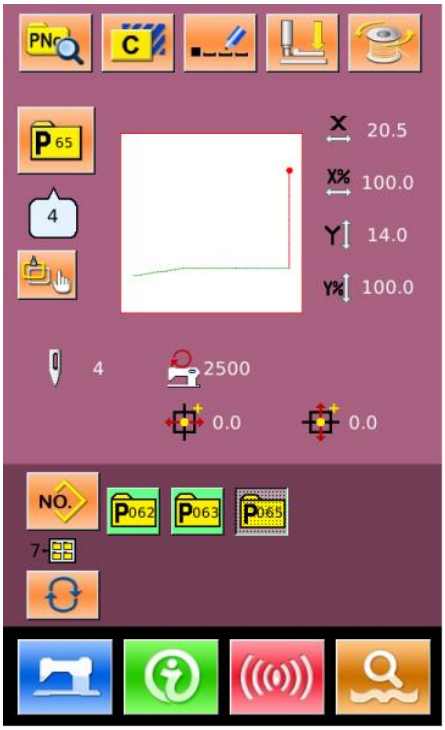


（2）P Pattern Data Input Interface

P Pattern data input interface is shown as the right picture (with purple background).

Press  at the P pattern sewing interface to enter the P pattern data input interface.

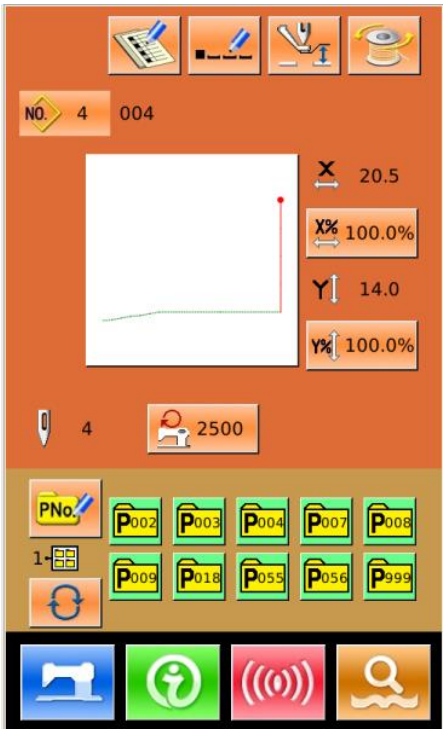
Note: only when the parameter U207 is set as ON can the P pattern sewing interface be shifted to the P pattern data input interface. (Parameter U207 is used to set whether to display the P pattern data input interface.)



（3）Data Input Interface

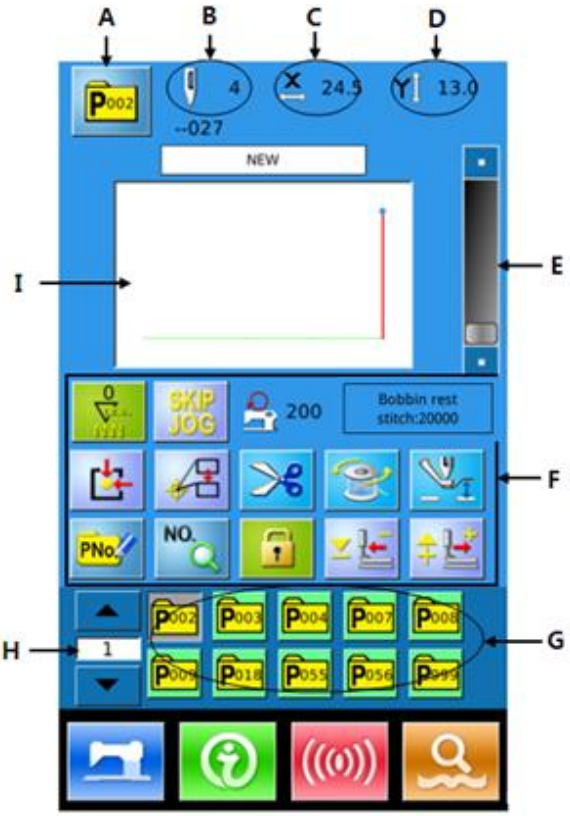
Press 

at the P pattern data input interface to enter data input interface.



2 Basic Operations

2.1 Basic Functions of the Sewing Interface of the Pattern Sewing Machine



No.	Function	Description
A	P Pattern Number Display	Display the number of the P pattern.
B	Pattern Stitch Number Display	Display the stitch number of the selected sewing shape.
C	X Actual Size Display	Display the X actual size of the selected sewing shape.
D	Y Actual Size Display	Display the Y actual size of the selected sewing shape.
E	Sewing Speed Setting	Change the sewing speed.
F	Editing Key for Every Functional Parameters	: bottom thread counter setting (stitch number) : skip function : display the sewing speed of the machine : display the remaining stitches of the bottom thread

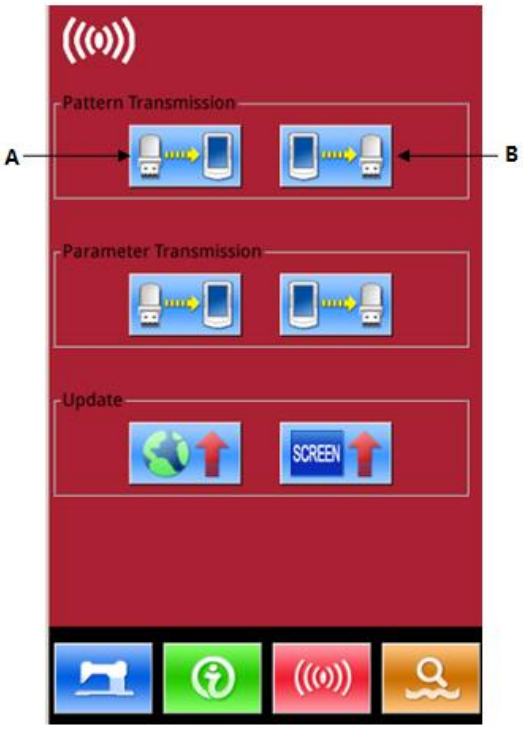
No.	Function	Description
		 : back to origin  : move to the sewing start point  : thread trimming  : thread winding  : intermediate presser setting  : P pattern number hotkeys, used to register up to 999 P patterns  : search pattern name  : when the lock is open, user can change pattern manually not automatically; when locked, pattern can be changed automatically not manually.  : presser moves backward  : presser moves forward
G	Pattern Selection	Display the registered P patterns and press to enter pattern data input interface. This key is not displayed in the initial setting.
H	P Pattern File Page Key	Change P Pattern group by page turning
I	Pattern Shape Display	Display the pattern shape that is sewn at present.

2.2 Basic Operation Procedure for Pattern Sewing Machine

1. Load patterns from U disk: user needs to load the pattern to be sewn from the U disk to the control panel (or to generate the pattern through pattern making). The procedure to load patterns to the control panel is as follows:

Load Patterns from U Disk

The pattern sewing interface (with blue background) will automatically display after starting the machine. Press  **to enter communication interface (as shown in the right picture) where user can load patterns from U disk.**



A: Download patters from U disk to control panel

B: Export the patterns saved in the control panel to U disk

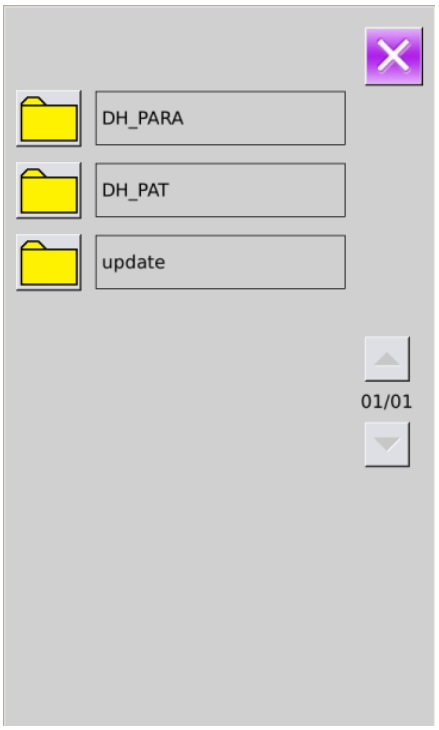
Method of naming the patterns in U disk:

Please name the patterns to be loaded from U disk as follows:

Standard format: 001~999+vdt

Other formats: PLT, DST, DSB, DXF, VDTD, 3LD, etc.

These other formats cannot be recognized by the system. (Under default condition, the name of the pattern will remain the same, and therefore user can search the pattern by name.)



The catalog for patterns from U disk is shown as the right picture:

※ Patterns from U disk can be saved under any catalog of the U disk;

※ Patterns from the control panel will be saved in the file named DH_PAT of the U disk;

※ Patterns to be sewn by U disk shall be saved under the "update" catalog.

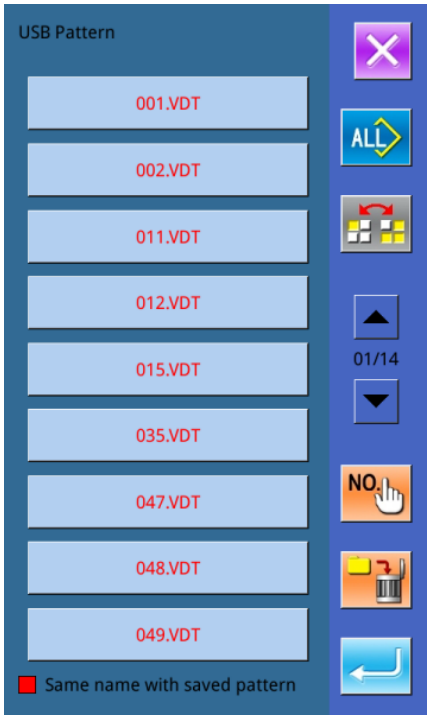
Click any file folder and enter the interface to load patterns from U disk to control panel.


: select all patterns


: invert selection


: input number to be saved (when only one pattern is to be loaded)


: delete patterns



After selecting the patterns to be loaded, press  to complete the operation. The imported patterns will be saved according to their numbers.

Note: the existing patterns will not be covered.

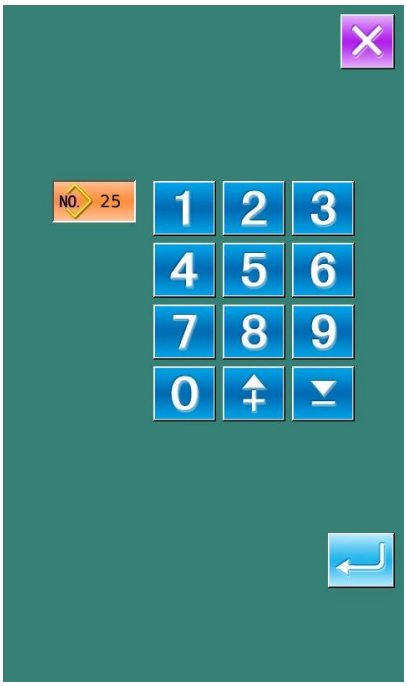
The patterns with file names in read cannot be loaded, for their names are the same with existing patterns saved in the control panel. User can input their numbers manually for import.

Press 

to enter the number input interface to input the target number manually and press Enter key to complete the saving operation.

Note: patterns with same numbers can only be imported one by one; user cannot use 

to select many patterns.



2. Create New P Patterns

Create new P patterns: the imported patterns are normal patterns until being registered as P patterns. The pattern number shall be identical with the P pattern number the user needs. The operation procedure is as follows:

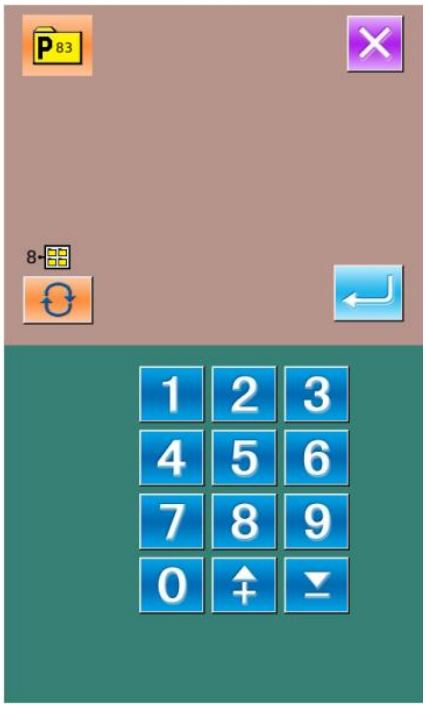
Up to 999 P patterns can be registered.

Press 

to enter prompt pattern creation interface.

Select the normal pattern named 012:012, and press  to complete this operation.

Press  to save the pattern under the prompt pattern number 083.



After the system quits the P pattern creation interface, the newly created P pattern 083 will be displayed on the screen. P Pattern 083 will be saved under the pattern sewing interface for the convenient use by the user.

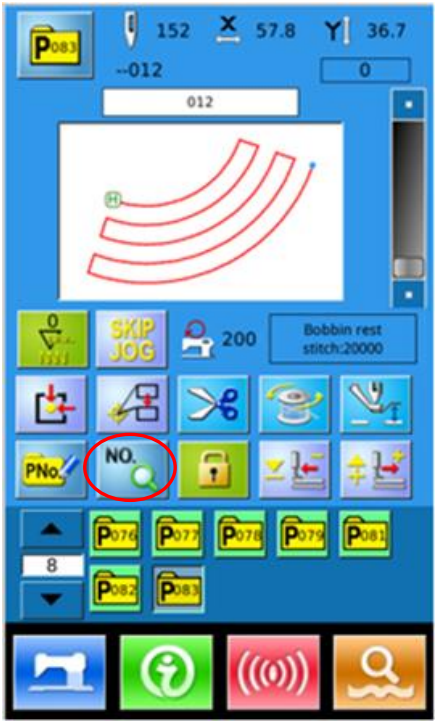
3. Search Pattern

User can search patterns according to their name as follows:

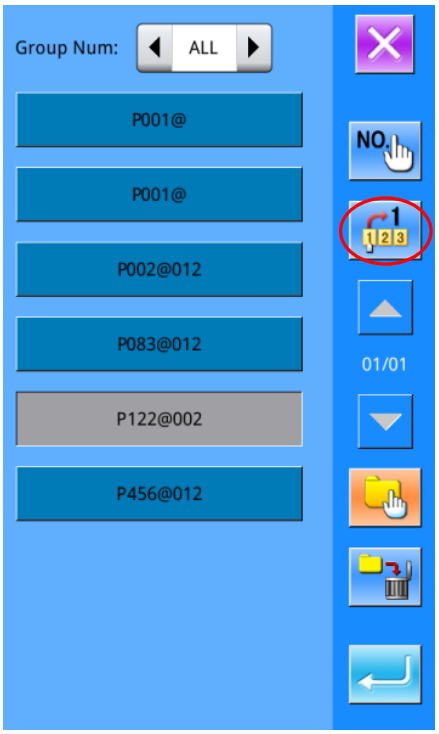
Press 

to enter the search interface.

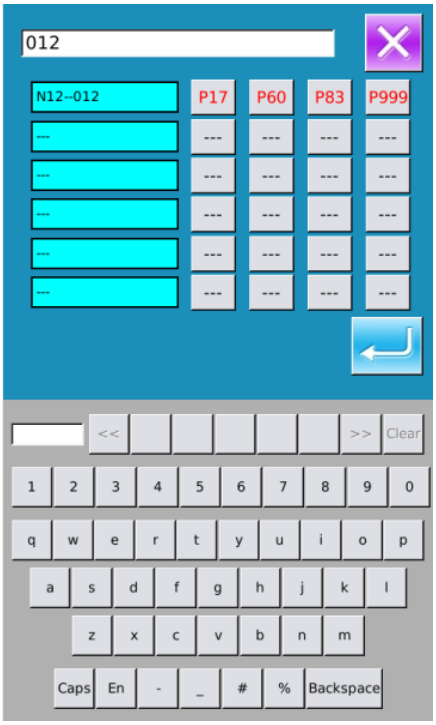
Note: user can use the pattern name to search and determine the pattern number.



Press  to enter advanced search interface.



User can shift between Chinese and English to input the pattern number or the pattern name for search.

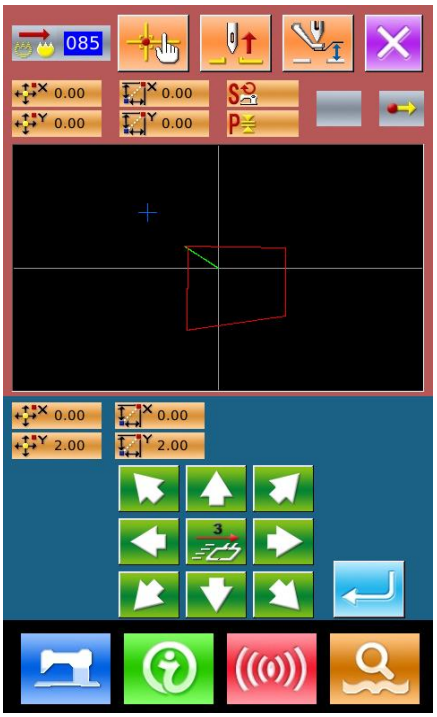


4. Change Sewing Start Point

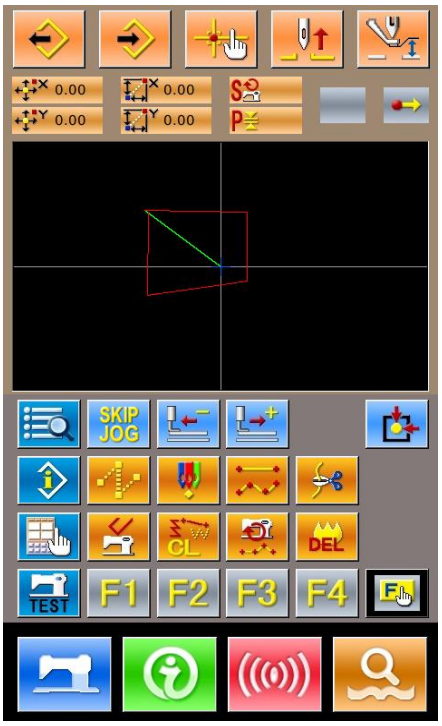
If the position of an imported pattern is not identical with the P pattern, user can change the sewing start point according to the need. User can enter the sewing start point changing mode to make the following operations:

Press  to enter the interface for changing sewing start point as shown in the right picture.

Press  to move the sewing start point to the appointed position.



Press  to complete the operation and the whole pattern will move to the appointed position.



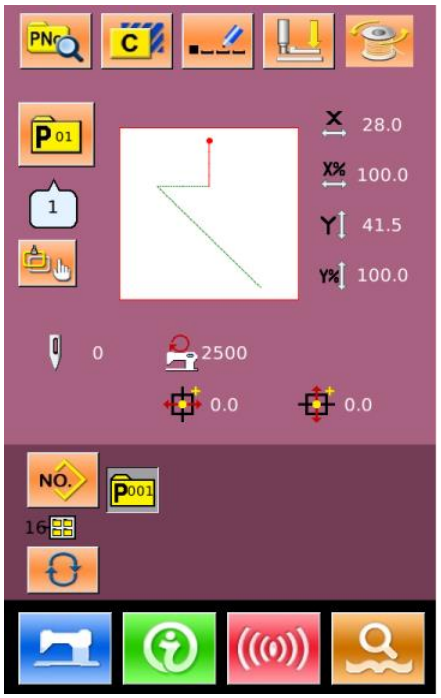
2.3 P Pattern Data Input

P pattern consists of a normal pattern and relating sewing parameters (like X Scale Rate, Y Scale Rate, Speed Limitation and so on). User needn't set the parameter at each time when using P pattern.

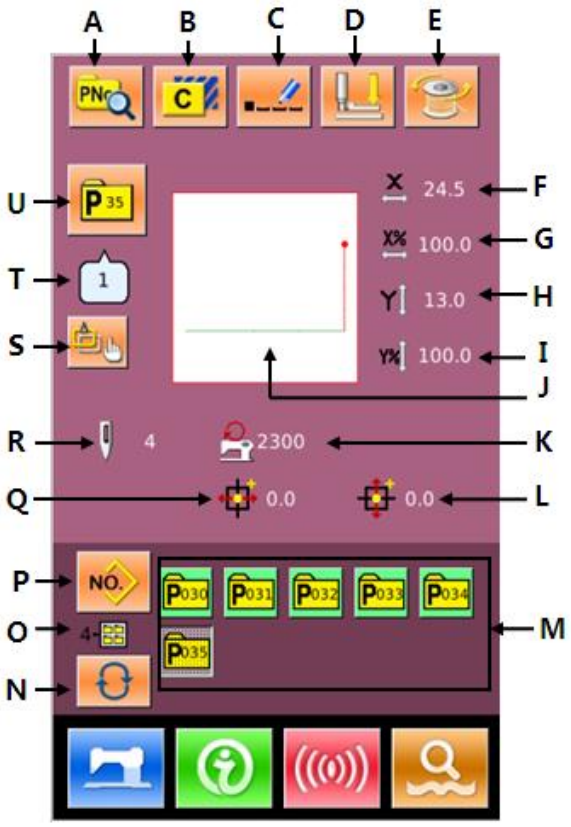
P Pattern Data Input interface is shown as the right picture.

999 P patterns can be registered at most.

Note: only when the parameter U207 is set as ON can the P pattern sewing interface be shifted to the P Pattern data input interface. (Parameter U207 is used to set whether to display P pattern data input interface.)



P Pattern Input Interface Functions:



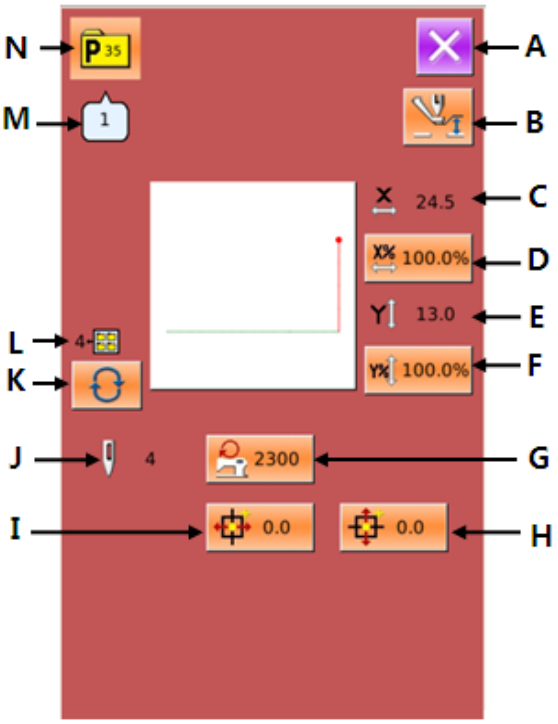
No.	Functions	Descriptions
A	P Pattern Edition	Edit the content of P pattern.
B	Copy P Pattern	Copy the current P pattern, and save it as a new pattern.
C	Pattern Naming	32 figures can be inputted at most.
D	Threading	Press it to lower the intermediate presser
E	Winding	Enter winding interface Press  for winding
F	X Actual Size Display	Display the actual size of the current pattern in X direction.
G	X Scale Rate Setting	Display the scale rate of the current pattern in X direction.
H	Y Actual Size Display	Display the actual size of the current pattern in Y direction.
I	Y Scale Rate Setting	Display the scale rate of the current pattern in Y direction.
J	Sewing Shape Selection	Display the sewing shape of the current pattern

No.	Functions	Descriptions
K	Max Speed Limitation	Display the Max speed
L	Y Travel Amount Display	Display the Y travel amount of the current pattern
M	P Pattern Selection	Display the registered P pattern.
N	P Pattern File Folder Selection	Shift the P pattern file folder number orderly.
O	P Pattern File Folder Number Display	Display the file folder number of current P pattern
P	Return to Normal Pattern Data Input	Return to the interface for inputting normal pattern data.
Q	X Travel Amount Display	Display the X travel amount of the current pattern
R	Pattern Stitch Number Display	Display the stitch number of the current pattern.
S	P Pattern Hotkeys Setting	K125 P pattern hotkey recognition switch, K126 P pattern number section
T	Sewing Shape Number Display	Display the number of the normal pattern quoted in the current P pattern.
U	P Pattern Number Display	Display the number of the selected pattern

2.4 P Pattern Edition

① Enter Interface for Editing P Pattern

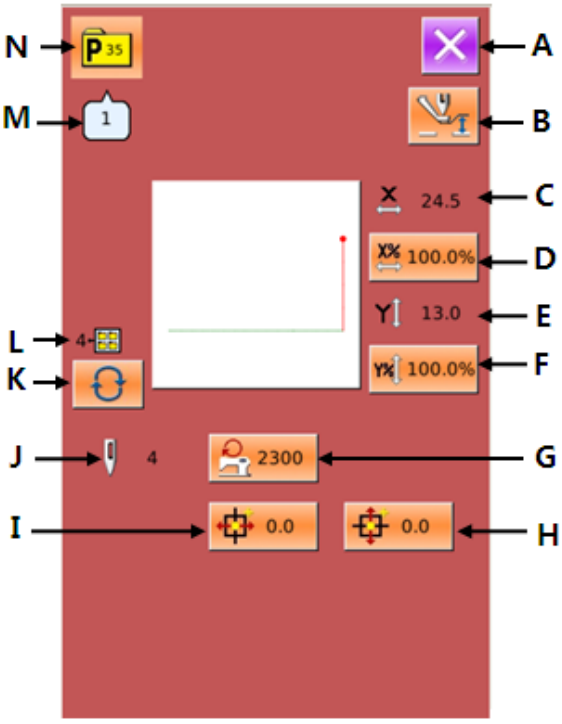
Press  to enter the interface for editing P pattern（as shown in right）.



② Edition of Data

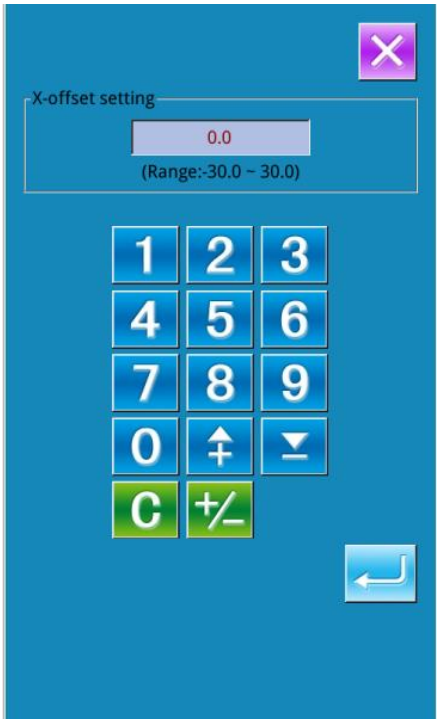
Select the item for change and set the value.

	Item	Input Range	Default value
A	quit		
B	Intermediate Presser Height	0.0~8.0mm	0
C	X Actual Size Display		
D	X Scale Rate	1.0~400.0%	100.0%
E	Y Actual Size Display		
F	Y Scale Rate	1.0~400.0%	100.0%
G	Max Speed	200~2800rpm	2300rpm
H	Y Travel Amount	-30.0~30.0 mm	0
I	X Travel Amount	-30.0~30.0 mm	0
J	Pattern Stitch Number Display		
K	P Pattern File Folder Selection		
L	P Pattern File Folder Number Display		
M	Sewing Shape Number Display		
N	P Pattern Number Display		



③ Confirmation of Data Change

Take “X Travel Amount” as example, user can input the value with number keyboard. Press  to finish the operation.



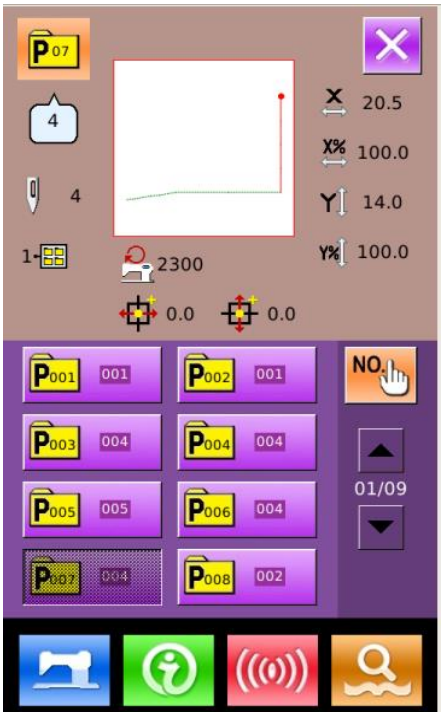
④ Quit the Edition Interface

Press  to close the P pattern edition interface and return to data input interface.

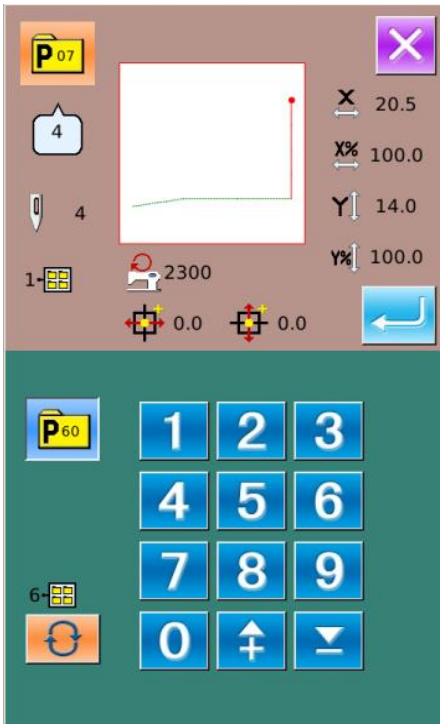
2.5 Copy P Pattern

① Select the Pattern for Copy

Press  to enter the interface for copying P pattern (as shown in right). Select the copied pattern number among the registered patterns and press  .



② Input the Number for Newly Registered Pattern



At the upper of the interface, it is the copied pattern. User can select an unregistered pattern number for it with the number keys. The registered pattern number can't be registered repeatedly.

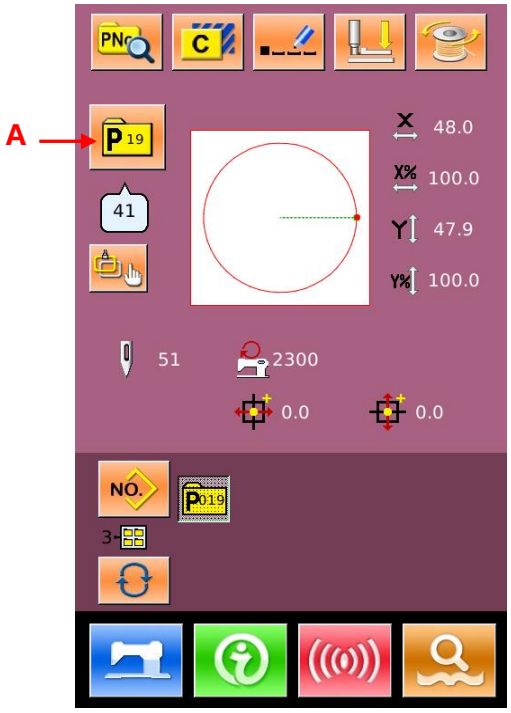
Press  to select the file folder for saving pattern.

Press  to finish the operation of copying the pattern and return to the interface for copying the P pattern.

2.6 P pattern Selection

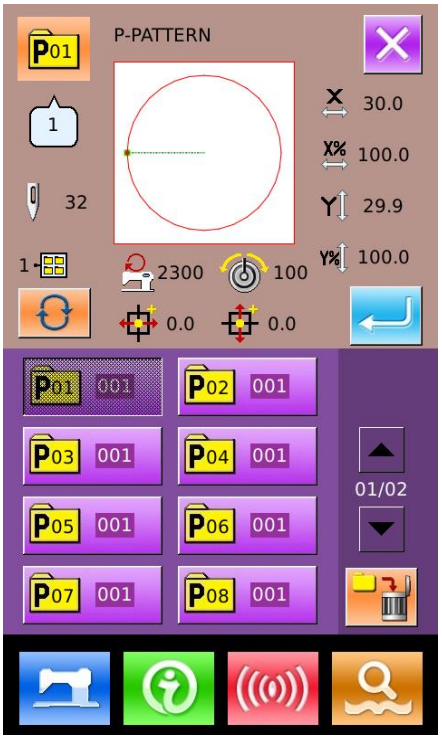
① Enter Interface for Selecting P Pattern.

As shown in right figure, press button A to enter the interface for selecting P pattern.



② Selection of Pattern Number

The upper side of the interface is the information of the selected pattern. Press  to hide file folder number. At this moment, the entire registered P pattern will be displayed.



③ Confirm the Pattern Selection

The operation is the same with that of the normal pattern selection. Please press  to end the selection.

2.7 P Pattern Sewing Interface Functions

(1) Edit the current P pattern

Press  to enter the normal pattern selection interface.

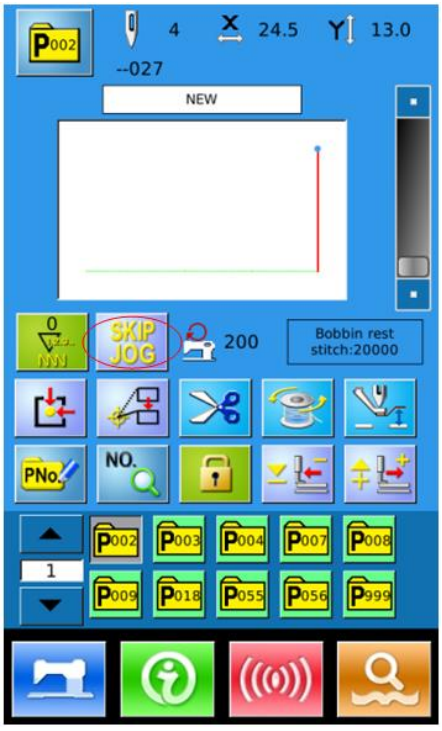
Select any pattern and confirm as shown in the right picture. Replace the current P pattern with the selected normal pattern.

(2) Skip Key

Skip: move the frame to the inputted stitch position.

Press 

to enter the skip interface and enter the stitch number to skip to.



(3) Lock Key

Lock: lock the pattern edited currently to prevent the shift of current pattern.

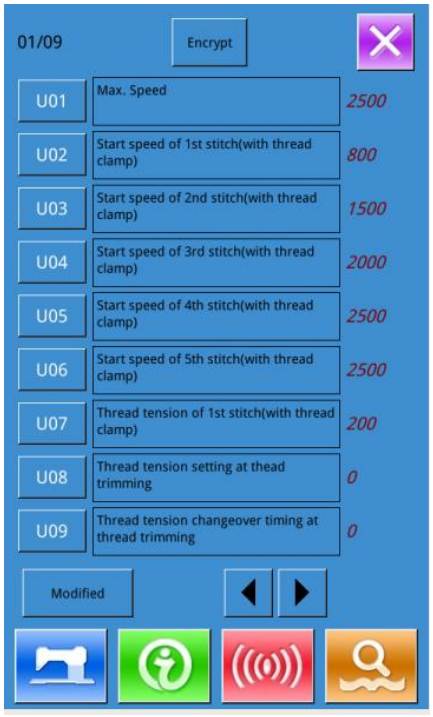
 : user can shift pattern manually but not automatically.

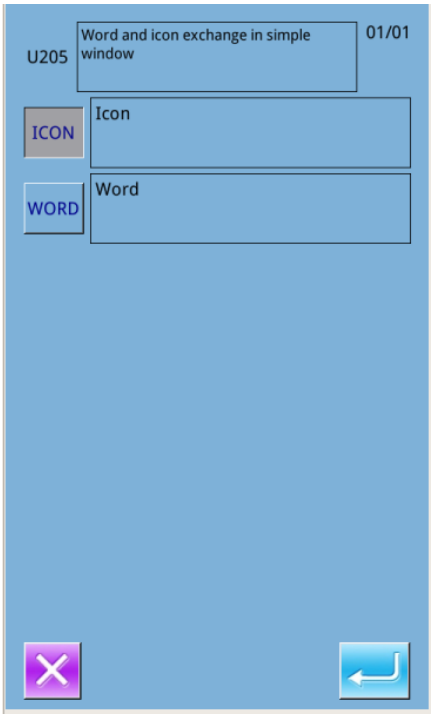
 : pattern can shift automatically but not manually.

(4) Shift between Icon Mode and Word Mode of P Pattern Sewing Interface

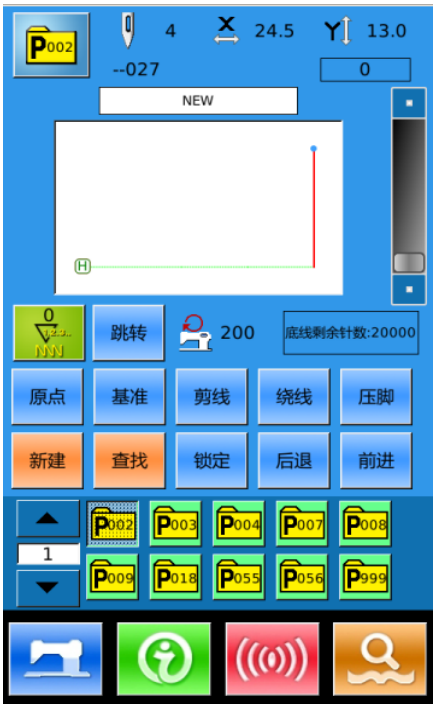
Press  to enter the function interface for the selection of parameter.

Parameter U205 is about the shift between icon mode and word mode. Select the word mode and confirm it, then the P pattern sewing interface will change to the text mode from the icon mode.





The function keys of the P pattern sewing interface will change into word mode.

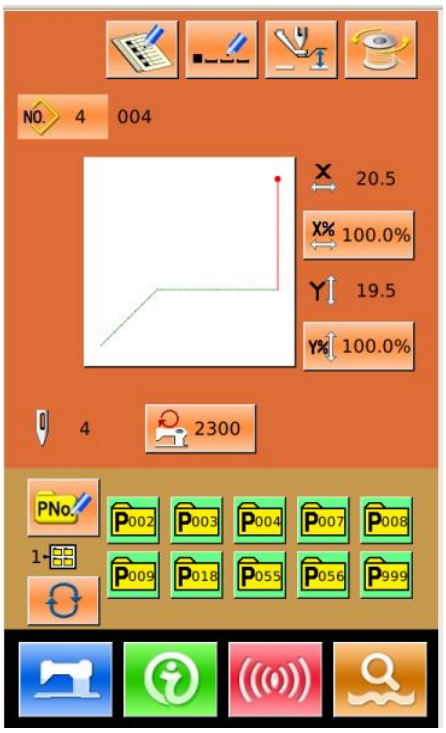


3 Operation Instructions

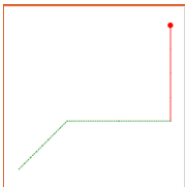
3.1Basic Operations

① Turn on the Power

Turn on the power to activate the interface for inputting data.



② Select the No. of the Desired Pattern

At the existing interface, the number of the selected pattern will be displayed. Press  to select the pattern number.

For the operations about the pattern selection, please refer to [2.4 Pattern Selection].

③ Set as Ready for Sewing

Press  and the background color of the LCD will turn into blue, ready for sewing.

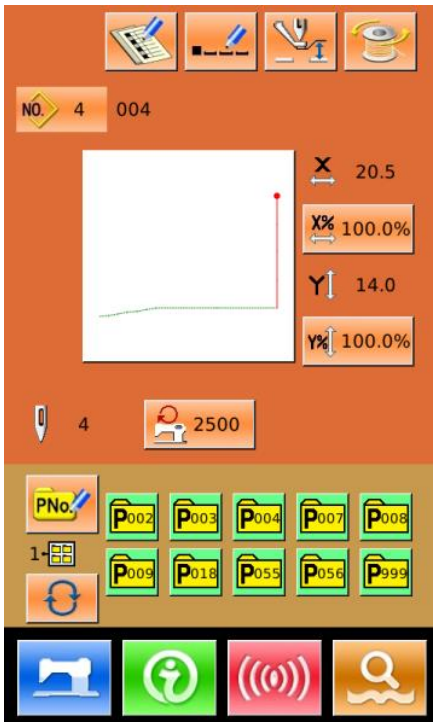
④ Start Sewing

Put the material under the presser, step the pedal to lower the presser and activate the sewing machine to start sewing.

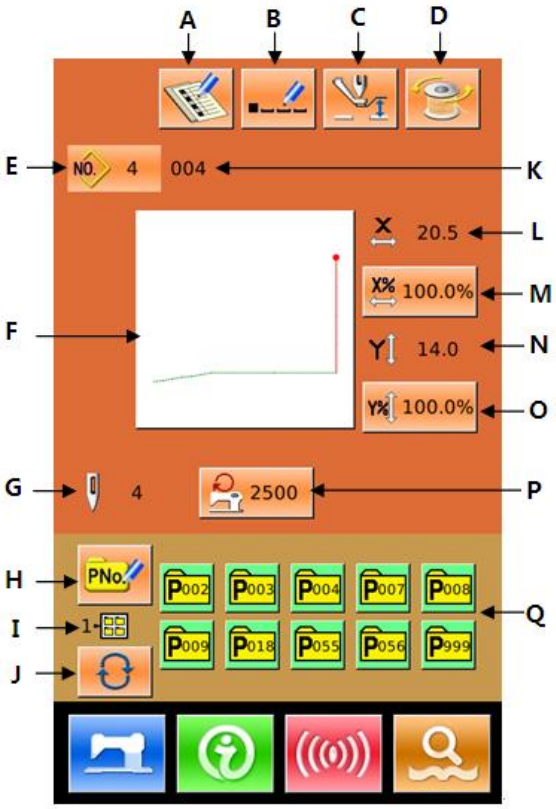
3.2 Operations of Normal Patterns

（1）Sewing Data Input Interface

Press  in the pattern sewing interface (blue background) to enter P pattern sewing interface (purple background), and then press  to enter data input interface (yellow background) as shown in right.



（2）Data Input Interface Functions



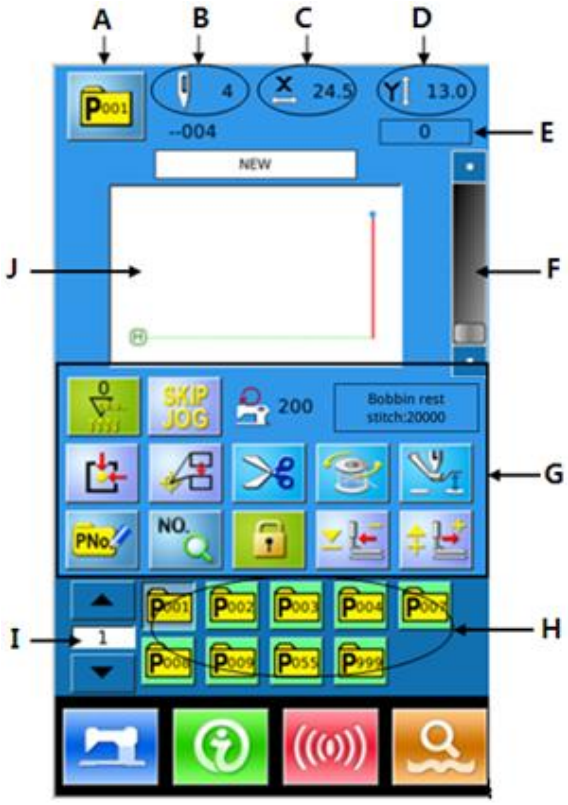
No.	Functions	Description
A	Pattern Registration	999 normal patterns can be registered.
B	Pattern Naming	32 figures can be inputted at most.
C	Intermediate Presser Setting	Press it to enter the interface for setting the height of intermediate presser. And then press  for entry.
D	Winding	Enter winding interface. Before winding, user have to press  .
E	Pattern No. Display	Display the number of the pattern selected at present.
F	Sewing Shape Selection	The shape of the existing pattern is displayed on the button. Press this button to have access to the interface for selecting pattern
G	Stitch Number of Pattern Display	Display the stitch number of the pattern sewn at present.
H	Prompt-pattern (P Pattern for short) Registration	Use for registering the P pattern, and 999 P patterns can be registered at most.
I	P Pattern File Folder Number Display	Display the number of the current P pattern file folder.
J	P Pattern File Folder Selection	Shift the P pattern file folder number orderly.
K	Name of Pattern	Display the name of the selected pattern.
L	X Actual Size Display	Display the actual size of the selected pattern in X direction User can input the actual size with the parameter U64, at that time the keys for adjusting the X actual size will be displayed.
M	X Scale Rate Setting	The X scale rate of the selected pattern is displayed on the button. Press it to have access to the interface for setting. This value is affected by parameters U64 and U88.
N	Y Actual Size Display	Display the actual size of the selected pattern in Y direction User can input the actual size with the parameter U64, at that time the keys for adjusting the Y actual size will be displayed.
O	Y Scale Rate Setting	The Y scale rate of the selected pattern is displayed on the button. Press it to have access to the interface for setting. This value is affected by parameters U64 and U88.
P	Max.Speed Limitation	Display the Max Speed, which can be set after this button is pressed.
Q	P Pattern Selection	Display the registered P patterns. Press that key to have access to the interface for inputting P pattern data. This button is not displayed at the initial status.

(3) Common Keys

No.	Icon	Function
1		Esc → Cancel the data modification before quitting the present setting/data changing interface.
2		Enter → Confirm the data modification.
3		Add → Increase the value of the number
4		Minus → Decrease the value of the number
5		Reset → Release abnormal conditions
6		Input → Display number keys to input numbers
7		Ready → Shift between data input interface and sewing interface
8		Information → Shift between data input interface and information interface
9		Communication → Shift between data input interface and communication interface
10		Mode → Shift between data input interface and detailed setting interface

（4）Sewing Interface

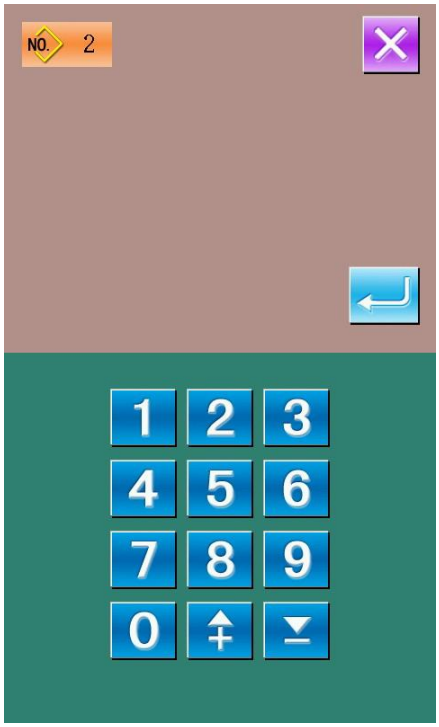
Press  to enter sewing interface as shown in right. As for detailed function description, please refer to function list. [**See 1.6 Operation Interface Function List**]



3.3 Pattern Registration

999 normal patterns can be registered at most.

Press  to enter the pattern registration interface (as shown in right figure):



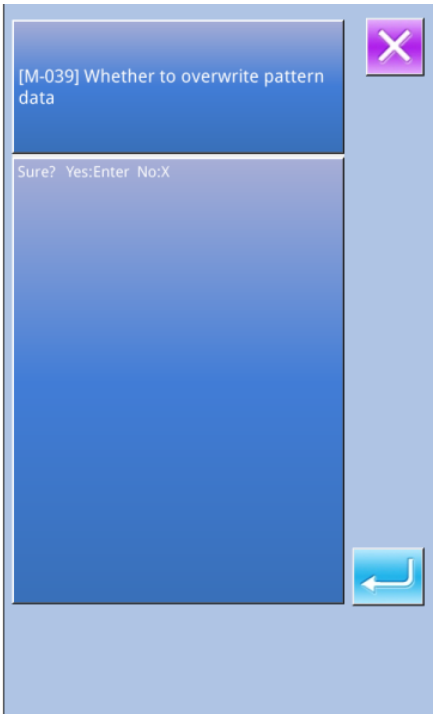
① Input Pattern Number

Use the number keys to input the desired pattern number. If the existed pattern number is inputted, the upper side of the interface will display the shape and relating data of the registered pattern. With  , user can find the unregistered pattern number.

② **Register New Pattern**

After the pattern number is set, user can press  to copy the displayed pattern data to the newly registered pattern. The system will return to the interface for inputting the data of the newly registered patterns.

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



3.4 Pattern Naming

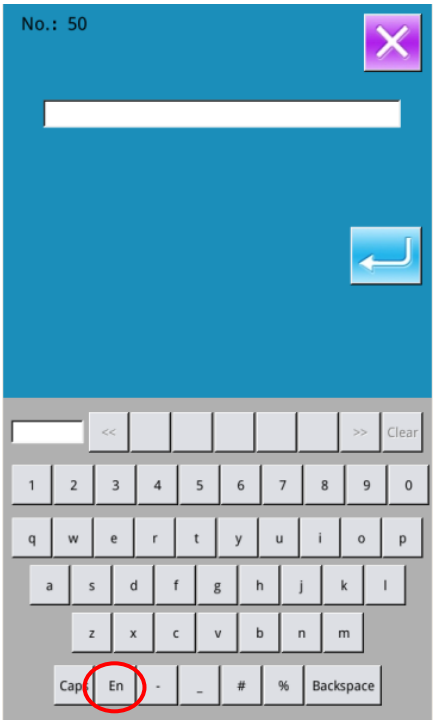
Press  to enter the interface for naming pattern (as shown in right figure), and at most 14 figures can be inputted to name a pattern. User can input the pattern name manually with number, English and Chinese.

: Input English. Name pattern with English, and press it to change to Chinese.

: Input Chinese. Name pattern with Chinese.

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

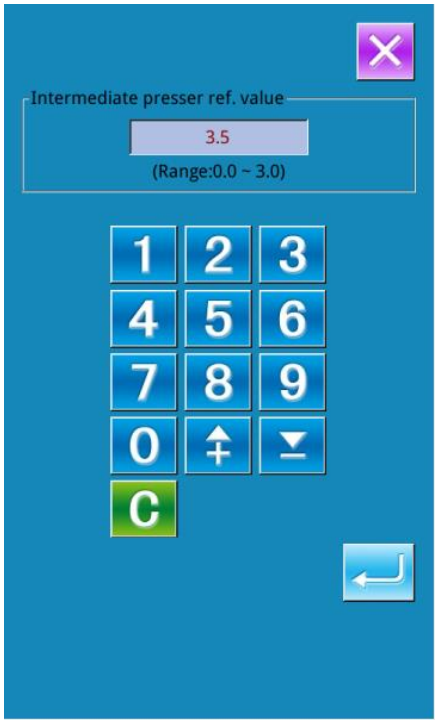
By moving the cursor, user can set the position of the figure. The Eraser is used to clear the figure at that position.



3.5 Intermediate Presser Setting

Press  to enter the interface for setting the intermediate presser.

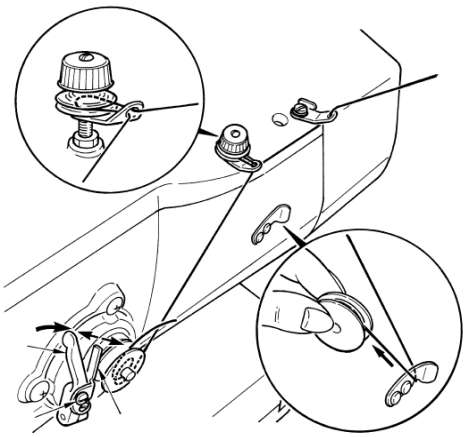
By using the  ~  and number keys or  /  , user can input the wanted figure. Press  to finish this operation and return to the data input interface.



3.6 Winding

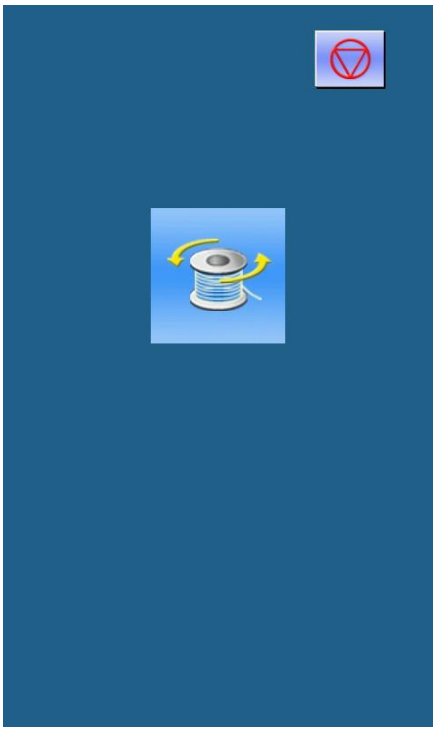
① Installation of bobbin

Put the bobbin onto the winding axis, then press the bobbin guide in the direction of arrow (as shown in right picture).



② Display the Interface for Winding Bottom Thread

In the data input interface, user can press  to activate the interface for winding (as shown in right figure).



③ Start Winding

Press the start pedal to start sewing machine. At this moment, the machine starts to wind bottom thread.

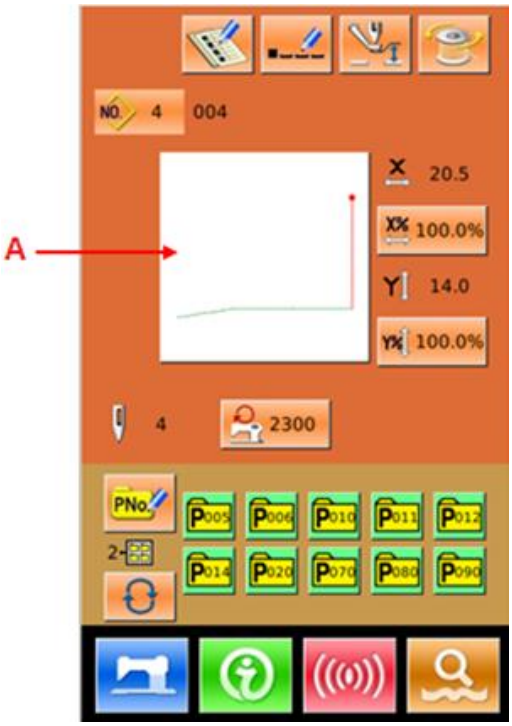
④ Stop Sewing Machine

After user presses  , the sewing machine will stop and return to normal mode. Additionally, if the pedal is pressed in the process of winding bottom thread, the sewing machine will be stopped in winding mode. Therefore, when user steps the pedal again, the sewing machine will continue winding. This function can be used when several bobbins are wound.

3.7 Pattern Selection

① Enter Pattern Selection Interface

Press Sewing Shape (A) in the data input interface (the right picture) to enter the Pattern Selection Interface.



In the pattern selection interface, the patterns will be listed orderly.

 : Preview Pattern

 : Inquire Pattern by No.

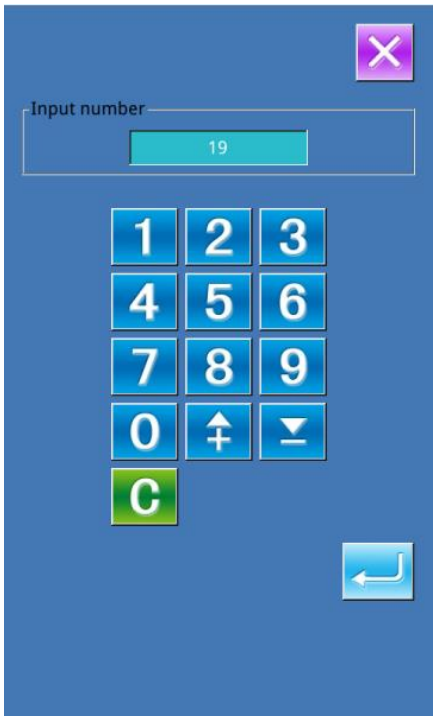
 : Delete Pattern

② Pattern Selection

16 pattern numbers are displayed in each page. When user selects a registered pattern number, press  to finish the selection.

③ Pattern Inquiry

Press  to activate the pattern inquiry interface. Use number keys to input the pattern number directly.

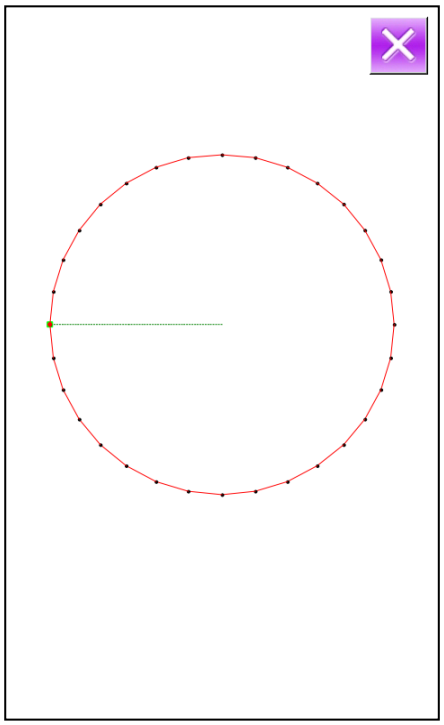


④ Pattern Deletion

Select a registered pattern at first, press  to delete this pattern; however, the patterns registered to P can't be deleted.

⑤ Pattern Preview

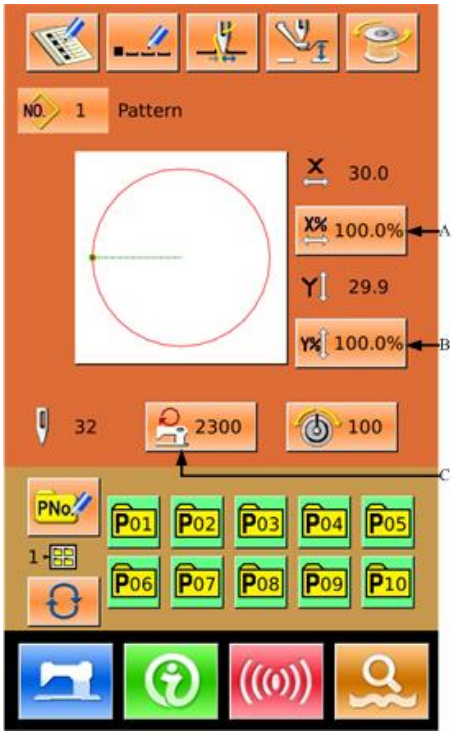
Press  to preview the present pattern in full screen.



3.8 Sewing Data Setting

① Enter Interface for Setting Sewing Data

Pressing keys A, B or C in the interface of data input to enter the interface for setting scale rate or the interface for setting the speed limitation respectively



	Item	Input Range	Default
A	X Scale Rate	1.0~400.0%	100.0%
B	Y Scale Rate	1.0~400.0%	100.0%
C	Max Speed Limitation	200~2500rpm	2300rpm

Reference 1: Parameter U64 is used to shift the selection between the scaling rate and actual size.

Reference 2: The input range and initial value of Max speed is affected by the parameter U01.

② Scale Rate Setting

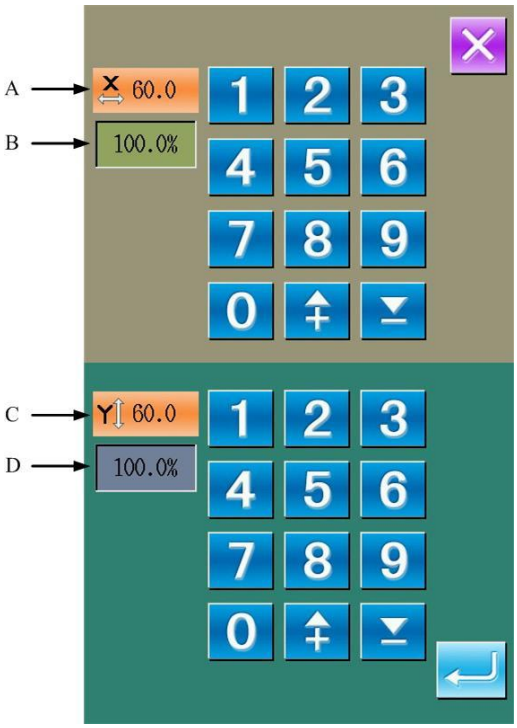
The right figure is the interface for setting the scale rate. The upper side is for setting that in X direction, while the lower side is for Y direction.

A: Actual value in X direction

B: Scale rate in X direction

C: Actual value in Y direction

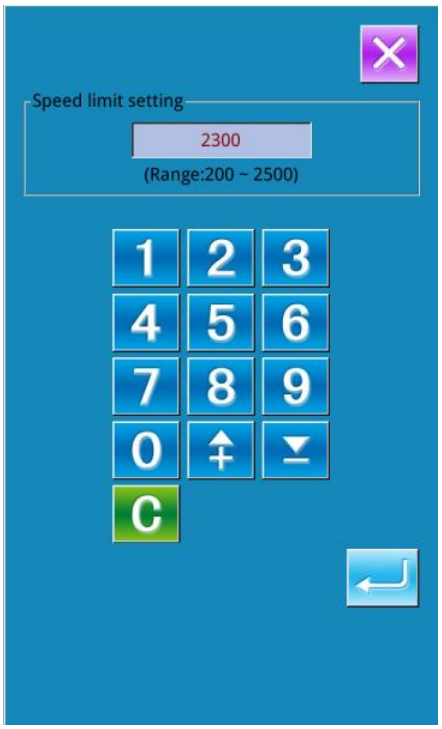
D: Scale rate in Y direction



With 0 ~ 9 and number keyboard or / to input the wanted value. Press to finish the operation and return to data input interface.

③ Max Speed Limitation Setting

The operation is the same with that at above

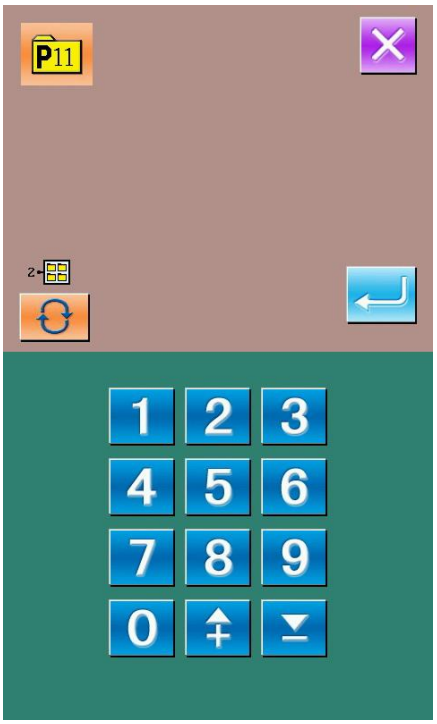


3.9 P Pattern Registration

① Enter P Pattern Registration Interface

In the data input interface, press 

to enter the P pattern registration interface (as shown in right).



② Input the P Pattern Code

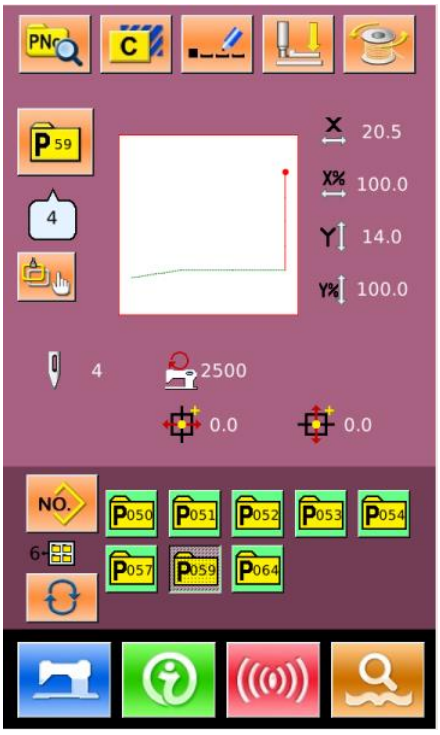
By using the number keyboard, user can input the wanted code. If the inputted pattern code is registered, the upper side of the interface will display the registered sewing shape and relating data. At this moment, no new pattern can be registered.

③ Select File Folder Number

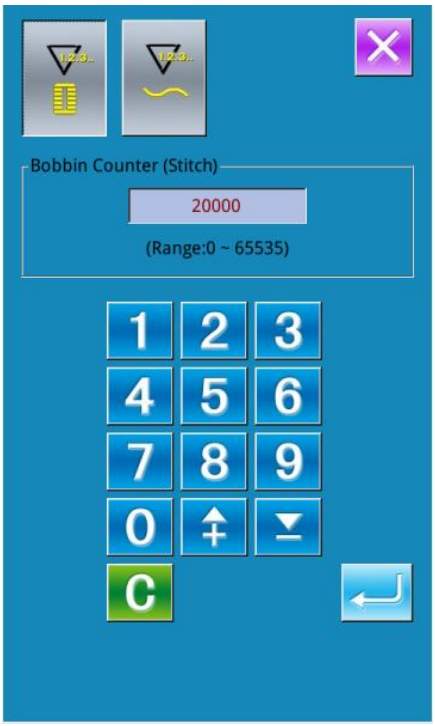
P Pattern number can be registered into five folders, 10 P patterns in each folder at most. User can use  to select orderly

④ Confirm the Pattern Number

Press  to finish the P patter registration, and the system returns to the interface for inputting the P pattern data.



3.10 Operation of Counter



① Display Counter Interface

In the sewing interface, press  to enter the interface for setting counters.

 : Sewing Counter Type

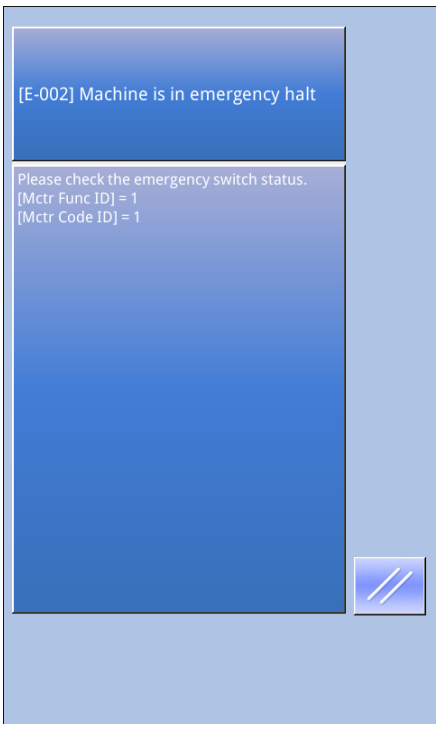
 : Bobbin Stitch No. Setting (Length)

 : No. of Pieces Counter

② Counter Selection & Value Setting

With  ,  &  , user can set the type and the value of counter.

3.11 Emergency Stop



① Release the Error

During the sewing, press the stop switch to stop the machine. And the screen will display the right interface.

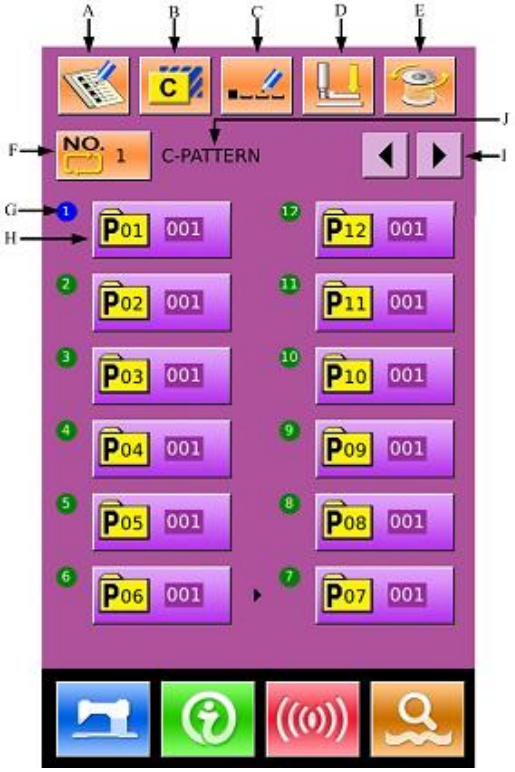
Press  to release the error. Step the pedal to start and continue sewing.

4 Operation of Combination Pattern (C Pattern)

4.1 C Pattern Data Input

The combination pattern is called as “C Pattern” for short, which consists of a group of P patterns. In a C pattern, 50 P patterns can be inputted at most. And 50 C patterns can be registered in system at most.

Please refer to the content in [8.5 Change Sewing Type] to enter the interface for inputting C pattern data (as shown in right).



Function List:

No.	Functions	Descriptions
A	C Pattern Registration	Register a new C pattern.
B	Copy C Pattern	Copy the content of current C pattern, and save it as a new pattern
C	Pattern Naming	14 figures can be inputted at most.
D	Threading	Press it to lower the intermediate presser
E	Winding	Enter winding interface. Press it and  for winding
F	C Pattern Number Selection	The number of the selected pattern is displayed on the button. Press it to have access to the interface of C pattern selection.
G	Sewing Sequence Display	Display the sewing sequence of the selected pattern. The one attached the blue number is the initial sewing pattern.
H	C Pattern Shape	Press the button to have access to the C pattern edition interface. User

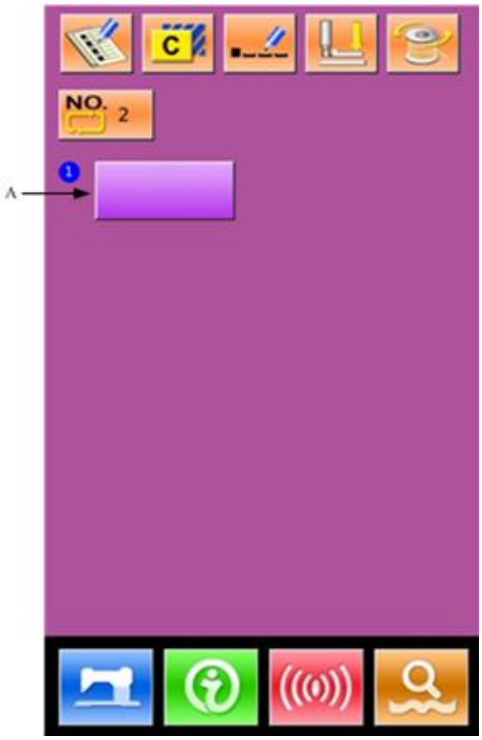
No.	Functions	Descriptions
	Selection	can select a P pattern to input.
I	Page Key	50 shapes can be registered in a C pattern at most. 12 shapes can be displayed in each page.
J	C Pattern Name	Display the name of C pattern.

4.2 C Pattern Edition

① Enter C Pattern Edition Interface

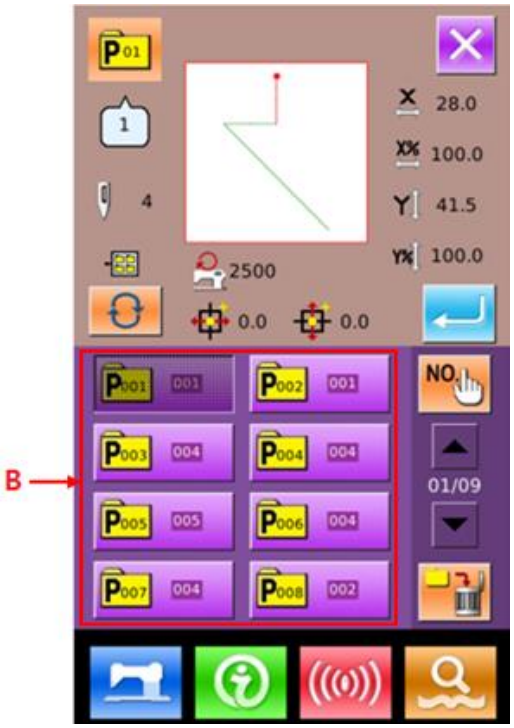
In the interface for inputting C pattern data, user can press button A to enter the C pattern edition interface.

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



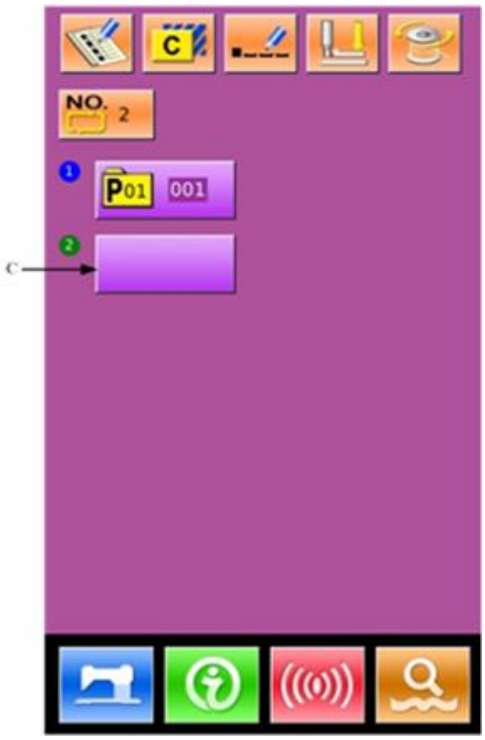
② Select a Shape

The right figure is the interface for C pattern edition. User can select a P pattern (B) to be registered. Press  to end the selection.



③ Repeat the Registration of the Rest Shapes

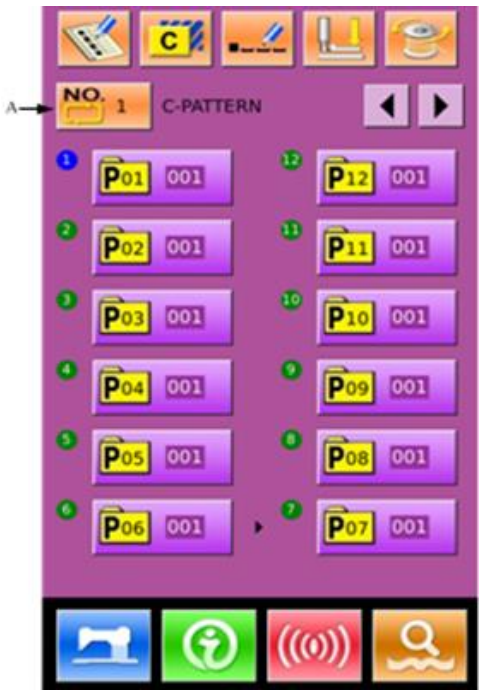
When the first shape is set, the selection key (C) for the second shape is displayed. Repeat the above operation to register the rest shapes.



4.3 C Pattern Selection

① Enter Interface for Selecting C Pattern

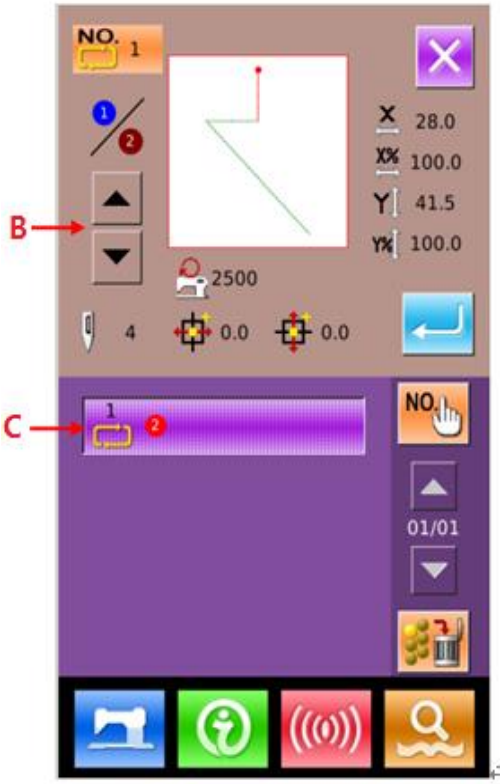
Press the icon A in the right interface to enter the C pattern selection interface.



② Select the C Pattern Number

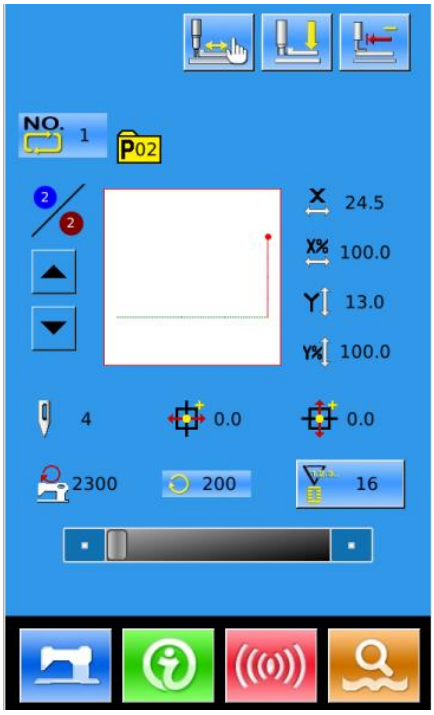
The right picture is the C pattern selection interface. After pressing button B, user can orderly change the data of P patterns which are inputted in the current C pattern.

To confirm the selected C pattern number, please press  .

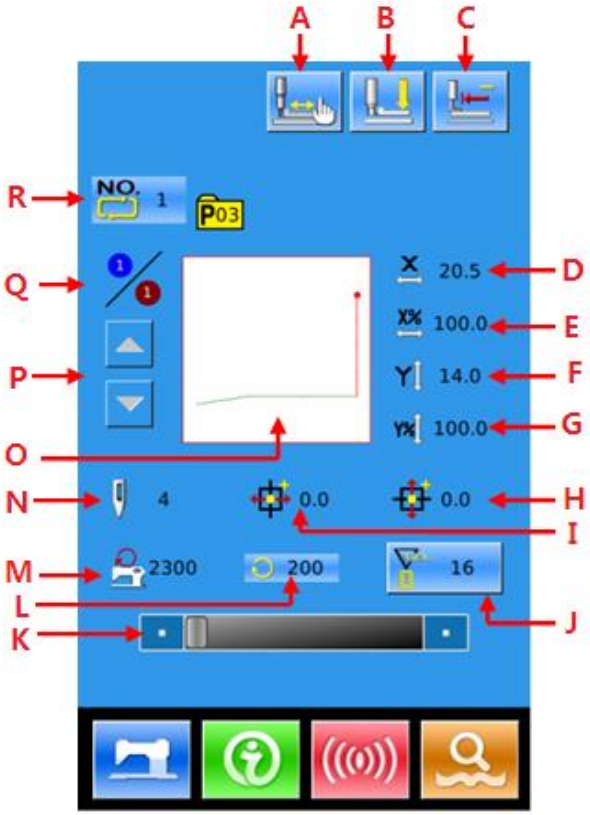


4.4 C Pattern Test Sewing

In the interface of C pattern data input, press  to enter the test sewing interface (as shown in right).



Function List:

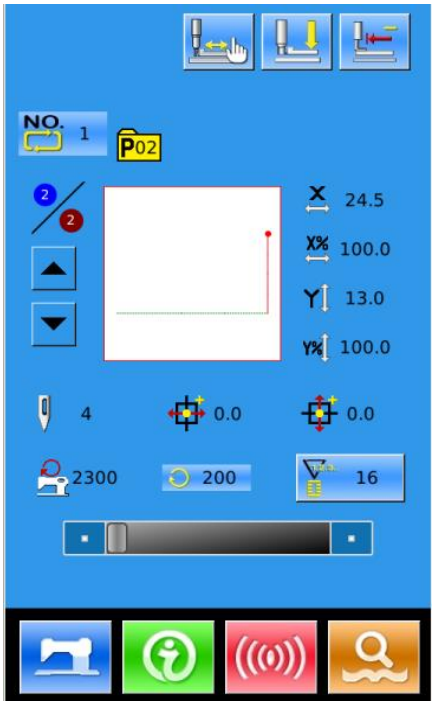


No.	Function	Description
A	Thread-catching Button	Select the thread-catching function effective/ineffective. This is affected by parameter U35.  : Thread-catching Ineffective  : Thread-catching Effective
B	Threading	Press it to lower the intermediate presser.
C	Return to Origin	This button returns the presser to the start sewing point.
D	X Actual Size Display	Display the X actual size of the registered sewing shape.
E	X Scale Rate Setting	Display the X scale rate of the registered sewing shape.
F	Y Actual Size Display	Display the Y actual size of the registered sewing shape.
G	Y Scale Rate Setting	Display the Y scale rate of the registered sewing shape.
H	Y Travel Amount Display	Display the Y travel amount of the current registered sewing shape
I	X Travel Amount Display	Display the X travel amount of the current registered sewing shape
J	Counter Setting	Press to select the type of counter and set the value of the counters.  : Sewing Counter  : No. of pcs Counter
K	Sewing Speed Setting	Change the sewing speed.
L	Sewing Speed Display	Display the current sewing speed
M	Max Speed Limitation Display	Display the Max speed of the current registered sewing shape.
N	Pattern Stitch Number Display	Display the stitch number of the current registered sewing shape.
O	Pattern Shape Display	Display the registered shape that is sewn at present.
P	Sewing Sequence Forward /Backward	The sewing shape can be moved forward/ backward by one.
Q	Sewing Sequence Display/ Total Registration Number	Display sewing sequence number in the current C pattern/ Display the total number of shapes registered in this current pattern

No.	Function	Description
	Display	
R	C Pattern Number Display	Display the number of the selected pattern.

① Test Sewing Interface

In the data input interface, press  to enter test sewing interface, and at that moment, the background of the LCD will become blue.



② Display Test Sewing Interface

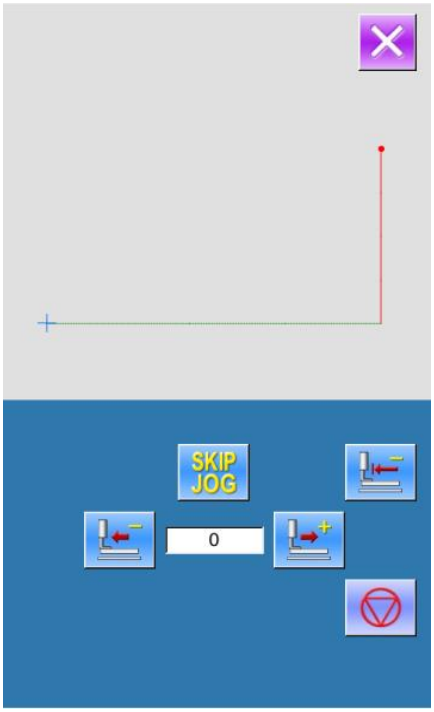
In the sewing interface, press  to enter test sewing interface (as shown in right):

 : back to origin

 : presser moving backward

 : presser moving forward

 : stop



③ Start Test Sewing

Step the pedal switch to lower the presser and use  &  to confirm the shape. If user presses these keys constantly for a while, the presser will continue moving even after the release of these keys until user presses  to stop the move of the presser.

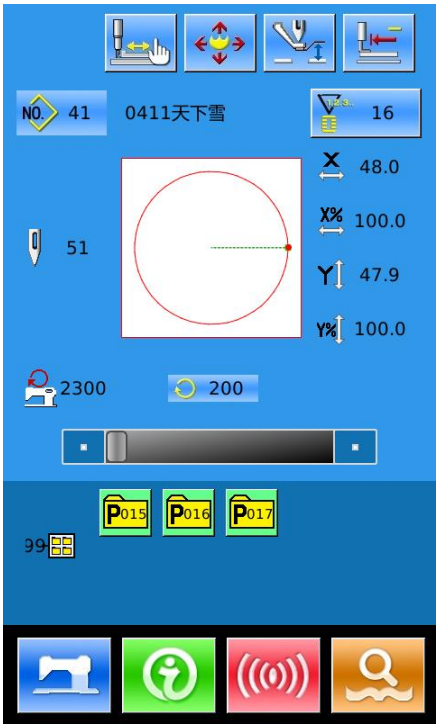
④ End Test Sewing

Press  to quit the test sewing interface and return to the sewing interface. If the pattern is not set at the sewing start position or sewing end position, step the pedal switch will confirm to start sewing halfway.

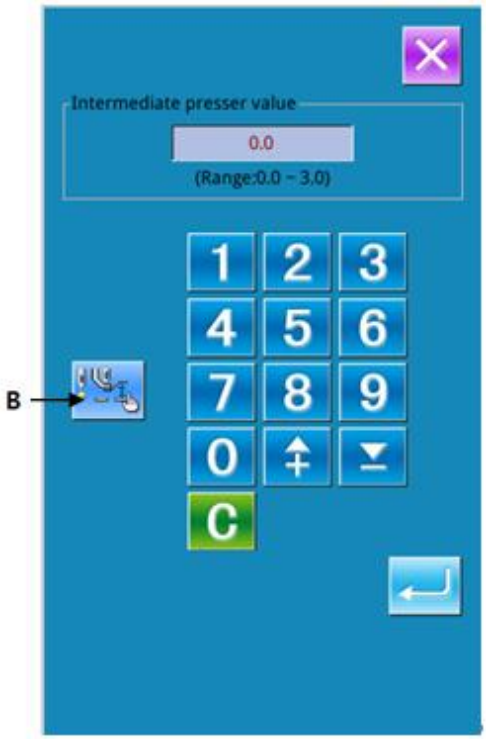
4.5 Single-stitch Intermediate Presser Setting

① Enter Interface for Setting Single-stitch Intermediate Presser

In the sewing interface (the right figure), press Intermediate Presser Setting (A) to have access to the interface for setting the intermediate presser.



In the interface for setting the intermediate presser (the right figure), press the Single-stitch Intermediate Presser Setting (B) to enter the interface for setting the single-stitch intermediate presser



② Set Value of Single-stitch Intermediate Presser

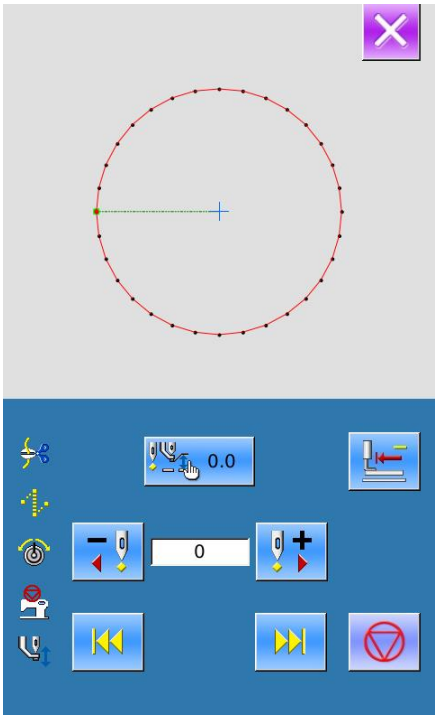
Presser 

to enter the interface for setting intermediate presser, the setting method is same to that in 3.5.

With  or  , the needle moves by one stitch in rear or front when the frame goes down. With  or  , needle moves to the needle entry point where the intermediate presser commend locates in front or rear. For stop, please press  .

Press  to move to origin.

The displayed value is the absolute value (intermediate presser reference value + intermediate presser increase/decrease value)



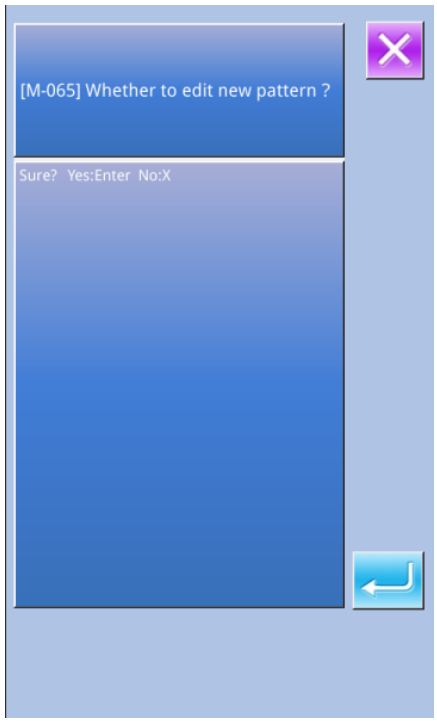
5 Pattern Edition

5.1 Enter the Pattern Edit Mode

Press  to shift the data input interface and the mode selection interface (shown in right). In the mode selection interface, user can do some detailed settings and editions.

For the detailed operations and setting within the mode selection interface, please refer to [8. Mode & Parameter Setting] .

Press  to enter the interface for selecting the edit mode or sewing mode.

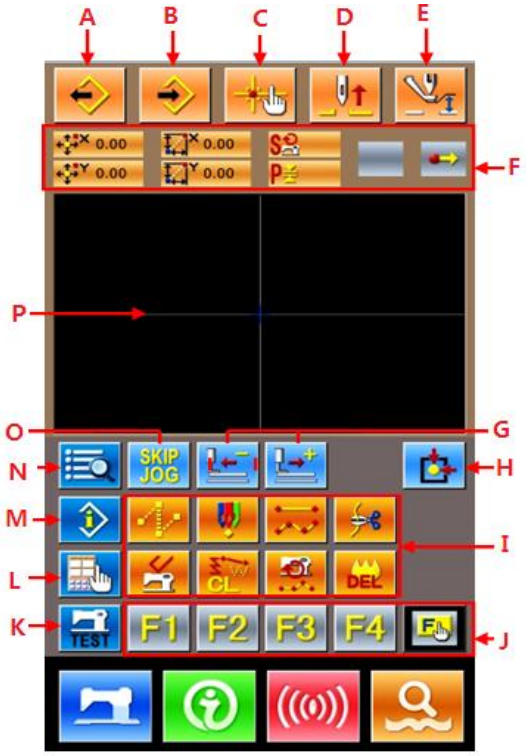


 : Sewing Mode

 : Edit Mode

Select  and then press  again, the system will quit from mode selection interface. At this moment, system will ask user whether to enter the pattern edition interface.

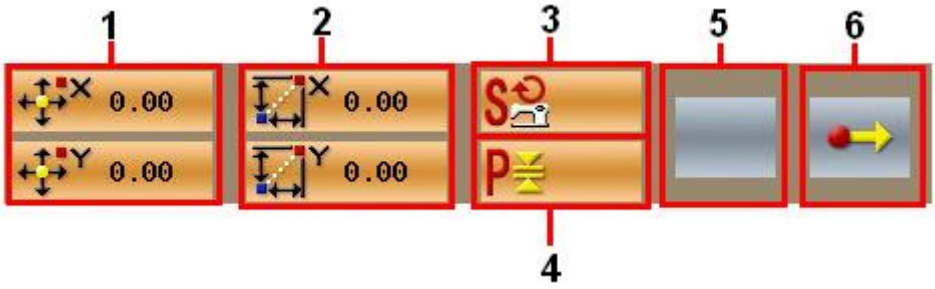
Press  to enter the pattern edit standard interface, as shown in right:



Function List:

No.	Functions	Descriptions
A	Load Design	Display the interface for loading design
B	Input Design	Display the interface for inputting design
C	Needle Entry Inquiry	Quickly locate the needle entry point; during the pattern edition, user can input the coordinates directly.
D	Needle-lifting	Return the needle to the highest point
E	Intermediate Presser Adjustment	Lift or lower the intermediate presser
F	Current Needle Position Information	This part will show the position information of current needle.
G	Feeding Forward·Backward	Move one stitch from the current needle position (Forward  ; Backward )
H	Return to Origin	Return the current needle position to the origin
I	Function Buttons	1  : Jump Feed
		2  : Point Sewing

No.	Functions	Descriptions
		3  : Normal Sewing
		4  : Thread-trimming
		5  : Release Mechanical Control Order
		6  : Elements Deletion
		7  : Modification on Sewing Speed Range
		8  : Delete Pattern Edited At Present
J	Function Hot-key	User can use Functional Selection· Setting (Functional code 112) to assign the needed functions to each button, thus uses these buttons as hot keys. After the assignment, the figure standing up for that function will be displayed on that key.
K	Trial Sewing	Trial sewing on the pattern edited at present
L	Display Setting	Set wide-angle, display of needle entry point and so on
M	Information Display	Display the detailed information of the pattern edited at present
N	Code List	Display the entire available functions on edition, please refer to [Editing Function List]
O	Pattern Display Area	Display the pattern.

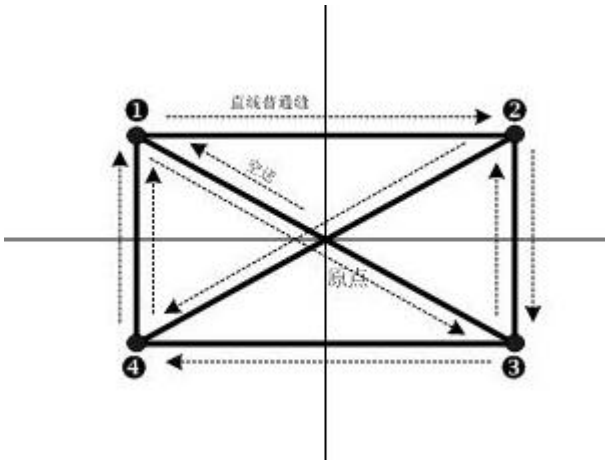


No.	Project	Content
1	Absolute Coordinate	The absolute coordinate of the current needle position
2	Relative Coordinate	The relative coordinate of the current needle position
3	Speed	The sewing speed or jump feed speed of the current point

No.	Project	Content
4	Interval	The length of current element stitch. (If the stitch is scaled, the value before the scaling will be displayed when the value is loaded).
5	Type of Element	Type of present element. For sewing data, the type of element will be displayed (like jump feed, broken line, free curve and so on). For the mechanical orders, the type of the control order will be displayed (like thread-trimming).
6	Type of Needle Entry Position	The types of the needle entry position
		Start of Design: Start point (origin) of the 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

By using the pattern editing functions, user can input the following pattern



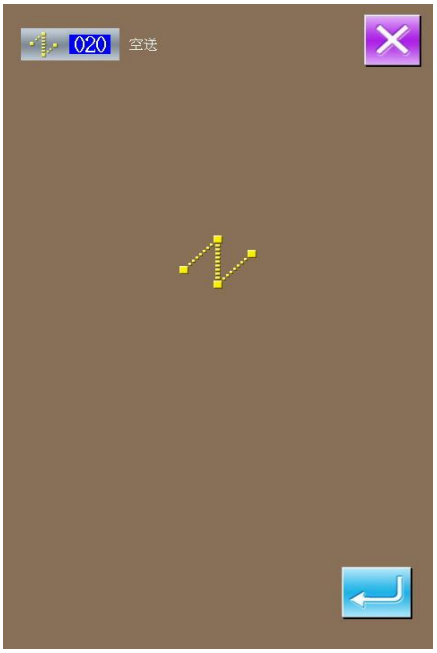
Input Points：

	X (mm)	Y (mm)
❶	-40.00	25.00
❷	40.00	25.00
❸	40.00	-25.00
❹	-40.00	-25.00

Input order: shown as the dotted arrow in the left.

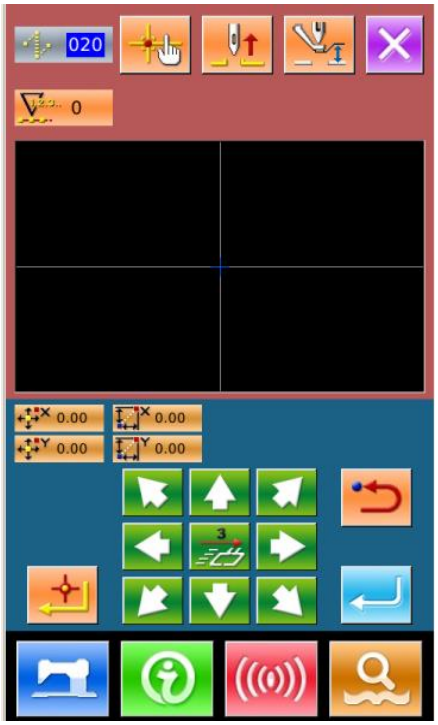
① Input of Jump Feed

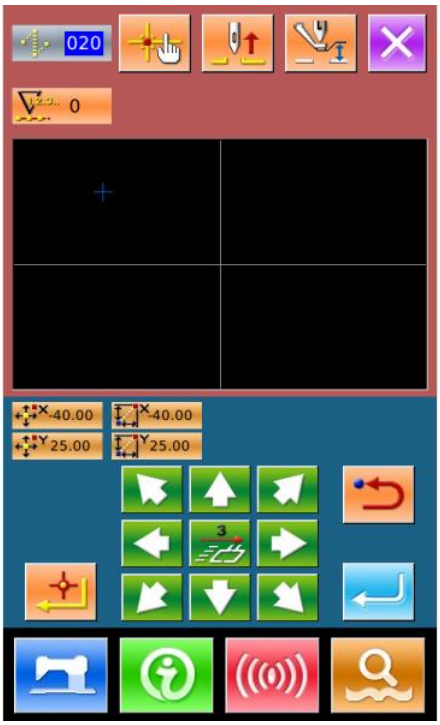
In the standard interface for pattern edition. Press  to display the interface for setting the jump feeding.

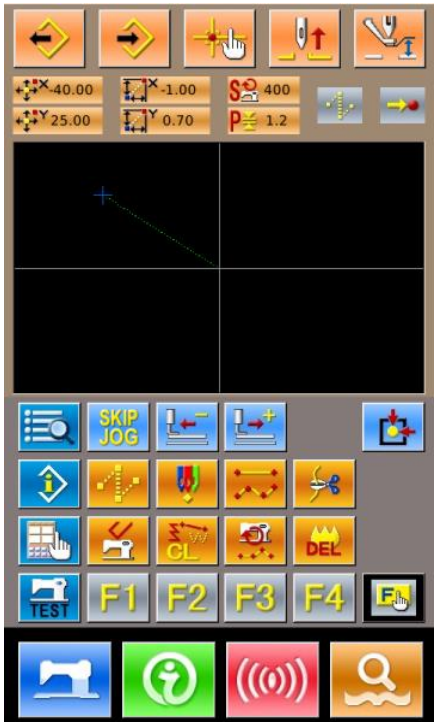


Press  to display the interface for locating the jump feed position;

In the jump feed location interface, user can use  to move the cursor (needle position) to (-40, 25). Press  for confirmation, and then press  for saving. After that the system will return to the standard interface for pattern edition and display the stitch form of jump feed:

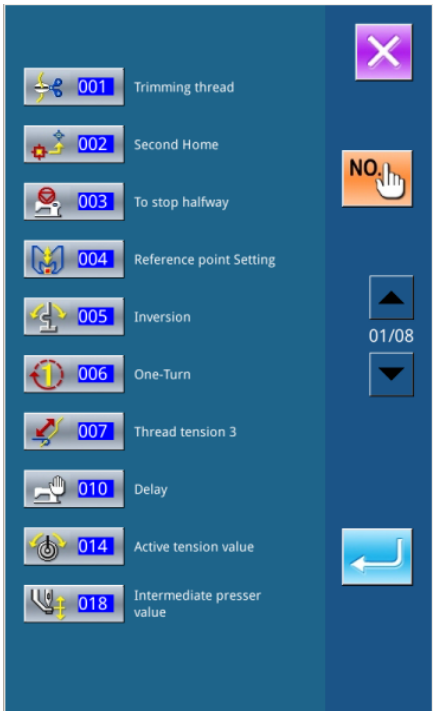


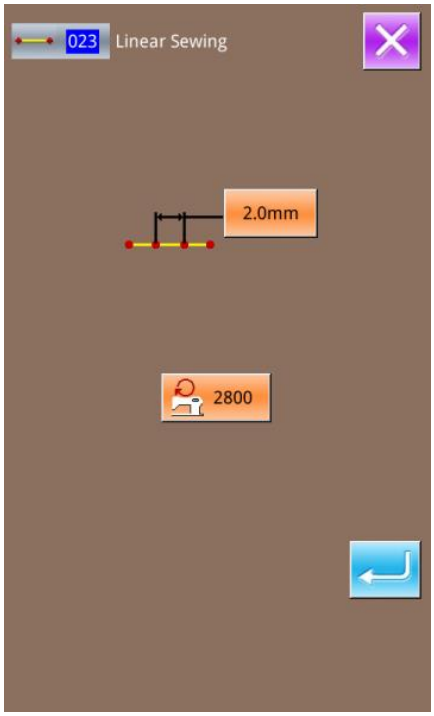




② Input of Linear Normal Sewing

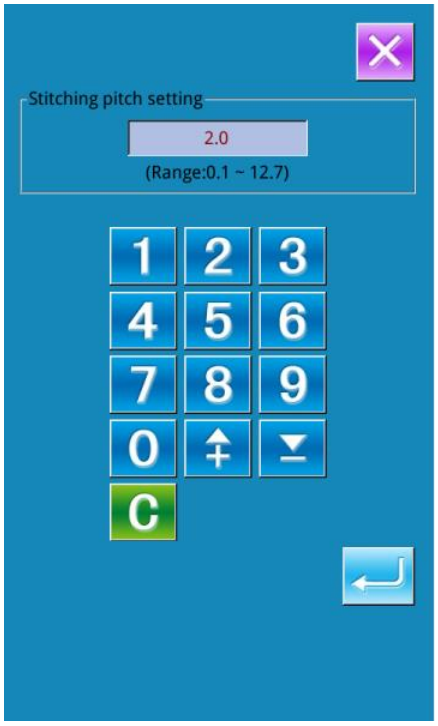
In the "Function Code List", select the "023 Linear Normal Sewing" and then press  to enter the interface for setting the linear normal sewing:





In the interface for setting the linear normal sewing, press 

to enter the interface for setting the stitch length, as shown in right.

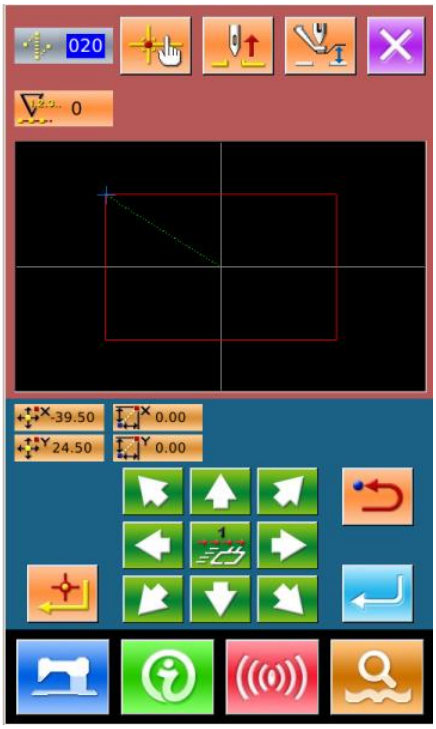


Press 

& 

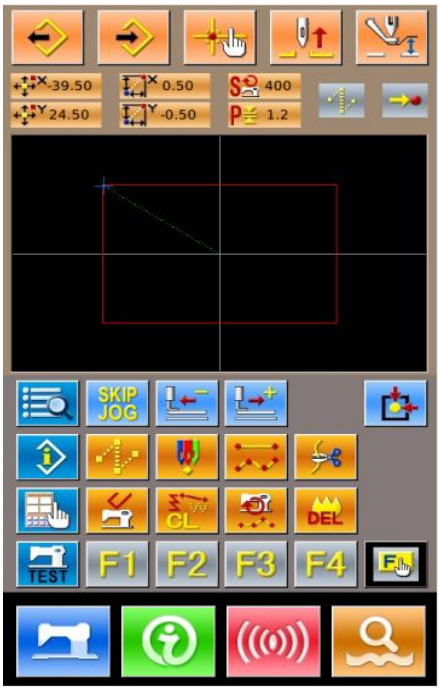
in sequence, to change the stitch length to “3.0”. Press “Enter” for saving, and system will return to the interface for setting linear normal sewing

After confirming the value on “Sewing Stitch Length Button” is “3.0mm”, user can press  to enter the interface for setting the linear normal sewing.



In this interface, press  to move the cursor (needle position) from ❶ to ❷, and then press  . Repeat the above operation to move the cursor in the order of ❷→❸→❹→❶, which is shown in right figure.

After confirming the pattern, user can press the  to create the pattern data. Then the system will return to the standard interface of the pattern edition and show the shape of pattern

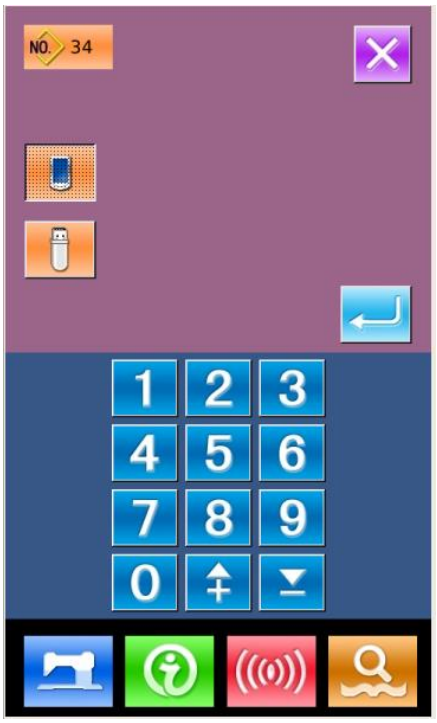


③ Save Pattern

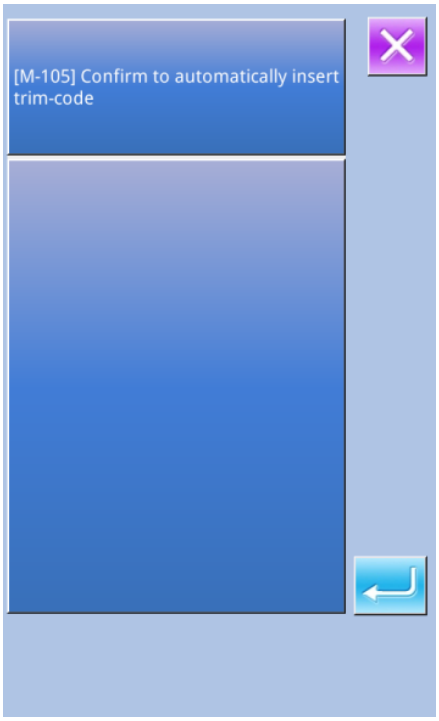
Press  to enter the interface for saving the pattern, where the edited pattern will be saved, as shown in right.

The system will set the number automatically, the user can also input the wanted number with number keyboard.

With  &  , user can select the storage position of the pattern. User can save the pattern at the storage media on operation panel, or save it at a U disk.



Press  to save the pattern. At the moment, the system will ask the user whether to insert the thread-trimming automatically. The interface at that time is shown as the right picture.



Press  to add the thread-trimming; press  to cancel adding the thread-trimming. After the operation, the system will return to the standard interface of pattern edition.

For the specific operations and descriptions on pattern edition, please refer to "SP-510 Pattern-making Operation Manual".

5.3 Quit Pattern Edition Mode

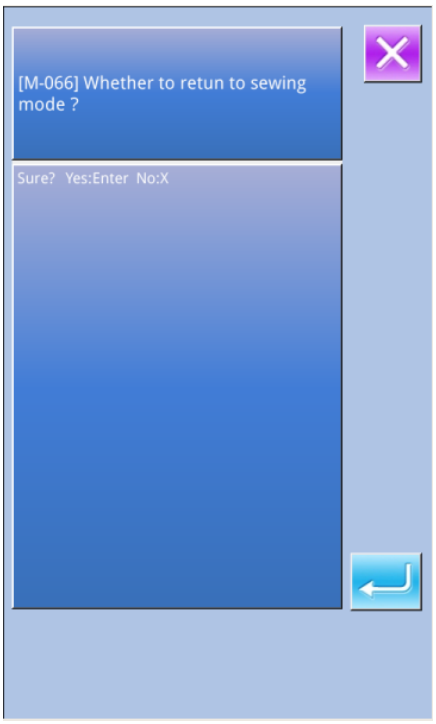
In the standard interface for pattern edition, press  to enter the mode selection interface, as shown in right.

Press  to shift between the sewing mode and edition mode:

 : Edition Mode

 : Sewing Mode

Press  again to quit the interface for mode selection. At this time the system will ask user whether to return to the sewing mode. Press  to return to the sewing mode from the pattern edition mode.



6 Information Function

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.

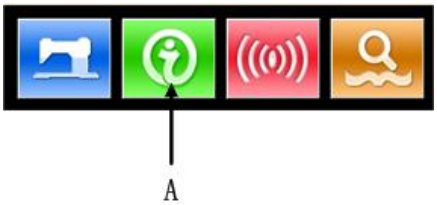
2）Speed can be checked at a glance and the target achieving consciousness as a line or group is increased as well by the function to display the target output and the actual output.

3）Display the threading figure.

6.1 Information for Maintenance & Repair

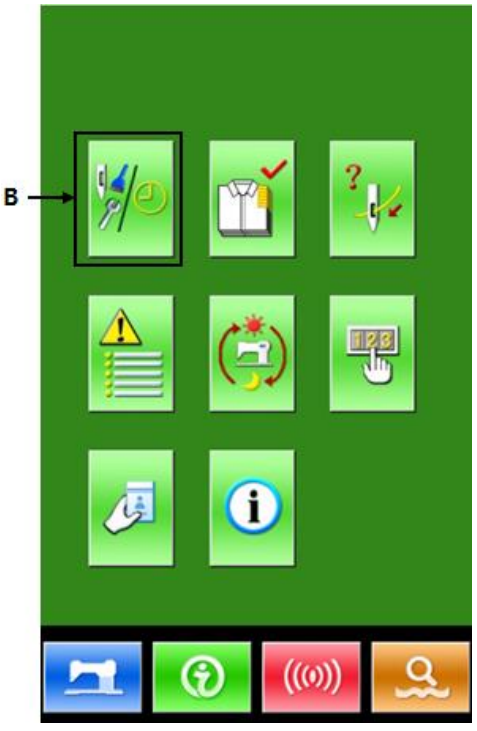
① Display of Information Interface

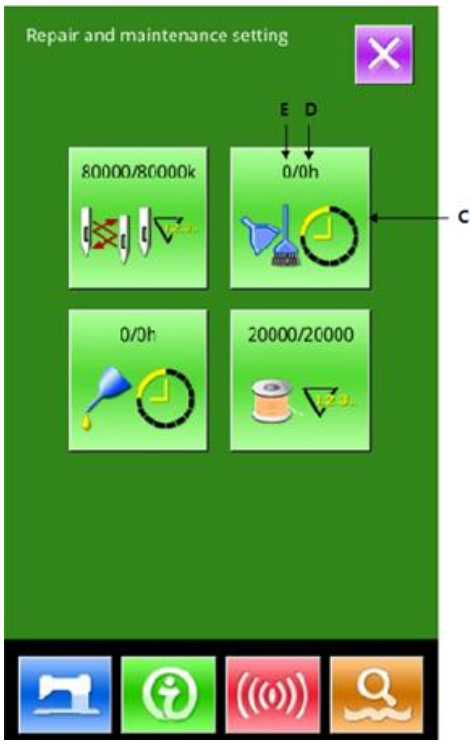
In data input interface, press the Information Key (A) to activate the information interface.



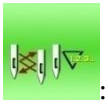
② Display of Maintenance & Repair Interface

Please press the button  (B) to call the maintenance & repair interface.





In the interface for maintenance and repair, the following three items are displayed.

 : Needle replacement (thousand stitches)

 **:** Cleaning time (hour)

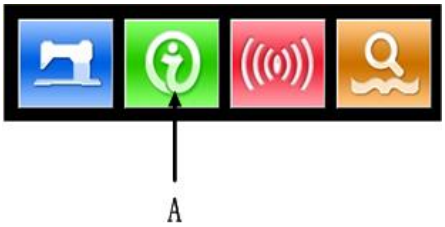
 **:** Oil replacement time (hour)

: Bobbin thread counter value

The displays of the items are at button C. The interval of repair (maintenance) is at D; the left time for replacement is at E.

Additionally, user can clear the left time for replacement.

6.2 Maintenance & Repair Time Input



① Display of Information Interface (Levels of Maintenance)

In the interface of data input, hold the Information Key (A) for 3 seconds to activate the interface of information (Maintenance level).

In that interface, there are six keys.

② Display of Interface for Maintenance & Repair

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

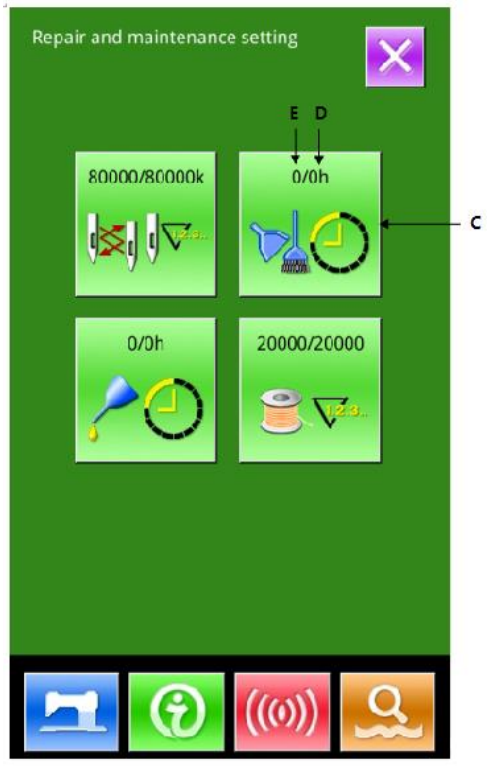
※ The descriptions about the three following buttons on the down part of this interface:

 : Alarm Record

 : Running Records

 : Periodical Password

In the interface of maintenance and repair information, the system displays the content same to that on the ordinary maintenance and repair interface. Press the Item Button C (for changing the repair and maintenance time) to activate the relating input interface.

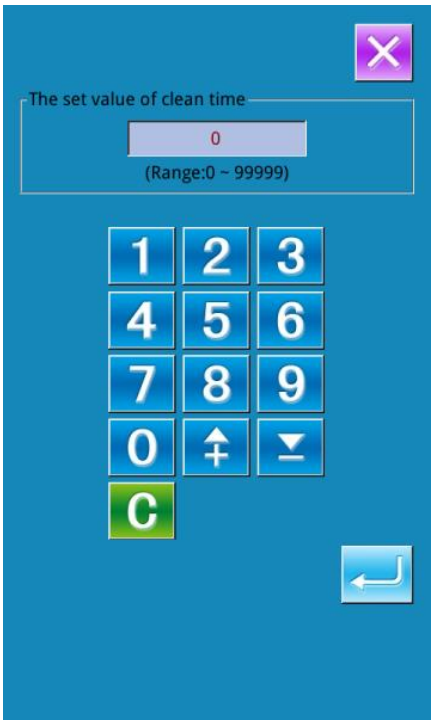


For an example, press  to set the cleaning time.

③ Set Item for Maintenance & Repair

If the value of this item is set at 0, the function for maintenance and repair is stopped.

Use the number keyboard to input the set value of this item, press  to confirm the input.



6.3 Alarm Release

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 Enter. 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 information prompt code for each item:

- •Needle Replacement: M052
- •Clean Time: M053
- •Oil Replacement Time: M054

6.4 Production Control

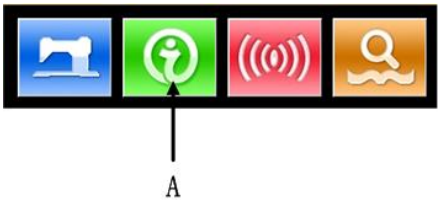
In the interface of production control, the system will be able to display the amount of products from the beginning to now and the target producing amount. The two methods for displaying the interface of production control are shown at below:

- Via Information Data Input Interface
- Via Sewing Interface

6.4.1 Via Information Data Input Interface

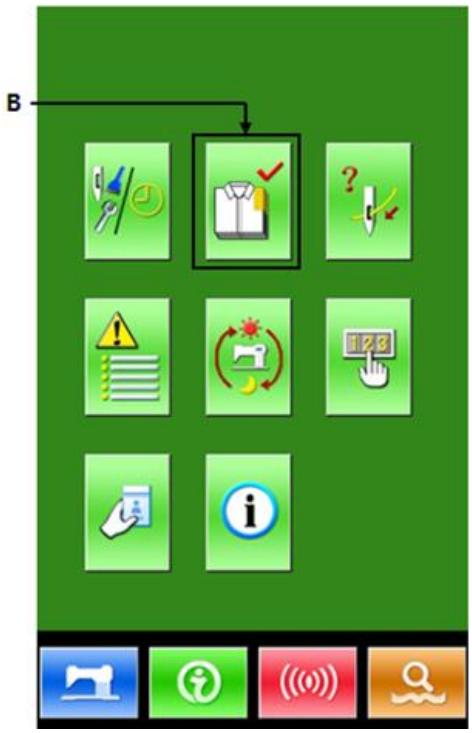
① Display of Information Interface

In the interface of data input, please press the information key (A) to activate the interface of information.



② Display of Production Control Interface

Press the key (B) in the interface of information to activate the production control interface (as shown in right).



There are five items displayed on the interface of production control.

A : Final Target Value

Set the final target amount of production.

B : Existing Target Value

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

C : Actual Result Value

Automatically display the amount of pieces sewn.

D : Pitch Time of Target

Set the pitch time (Second) among each working process.

E : Unit Interval of Actual

Set the time for completing one process in actual.

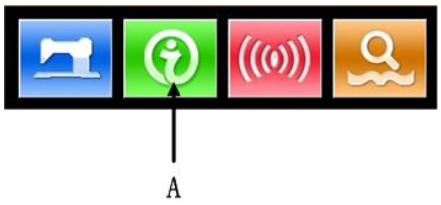
6.4.2 Via Sewing Interface

① Display of Sewing Interface

After user presses  in the data input interface, the sewing interface is displayed.

② Display of Production Control Interface

Press Information Key (A) in the sewing interface to activate the production control interface.

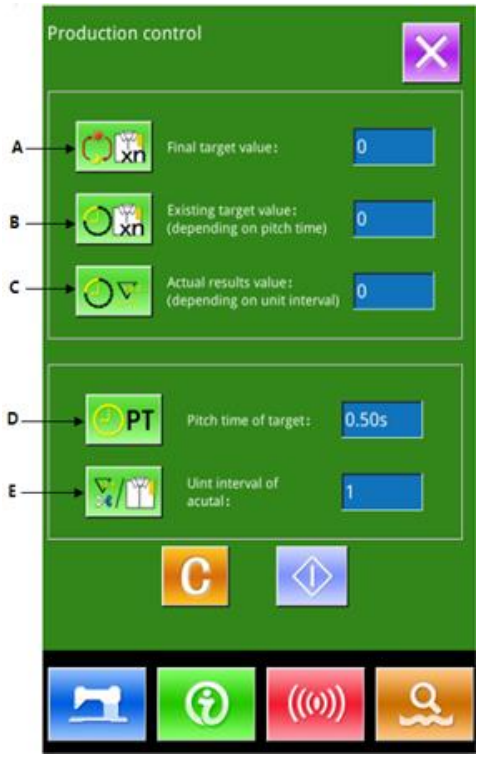


The displayed content and the functions are same to the content at above section

6.5 Setting on Production Control

① Display of Production Control Interface

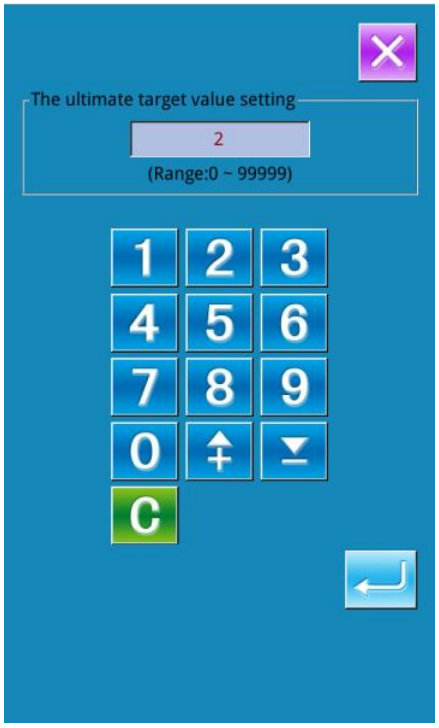
Please refer to the Chapter 6.4 to enter the interface of production control.



② Input Final Target Value

At first, please input the number of the production target pieces to which the sewing is performed from now on. Press final target value key  (C) to activate the interface of final value input.

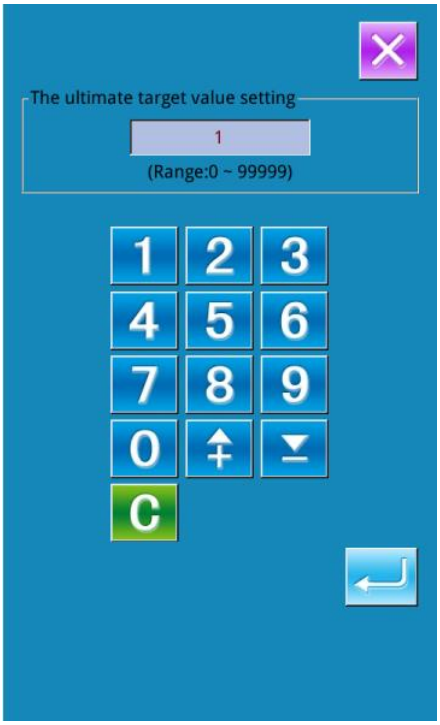
After the input of value, please press  for confirmation.



③ Input Pitch Time of Target。

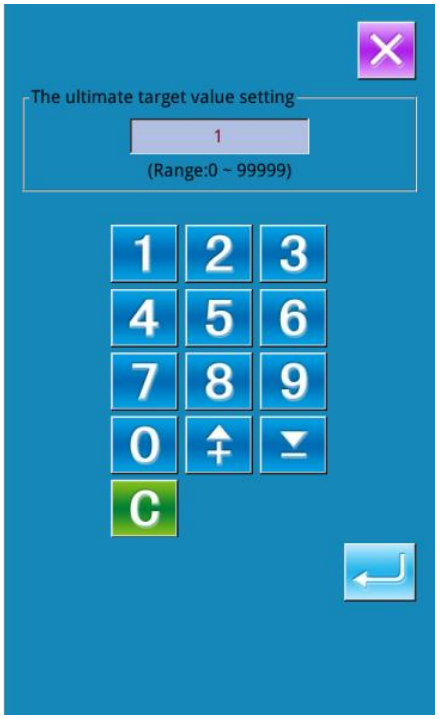
Then, please input the pitch time at each process. Press the pitch time key  (D) at previous page to activate the interface for inputting the pitch time.

Input the desired figures. After the input, please press  to confirm.



④ Input Unit Interval of Target

Then please input the average times interval of piece work. Press  (E) in previous page to activate the interface for inputting



⑤ Start to Count Amount of Production

Press  (I) to start counting the number of production amount, the [Final Target Value], [Existing Target Value] and [Actual Result Value] will 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：According to the value set at [Unit Interval of Actual] the system will start count the actual value by adding 1 at finishing each piece

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

⑥ Stop Counting

In the status of counting, you can see the  displayed on the screen. Press  to stop counting. After stop, the Counting Key  will take the position of  . If user wants to continue counting, please press  .

Without pressing C, the value will be kept.

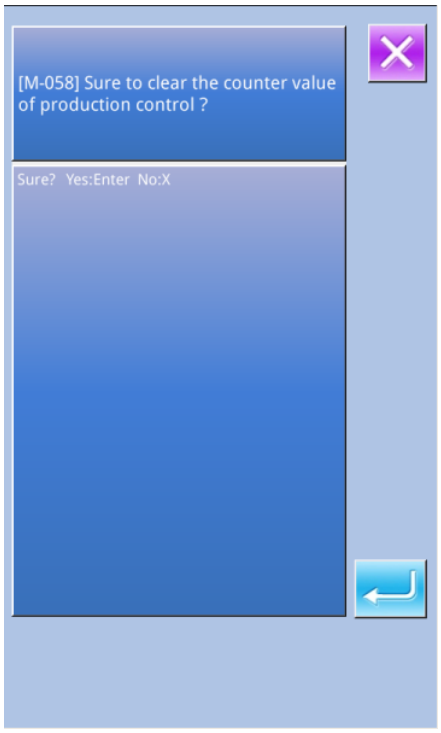
⑦ Clear the Data in Counter

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

The values of xn and can be cleared.

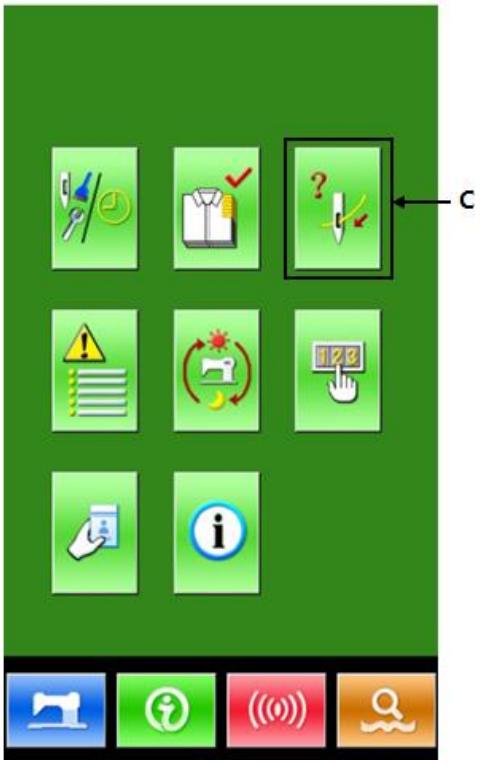
(Note: the clear key can only be displayed when the counter is stopped.)

After pressing C, the interface for confirming clearance is activated; then press to confirm the clearance.

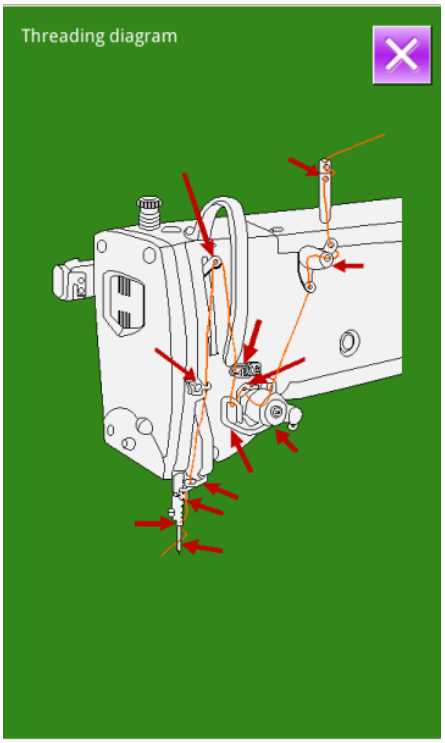


6.6 Display of Threading Figure

In the interface of information, press (C) to activate the threading figure.



User can take reference when threading



6.7 Alarm Record

For qualified maintenance personnel, press  to enter the alarm record interface (as shown in right). The interface displays the information of the fault occuring at the system. The smaller number means the later occurance.

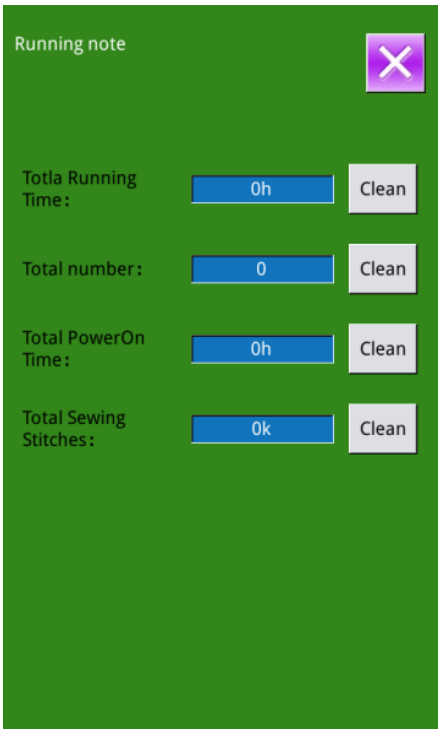
Additionally, system also records the production value at each alarm.

User can use  to turn the page, so as to check more alarm information.

Press  to clear all the fault record.

6.8 Runnning Records

For qualified maintenance personnel, press  to inquire the running information of machine.



Total Running Time：accumulated running times (hour)

Total Number: accumulated number of sewn pieces

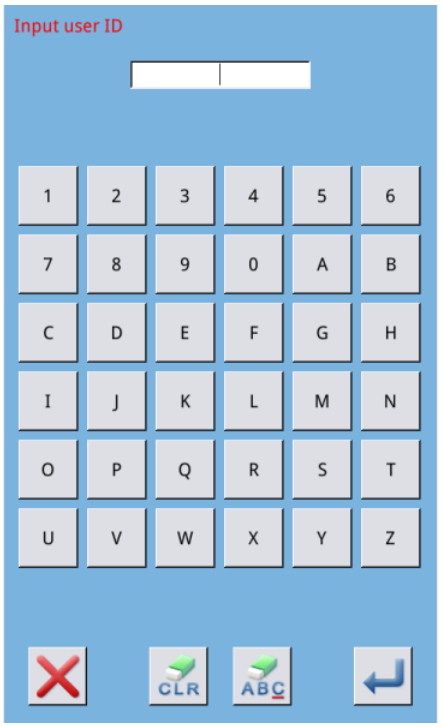
Total Power-on Time: accumulated time of power-on（hour）

Total Sewing Stitches: accumulated number of stitch (1000 stitches as a unit).

Press “Clear” to clear the record value

6.9 Setting of Periodical Password

1) For qualified maintenance personnel, Press  to set periodical password



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

- At most ten periodical passwords with different activation dates can be set
- The system will display the information of passwords set by manufacturer.

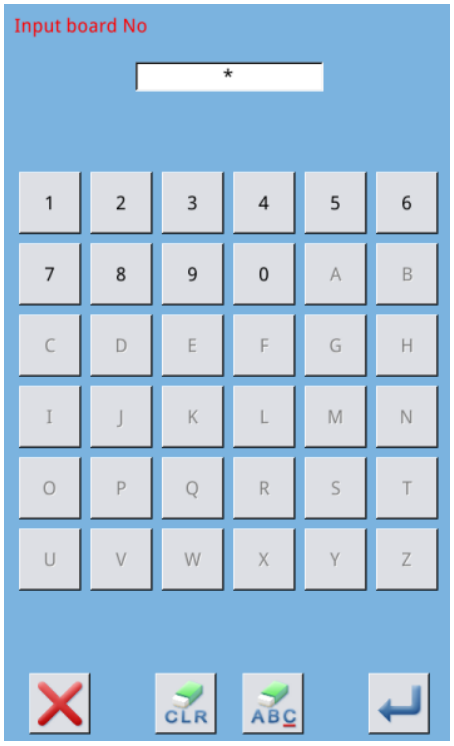
2) Input the Correct Manufacturer ID to enter the password setting interface

Before setting the password, user has to set board number and system clock

3) 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



4) Input System Clock

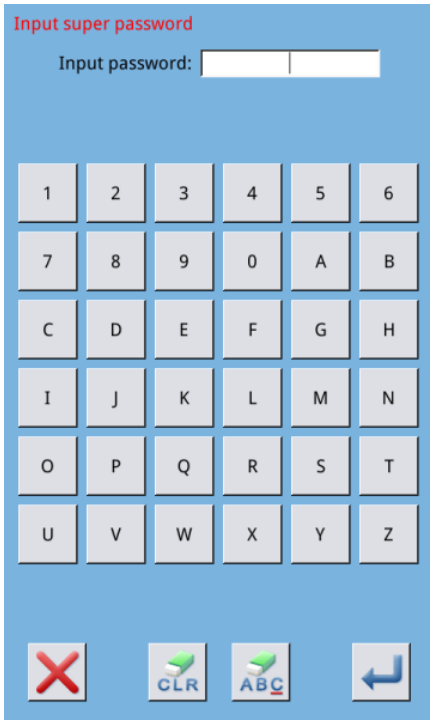
Press “Clock” to enter the interface for setting the system clock. And set the time.

5) Input the super password

Press the “Super Password” to enter the interface for setting super password

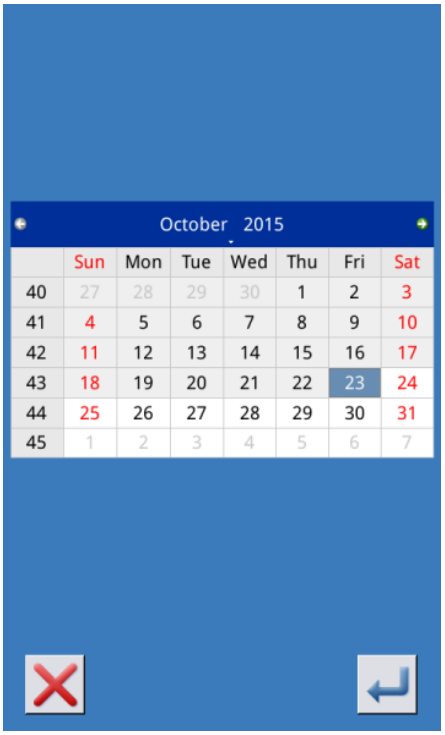
※ **At most, user can input nine-figure super passwords.**

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



6) Input periodical password

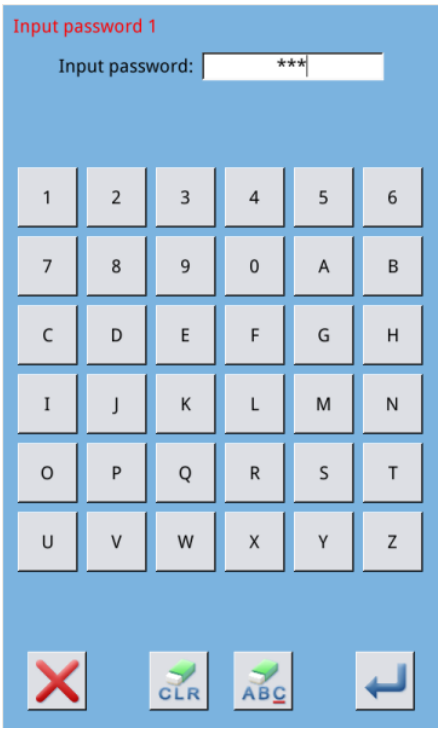
Press "Password-1" to enter the first password date, where user can input the first date for activation. After selecting the proper date, user can press  for confirmation.



Then enter the password setting interface to input the password.

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

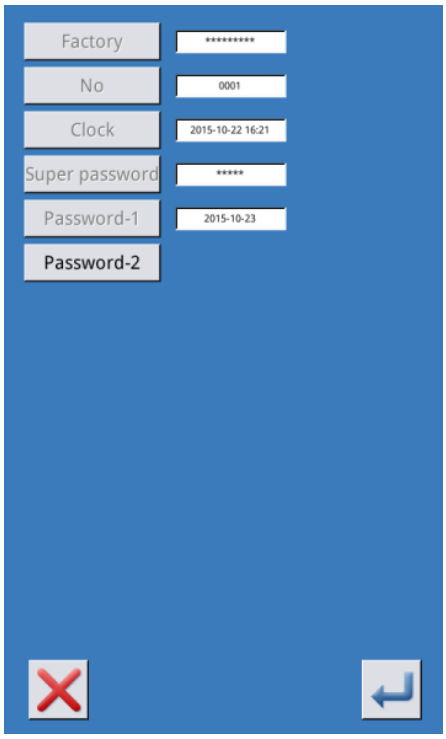
※ **At the password confirmation, make sure the two input passwords are same**



7) Input other periodical passwords

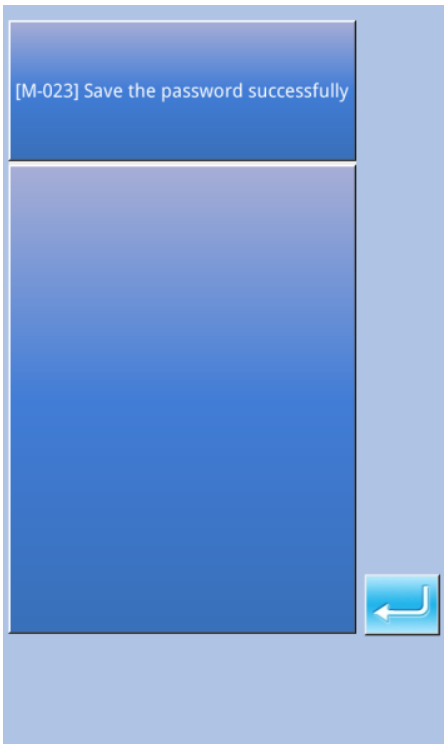
The setting of other periodical password is the same with that in step ⑦. Please make reference to that.

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



8) Save Password

After inputting the password, please press  to save it. After the password is saved, the system will display “Save the password successfully”, as shown in right figure.



9) Clear Password before Activation

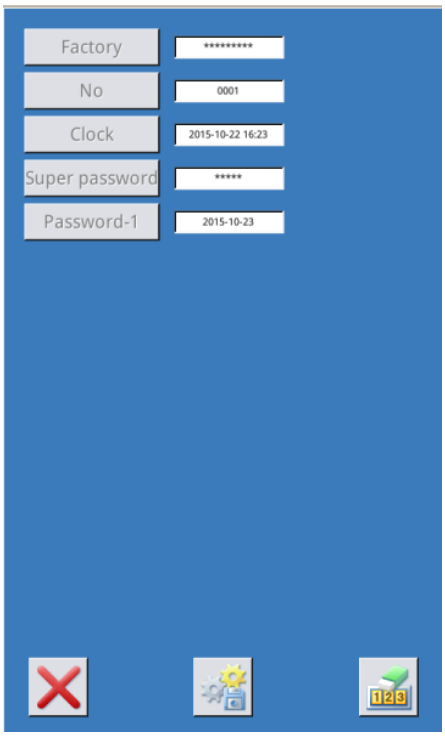
It is to clear the passwords before its activation.

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

B. Input the right manufacturer ID to activate the right interface.

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

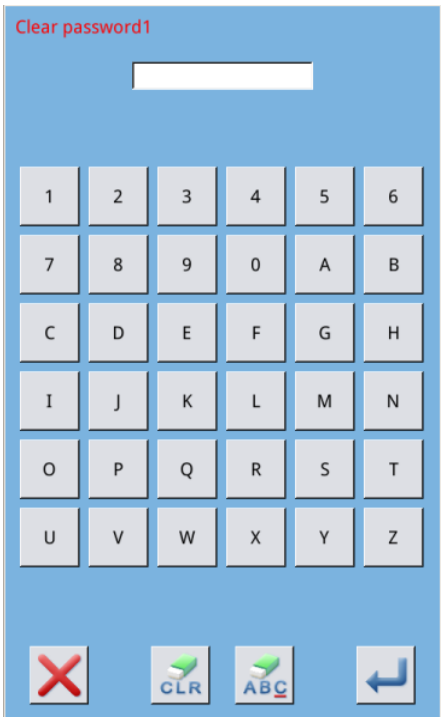
D. Press  to delete the password orderly.



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.



10) Clear Password at Activation

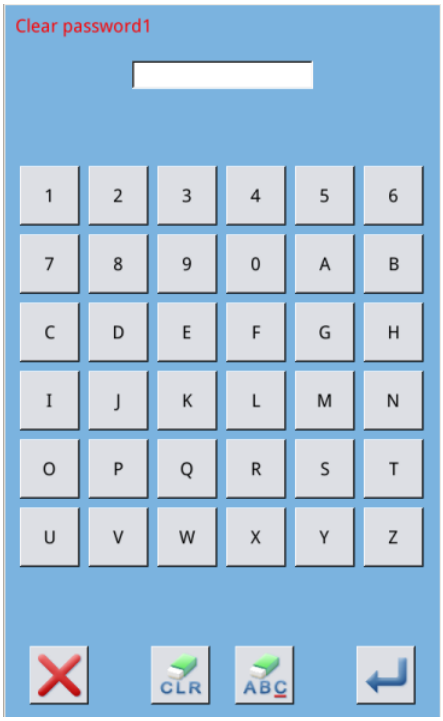
If the system has password and that password is still effective, it will be activated at the activation day.

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.



6.10 Intelligent Attendance Check

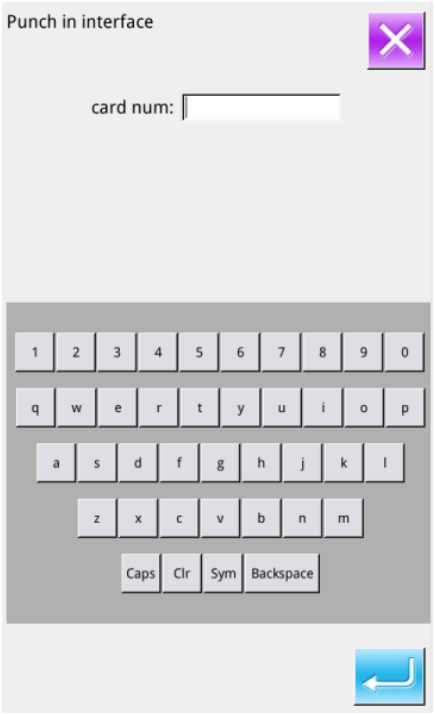
In the information interface, press  to enter the interface for the intelligent attendance check of the workers, as shown in right picture.

If the internet is available, workers can input their employee identification number and press Enter to send their information to the server.

If the information of workers has been stored in the server for intelligent factory, the attendance check information sent by the employees will be recorded into the work statistics.

The management personnel can use the mobile app of the intelligent factory to easily calculate the production and wages of the workers according to the work statistics.

Note: only operation panels with WIFI function can enable this function.

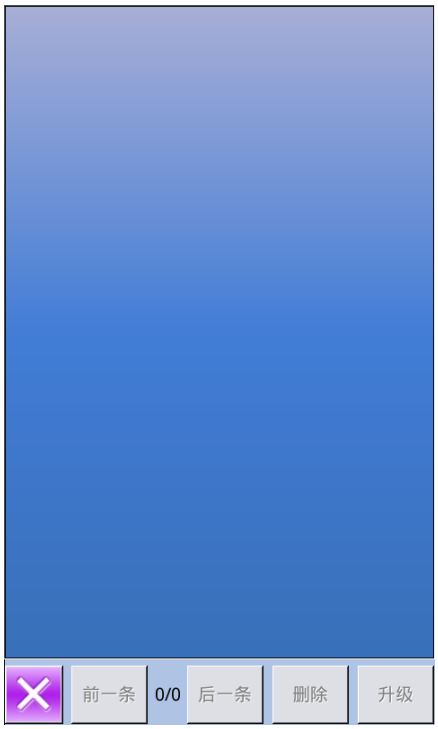


6.11 Information Push

For qualified maintenance personnel, press  to enter the interface for information push, as shown in right picture.

If the management personnel have sent information from the mobile app of the intelligent factory, the interface will display the latest information.

Press “Previous”, “Next”, or “Delete” keys to turn page or delete information.


前一条
0/0
后一条
删除
升级

7 Communication Functions

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

① Display the Communication Interface

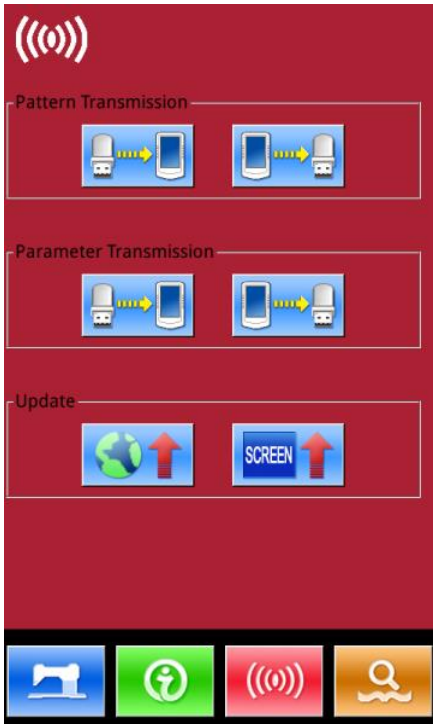
In the data input interface, press  to display the communication interface.

② Select the relating operations

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

- Pattern Transfer
- Parameter Transfer
- Software Update

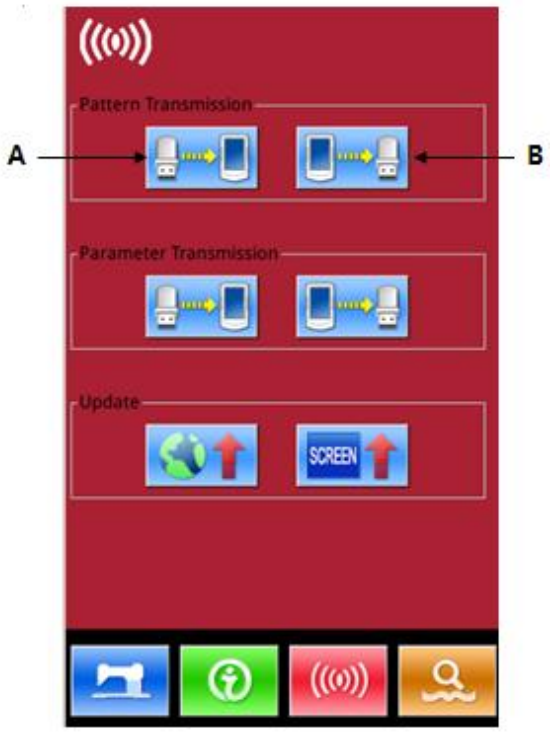
Click the corresponding figure to perform the operations.



③ Press  to quit the Communication

7.3 Pattern Transfer

① **Display the Communication Interface**



A: Input patterns from U Disk to Operation Panel
B: Output patterns from Operation Panel to U Disk

※ **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 need follow the naming rule at below:：

File Name: 3 figures, 001~999

For Example:

Right Names: 100.vdt, 102.dst

Other naming methods are wrong, which cannot be recognized by machine

In default condition, the file name is the storage position after the file is copied to operation panel.

7.3.1 Input Pattern from U Disk

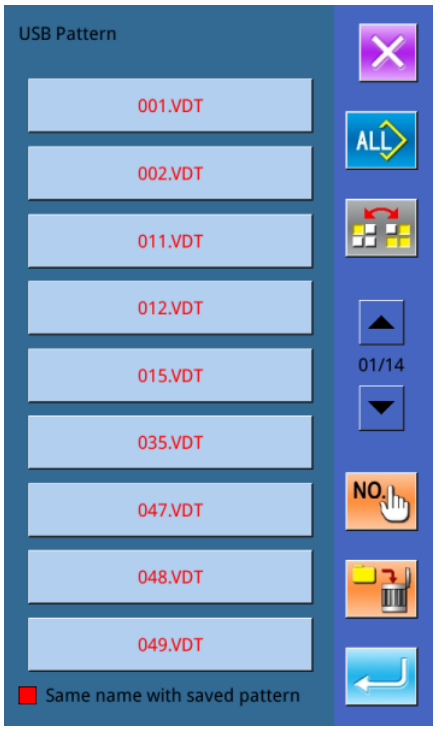
Press  (A) to enter the interface for inputting pattern from U disk to control panel.

 : Select All

 : Contrary Selection

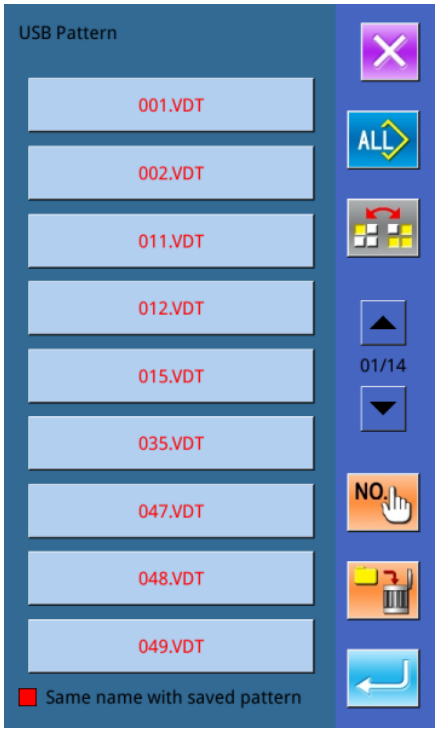
 : Input Saved Number （Available at selecting one pattern）

 : Delete Pattern



Press  to finish pattern input. At this moment, the saved position in panel is same as the number of the selected pattern.

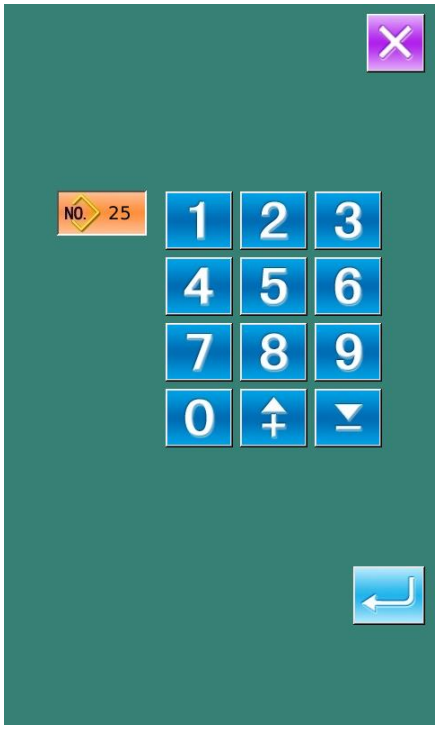
Note： the saved pattern cannot be replaced.



The pattern with name in red cannot be input, because its name is same to the existing pattern with the panel. User has to input number manually.

Press 

to enter the number input interface. The default number is the current empty number. User can also input number manually. Press ENTER to finish the operation.



Note：For the patterns with same name, user has to input it one by one. At selecting several patterns, user can not use 

key.

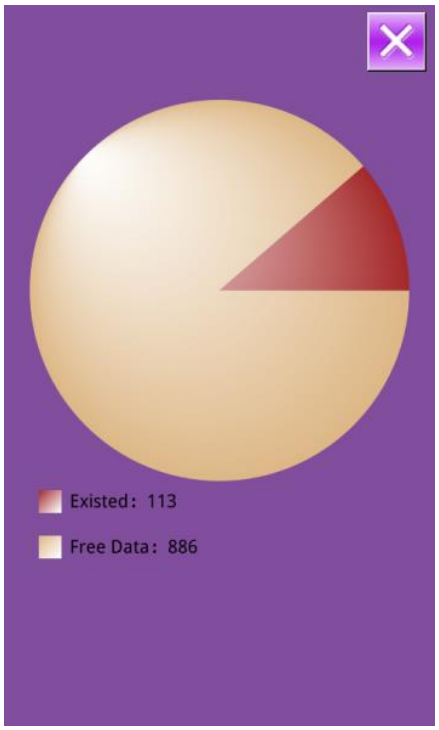
7.3.2 Output Pattern to U Disk

Press  (B) to enter the interface for outputting pattern to U disk.

Select the number and press  to finish the operation.

User can also delete patterns in batch at current interface.

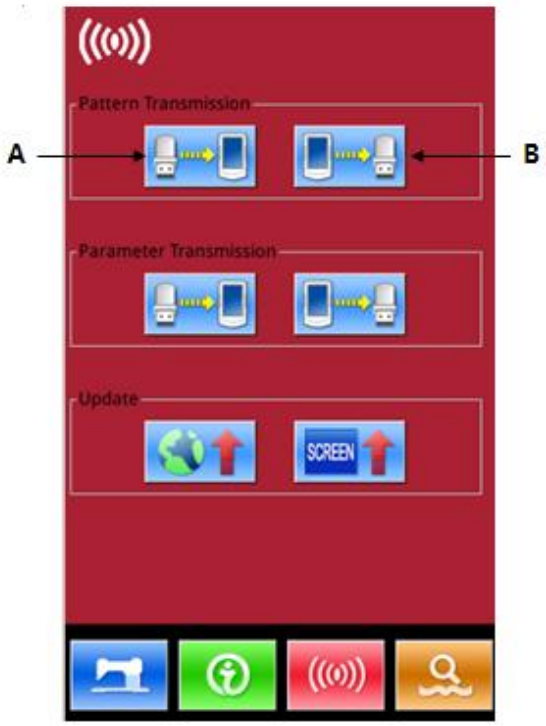
In this interface, press  to display the free room of the memory



7.4 Parameter Transfer

① **Display the Communication Interface**

A: Input parameters from U Disk to Operation Panel
B: Output parameters from Operation Panel to U Disk



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

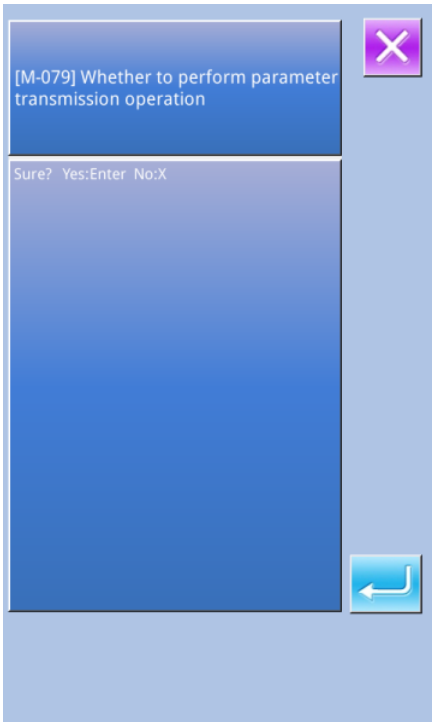
※ **When outputting patterns from operation panel, user has to save the parameters into the DH_PARA in the U disk with name ukParam.**

※ **The parameter file is the binary file, which is operated on the control panel. User can ot change that file manually, or the file may be damaged**

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

A. Press  to input the parameters and quit

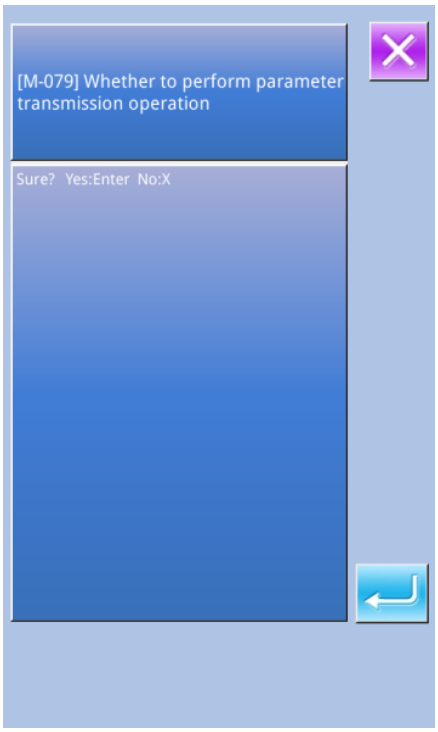
B. Press  to quit directly



③ **Press Button B to Output Parameters to Operation Panel**

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

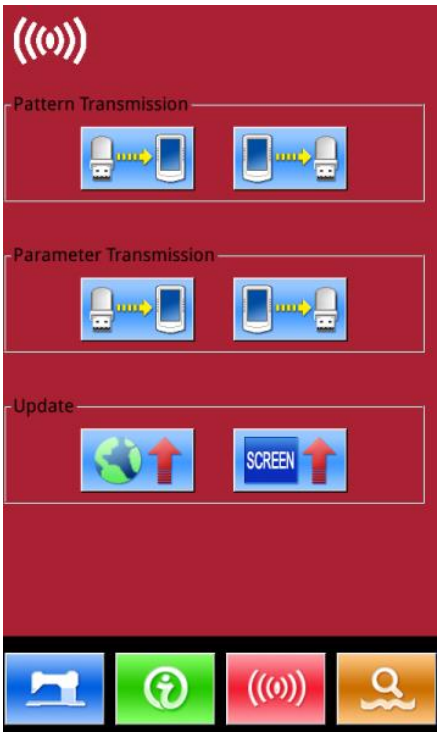
B. Press  to quit directly.



7.5 Software Update

1） Display the Interface

In Communication interface, press  to enter Software Update Interface.



2） Update Selection

The software update contains：

- Operation Panel Software
- Icon
- Font
- Power-on Screen
- Video File
- Player

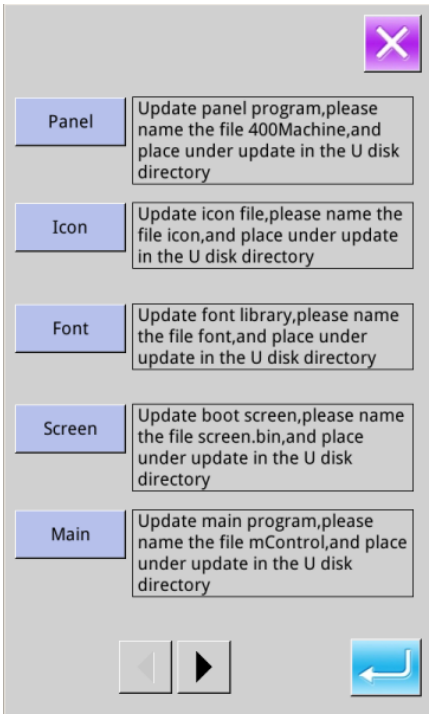
Press  and  to turn the page.

A: Press  to finish the selected update and quit

B: press  to quit directly

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

D. After the update, please restart the machine.



8 Mode & Parameter Setting

8.1 Enter Mode and Parameter Setting

Press  to shift between the data input interface and the mode interface (as shown in right picture), where the detailed settings and editions can be performed.

Hold  for 3 seconds to enter the Mode Setting Level 2 status; hold that key for 6 seconds to enter the Mode Setting Level 3 status.

Mode Setting Level 1

Mode Setting Level 2

Mode Setting Level 3

Function List:

No.	Figure	Functions	Description
1		Level 1 Parameter Setting	Set parameters at level 1 (U)
2		Counter Setting	Set type of counter, counting value and default value
3		Sewing Type Setting	Shift between the normal pattern sewing and combination pattern sewing.
4		Pattern Edition	Enter pattern edition status
5		Parameter Setting Hotkeys	Set the commonly used parameters
6		Delete Patterns in Batch	Delete patterns in batch
7		Stitch Length Setting	Change the length of stitches
8		Letter Sewing Edition	Set letter sewing
9		Initialization	Initialize the system
10		Software Version Inquiry	Inquire the versions of the current panel
11		Keyboard Lock	Lock some functions that can be set.
12		Test Mode	Set the mechanical devices and LCD

No.	Figure	Functions	Description
13		Parameter Back-up	Backup or recover the current parameters
14		Activate Parameter Edition	Activate or deactivate the edition of parameters
15		Level 2 Parameters Setting	Set the Level 2 (K) parameters

8.2 Level 1 Parameters Setting

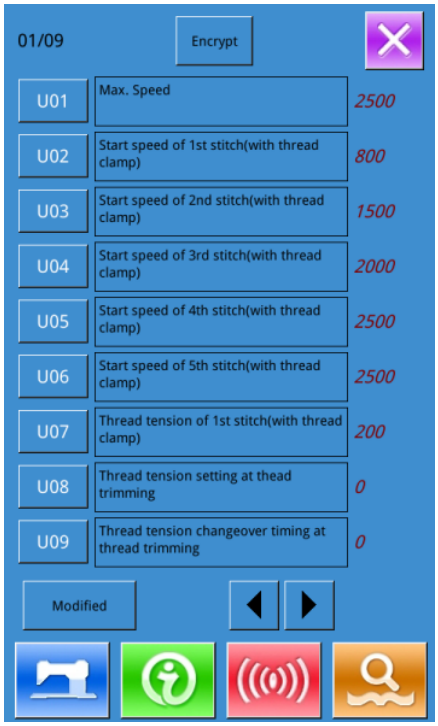
① Set Parameter

Select  to enter the interface for Level 1 parameter setting (shown in right picture).

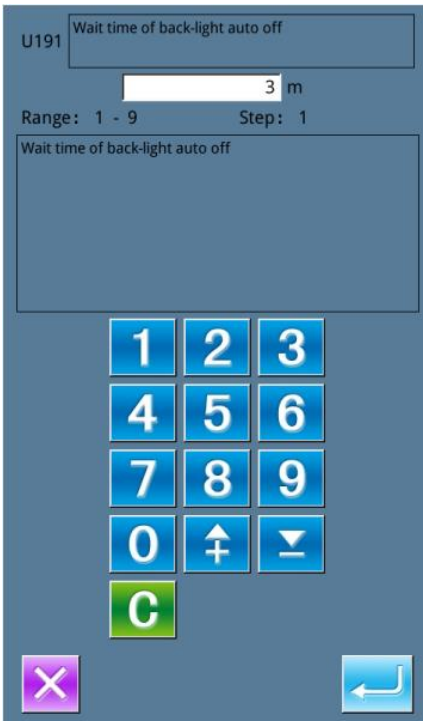
Press  to quit the setting interface.

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

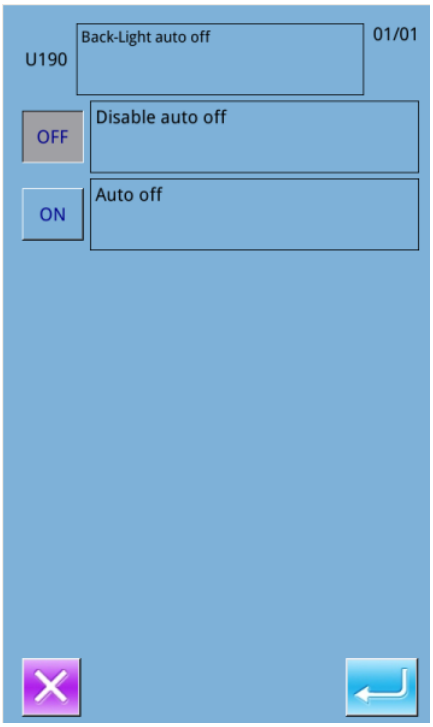
Select the parameter for changing; Then the system will enter the setting status. The parameters are separated as "Input Type" and "Selection Type". Please refer to the example at below:



Select U191 and enter the interface below (Input)



Select U190 and enter the interface below (Selection)



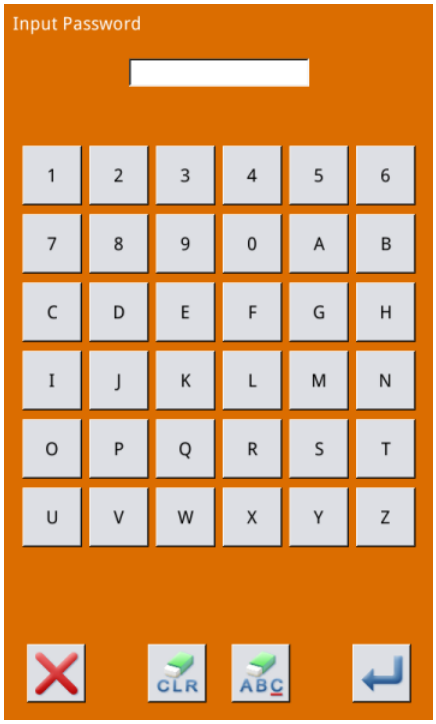
② Parameter Encryption

Press "Encryption" to enter the password input interface.

※ Press CLR to clear all the content

※ Press ABC to erase one figure at each pressing

※ the default password is the manufacturer ID



Input the right password to enter the interface for parameter encryption Select the parameter for encryption.

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

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

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

Press  to quit the encrypting function

③ Check the changed parameter

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.

A. At first, the system will ask user to input the password. After inputting the right password, user can enter the interface for inquiring changed parameters.

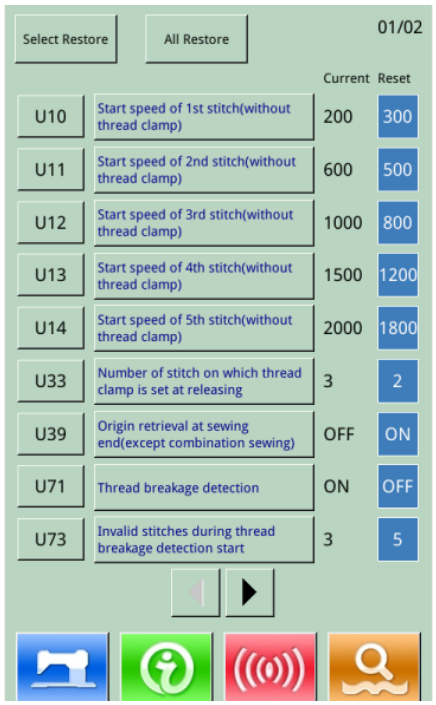
B. Under the interface of changed parameter inquiry, user can find the list containing all the changed parameters. In that interface:

※ Press 【All Rest.】 will restore all the changed parameters to their default values

※ Click Parameter Name, like【 Back Light Auto Off】 and then press 【Select Rest.】 to restore this parameter to the default value. User can select several parameters’ name in the interface.

※ Press Parameter Number, like【U190】 to enter the parameter setting interface, where user can reset the parameter value.

※ Press  to quit the interface



8.2.1 List of Level 1 Parameters

No.	Parameter	Range	Unit	Default value
U01	Max. Speed	200~2800	100rpm	2500rpm
U02	Start Speed of 1st Stitch (with thread clamp)	200~2800	100rpm	800rpm
U03	Start Speed of 2nd Stitch (with thread clamp)	200~2800	100rpm	1500rpm
U04	Start Speed of 3rd Stitch (with thread clamp)	200~2800	100rpm	2000rpm
U05	Start Speed of 4th Stitch (with thread clamp)	200~2800	100rpm	2500rpm
U06	Start Speed of 5th Stitch (with thread clamp)	200~2800	100rpm	2500rpm
U07	Thread Tension of 1st Stitch (with thread-catching function)	0~200	1	200
U08	Thread-tension at Thread-trimming	0~200	1	0
U09	Thread Tension Changeover Timing at Thread-trimming	-6~4	1(4°)	0
U10	Start Speed of 1st Stitch (No Thread-catching)	200~1500rpm	100rpm	300rpm
U11	Start Speed of 2nd Stitch (No Thread-catching)	200~2700rpm	100rpm	500rpm
U12	Start Speed of 3rd Stitch (No Thread-catching)	200~2700rpm	100rpm	800rpm
U13	Start Speed of 4th Stitch (No Thread-catching)	200~2700rpm	100rpm	1200rpm
U14	Start Speed of 5th Stitch (No Thread-catching)	200~2700rpm	100rpm	1800rpm
U15	Thread Tension of 1st Stitch (No thread-catching function)	0~200	1	0
U16	Thread Tension Changeover Phase at Sewing Start (No thread-catching function)	-5~2	1	-5
U25	Sewing Counter Unit	1~30	1	1
U26	Presser Height at 2 step scrolling	50~90	1	70
U32	Buzzer Setting	0: OFF: NBuzzer off 1: PAN: Control Panel Voice available		2

No.	Parameter	Range	Unit	Default value
		2: ALL:Voice Control Panel and buzzer available		
U33	Number of stitch on which thread clamp is set at releasing	1~7	1	4
U34	Thread Clamp Delay Timing	-10~0	1(4°)	0
U35	Thread clamp control is forbidden? ON : Permitted OFF: Forbidden	0: Permitted 1: Forbidden		0
U36	Selection of feeding Action Timing Set the timing in "-" direction when the thread is not well-tightened	4~12	1(4°)	4
U37	Presser status after sewing	0: Presser goes up after sewing starts 1: Presser goes up immediately after sewing ends 2: Pedal goes up after sewing starts.		0
U38	Presser goes up when sewing is ended.	0: ON: Permitted rising 1:OFF:Prohibit presser rising		0
U39	Origin retrieval at sewing end(except combination sewing)	0: OFF: Don't have origin retrieval 1: ON:origin retrieval		0
U40	Set origin search at combination sewing.	0: OFF: Don't have origin retrieval 1: PAT: after a per pattern 2: CLC: after a loop		0
U41	Presser status at Order of Pause	0: Presser goes up automatically 1: Presser goes up with pedal pressed.		0
U42	Needle Stop Position	0: UP: Up Position 1: DEAD: Up Dead-Point		0
U46	Trimming forbidden	0: ON: Permitted 1: OFF: Forbidden		0
U48	Set Route for Returning Start Sewing Point	0: Linear Return 1: Reverse Return of Pattern 2: Original Retrieval		0
U49	The robbinning-speed setting	200~2800	100rpm	1600rpm

No.	Parameter	Range	Unit	Default value
U51	Motlon-wipper forbidden	0: OFF: Off 1: ON: On		1
U64	Select Unit in Changing Size	0: %: Input Percentage 1: SIZ: Input Actual Size		0
U68	Thread Tension Output Time at Setting Thread Tension	0~20s (0：No Tension Output)	1	0
U69	Bend position of thread clamp	-10~10	1	0
U70	Thread-catching position	0: Standard (Front Position) 1: Rear Position		0
U71	Thread –breakage detection	0: OFF: Invalid 1: ON: Valid		0
U72	The number of stitch without thread-breakage detecting at sewing start	0~15	1	8
U73	The number of stitch without thread-breakage detecting at midway of sewing	0~15	1	3
U81	Frame control – pedal on/ off	0~99 (Solenoid Presser) 0: 1-step 1: 2-step stroke (Use the presser switch to lower the presser further) 2: 2-step stroke (Re-lowering the presser with the start switch) 3: 2-step stroke(With presser switch 1, control presser to intermediate, lowest and up position) 4~99: 1-step (Air-control Presser) 0: Solid Presser 1: Left/right separated presser (Without priority of right or left) 2: Left/right separated presser(In the order of right to left) 3: Left/right separated presser(in the order of left to right) 4: Solid Stroke 5: Left/right separated left stroke (Without priority of right or left) 6: Left/right separated left	1	0

No.	Parameter	Range	Unit	Default value
		stroke (in the order of right to left) 7: Left/right separated left stroke (in the order of left to right) 8~99: Solid Presser		
U82	Frame Control- On/off at Midway Stop	0~99 (Solenoid Presser) 0:1 Stroke 1: 2-step stroke (Use the presser switch to lower the presser further). 2: 2-step stroke (Re-lowering the presser with the start switch) 3: 2-step stroke (With presser switch 1, control presser to intermediate, lowest and up position) 4~99: 1-step (Air-control Presser) 0: Solid Presser 1: Left/right separated presser (Without priority of right or left) 2: Left/right separated presser(In the order of right to left) 3: Left/right separated presser(in the order of left to right) 4: Solid Stroke 5: Left/right separated left stroke (Without priority of right or left) 6: Left/right separated left stroke (in the order of right to left) 7: Left/right separated left stroke (in the order of left to right) 8~99: Solid Presser	1	0
U84	Pedal SW1 with/without latch	0: OFF: Off 1: ON: On		1
U85	Pedal SW2 with/without latch	0: OFF: Off 1: ON: On		1
U86	Pedal SW3 with/without latch	0: OFF: Off		1

No.	Parameter	Range	Unit	Default value
		1: ON: On		
U87	Pedal SW4 with/without latch	0: OFF: Off 1: ON: On		1
U88	Scale Mode	0: OFF: Forbidden 1: PIT: Change at Interval 2: STI: Change at Stitch Number		1
U89	Motion Mode	0: Forbidden 1: Parallel Motion 2: Set 2nd Origin		2
U91	Retainer Compensation Motion:selection of motion	0: OFF: Off 1: ON: On		0
U94	Select the highest point at origin retrieval	0: OFF: No 1: ON: Yes		0
U97	Pause–Thread-trimming Operation	0: AUT: Auto Thread-trimming 1: MAN: Manual trim thread		1
U101	Main Motor X/Y Feeding Synchronized Control	0: 2700rpm /3.0mm 1: 2200rpm 3.0mm 2: 1800rpm /3.0mm 3: 1400rpm /3.0mm		0
U103	Intermediate Presser Control	0: No（Lowering is fixed） 1: Yes（Lowering with sewing data during the operation） 2: Yes（Lowering even at the time of feeding forward/backward）		1
U104	Intermediate Presser Lowering Timing	0: Before the start of the sewing machine head 1: Synchronized with the last frame		0
U105	Middle presser/thread-wipper device sweeping position	0: Sweeping above the middle presser 1: Sweeping above the middle presser,this will get to the lowest position 2: Sweeping below the middle		0

No.	Parameter	Range	Unit	Default value
		presser		
U108	With/ without Air Pressure Detection	0: OFF: Off 1: ON:On		0
U129	With/without Needle Cooler Control	0: OFF: Off 1: ON:On		0
U132	Oil immitint space time	0~65535	1	5
U133	Oil immitint working time	0~65535	1	600
U190	Back Light Auto Off	0: OFF: Disable auto off 1: ON: Auto Off		0
U191	Back Light Off Wait Time	1~9 min	1	3
U192	Back Light Adjustment	20~100	1	100
U193	Profibit to change counter	0: OFF: Permit modify 1: ON: Forbid modify		0
U194	Operation of sewing machine after counter reach setting value	0: OFF: Stop Sewing 1: ON: sewing operation can continued		0
U195	Volume	30~63	1	50
U200	Language	0: ZH:Chinese 1: EN:English 3:TU:Türk 4:HAN:한국어		0
U201	Whether to select languge when power on	0: OFF: No 1: ON: Yes		0
U203	Big stitch pattern is effective or not	0: OFF: No 1: ON: Yes		1
U204	Main Control Loading Address	655360~917504 0: 0XA0000：655360 1: 0XB0000：720896 2: 0XC0000：786432 3: 0XD0000：851968 4: 0XE0000：917504	1	3
U205	Word and icon exchange in simpie window	0: ICON :Icon 1: WORD:Word		0
U206	Thread breakage detection warning is clear automatically or not	NO: No YES: Yes		0
U207	P Pattern Setting Interface Display	0:NO 1:YES		0
U208	Templet Identify Occasion	0: Identify freely without presser status 1: Identify after presser going down		0

No.	Parameter	Range	Unit	Default value
U209	Internet Setting	0:OFF: Off 1:ON: On		0
U210	Time of oil inject box	0~9000	1	84

8.3 Level 2 Parameters Setting

In the interface of Mode Setting Level 3, press  to enter the interface for setting Level 2 parameters (as shown in right picture). For the operation, please refer to Level 1 Parameter Setting.

8.3.1 List of Level 2 Parameters

No.	Parameter	Range	Unit	Default value
K03	Thread clamp type selection	0: M: Mechanical 1: E: Electronic		0
K04	Box move mode	0~9	1	0
K06	Sewing material; type	0: Thin; 1: Middle; 2: Thick	1	0
K07	Material Thickness Selection	0~15	1	0
K08	Origin-returning Speed	0~9	1	2
K09	Start Point Return Speed	0~9	1	2
K10	Idling Speed	0~9	1	2
K11	Speed of frame moving	1~3	1	3
K13	Thread-loosing Solenoid Open Current	0~255	1	0
K14	X-axis Sensor Installation	0：L： at the left side		0

No.	Parameter	Range	Unit	Default value
	Position	1：R：at the right side		
K18	Fixation mode in the start	0：Forbid fixaction 1: Fixaction in the first stitch 2：Fixaction before several stitchs 3：Fixaction in zigzag		2
K19	Fixaction stitch count	-4~4	1	-2
K20	Fixation mode in the end	0: Forbid fixation 1:Fix one stitch before end stitch about 0.1mm 2: Fix two same stitch before the end stitch 3:Fix three same stitch before the end stitch 4:Fix four same stitch before the end stitch		3
K21	K1_Box move of X axis adjust in start	-120-120	1	0
K22	K1_Box move of Y axis adjust in start	-120-120	1	0
K23	K1_Box move of Xaxis adjust	-120-120	1	0
K24	K1_Box move of Y axis adjust	-120-120	1	0
K25	K0_Box move adjust in start	-120-120	1	0
K26	K0_Box move adjust	-120-120	1	0
K27	Box move time of axis	-20-20	1	0
K28	Box move time of Y axis	-20-20	1	0
K29	Thread clamp setting before two stitch in start sewing	0:OFF: Off 1:ON: On		0
K30	Thread Clamp is ON or OFF before empty jump	0:OFF: Off 1:ON: On		0
K31	Selection of Pause Inputting	0: invalid 1: Valid 2: Use Pause Switch to trim thread or start machine when the machine is paused		1
K42	Position Trim of searching origin	-500~500	10	0
K43	Thread-trimming speed	200~400rpm	10	240
K52	Solenoid Sweeper : Time for Turning on	10~500ms	10ms	50ms
K53	Solenoid Sweeper :Time for Turning off	10~500ms	10ms	80ms

No.	Parameter	Range	Unit	Default value
K54	Time phase of thread wipper at up dead point	0: UP: Upper Position 1: DEAD: Highest Position		0
K56	Positive limit of direction X	0~2000mm	1	1500
K57	Negetive limit of direction X	0~2000mm	1	1500
K58	Positive limit of direction Y	0~1000mm	1	0
K59	Negative limit of direction Y	0~1000mm	1	750
K60	Three step pedal enable	0: OFF: Invalid 1: ON: Valid		0
K61	Main Motor Stop Angle	30~80	1	53
K67	Thread Tension Output of Thread Sweeper	0: OFF: No Output（Keep the tension at thread-trimming） 1: MAX: Max Output		0
K74	Operation of Moto/pneumatic	0: MAG: Moto Presser 1: AIR: Pneumatic presser		0
K75	Time Postponement at Lowering the Air-control Presser	0~1000ms	10ms	100
K92	Selection of Path for Origin Retrieval/ Origin Search at Normal	0: STD: Standard 1: REV: Reverse 2: Y2X: Y Axis→X Axis 3: X2Y: X Axis→Y Axis 4:2Y:Just move Y axis		0
K93	Selection of Path for Origin Retrieval/ Origin Search at Reverse	0: STD: Standard 1: REV: Reverse 2: Y2X: Y Axis→X Axis 3: X2Y: X Axis→Y Axis		0
K95	Positive time phase of trimming	-2~2	1	0
K98	Empty Feeding order:sleep time in peak	0~100ms	10ms	20
K110	Reverse Device and Stretching Presser Control	0: OFF: reverse device off 1: ON1: reverse device on 2: ON2: Stretch Presser extend		0
K112	Delay of Stresser Presser extend	0~255ms	1	25
K113	Delay of Stretch Presser up	0~255 ms	1	0
K114	Delay of Stretch Presser down	0~255 ms	1	0
K115	Position of Stretch Presser in Sewing	0：Up 1：Down		0
K122	Mark Pen offset in X-Axis	-500~500	1	0

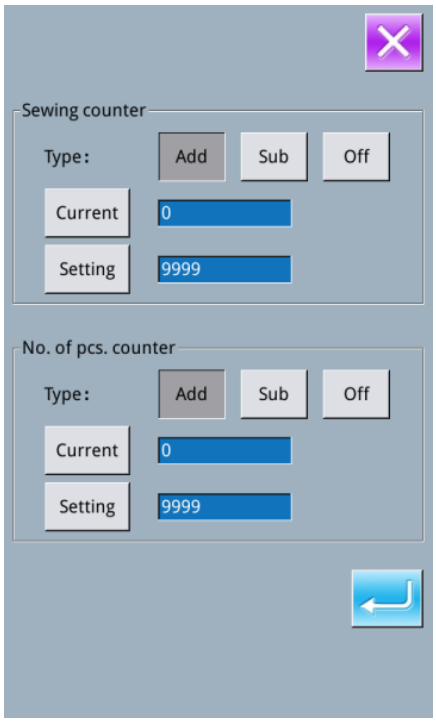
No.	Parameter	Range	Unit	Default value
K123	Mark Pen Offset In Y-Axis	-500~500	1	0
K124	Pen Moving Speed	1~9	1	1
K125	Templet Identify Setting	0: Off 1: On		1
K127	Motor Direction In X-Axis	0:POS:Postive 1: NEG:Negative		1
K128	Motor Direction In Y-Axis	0：POS:Postive 1：NEG:Negative		0
K129	Template identity device	0：SEN5：Sensor 5 1：SEN8：Sensor 8 2：BAR：Bar code scanner		2
K130	Brightness of light setting	0~100	1	50
K131	Presser control in pause error	0：OFF：off 1：ON：on		0
K132	Motor Working Method	0：Close 1：Open		0
K135	Burst mode Thread breakage sensor	0：L：Low Level 1：H：High Level		1
K136	Bottom warnning Setting	0：In Sewing 1：Before Sewing		0
K137	Enter into ready status after power on	0：No 1：Yes		1
K138	The second start-up	0：Off 1：On		1
K140	Stop in empty jump setting	0:OFF:off 1:ON: on		1
K141	Signal of error input	0:OFF: Don’t output 1:Output 1 way 2:Output 3 way		0
K142	Middle Presser Motor interface	0:X21 1:X23		0
K143	Position of Clamp Thread	0~100	1	26
K144	Angle adjust per step in X axis	-30~30	1	0
K145	Angle adjust per step in Y axis	-30~30	1	0
K146	Middle presser type	0:MOTO1: Motor 1 1:AIR: Air		0

No.	Parameter	Range	Unit	Default value
		2:MOTO2:Motor 2		
K147	Repair gear clearance in Y axis	0~30	1	0
K148	Speed In Knee Speed Reduction Setting	200~2000	100	1000
K149	Repair gear clearance in X axis	0~30	1	0
K165	Huff function setting	0:OFF 1:ON		0
K166	Huff time	10~200	1	10
K167	Assistant presser action after thread break	0:UP:Assistant presser up 1:DOWN:Assistant presser down		0
K168	Start fixaction speed setting	0:The first stitch speed 1:Before five stitches speed in start sewing		1
K169	Maching type setting	0~4 0:Standard configuration type 1:Middle configuration type 2:Advanced configuration type 3:Anto type 4:10070 type	1	1
K171	Machine board CZ137 setting	0:PEN:Mark pen 1:BLOW:Needle blow		0
K172	Fixed stitch counts in start sewing position	0~2	1	0
K173	The height of moving middle presser	0~255	1	2
K174	Start angle when middle presser falling down	0~359	1	54
K175	End angle when middle presser falling down	0~359	1	126
K176	Start angle when middle presser going up	0~359	1	270
K177	End angle when middle presser going up	0~359	1	18
K178	Attract wind whit thread clamp	0~30	0	3
K179	Speed of the firest stitch in the end	200~2800	100	1800

No.	Parameter	Range	Unit	Default value
K180	Speed of the second stitch in the end	200~2800	100	1200
K181	Speed of the third stitch in the end	200~2800	100	800
K182	Speed of the fourth stitch in the end	200~2800	100	400
K183	Delay of knife synchronicllly	0~255	1	4
K200	Restore Default Parameters			

8.4 Counter Setting

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



Sewing Counter: The counter adds/ decreases 1 at sewing one piece.

No.of Pcs Counter: The counter adds/ decreases 1 ar sewing one cycle.

The No. of Pcs Counter is mainly for counting the C Pattern. For any other sewing types, the function of sewing counter and No. of Pcs counter are same.

1） Counter Setting

Current: Press it to set the Current Value of counter.

Setting: Press it to set the Setting Value of counter. When the Setting Value is 0, the counter can not be used.

3） Counter Type Setting

Add: Set the counter as Up Counter. When current value reaches the setting value, the system will give alarm.

Sub: Set the counter as the Down Counter. When the current value is 0, the system will give alarm.

Off: Turn off Counter

Note 1: When parameter [U193] is set at "Forbid", user cannot enter this interface.

Note 2: When parameter [U194] is set at "Continue Sewing", the system will not give alarm when the current value is over the setting value. The current value will return to the target value automatically (Up Counter will return to 0 while down counter will return to the set value).

8.5 Change Sewing Type

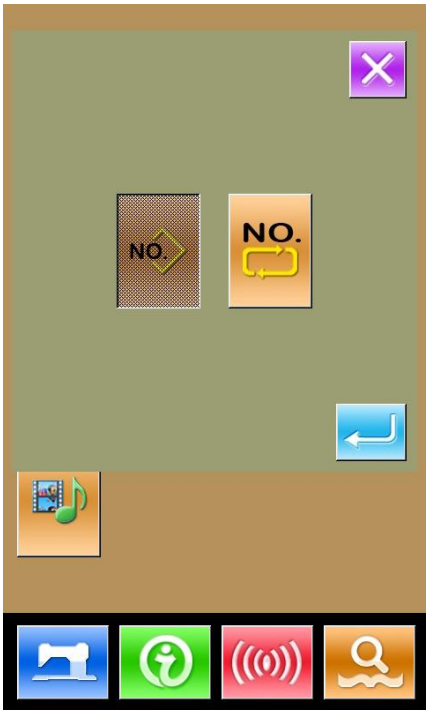
Press 

to enter the interface of sewing type selection (as shown in right picture).

: Normal Sewing

: Combination Sewing

After confirming the sewing type, user can press  to end the operation. And then press  to activate the interface for inputting data of the selected sewing type.



8.6 Entry to Pattern Edition

Press  to shift between the following two figures. Select the corresponding mode and then press  to enter the pattern edition mode.

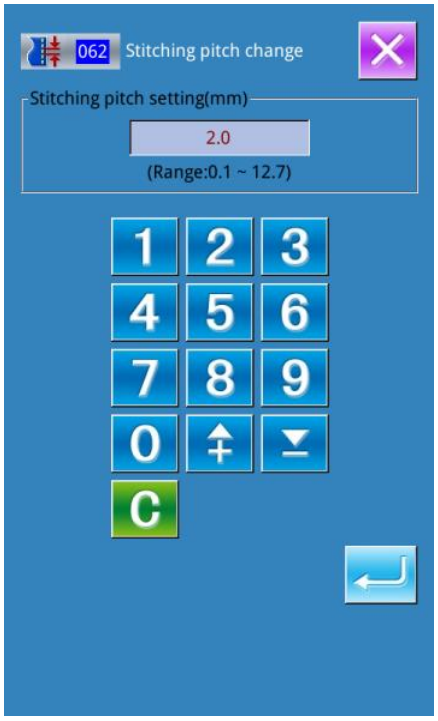
For the specific operation, please refer to 【5 Pattern Edition】

 : Sewing Mode

 : Edition Mode

8.7 Stitch Length

Press  to enter the interface for setting stitch length, and user can set the stitch length ranging from (0.1~12.7.7) mm. After pressing “Enter” key, a new pattern will be generated according to the set value.

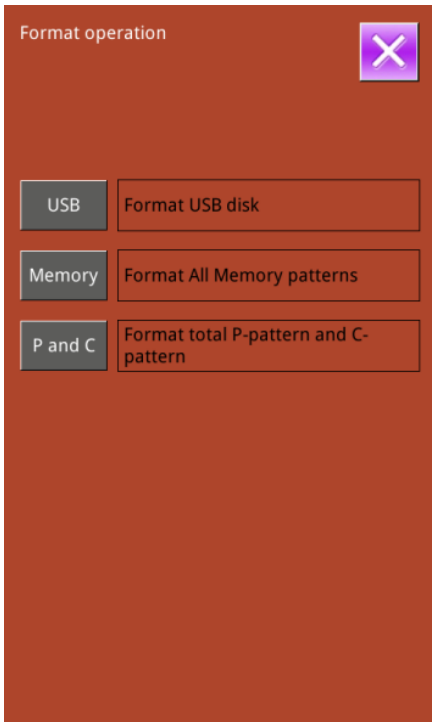


8.8 Initialization

Press  to enter the interface for setting the initialization, where user can do the following operations:

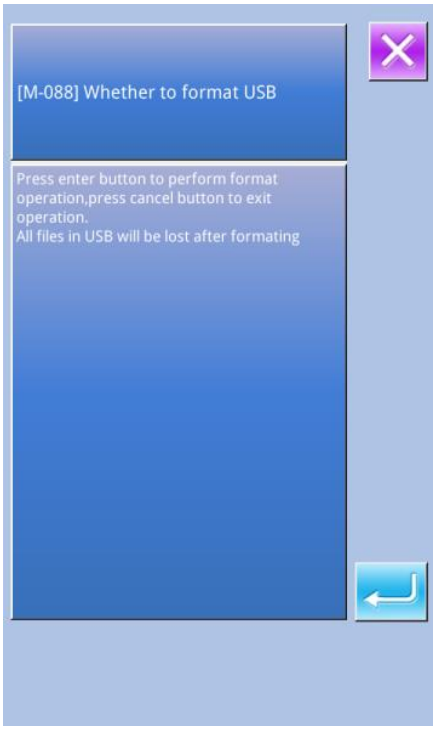
A. U Disk Initialization
B. Memory Initialization
C. P and C Pattern Initialization

Press the related function keys and enter the corresponding interface.



1）Press "USB" to Initialize U Disk File

Press  to initialize all the U disk files; press  to quit.

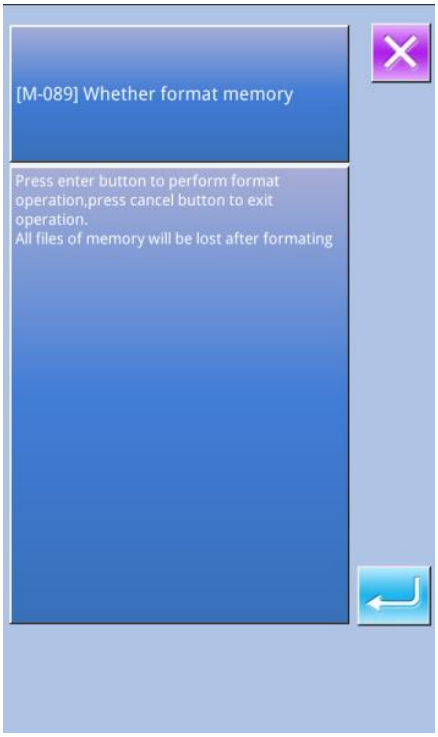


2）Press "Memory" to initialize memory patterns

Press  to initilize memory; press  to quit.

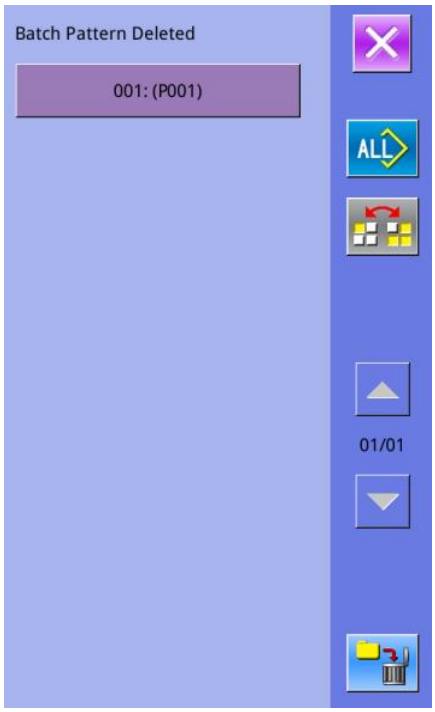
After the initialization of memory, the entire patterns will be deleted, including the C patterns and P patterns. Then the system will load the default patterns again.

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



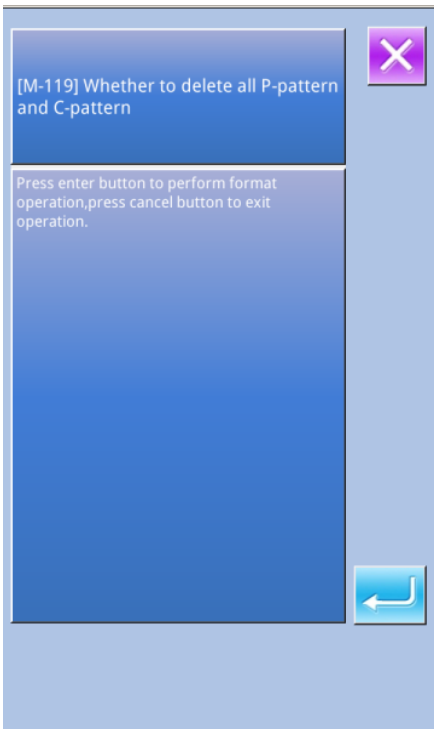
3） Perform the batch deletion

Press  to enter batch deletion interface, where the system will display all the normal patterns within the memory and their relation with P patterns. Click the corresponding button to perform the batch deletion.



4） Press “P&C” to delete the entire P patterns and C patterns

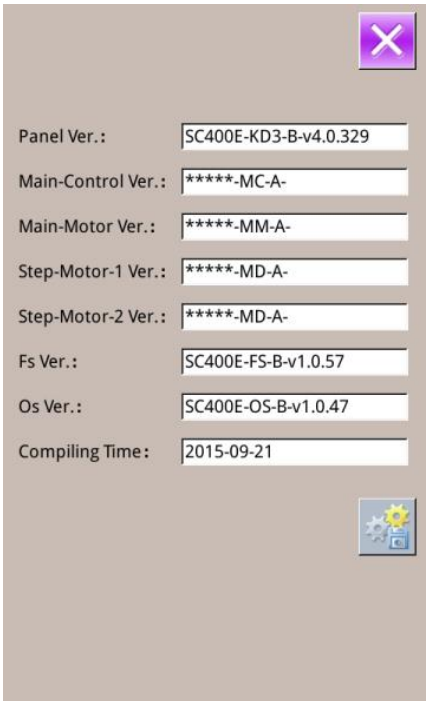
Press  to delete the entire P patterns and C patterns; press  to quit.



8.9 Software Version Inquiry

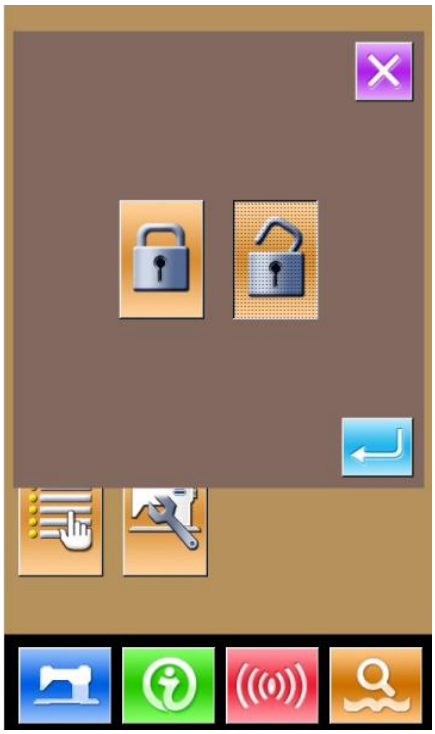
At Mode Setting Level 2 interface, press  to check the software version of system.

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



8.10 Keyboard Lock

At Mode Setting Level 2 interface, press  to enter the interface for keyboard lock setting.



1）Operation for Locking Keyboard

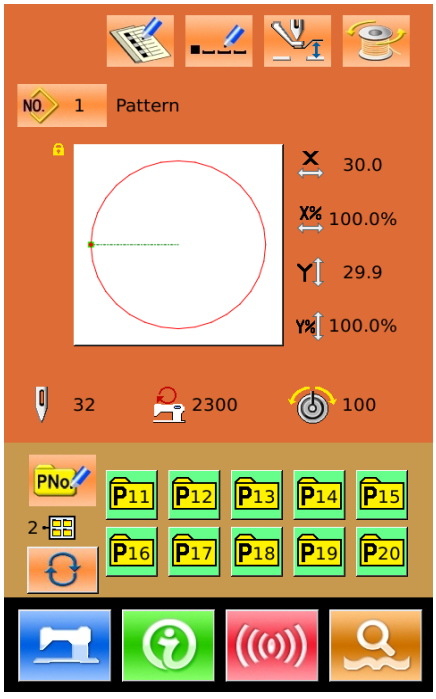
 : Keyboard Unlocked

 : Keyboard Locked

Select  and press  to lock keyboard.

2）Display of Keyboard Lock Status

Close parameter setting mode interface and return to data input interface (as shown in right picture). We can see a small figure “ ” under the pattern number, which means the keyboard is locked.



3） Range of Keyboard Lock

1. Interface of Normal Sewing Data Input:	·Pattern Registration
	·Pattern Naming
	·Scale Rate Setting
	·Max Speed Limitation
	·P Pattern Registration
2. Normal Sewing Interface:	·Counter Setting
	·Thread-tension Setting
3. P Pattern Input Interface:	·P Pattern Edition
	·P Pattern Copy
	·P Pattern Naming
4. P Pattern Sewing Interface:	·Counter Setting
5. C Pattern Data Input Interface:	·C Pattern Registration
	·C Pattern Copy
	·C Pattern Naming
	·C Pattern Edition
6. C Pattern Sewing Interface:	·Counter Setting
7. Parameter Setting Mode:	·Parameter Level 1
	·Parameter Level 2
	·Counter Edition
8. Test Mode	·Test Mode

8.11 Parameter Back-up & Recovery

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

Clear: Clear all the customized parameters that are saved.

Save: Save current parameters

Restore: Restore the current parameters

① Click any key among 

~ 

to set the position for saving the parameter. And then press “Save” to save that parameter.

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

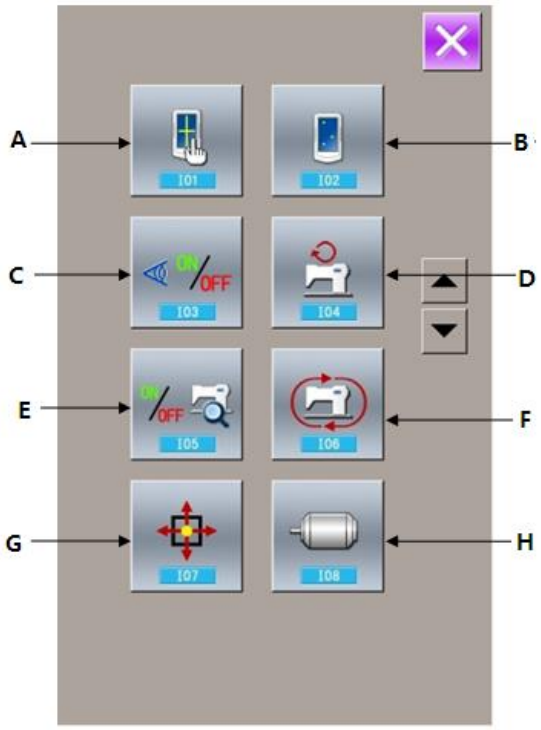
。

③ Select the button with parameters, press “Restore” to reload the corresponding parameter values

④ Press “Clear” to delete all the saved parameters

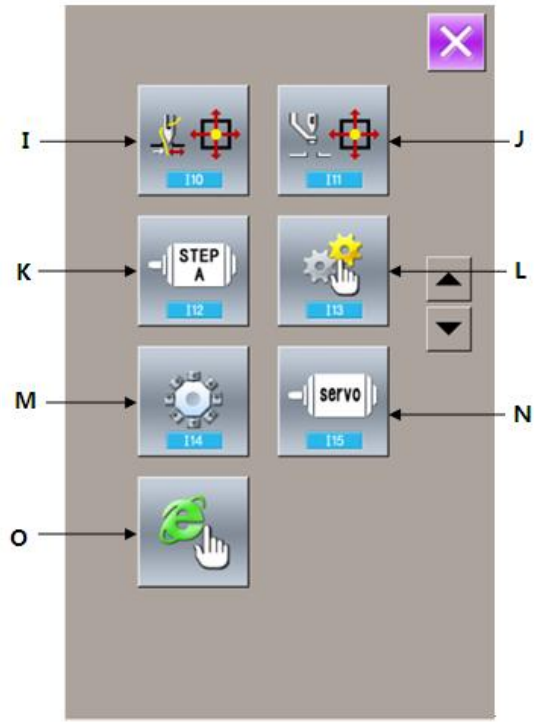
8.12 Test Mode

At setting mode level 2, press  to enter the interface for test mode (as shown in the right picture). Use  to turn the page.



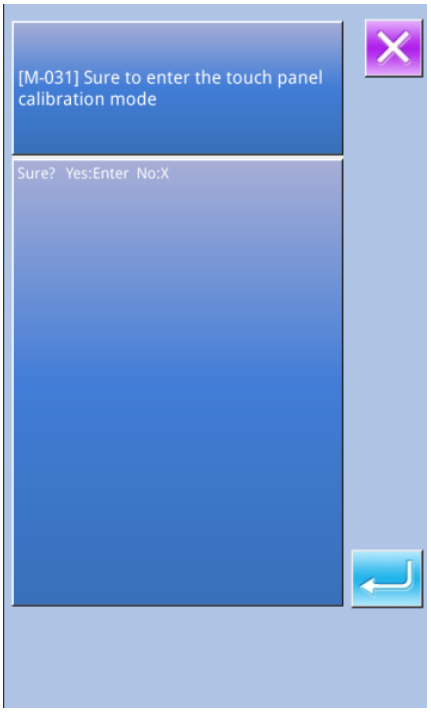
Detailed function of the figures:

No.	Name
A	I01 Touching Panel Correction
B	I02 LCD Test
C	I03 Input Test
D	I04 Speed Measurement
E	I05 Output Test
F	I06 Continuous Running
G	I07 X/Y Motor Origin Test
H	I08 Main-shaft Motor Correction
I	I10 Thread-catching Motor/ Origin Sensor Test
J	Intermediate Presser Motor/ Origin Sensor Test
K	Stepping Motor Current Test
L	Main-shaft Correction
M	Auto Rotating Shuttle/Cutter Parameters
N	Servo Parameters
O	Internet Setting



1）Touching Panel Correction

In the test mode interface, press  (I01Touching Panel Correction). At this moment, the system will display “Sure to enter the touch panel calibration mode?” Press  to enter the touching panel correction interface.



Because the corrections at 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.

【Note】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.

2）LCD Test

In the test mode interface, press 

(I02 LCD Test) to enter the interface for testing LCD (as shown in the right picture), where user can test whether the LCD is OK.

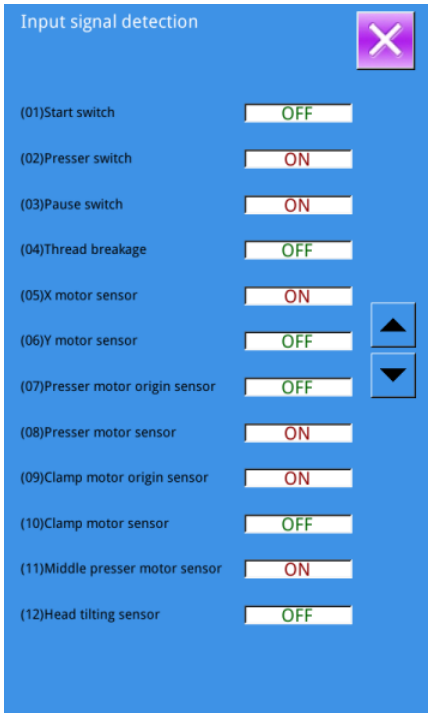
3）Test Method on Inputted Signal

In the test mode interface, press 

(I03 Input Test) to enter the interface of input test (as shown in the right picture). User can confirm the input status of the various sensors and switches in that interface.

ON: Turn On

OFF: Turn Off



(1) Start Switch (Pedal)

(2) Presser Switch (Pedal)

(3) Pause Switch

(4) Thread-breakage Detection

(5) X Motor Sensor

(6) Y Motor Sensor

(7) Presser Motor Origin Sensor

(8) Presser Motor Sensor

(9) Thread-catching Motor Origin Sensor

(10) Thread-catching Motor Sensor

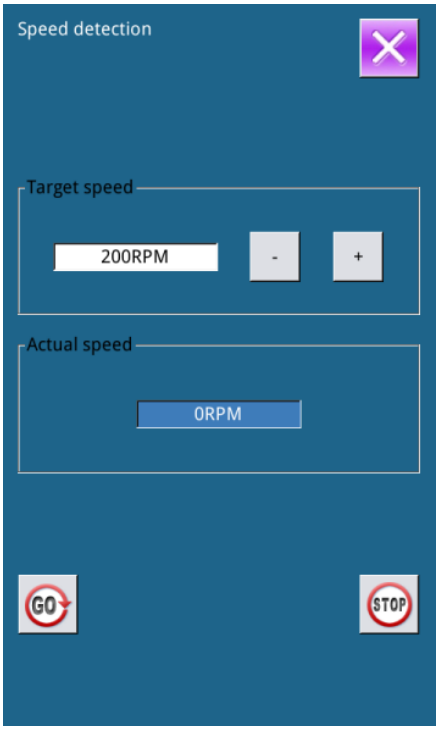
(11) Intermediate Presser Motor Origin Sensor

(12) Head Tilting Switch

4）Speed Measurement

① Display of Speed Measurement Interface

In the test mode interface, press  (I04 Speed Measurement) to enter the interface of speed measurement (as shown in the right picture). Users can test the main motor speed in this interface.



② Speed Measurement Setting

By using  &  , user can set the main motor speed. After user presses  , the main motor will run in the set speed. At this moment, the actually measured speed will be displayed at the input column.

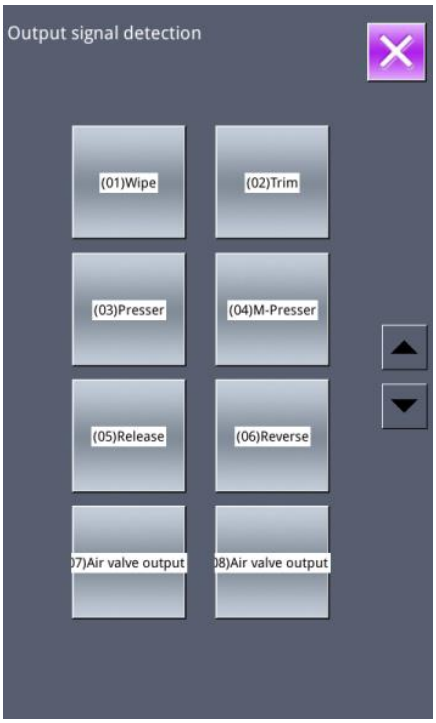
Press  to stop the machine.

Press  to return to the upper interface.

5）Output Test

In the test mode interface, press  (I05 Output Test) to enter the interface of Output Test (as shown in the right picture). In this interface, the output status of the solenoid can be tested.

(1) Thread-stirring
(2) Thread-trimming
(3) Outer Presser
(4) Intermediate Presser
(5) Thread-loosing
(6) Reverse Presser
(7) Valve Output 1
(8) Valve Output 2

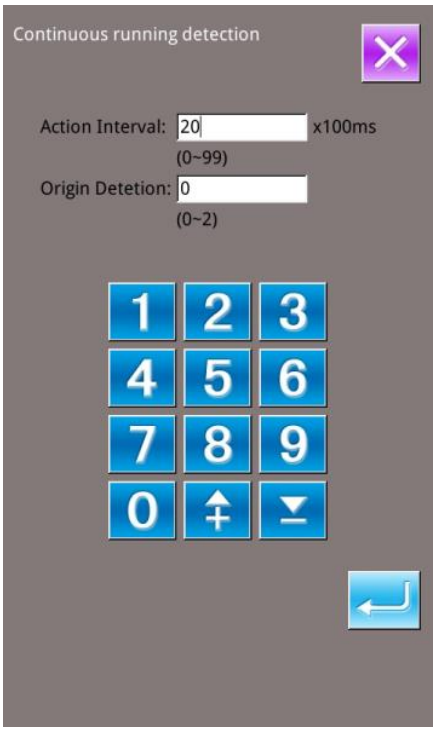


Press the corresponding figures to test the output of each external device.

6）Continuous Running

① Display of Continuous Running Interface

In the test mode interface, press  (I06 Continuous Running) to enter the continuous running interface (as shown in the right picture).

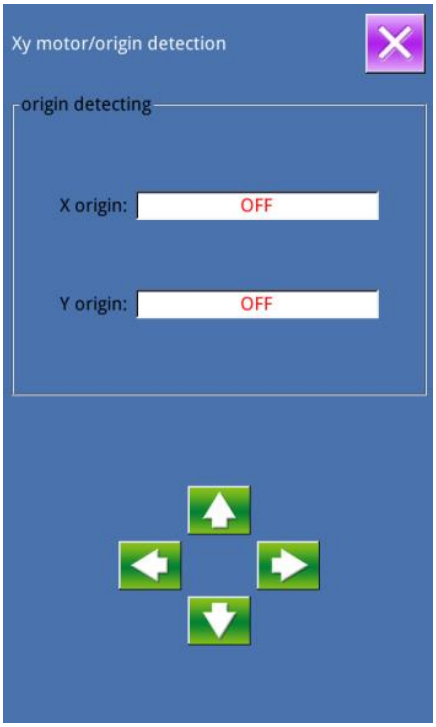


② Continuous Running Setting

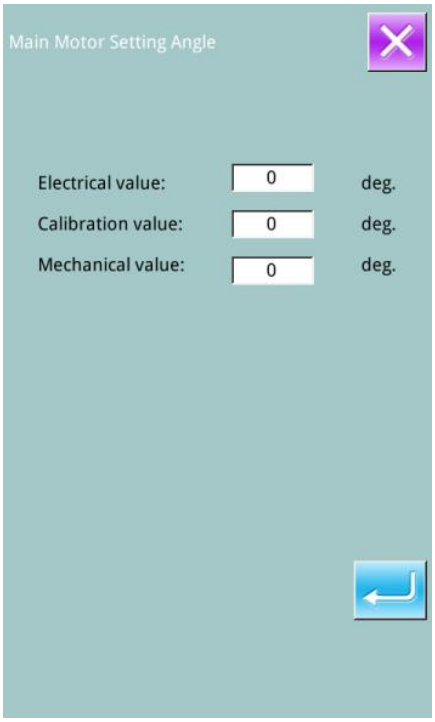
In the interface of continuous running, press the setting figure to set the action interval and gusseting origin test. Press  to return to the interface for inputting data. Then press  and step the pedal to allow machine to run continuously.

7）XY Motor Origin Sensor Test

In the interface of testing mode, press  (I07 XY Motor Origin Test) to enter the output test interface (as shown in the right picture). In this interface, user can drive motor to move by using the direction keys, and the ON/OFF status of sensor can be displayed.



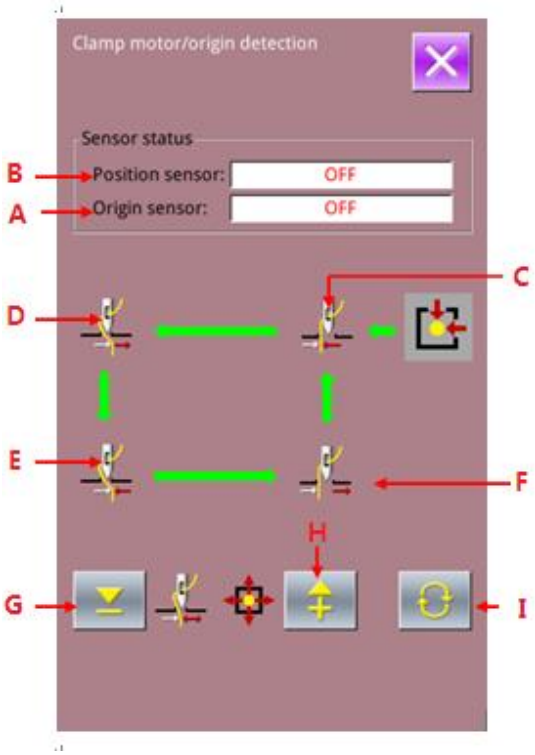
8）Main-shaft Motor Correction



In the test mode interface, press  to enter the interface of main-shaft motor correction (as shown in the right picture).

In this interface, remove the main motor. Turn the hand wheel on the machine to move the needle bar to the highest position. Then turn the joint linkage of the main shaft to have the electronic angle displayed within 30 degree. Install the main motor again and press  .

9) Thread-catching Motor/Origin Sensor Test



According to the status of thread-catching origin sensor, position A will indicate ON/OFF.

According to the status of thread-catching sensor, position B will indicate ON/OFF.

With  &  , presser / thread-cutting motor will drive 1 pulse by 1 pulse. If user presses  , user can drive the presser/thread-cutting motor to the following appointed position, whose icon will become in dark:

C: Standby Position (Front)

D: Thread Bending Position

E: Thread Holding Position

F: Withdraw Position (Back)

Search the origin of the thread-catching motor by start SW.

Note: After searching the origin of the thread-catching motor by start switch, the

status of the origin sensor will become ON.

10) Intermediate Presser Motor/ Origin Sensor Test

According to the status of the intermediate presser origin sensor, position A will indicate ON/OFF.

With  &  , presser / thread-cutting motor will drive 1 pulse by 1 pulse. If user presses  , user can drive the presser/thread-cutting motor to the following appointed position, whose icon will become in dark:

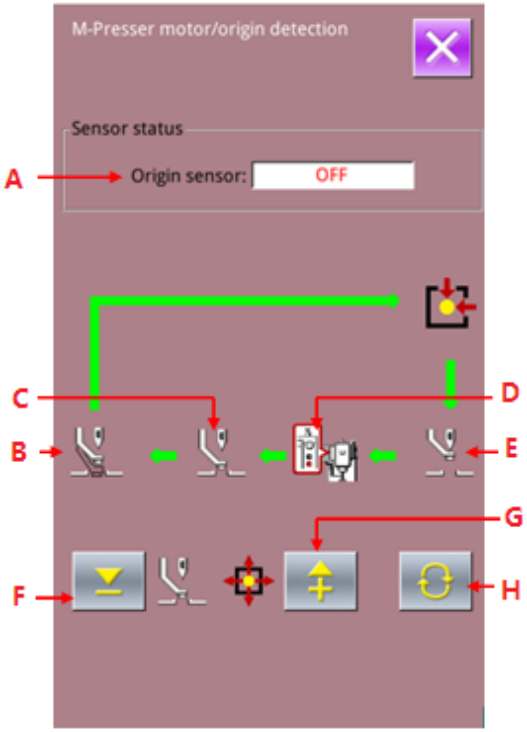
B: Adjusted position of intermediate presser bar

C: Position where height of the lower part is 0mm when presser goes down

D: Confirmed phase position

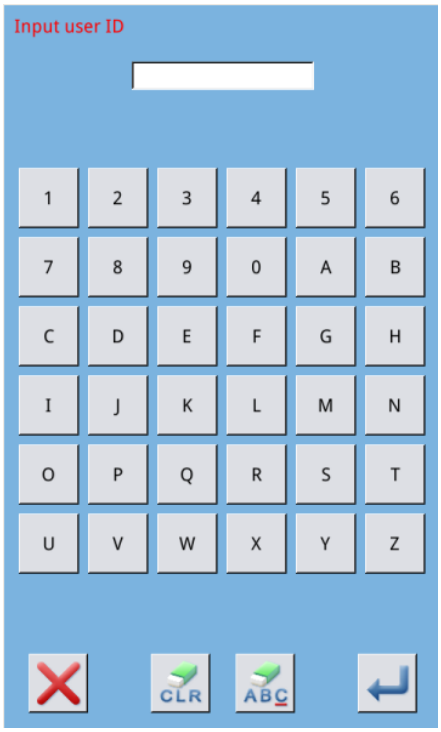
E: Position where height of the lower part is 7mm when the presser goes down

Search the origin of the thread-catching motor by starting SW.

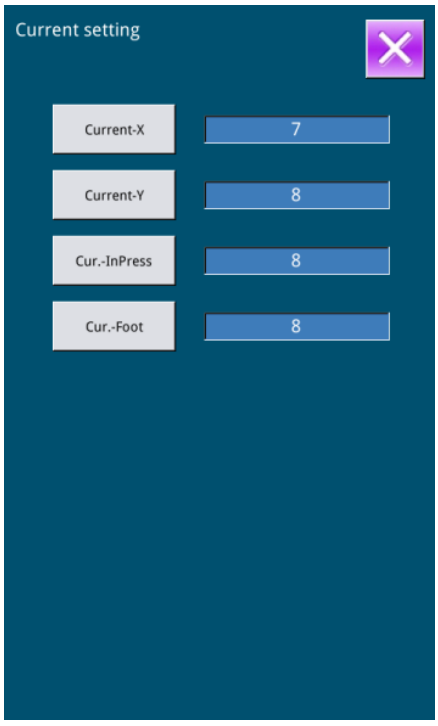


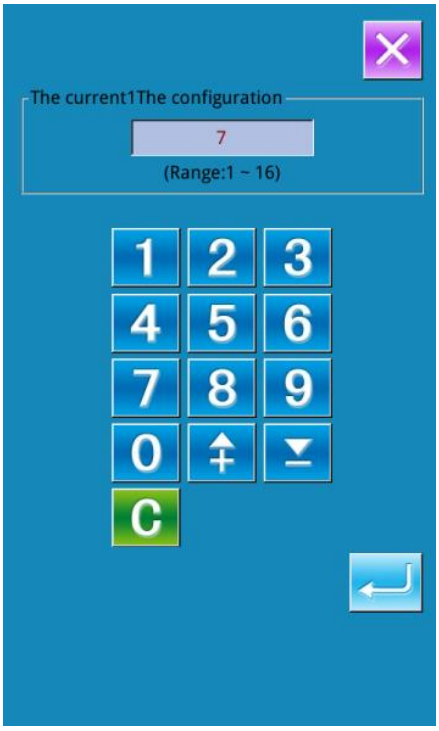
11) Current Setting

After entering the current setting test, user need first input user ID to enter current setting interface



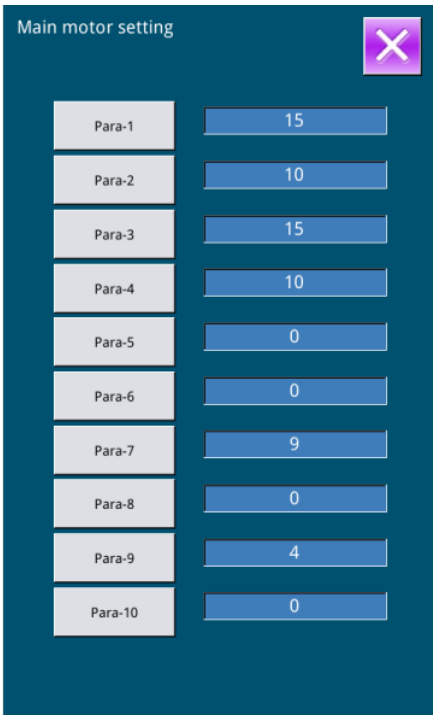
Current setting will display the responding set value of the several motors. Click the button for each motor to enter the interface for setting the motor value.





12) Main-shaft Parameter Setting

User can enter the interface for setting the main-shaft parameters to set the corresponding parameters. Press "Para-1" to enter the setting interface, and then user can set the value of the main-shaft parameter.

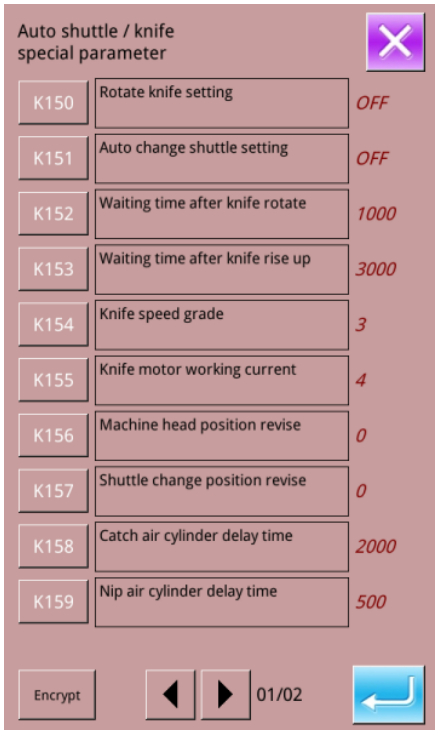


13) Auto Rotating Shuttle/Cutter Parameter

No.	Parameter	Range of Setting	Unit	Default
K150	Availability of the rotating cutter	OFF: turn off ON: turn on		
K151	Availability of auto shuttle changing	OFF: turn off ON: turn on		
K152	Waiting time after the rotation of cutter	0~20000	1	10000
K153	Waiting time after the lift of cutter	0~20001	1	3000
K154	Speed level of cutter	1~10	1	3
K155	Current level of cutter motor	1~10	1	4
K156	Head joint position correction adjustment	-127~127	1	0
K157	Joint position correction adjustment for shuttle changing	-127~127	1	0
K158	The front and back holding cylinder delayed in position	0~20000	1	2000
K159	Clamp cylinder delayed in position	0~20000	1	500
K160	Working current level of the catching arm motor	1~10	1	5
K161	Shuttle changing stop position	0: at the side of the shuttle disk 1: at the side of the head		
K162	Shuttle changing method	0: manual change after bobbin thread alarm 1: auto change after bobbin thread alarm		
K163	Sewing start method after shuttle changing	0: manual start 1: auto start		
K164	Empty shuttle handling method	0: put in shuttle disk 1: put in storage box		
K184	Rotate knife angle of zero	0～360	1	0
K185	Line knife setting	0：OFF：Off 1：ON：Enable		0
K186	Height of line knife fall off	0～360	1	230
K187	Range of line knife waved	10～100	1	31
K188	Delay synchronically of line knife	0～50	1	0

Auto Rotating Shuttle Test

In the test mode interface, press  to enter the interface of auto rotating shuttle interface, as shown in the right picture.



First set the special parameters of auto rotating shuttle, and then click Enter to enter the rotating shuttle test interface.

Auto rotating shuttle test covers:

· rotating cutter

· lifting cylinder

· material pressing cylinder

· cutter switch

· shuttle changing motor

· catching arm motor

· holding cylinder

· catching arm cylinder

· shuttle core signal

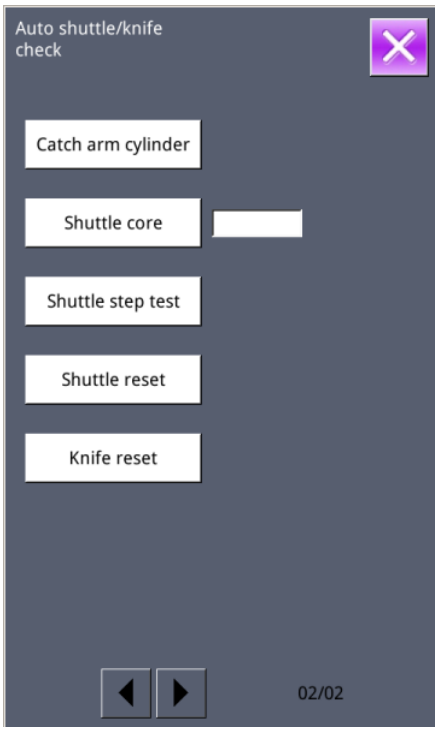
· shuttle changing single-step debug

· shuttle changing action reset

· rotating cutter reset

As for the items concerning motors, press the item key and then press + or – to test the motor action.

As for cylinder and reset actions, press the item key to test the action.



14) Servo Parameters

No.	Parameter	Current Value	Reset Value
Servo 01	xy_br_x_7_Kpp	0	40
Servo 02	xy_br_x_7_Kps	0	5
Servo 03	xy_br_x_7_Kis	0	5
Servo 04	xy_br_x_7_UiMax	0	120
Servo 05	xy_br_x_7_Kff	0	127
Servo 06	xy_br_x_6_Kpp	0	40
Servo 07	xy_br_x_6_Kps	0	5
Servo 08	xy_br_x_6_Kis	0	5
Servo 09	xy_br_x_6_UiMax	0	80
Servo 10	xy_br_x_6_Kff	0	120
Servo 11	xy_br_x_5_Kpp	0	40
Servo 12	xy_br_x_5_Kps	0	5
Servo 13	xy_br_x_5_Kis	0	5
Servo 14	xy_br_x_5_UiMax	0	120
Servo 15	xy_br_x_5_Kff	0	125
Servo 16	xy_br_x_4_Kpp	0	30
Servo 17	xy_br_x_4_Kps	0	5
Servo 18	xy_br_x_4_Kis	0	5
Servo 19	xy_br_x_4_UiMax	0	90
Servo 20	xy_br_x_4_Kff	0	127

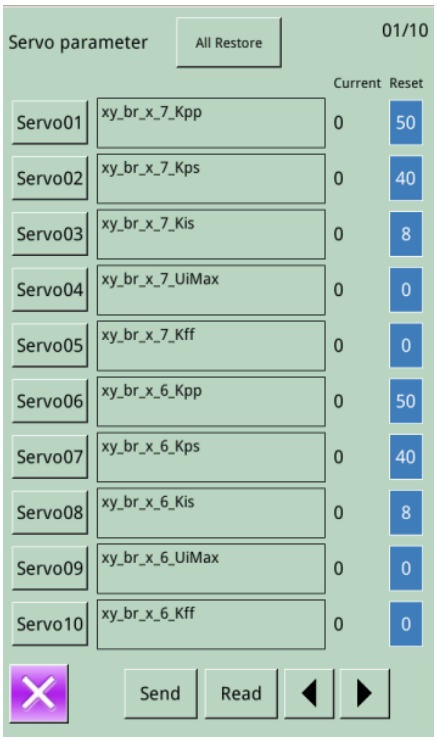
Servo 21	xy_br_x_3_Kpp	0	50
Servo 22	xy_br_x_3_Kps	0	5
Servo 23	xy_br_x_3_Kis	0	5
Servo 24	xy_br_x_3_UiMax	0	40
Servo 25	xy_br_x_3_Kff	0	127
Servo 26	xy_br_x_2_Kpp	0	50
Servo 27	xy_br_x_2_Kps	0	7
Servo 28	xy_br_x_2_Kis	0	5
Servo 29	xy_br_x_2_UiMax	0	20
Servo 30	xy_br_x_2_Kff	0	100
Servo 31	xy_br_x_1_Kpp	0	50
Servo 32	xy_br_x_1_Kps	0	7
Servo 33	xy_br_x_1_Kis	0	5
Servo 34	xy_br_x_1_UiMax	0	20
Servo 35	xy_br_x_1_Kff	0	80
Servo 36	xy_br_x_0_Kpp	0	20
Servo 37	xy_br_x_0_Kps	0	3
Servo 38	xy_br_x_0_Kis	0	5
Servo 39	xy_br_x_0_UiMax	0	20
Servo 40	xy_br_x_0_Kff	0	0
Servo 41	xy_br_x_7_Kpp	0	50
Servo 42	xy_br_x_7_Kps	0	5
Servo 43	xy_br_x_7_Kis	0	5
Servo 44	xy_br_x_7_UiMax	0	20
Servo 45	xy_br_x_7_Kff	0	127
Servo 46	xy_br_x_6_Kpp	0	40
Servo 47	xy_br_x_6_Kps	0	5
Servo 48	xy_br_x_6_Kis	0	5
Servo 49	xy_br_x_6_UiMax	0	50
Servo 50	xy_br_x_6_Kff	0	127
Servo 51	xy_br_x_5_Kpp	0	40
Servo 52	xy_br_x_5_Kps	0	5
Servo 53	xy_br_x_5_Kis	0	5
Servo 54	xy_br_x_5_UiMax	0	50
Servo 55	xy_br_x_5_Kff	0	125
Servo 56	xy_br_x_4_Kpp	0	50
Servo 57	xy_br_x_4_Kps	0	5
Servo 58	xy_br_x_4_Kis	0	5
Servo 59	xy_br_x_4_UiMax	0	50
Servo 60	xy_br_x_4_Kff	0	120
Servo 61	xy_br_x_3_Kpp	0	40
Servo 62	xy_br_x_3_Kps	0	7
Servo 63	xy_br_x_3_Kis	0	5

Servo 64	xy_br_x_3_UiMax	0	80
Servo 65	xy_br_x_3_Kff	0	127
Servo 66	xy_br_x_2_Kpp	0	40
Servo 67	xy_br_x_2_Kps	0	5
Servo 68	xy_br_x_2_Kis	0	5
Servo 69	xy_br_x_2_UiMax	0	50
Servo 70	xy_br_x_2_Kff	0	120
Servo 71	xy_br_x_1_Kpp	0	50
Servo 72	xy_br_x_1_Kps	0	7
Servo 73	xy_br_x_1_Kis	0	5
Servo 74	xy_br_x_1_UiMax	0	60
Servo 75	xy_br_x_1_Kff	0	80
Servo 76	xy_br_x_0_Kpp	0	20
Servo 77	xy_br_x_0_Kps	0	3
Servo 78	xy_br_x_0_Kis	0	5
Servo 79	xy_br_x_0_UiMax	0	20
Servo 80	xy_br_x_0_Kff	0	0
Servo 81	xy_bl_Kpp	0	10
Servo 82	xy_bl_Kps	0	3
Servo 83	xy_bl_Kis	0	5
Servo 84	xy_bl_UiMax	0	20
Servo 85	xlyr_Kpp	0	50
Servo 86	xlyr_Kps	0	5
Servo 87	xlyr_Kis	0	5
Servo 88	xlyr_UiMax	0	20
Servo 89	xlyr_Kpp	0	50
Servo 90	xryl_Kps	0	5
Servo 91	xryl_Kis	0	5
Servo 92	xryl_UiMax	0	20
Servo 93	xryl_time	0	10

Servo Parameter Setting

In the test mode interface, press 

to enter servo parameter setting interface, as shown in the right picture.

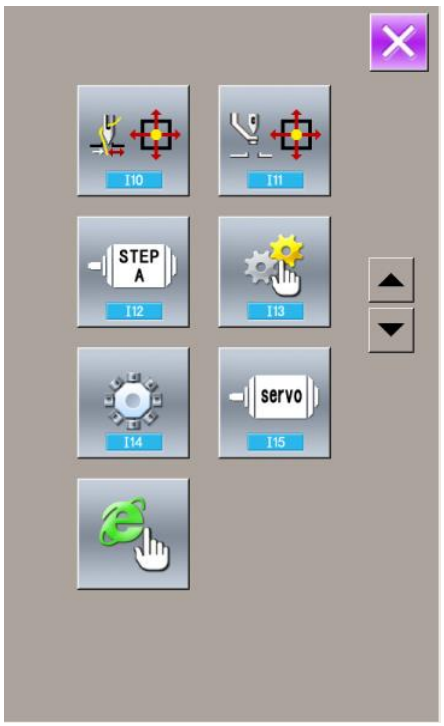


There are 93 servo parameters. After modifying any of the parameters, press "Send" to send to the main control.

Or user can press "Load" to load main control parameter values to the operation panel.

15) Internet Setting

In the test mode interface, press 
to enter the internet setting interface, as shown in the second right picture.



After opening the internet parameter, user can connect the server by the following operations:

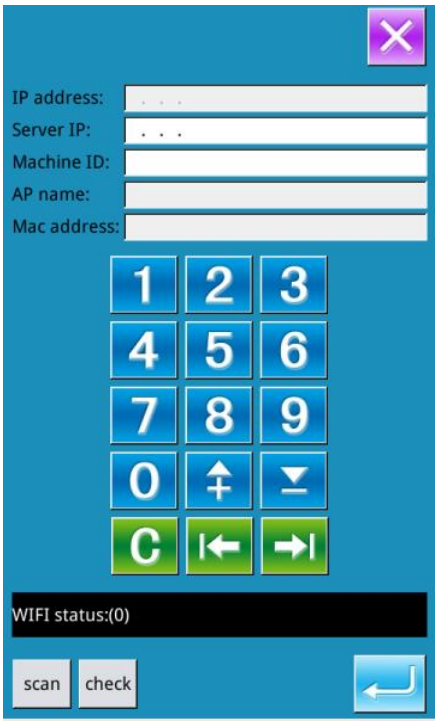
Input the IP address at the server IP, obtain the machine IP from the manufacturer, and click "Enter" to save the information.

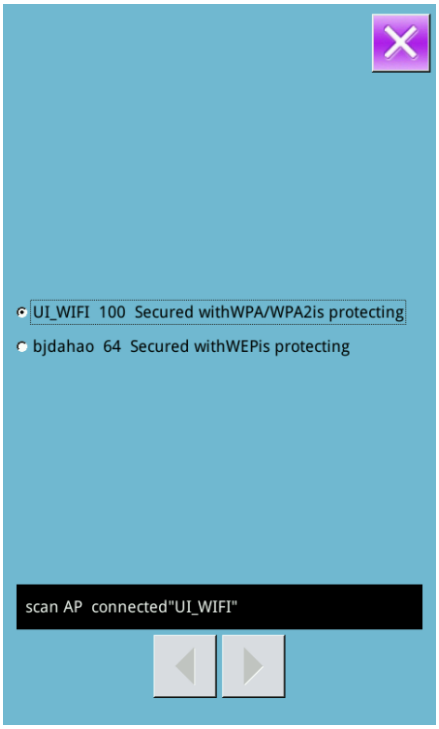
Press "Scan" to enter the hotspot scanning interface, as shown in the third right picture. If the hotspot is found, click it and input the WIFI password to make the connection.

When the system returns to the IP setting interface, the communication status bar will display the connection status, such as connecting, verified successfully, etc.

User should take heed that only after the intelligent factory management personnel input the relevant information can the machine ID become effective. Only after the machine ID becomes effective can the server record the production and pattern information of the machine.

If the connection with the server is established, the IP address, AP address and mac address will display the corresponding information, and the communication status will indicates "verified".



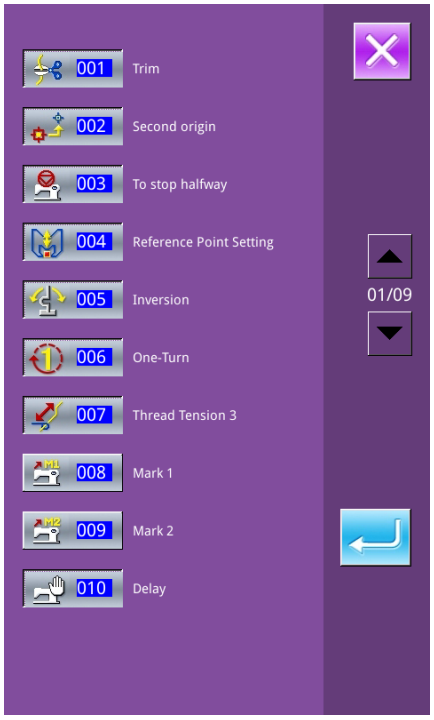


8.13 Pattern Edition Parameter Setting

In the interface of Setting Mode Level 3, press  to enter the interface for setting pattern edition parameters.

The figures in dark are the available functions, while the figures in bright are the functions forbidden.

Set the edition parameters according to the needs, press  to finish the settings.



9 Appendix 1

9.1 Warning List

No.	Name	Method of Release
E001	Pedal is not at the middle position.	Self-recovery
E002	Machine is in emergency stop	Press 
E004	Main voltage is too low(300V)	Turn Off Machine
E005	Main voltage is too high(300V)	Self-recovery
E007	IPM is over-voltage or over-current	Turn Off Machine
E008	Voltage of assistant device(24V) is too high	Turn off Machine
E009	Voltage of assistant device(24V) is too low	Turn off Machine
E010	Valve short connection or fan blocks	Turn off Machine
E011	X motor over-speed error	Turn off Machine
E012	X motor over-distance error	Turn off Machine
E013	Encoder is error or unconnected.	Turn off Machine
E014	Motor running abnormal	Turn off Machine
E015	Exceeds sewing area	Turn off Machine
E016	Needle bar upper position abnormal	Press 
E017	Thread breakage detection error	Press 
E018	Knife position abnormal	Turn off Machine
E019	Emergency switch is not at the right position	Self-recovery
E020	Stepping version error	Turn off Machine
E023	Thread-catching position abnormal	Turn off Machine
E024	Wrong connection between operation panel and sewing machine	Turn off Machine
E025	X origin detection abnormal	Turn off Machine
E026	Y origin detection abnormal	Turn off Machine
E027	Presser origin detection abnormal	Turn off Machine
E028	Thread-catching origin detection abnormal	Turn off Machine
E029	Intermediate presser origin detection abnormal	Turn off Machine
E030	Stepping driver communication abnormal	Turn off Machine
E031	Stepping motor over-current	Turn off Machine
E032	Stepping driver power supply abnormal	Turn off Machine
E034	Abnormal current	Turn off Machine
E035	IPM over-current 1	Turn off Machine
E036	IPM over-current 2	Turn off Machine
E037	Motor blockage 1	Turn off Machine
E038	Motor blockage 2	Turn off Machine
E039	Motor over speed	Turn off Machine

No.	Name	Method of Release
E040	Over-current at stop	Turn off Machine
E041	Motor overload	Turn off Machine
E042	Bus Voltage Abnormal	Turn off Machine
E043	X motor over-speed error	Turn off Machine
E044	X motor over-distance error	Turn off Machine
E045	Bottom Thread Low	Reach the bottom thread replacement value, please replace bottom thread
E052	Write driver program error	Turn
E053	X motor big current	Turn
E054	Y motor big current	Turn
E055	Curve move quickly calculated error	Turn
E056	SPI communication end code error	Turn
E057	SPI communication revify error	Turn
E058	Received data of move quickly error	Turn
E059	X motor block running	Turn
E060	Y motor block running	Turn
E061	X motor command cover	Turn
E062	Y motor command cover	Turn
E063	X motor move fast command cover	Turn
E064	Y motor move fast command cover	Turn
E065	Frame move curve calcutate	Turn
E066	X Motor over current	Turn
E067	Clamp motor over current	Turn
E068	Origin position of rotate knife motor error	Turn
E069	Stop position error	Turn
E070	Wait over time when stopped	Turn
E071	Knife motor lower speed	Turn
E254	Undefined Error	Press 

9.2 Hint List

No.	Name	Content
M-001	Can not find pattern data	Please reload or input from design software
M-002	Set value too large	Please input value within range
M-003	Set value too small	Please input value within range
M-004	Parameter save error	Press Enter to recover default setting
M-005	Communication error	Communication error between operation panel and control box

M-006	Fail to load letter sewing file	
M-007	Operation head not match to control box	Please check the model and the software version
M-008	Over Max stitch pitch	
M-009	Wrong password	Input again
M-010	Clock error	The hardware clock is down, please contact manufacturer for repair
M-011	Letter sewing pattern saved successfully	Enter the pattern selection interface and generate new letter sewing pattern
M-012	SRAM initialization	Clear all the data within SRAM, please turn off machine and restore the DIP switch
M-013	Turning off	
M-014	USB is pulled out	
M-015	Can not find pattern in U disk	
M-016	At least input one letter	Periodical password has been set, can not change system time
M-017	No warning record	
M-018	Wrong user ID	Input again
M-019	Fail to confirm password	Input password again
M-020	Can not change system time	Periodical password has been set, can not change system time
M-021	Password file input error	
M-022	Password file load error	
M-023	Password save successful	
M-024	Clear all password failed	Can not delete password file
M-025	Fail to clear password	After clearance of password, the input of file has problem
M-026	Password file is deleted without authorization	Password file is deleted without authorization, please turn off machine
M-027	User ID file damaged	
M-028	Can not input blank	Input password again
M-029	Current password not match	Input current password again
M-030	New password not match	Input new password again
M-031	Enter touching panel correction mode	Are You Sure？Yes：enter No：X
M-032	Correction successful	Correction is successful, please restart machine
M-033	Correction failed	Please perform correction again
M-034	Clear warning record	Are You Sure？Yes：enter No：X
M-035	Periodical password is same to super password error	Input password again
M-036	Pattern data error	Current pattern data error, it will be replaced by default patterns
M-037	Pattern information file open failed	Restore to default pattern configuration
M-038	Memory full	Please delete the unused patterns

M-039	Cover the pattern	Are You Sure？Yes：enter No：X
M-040	P pattern open error	Pattern file has mistake, it will be deleted
M-041	C pattern open error	Pattern file has mistake, it will be deleted
M-042	Pattern is existed	Can not replace the pattern
M-043	Delete pattern data	Press Enter to delete; Press ESC to quit
M-044	Delete the selected pattern	Are You Sure？Yes：enter No：X
M-045	Pattern is used, can not delete	Please release the quotation at P or C pattern
M-046	Save at least one pattern	Can not delete last pattern
M-047	Load default patterns	No pattern in memory, please load default patterns
M-048	No pattern in memory	Press Enter to load default patterns
M-049	Pattern number not exist	Please input again
M-050	P pattern not exist	Please create P pattern
M-051	Save software version successful	Software version is saved to the root directory of U disk
M-052	Replace needle	Needle replacement set value is reached, please replace needle
M-053	Replace oil	Oil replacement set value is reached, please replace oil
M-054	Clean machine	Cleaning machine set value is reached, please clean machine
M-055	Clear needle replacement set value	Are You Sure？Yes：enter No：X
M-056	Clear oil replacement set value	Are You Sure？Yes：enter No：X
M-057	Clear cleaning time value	Are You Sure？Yes：enter No：X
M-058	Clear production control value	Are You Sure？Yes：enter No：X
M-059	Clear calculated running time	Are You Sure？Yes：enter No：X
M-060	Clear calculated sewing number？	Are You Sure？Yes：enter No：X
M-061	Clear calculated power-on time？	Are You Sure？Yes：enter No：X
M-062	Clear calculated sewing stitch number？	Are You Sure？Yes：enter No：X
M-063	Clear calculated over-current times？	Are You Sure？Yes：enter No：X
M-064	Clear calculated stop times？	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 items	Are You Sure？Yes：enter No：X
M-069	Not select an item	Please select one or several parameters
M-070	Sewing counter reaches set value	Please pres Enter to clear it
M-071	No.of pcs counter reaches set value	Please pres Enter to clear it
M-072	Successful	Current operation is successful
M-073	Failed	Current operation is failed
M-074	Copy failed	Check the room of memory
M-075	Copy failed	Check whether the U disk is pulled out

M-076	File I/O error	File I/O error
M-077	Verification failed at updating main software	
M-078	Cannot delete pattern data	The selected sewing data is in use
M-079	Perform parameter transfer	Are You Sure？Yes：enter No：X
M-080	Cannot open changed pattern	Please confirm pattern file
M-081	Changed pattern format error	Please confirm pattern file
M-082	Changed pattern data is too long	Please confirm pattern file
M-083	Update successful	Update successful, please restart machine
M-084	Fail to open file	Fail to open file
M-085	Parameter restoration successful	Parameter restoration successful, please restart machine
M-086	Not select update item	Please select at least one item for update
M-087	Selected item for update is not existed	If the item has no update file, the system will cancel the selection. If user wants to update the rest, please confirm again
M-088	Initialize U disk	Press Enter to perform operation; Press ESC to quit. The initialization will delete all the files in U disk
M-089	Initialize memory	Press Enter to perform operation; Press ESC to quit. The initialization will delete all the files in memory
M-090	Low memory	
M-091	Fail to select the function	
M-092	Shape point repeated error	
M-093	Can not return	
M-094	Can not find next stitch sewing data	
M-095	Can not find previous stitch sewing data	
M-096	Pattern data is too big	
M-097	Calculation error	
M-098	Pattern-designing error	
M-099	Cannot find the pattern	
M-100	Over moving range	
M-101	Over sewing range	Make sure pattern within sewing range
M-102	Stitch number over range	Reduce stitch number
M-103	Pattern file error	
M-104	Confirm to change point	
M-105	Confirm to insert auto trimming code	
M-106	Delete new pattern?	Press Enter to confirm; Press ESC to quit
M-107	Delete elements?	Press Enter to confirm; Press ESC to quit
M-108	Confirm to perform?	Press Enter to confirm; Press ESC to quit
M-109	Delete mechanical 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	Warning: Initialization will delete entire data in memory!	Press Enter to confirm; Press ESC to quit
M-114	Turn off machine.	Current operation is finished, please restart machine
M-115	Can not modify counter	At modification, please turn off setting
M-116	Restore to default setting?	Press Enter to confirm; Press ESC to quit
M-117	Clear entire custom parameters?	Are You Sure? Yes: enter No: X
M-118	Pattern calculation error	
M-119	Delete all the P and C patterns	Press Enter to confirm; Press ESC to quit
M-120	Over setting range	
M-121	Frame is at up position	Please lower the frame first!
M-122	Can not perform right operation	
M-123	Can not find USB	Pleas insert U disk containing mp3 file
M-124	No video files in vid.avi	Please put vid.avi file into pdat directory in U disk and then enter the update interface to update video files
M-125	Change bottom thread	The setting value of bottom thread replacement is reached, please replace the thread
M-126	Clear bottom thread count value?	Are You Sure? Yes: enter No: X
M-127	Bottom Thread Low	Please replace the bottom thread. Press Enter to count again.
M-128	Patterm not exist	Quit, then press Origin button and change pattern
M-129	Pattern file and pattern not match	Press Enter and then reload pattern; the more the patterns, the longer time it takes.
M-130	Main control update file length error	
M-131	Main control update erase check error	
M-132	Main control update write check error	
M-133	Main control update finish check error	
M-134	Saved as a new pattern?	Press Enter to confirm and press Exit to quit the operation. If saved as a new pattern, the original pattern will remain.
M-135	Network connection failed	
M-136	Punch in successfully	
M-137	Punch in unsuccessfully	
M-138	To confirm network function modification, please turn off the power and restart	The network function will be loaded after system restart.
M-139	Oil box alarm	Please check the oil volume of the oil box and add oil accordingly

M-140	Grease alarm	Please check parts under maintenance and add grease accordingly (refer to instructions of maintenance manual)
M-141	Stepping update finish check unsuccessful	

10 Appendix 2

10.1 Installation Size of Control Box

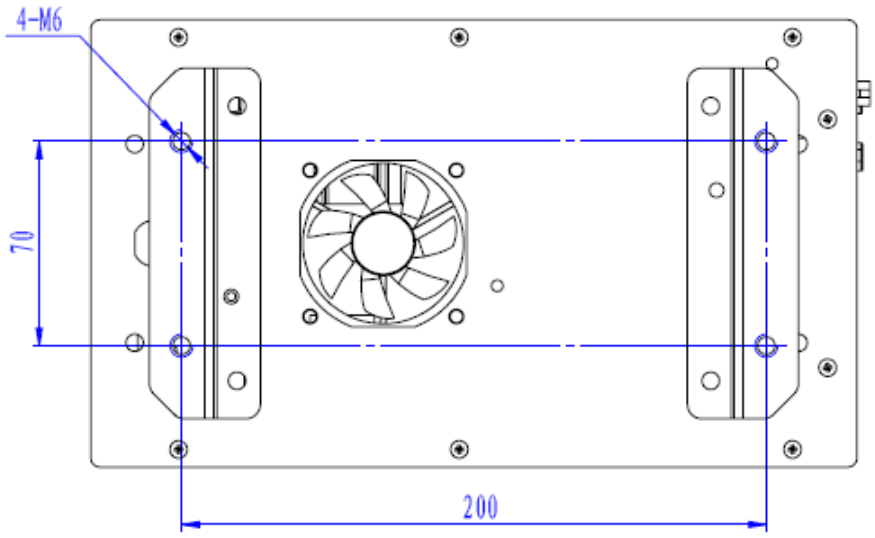


Figure 1 4-hole Installation

10.2 Installation Size of Operation Panel

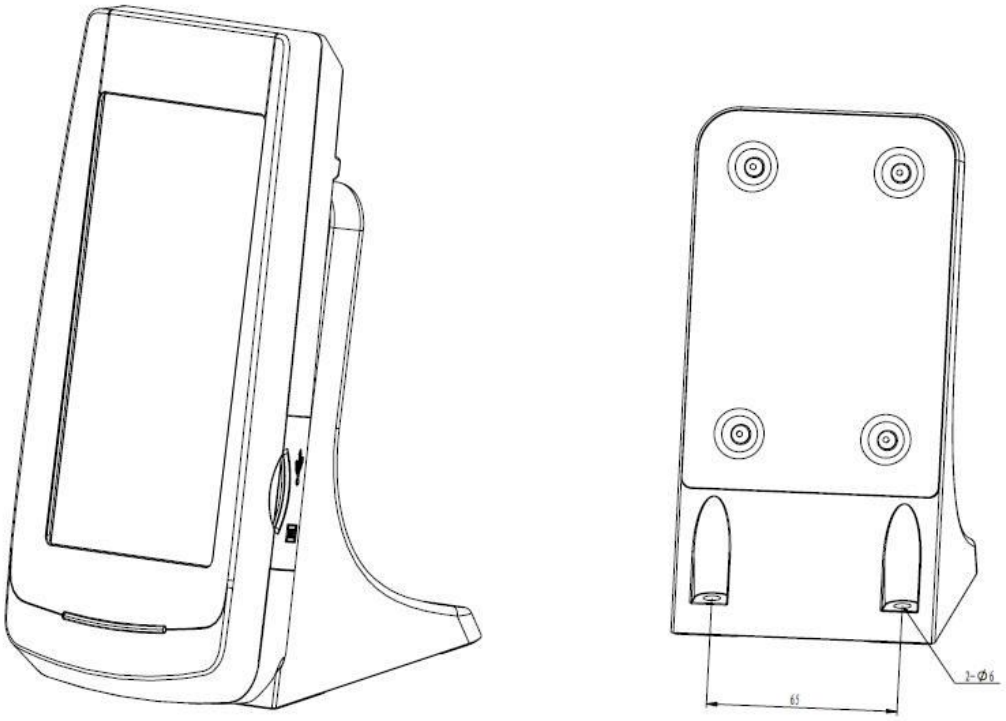


Figure 2 Installation Size of Operation Panel

10.3 Diagram of ZOJE ASC400-2E-B-MBJ