

曲折缝-液晶按键 M

2017-01

前 言

欢迎您使用本公司的特种缝纫机控制系统。

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

安全注意事项

1. 安全操作的标志及含义

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

	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。
	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“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°C~45°C 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。

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1 概要说明

1.1 概述

电子高速曲折缝电脑控制系统，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。

1.2 规格

		B 款	S 款	SR 款
序号	用途	薄料~中厚料		
1	最高转速	5000rpm		
2	最大摆幅宽度	10mm		
3	最大送布量	正逆 5mm		
4	送布方式	机械拨杆	电磁铁	步进马达
5	切线	无	有	有
6	数据记忆体	U 盘		
7	缝制图案	14 种花样	14 种花样	20 种花样
8	额定功率	600W		
9	使用温度范围	0°C ~ 45°C		
10	使用湿度范围	35% ~ 85% (无结露)		
11	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 安全使用注意事项

● 安装

- 控制箱
 - ◆ 请遵照说明正确装好
- 附件
 - ◆ 如要安装其它附件时，请先关掉电源并拔掉电源插头。
- 电源线
 - ◆ 请不要用重力去压住电源线或过度的扭曲电源线。
 - ◆ 请不要将电源线靠近转动的部位，最少要离开 25mm 以上。
 - ◆ 控制箱要接入电源前，请必再查看要接入的电源电压是否与控制箱上标

示的电压相同及确定位置后，才可供应电源。如有接用电源变压装置的话，同样的要检查一下后才可供应电源。这时缝纫机上的按钮式电源开关一定要放在 [OFF]。

- 接地
 - ◆ 为防止噪声干扰及漏电而发生电击事件，电源线上的接地线定要确实做好接地。
- 附属装置
 - ◆ 如要接用电气方面的附属装置的话，请遵照指示的位置接好。
- 拆卸
 - ◆ 要卸下控制箱时，必须要先关掉电源并拔掉电源插头。
 - ◆ 在拔离电源插头时不可只拉电源线，必须用手拿住电源插头拔出。
 - ◆ 控制箱里面有危险的高压电，所以要打开控制箱盖的话，需要先关掉电源后等候 5 分钟以上才可打开控制箱盖。

● 保养、检查和修理

- 修理和保养的作业，要请经过训练的技术人员执行。
- 更换机针和梭子时，请务必要关电。
- 请使用正厂的零件。

● 其它的安全对策

- 缝纫机运转中请不要去触摸会转动和会移动的部位（特别是机针和皮带附件）等，并注意头发不要靠近它们，以免发生危险。
- 控制装置不可摔落地，更不可在空隙间塞入其它物品。
- 请不要在拆掉各护盖的情形下运作。
- 如本控制装置有损伤或无法正常运作时，必要请有经验的技术人员调整，或检查修理，在故障还没排除前请不要再去运转它。
- 敬请各客户们不要自行改造或变更本控制装置。

● 废弃处理

- 请以一般产业废弃物处理。

● 警示示意和危险示意

- 错误的行为可能会发生危险，其程度如后述的标示区别说明。

 警告	错误的行动可能会发生重伤或死亡	 注意	错误的行为可能会发生伤害或房屋或财产的损害
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- 标示符号的表示如下说明。

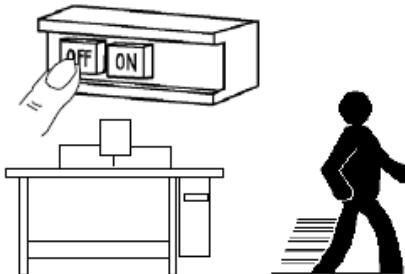
	请遵照指示内容作业		注意高压电（电击）的危险
	注意高温		务必接上接地线
	绝对不要执行		

1.4 使用上的预防措施

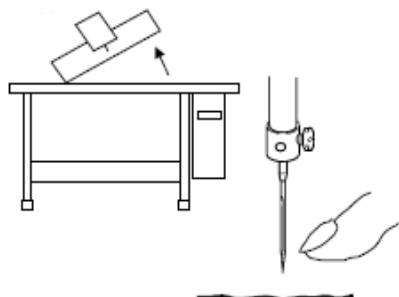


警告

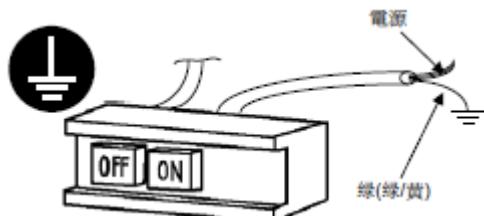
1、要离开工作岗位时，请务必关掉电源。



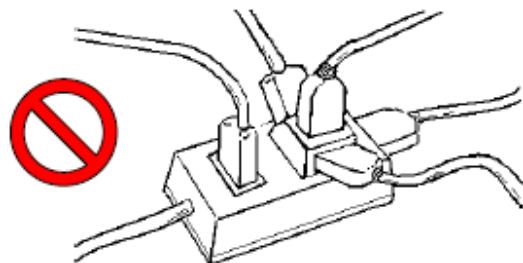
3、如要横倒头部或更换机针或穿面线时，请务必要关掉电源。



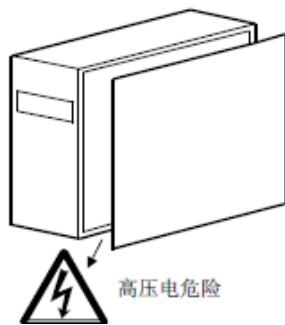
4、接地线要做好接地。



5、不要用家庭用多插孔式延长线。

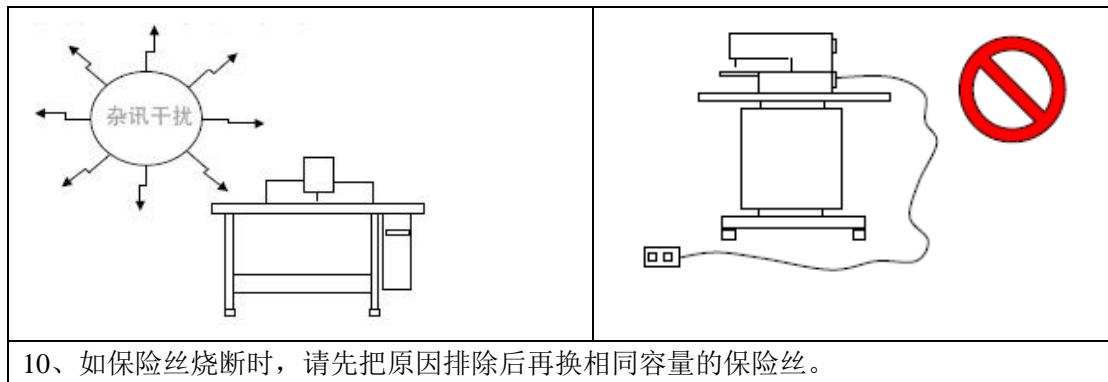


6、控制箱内部存有危险的高压电，所以关掉电源后等候 5 分钟才可打开控制箱盖。

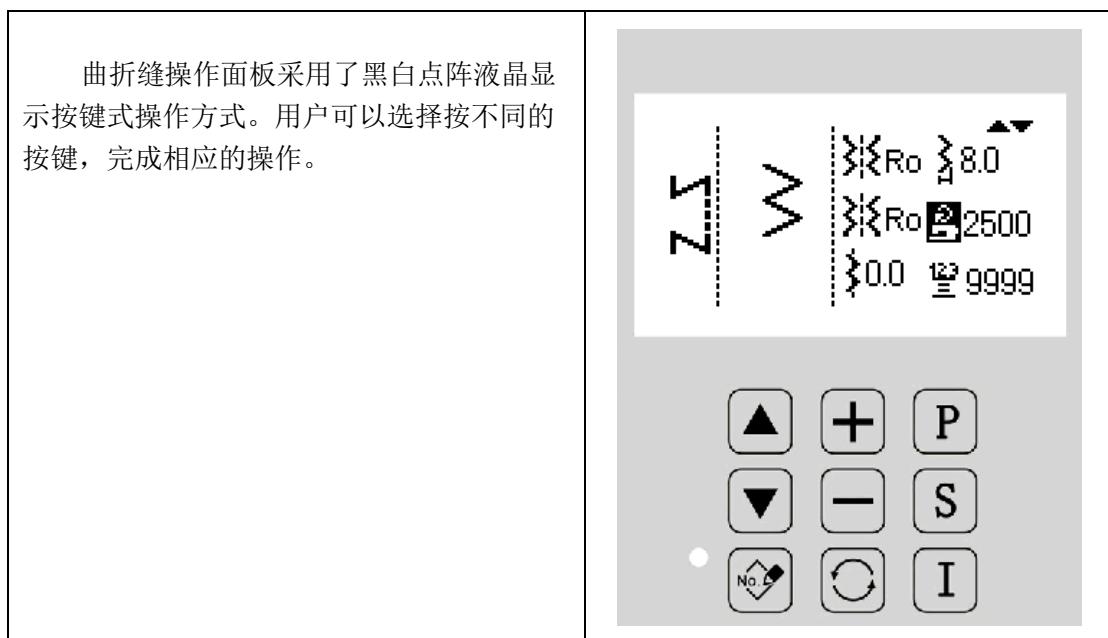


8、请远离会产生高周波噪声干扰的机器。

9、如利用外接信号插座接应用附属装置时，其连接线长度请尽量越短越好，长线可能会导致误动作，连接线请用隔离线缆。



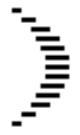
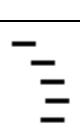
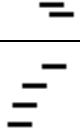
1.5 操作方式



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，以免对屏幕造成永久性损伤。

1.6 缝制图案一览表

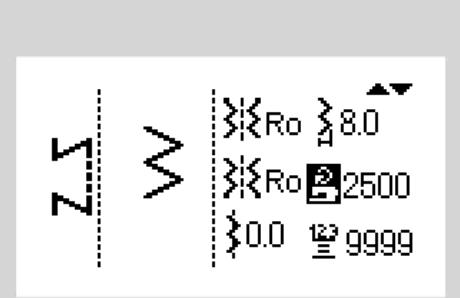
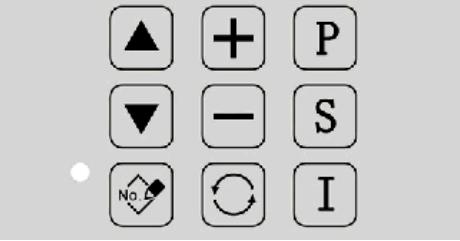
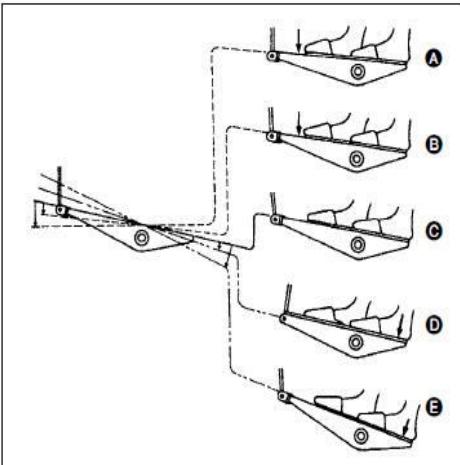
图案名称	针迹图案	图案针数	最大摆宽
直线		1	-

2 点曲折		2	
3 点曲折		4	
4 点曲折		6	
荷叶边 (右)	标准荷叶边		
	月牙荷叶边		24
	24 针均等荷叶边		10
	12 针均等荷叶边		12
荷叶边 (左)	标准荷叶边		
	月牙荷叶边		24
	24 针均等荷叶边		
	12 针均等荷叶边		12

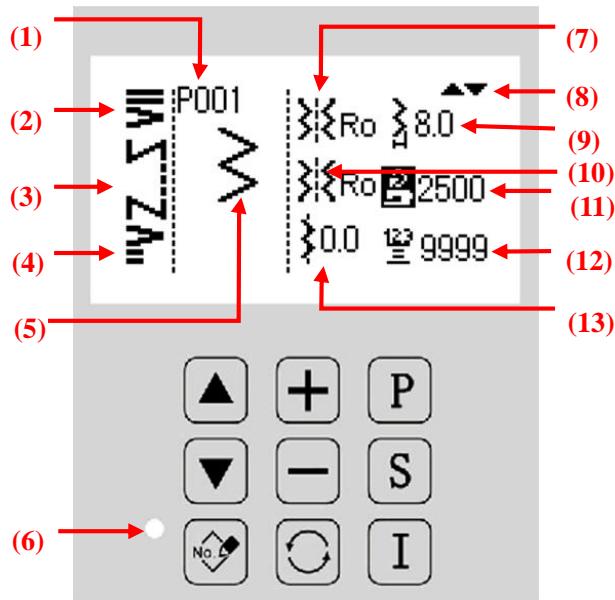
暗缝针迹 (左)		2+a	
暗缝针距 (右)		2+a	10
自编花样		500	

2 操作说明

2.1 基本操作

<p>1、打开电源开关</p> <p>当针杆不在上位置时，会出现「针杆上位置异常」的提示信息，需要转动手轮使针杆移动到上位置。</p>	 
<p>2、修改相关参数</p> <p>在主界面下修改转速、摆宽等相关参数。</p>	
<p>3、开始缝制</p> <p>脚踏板有 4 级操作。</p> <p>向前轻轻地踩踏板为低速缝纫⑧。</p> <p>再继续向前踩踏板为高速缝纫⑨（自动倒缝开关被设定时，倒缝结束之后再高速缝纫）。</p> <p>轻轻地踩踏板返回，缝纫机停止⑩（机针为上停止或下停止）。</p> <p>向后轻轻踩踏板之后缝纫机执行压脚提升动作⑪，再继续向后踩踏板之后缝纫机执行切线动作⑫。</p>	

2.2 主界面及按键说明



显示及按键功能说明:

序号	功能	内容
(1)	花样号	显示当前缝制的花样号，仅自编花样或是已登记花样才会显示，否则不显示
(2)	前倒缝	当设置前倒缝后会显示出当前的前倒缝类型，如果前倒缝设置为关闭，则不显示 ■：标准前倒缝 □：缩缝 ▲：自编前倒缝
(3)	缝制类型	缝制类型显示，主要包括自由缝、重叠缝、程序缝 ■：自由缝 ■：重叠缝 ■：程序缝(定针缝)
(4)	后倒缝	当设置后倒缝后会显示出当前的后倒缝类型，如果后倒缝设置为关闭，则不显示 ■：标准后倒缝 □：缩缝 ▲：自编后倒缝
(5)	当前缝制的花样形状	显示当前缝制的花样缩略图
(6)	指示灯	在登记状态或者报错状态时，该指示灯会亮起
(7)	起针点位置	显示当前起针点位置
(8)	操作指示	显示操作的提示信息
(9)	摆宽	显示当前摆宽
(10)	停针点位置	显示当前停针点位置
(11)	缝制速度	显示当前缝制速度
(12)	计数器	显示当前计数器数值
(13)	基准线位置	显示当前基准线位置
	选项上键	用于选择参数设置选项

	选项下键	用于选择参数设置选项
	编辑键	用于进行花样登记或进入编辑功能
	加号键	用于修改当前选项的数值
	减号键	用于修改当前选项的数值
	界面切换键	用于切换不同的界面，可在主界面(花样设置界面)、花样选择界面、缝制模式选择、倒缝设置等四个界面进行切换
	返回键	用于返回上一步的操作界面，退出当前操作界面
	确认键	用于确认当前的操作
	信息键	用于进入\退出功能选择模式

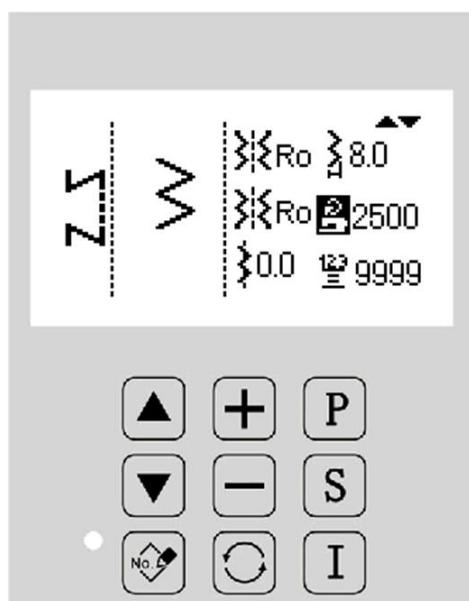
2.3 界面切换说明

- 打开电源后，操作面板显示为花样设置主界面。
- 每次按下切换键 ，主界面会按如下顺序变换（显示内容可能会稍有不同，取决于具体设置）。

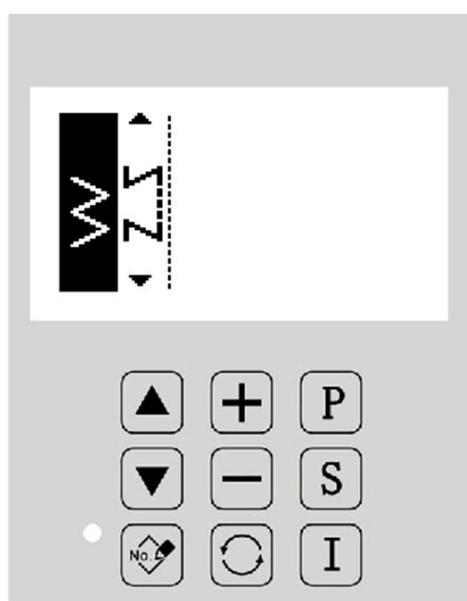
实例说明：

这里以两点曲折（程序缝方式）为例说明。

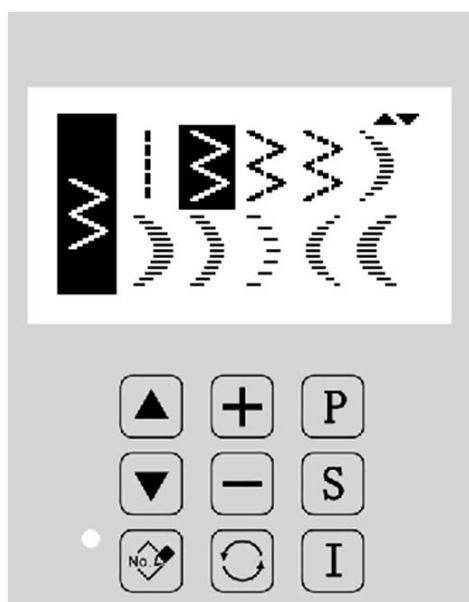
花样设置界面



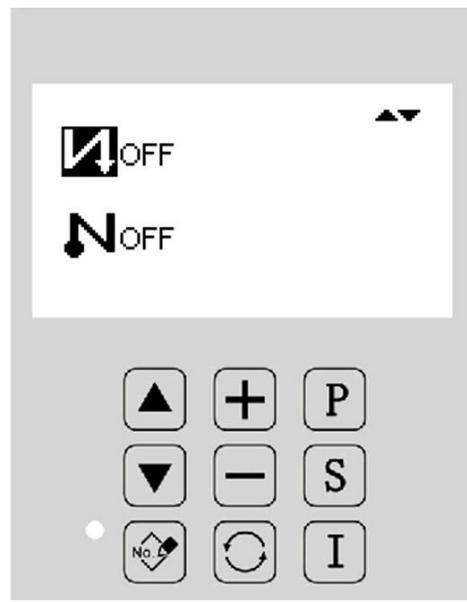
缝纫模式设置界面



花样选择界面



倒缝设置界面



【注 1】 选择缝纫未结束时，按下切换键 不会进入缝纫模式设置界面。

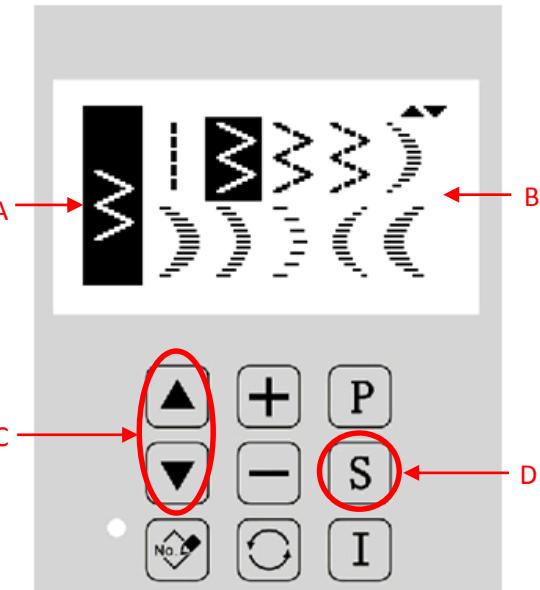
【注 2】 选择重叠缝纫模式时，按下切换键 不会进入倒缝设置界面。

【注 3】 不同机型界面略有不同，请以实物为准。

2.4 花样选择

说明如何选择一个花样用于缝制。

切换到花样选择界面，可以选择基本花型、自编花样、内存花样。

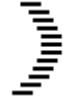
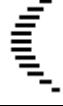
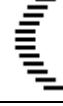


功能说明：

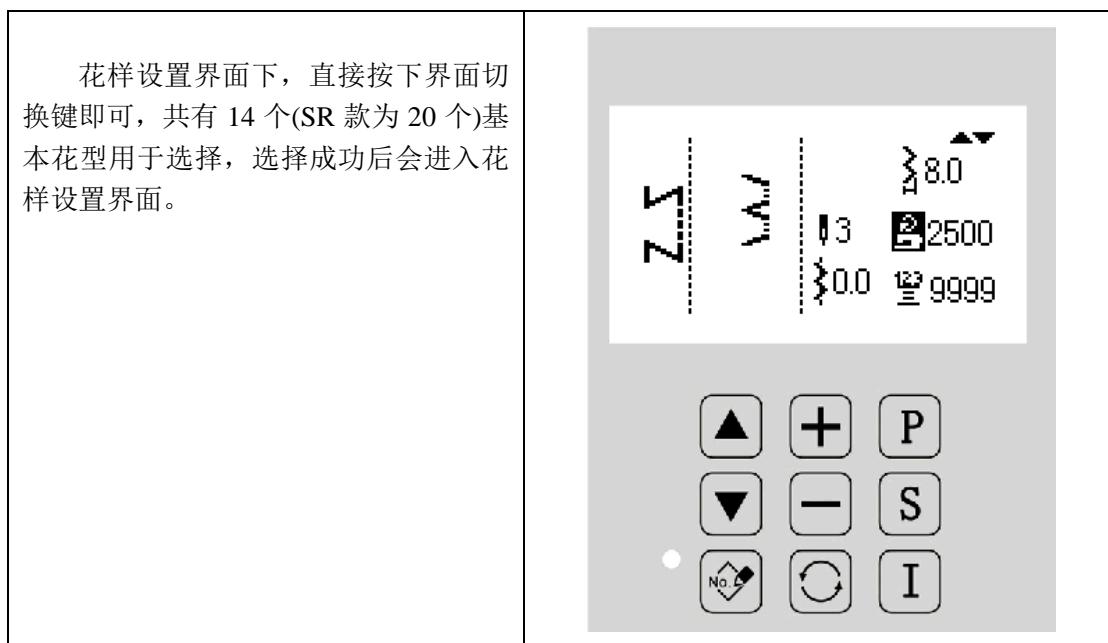
序号	功能	内容
A	当前花样	显示当前缝制的花样形状
B	花样选择区	用于选择基本花型、自编花样、内存花样
C	翻页键	用于前后翻页显示，选择各种花型
D	确认键	用于确认选择当前的花样

花样选择键说明：

图标	说明
	直线
>>	两点曲折
>>>	三点曲折

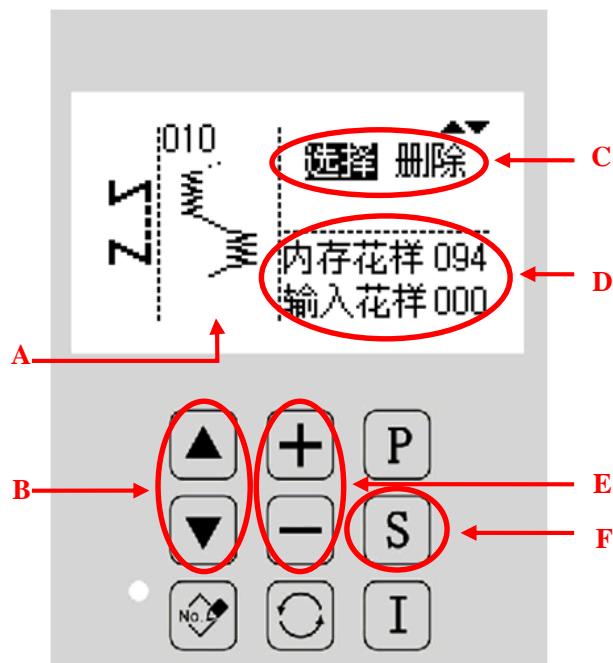
	四点曲折
	右标准荷叶边
	右月牙荷叶边
	右 24 针均等荷叶边
	右 12 针均等荷叶边
	左标准荷叶边
	左月牙荷叶边
	左 24 针均等荷叶边
	左 12 针均等荷叶边
	左暗缝
	右暗缝
	自编花样
	已存花样

2. 4. 1 标准花型选择



2. 4. 2 自编花样选择

- 花样选择界面下，选择自编花样键 ，按下 **S** 键即进入自编花样选择界面。
- 最多可以存储 200 个自编花样。
- 按下 **P** 键退出该界面。



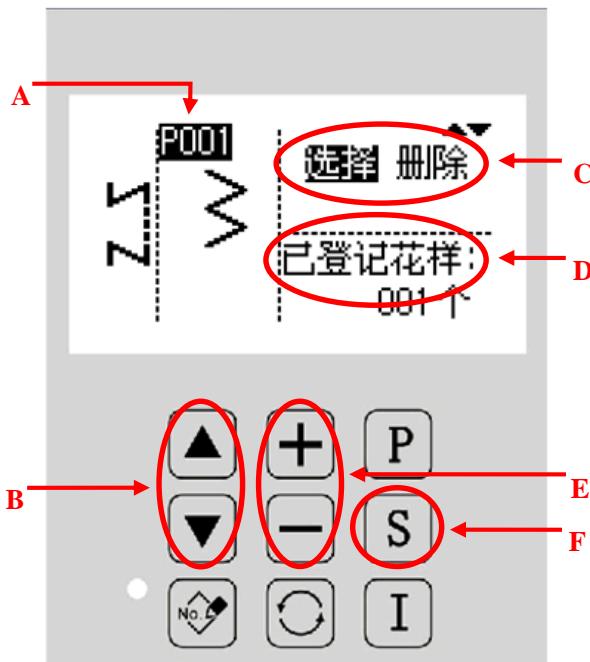
功能说明：

序号	功能	内容
A	花样显示	显示选中花样的形状及花样号。 注：系统自带的花样号为 1~200； 外部输入的花样号为 201~300
B	选项变更键	用于更改当前操作，在“选择”和“删除”间进行变换
C	操作选项	“选择”表示可以选择当前花样； “删除”表示可以删除当前花样，但是内存花样是不能删除的，只能删除外部输入花样
D	信息显示	用于显示自编花样的数量，自编花样分为内存花样和输入花样，后面的数字表示当前花样的数量
E	花样选择键	用于更改当前显示的花样
F	确定键	确定选择当前花样，并进入自编花样设置界面。

2. 4. 3 已存花样选择

- 已存花样是由基本花型或自编花样登记而成，已存样式的参数、缝纫模式和倒缝都是独立的。
- 最多可以登记存储 200 个已存花样。
- 花样选择界面下，选择已存花样键 ，按下  键即进入已存花样选择界面。
- 按下  键退出该界面。

【注】如果操作面板中没有存储已存花样，会显示「内存中没有登记花样」的提示信息。



功能说明：

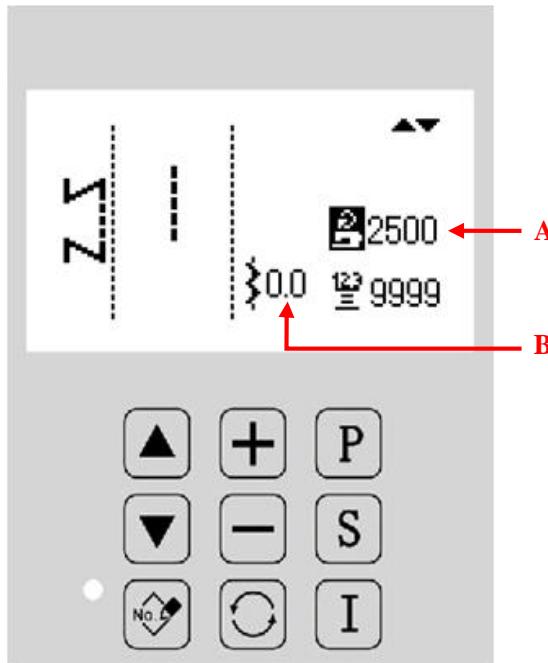
序号	功能	内容
A	花样显示	显示选中花样的形状及花样号，已登记的花样号为 Pxxx
B	选项变更键	用于更改当前操作，在“选择”和“删除”间进行变换
C	操作选项	“选择”表示可以选择当前花样； “删除”表示可以删除当前花样。
D	信息显示	用于显示已登记花样的数量
E	花样选择键	用于更改当前显示的花样
F	确定键	确定选择当前花样，并进入自编花样设置界面。

2.5 基本花样设定

说明如何设定基本花样的摆宽、基准线、送布量和转速等参数。

基本花样是指系统自带的 14 个(SR 款为 20 个)基本花型。

2.5.1 直线设置



功能说明：

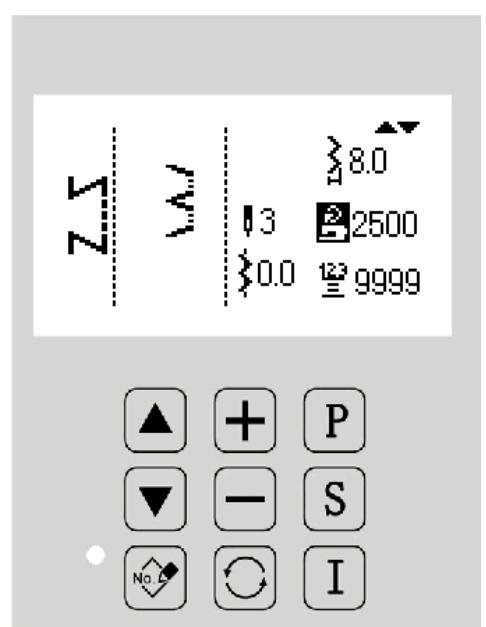
A	最高转速显示和设置	显示当前花样
B	基准线位置显示和设置	显示基准线位置

参数设置说明：

这里举例说明如何设置最高转速和基准线位置。

1、最高转速设置

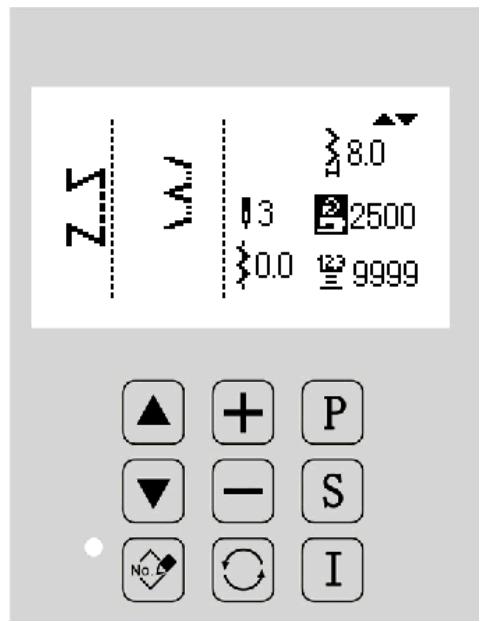
在花样设置界面下，按 或 键移动光标到最高转速设置选项，再按 或 键修改速度值即可。



2、基准线设置

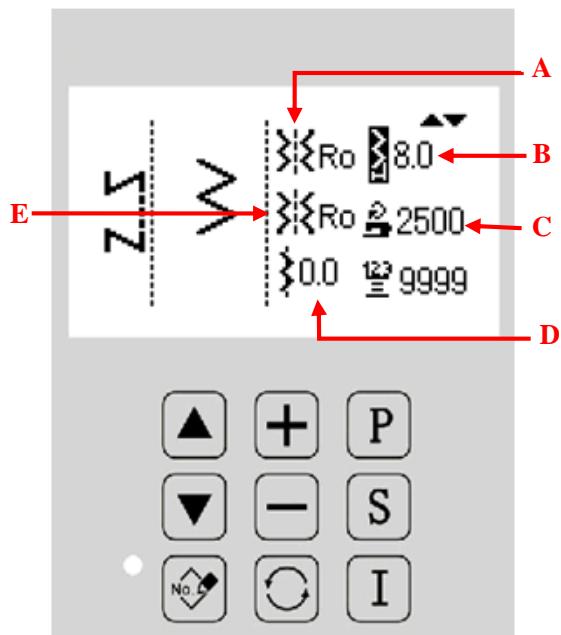
在花样设置界面下，按 或 键移动光标到基准线设置选项，再按 或 键修改速度值即可。

【注】基准线的数值受参数 P1-0、P1-1、P1-2、P1-3、P1-4 等参数的限制，在设置基准线时，系统会判断是否超过限制，只有在未超限时，该数值才会变化，否则，数值不能被更改。



2.5.2 两点、三点、四点曲折设置

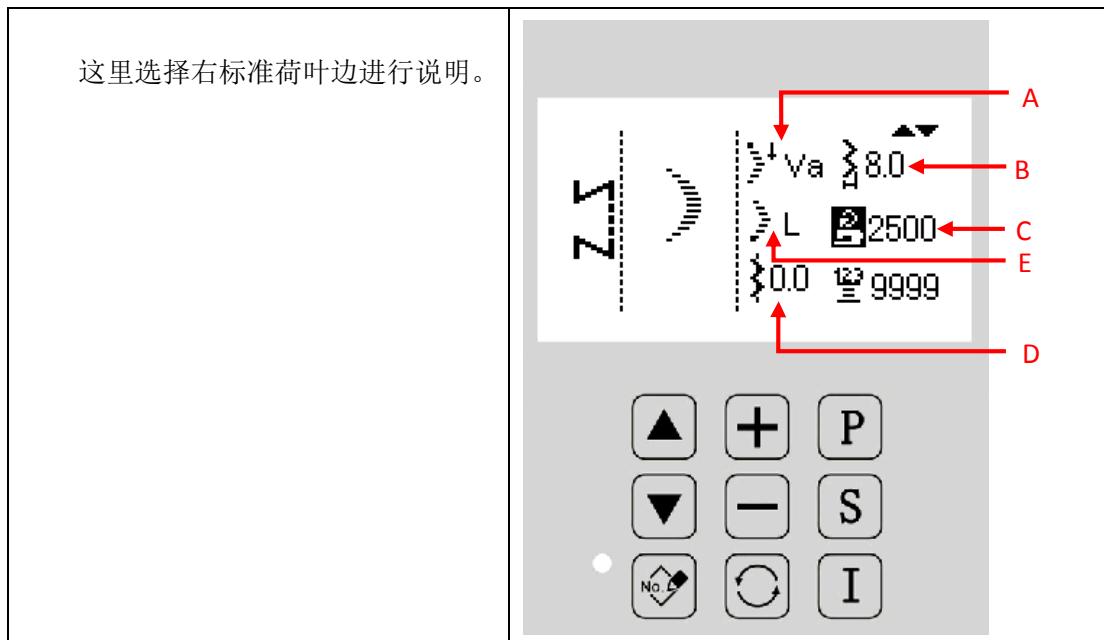
这里选择两点曲折进行说明。



功能说明:

A	起针点显示和设置	显示起针点位置 $\triangleright\triangleright Ro$: 任意 $\triangleleft\triangleleft R$: 右 $\triangleright\triangleleft L$: 左
B	摆宽显示和设置	显示摆宽数值。
C	最高转速显示和设置	显示最高运行速度。
D	基准线位置显示和设置	显示基准线位置，基准线的数值受参数 P1-0、P1-1、P1-2、P1-3、P1-4 等参数的限制，在设置基准线时，系统会判断是否超过限制，只有在未超限时，该数值才会变化，否则，数值不能被更改。
E	停针点显示和设置	显示停针点位置。 $\triangleright\triangleright Ro$: 任意 $\triangleleft\triangleleft R$: 右 $\triangleright\triangleleft L$: 左

2.5.3 荷叶边设置



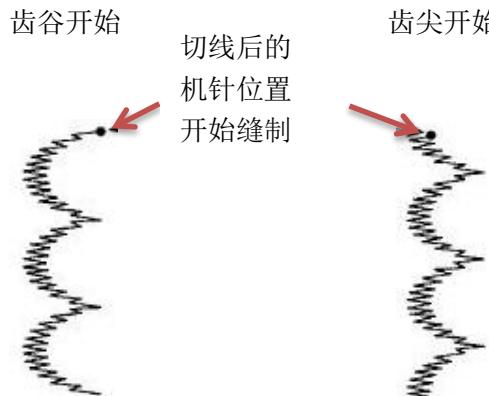
功能说明:

A	起针点显示和设置	显示起针点位置。 ↑ Va: 谷 ↑ Ap: 峰
B	摆宽显示和设置	显示摆宽数值。
C	最高转速显示和设置	显示最高运行速度。
D	基准线位置显示和设置	显示基准线位置，基准线的数值受参数 P1-0、P1-1、P1-2、P1-3、P1-4 等参数的限制，在设置基准线时，系统会判断是否超过限制，只有在未超限时，该数值才会变化，否则，数值不能被更改。
E	停针点显示和设置	显示停针点位置。 ↓ L: 左 ↓ R: 右 ↓ Ro: 任意 ↓ Va: 谷

关于锯齿边的齿尖开始和齿谷开始

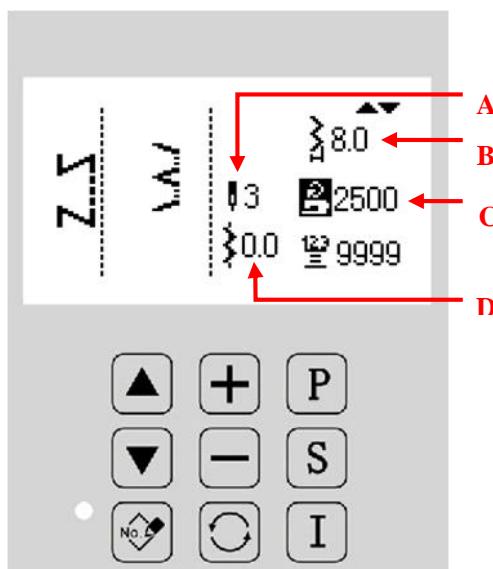
齿谷开始

齿尖开始



2.5.4 暗缝设置

这里选择左暗缝进行说明。



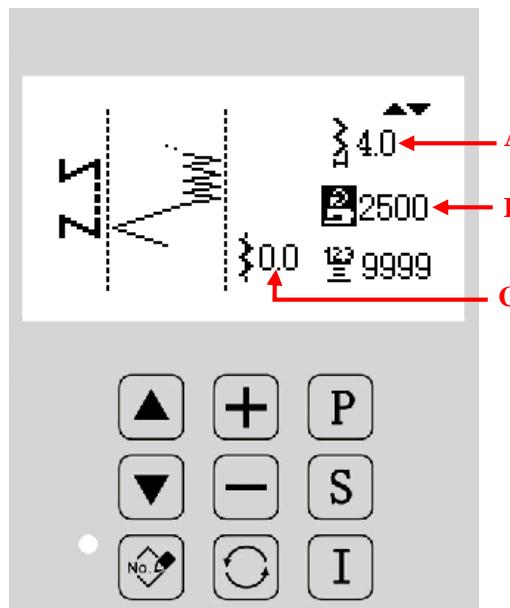
功能说明:

A	暗缝针数显示和设置	显示当前暗缝针数。
B	摆宽显示和设置	显示摆宽数值。
C	最高转速显示和设置	显示最高运行速度。
D	基准线位置显示和设置	显示基准线位置，基准线的数值受参数 P1-0、P1-1、P1-2、P1-3、P1-4 等参数的限制，在设置基准线时，系统会判断是否超过限制，只有在未超限时，该数值才会变化，否则，数值不能被更改。

2.6 自编花样

- 自编花样是指自由落针位置，可以编制任意的机针摆动图案。
- 自编花样可以由外部通过 USB 接口导入进来。
- 最多可以存储 20 个自编花样，每个图案最多可以支持 500 针。

参照【2.4.2 自编花样选择】内容，进入自编花样设置界面。



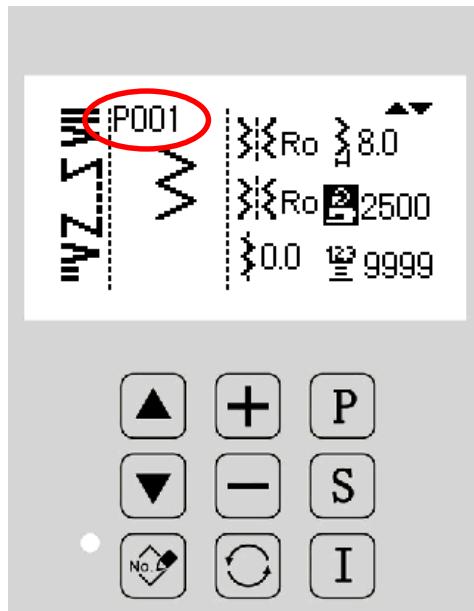
功能说明:

A	摆宽显示和设置	显示摆宽数值。
B	最高转速显示和设置	显示最高运行速度。
C	基准线位置显示和设置	显示基准线位置，基准线的数值受参数 P1-0、P1-1、P1-2、P1-3、P1-4 等参数的限制，在设置基准线时，系统会判断是否超过限制，只有在未超限时，该数值才会变化，否则，数值不能被更改。

2.7 已存花样

- 已存花样是由基本花样或自编花样登记产生的，仅在自由缝纫和重叠缝纫时能够登记。
- 由自编花样登记的已存花样不允许编辑数据，由基本花样登记的已存花样可以修改花样参数。

参照【2.4.3 已存花样选择】内容，进入已存花样设置界面。已存花样的设置界面与普通界面基本一样，只是在花样显示区的左上角有一个 PXXX 的花样号显示。

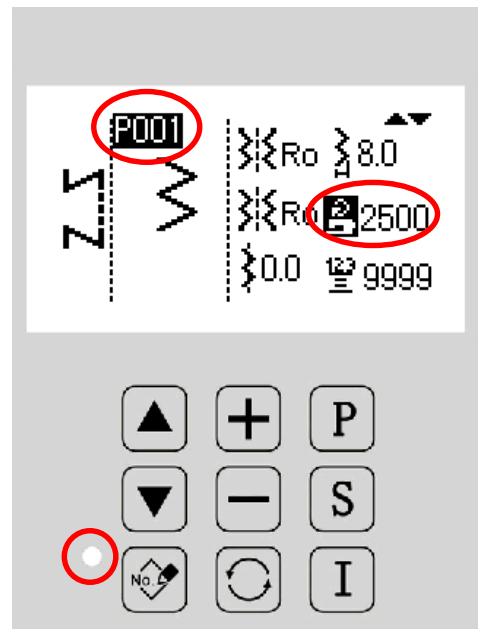


2.7.1 花样登记

这里以两点曲折花型举例说明。

1、选择想要登记的花样

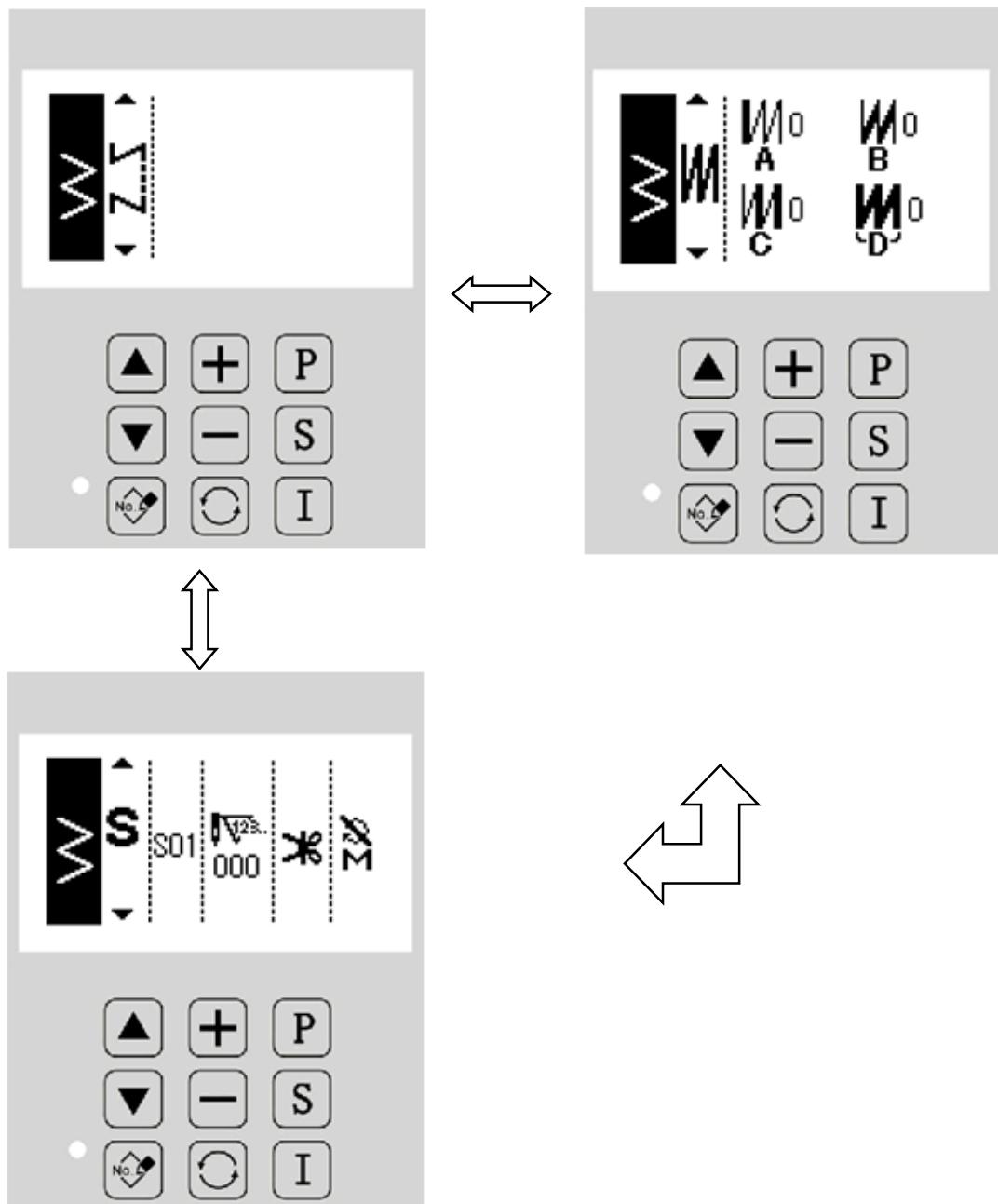
设置好想要登记的花样以及缝纫模式、倒缝，进入到花样设置界面，按下登记键 会进入花样登记界面，此时面板上的指示灯会亮起，花样显示区左上角会出现 PXXX 的字样，同时光标也会闪烁。注意，进入登记模式后，花样设置选项将会自动跳到速度选项处，如果当前花样是未登记的花样，则速度值默认为 2500rpm，否则显示的速度值为之前登记时的速度值。



<p>2、更改登记号码</p> <p>进入登记模式后，按 或 键可以更改登记的花样号码。</p> <p>3、更改花样速度</p> <p>进入登记模式后，按 或 键可以修改该花样的速度。</p> <p>【注】登记花样后，所登记的花样，其缝制速度不会超过登记时的速度，即实际缝制速度会受登记时的设置速度限制。</p>	
<p>4、登记结束</p> <p>速度和花样号设置好后，按 键确认，此时花样号将不再闪烁，表示登记成功，然后再按 键，面板指示灯会熄灭，进入花样设置主界面，此时，即可踩踏板进行缝制。</p>	

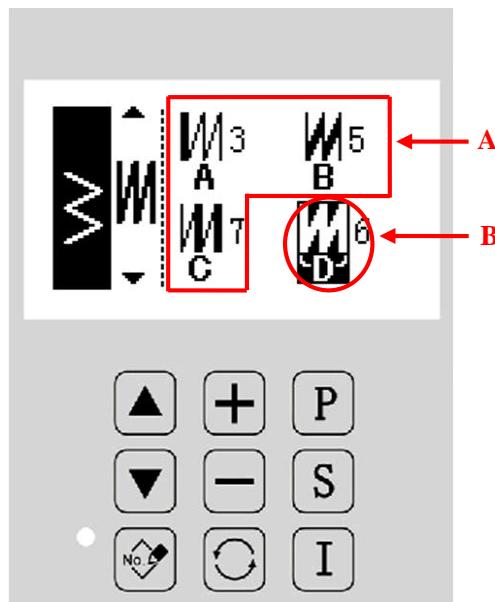
2.8 缝纫模式设置

- 参照【2.3 界面切换】内容，可以知道通过切换键 ，可以进入缝纫模式设置界面。
- 缝纫模式有自由缝、重缝缝和程序缝组成。
- 按 或 键可以在三种缝纫模式中进行切换。



2.8.1 重叠缝

重叠缝默认打开一次缝。



功能说明:

A	A、B、C 工序针数显示和设置	分别显示 A、B、C 工序针数，按下编辑键后进入重叠缝设置界面，范围为 0~19 针。
B	工序数 D 显示和设置	显示 A、B、C 的总工序数，按下设置键后进入重叠缝设置界面，范围为 0~9。

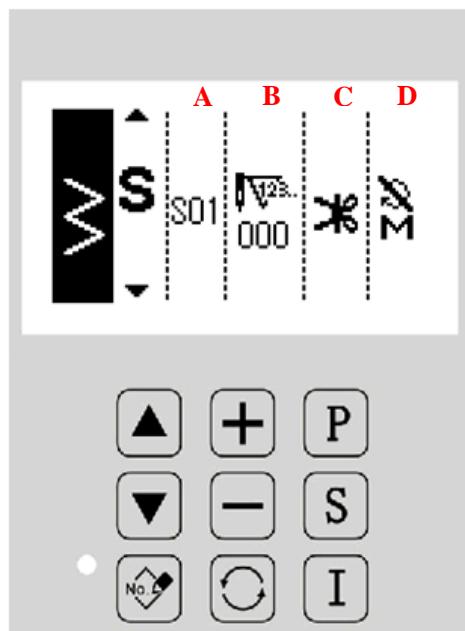
操作说明:

<p>1、选择到重叠缝界面后，按下 键，可进入重叠缝设置；</p> <p>2、按 或 键选择需要设置的工序；</p> <p>3、按 或 键修改当前工序的数值；</p> <p>4、按下 键，保存并退出重叠缝设置。</p>	
---	--

2.8.2 程序缝

程序缝最多可以设置 20 步骤，各步骤最多设定 500 针。

程序缝某一步骤设置为切线或针数设置为 0 后，后面的步骤会取消掉。

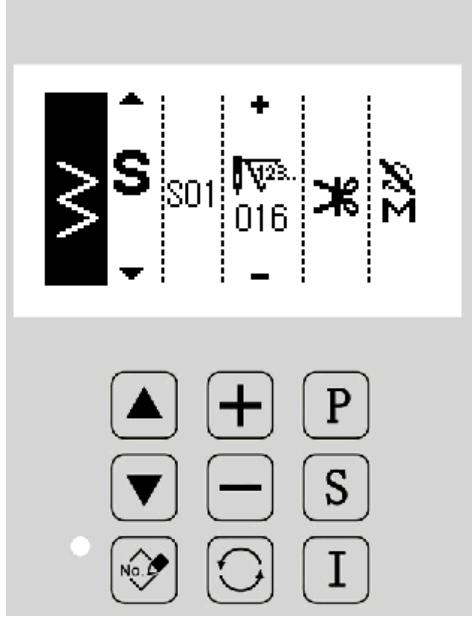


功能说明：

A	步骤信息	显示当前的步骤序号
B	针数信息	显示当前步骤下的针数
C	剪线信息	显示当前步骤是否自动剪线
D	缝制方式信息	显示当前步骤是否为一次自动缝制或者为手动缝制

程序缝设置说明：

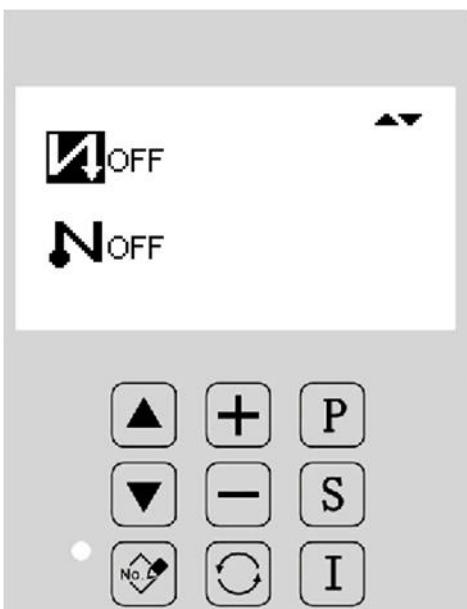
这里举例设置 S01 步骤。

<p>1、选择到程序缝界面后，按下  键，可进入程序缝设置，此时会出现 + 、 - 操作提示；</p> <p>2、按  或  键选择需要设置的项目，+、- 提示符也同时会表更到所选择的项目；</p> <p>3、按  或  键修改当前项目的数值；</p> <p>4、按下  键会保存当前的设置并自动跳转到下一步骤的设置，重复 2、3、4 步骤即可完成新步骤的设置；</p> <p>5、按下  键，退出程序缝设置。</p>	
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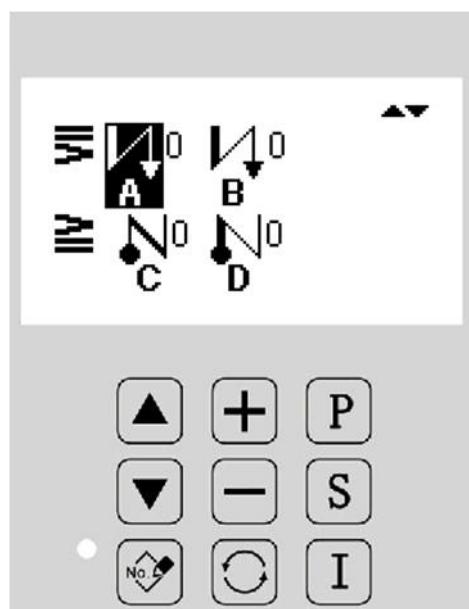
2.9 倒缝设置

倒缝用于缝制开始和缝制结束的加固，分为标准倒缝、2 点缩缝和自编倒缝三种类型。

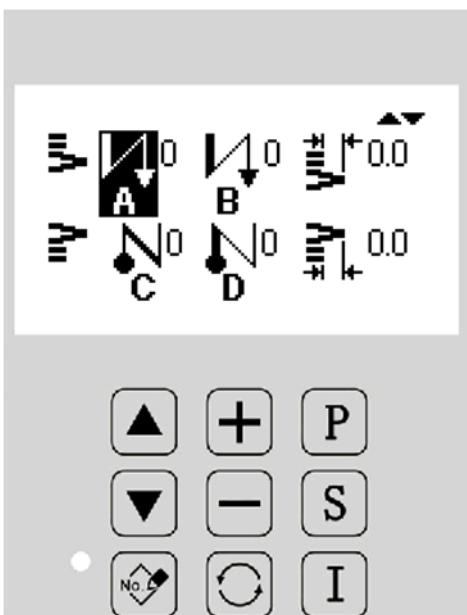
参照【2.3 界面切换】内容，可以知道通过切换键 ，可以进入缝纫模式设置界面



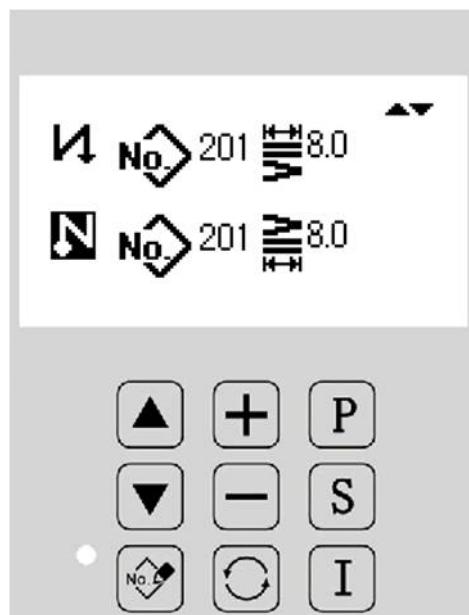
倒缝关闭



标准倒缝



2 点缩缝



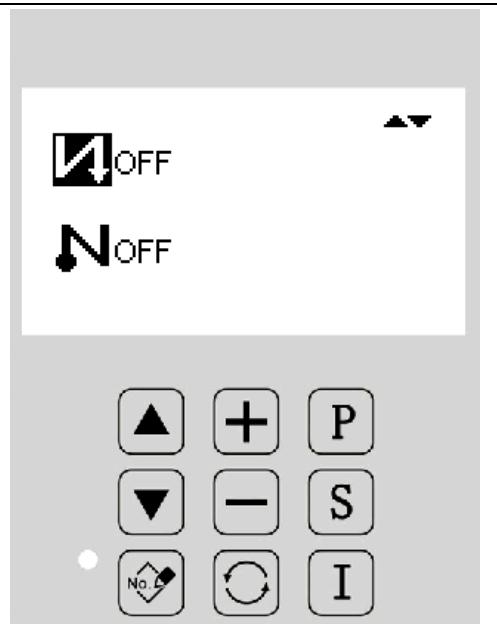
自编倒缝

前倒缝	无效	有效	无效	有效
缝制图案	↓	A B ↓	↓	A B ↓
后倒缝	无效	无效	有效	有效

设定方法:

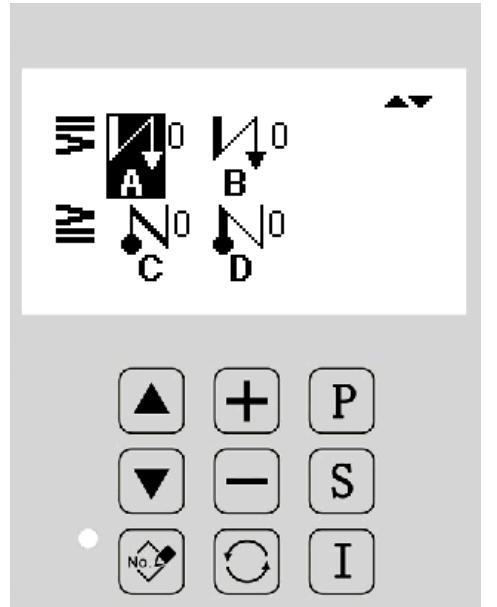
1、进入倒缝设置界面

按下切换键  进入倒缝设置界面，然后按下  键进入倒缝编辑模式，此时面板指示灯会亮起。



2、修改倒缝类型及参数

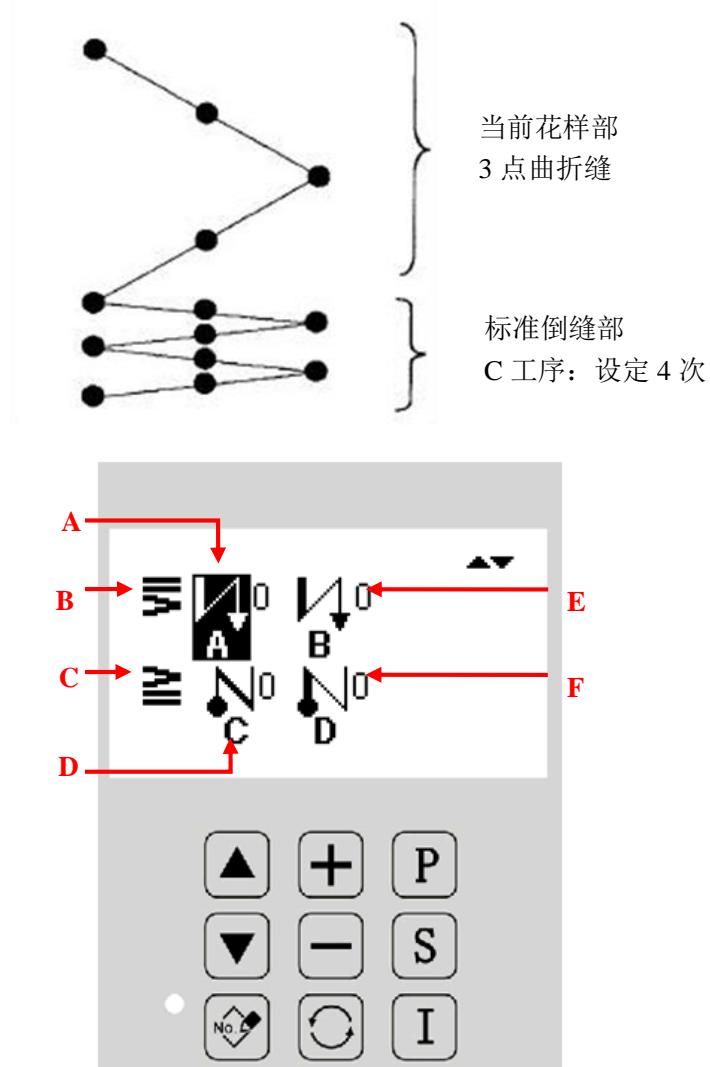
按  或  键修改需要修改的倒缝参数，此时光标也会随着更改；按  或  键修改相关参数的数值。



2. 9. 1 标准倒缝

- 标准倒缝可以进行与当前花样的摆动图案相同落针点位置的倒缝。

实例说明:



功能说明：

A	前倒缝工序 A	显示前倒缝 A 工序针数。
B	前倒缝类型	显示前倒缝类型。 标准前倒缝
C	后倒缝类型	显示后倒缝类型。 标准后倒缝
D	后倒缝工序 C	显示后倒缝 C 工序针数
E	前倒缝工序 B	显示前倒缝 B 工序针数。
F	后倒缝工序 D	显示后倒缝 D 工序针数

倒缝的设定根据摆针图案的不同，有以下两种方法：

1) 直线、扇形荷叶边、暗缝、自编花样、连续缝时，用针数设定。

前倒缝 → A (正方向送): 可以设定 0~19 针。

B (反方向送): 可以设定 0~19 针。

后倒缝->C (反方向送): 可以设定 0~19 针。

D (正方向送): 可以设定 0~19 针。

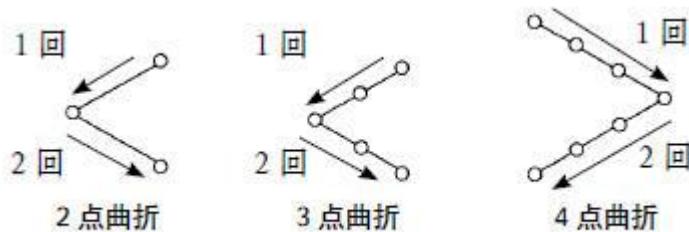
2) 2 点曲折、3 点曲折、4 点曲折时, 用机针摆动图案的次数来设定。机针摆动图案指机针摆动折回点之间。

前倒缝 ->A (正方向送): 可以设定 0~19 回。

B (反方向送): 可以设定 0~19 回。

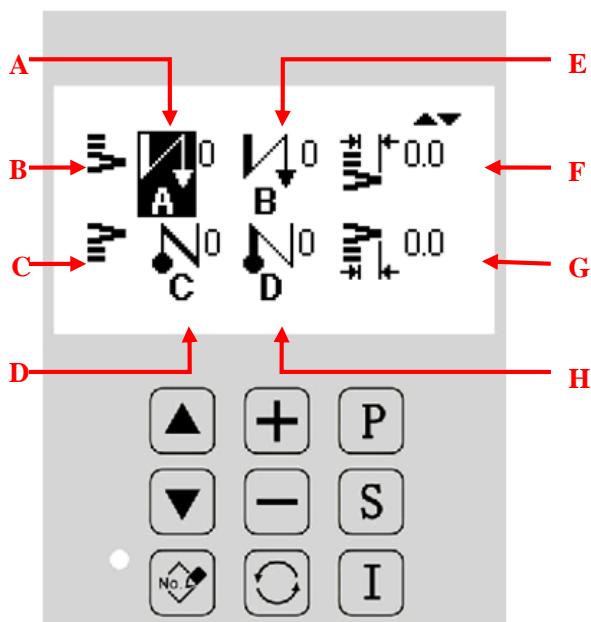
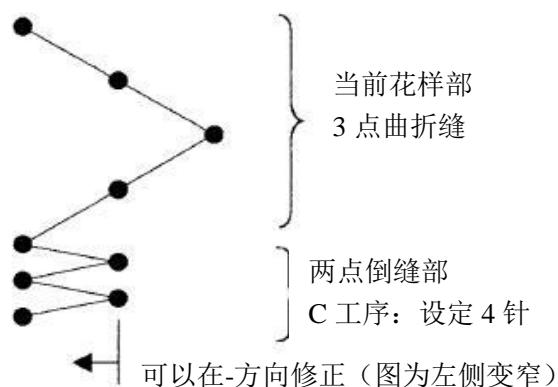
后倒缝->C (反方向送): 可以设定 0~19 回。

D (正方向送): 可以设定 0~19 回。



2.9.2 两点缩缝

- 两点缩缝可以在当前花样的当前落针点和下次落针点两点间进行倒缝。
- 两点间的宽度在「-」方向可以调整。



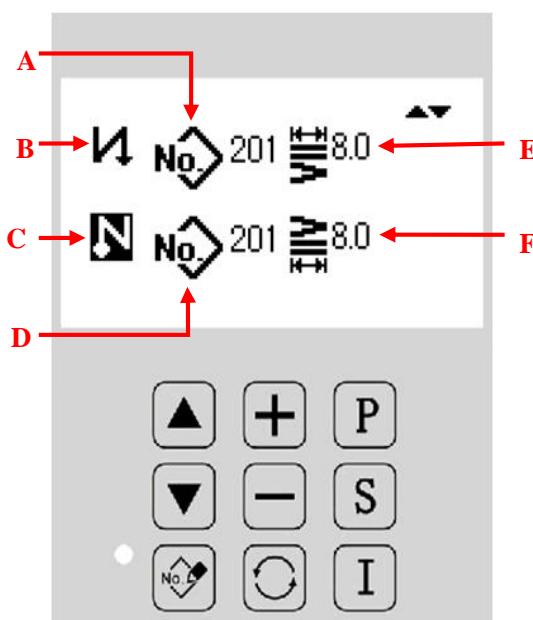
功能说明:

A	前倒缝工序 A	显示前倒缝 A 工序针数。
B	前倒缝类型	显示前倒缝类型。 图示：两点缩缝前倒缝
C	后倒缝类型	显示后倒缝类型。 图示：两点缩缝后倒缝
D	后倒缝工序 C	显示后倒缝 C 工序针数
E	前倒缝工序 B	显示前倒缝 B 工序针数。
F	前倒缝两点缩进宽度	显示前倒缝两点缩进的宽度
G	后倒缝两点缩进宽度	显示后倒缝两点缩进的宽度
H	后倒缝工序 D	显示后倒缝 D 工序针数

【注】两点缩缝宽度调整在倒缝时可以让最初的落针点到下一落针点的宽度变窄（设定值为 0 时不修正）。

2.9.3 自编倒缝

- 自编倒缝可以在输入的任意落针点进行倒缝。
- 自编倒缝最多支持 64 针。



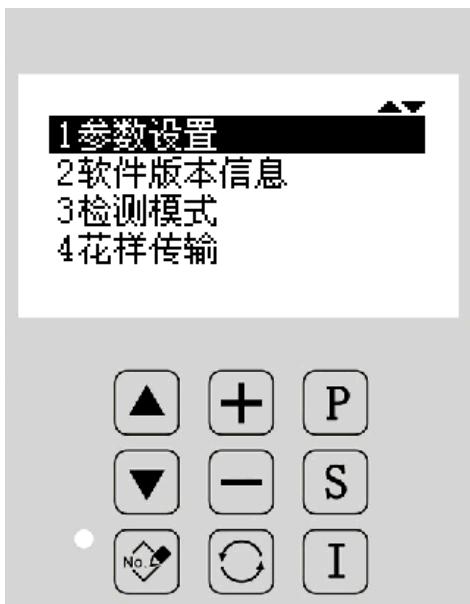
功能说明:

A	自编前倒缝花样号	显示自编前倒缝的花样号，自编倒缝花样是从自编花样中选取的
B	前倒缝类型	显示前倒缝类型。

		 ：自编前倒缝
C	后倒缝类型	显示后倒缝类型。  ：自编后倒缝
D	自编后倒缝花样号	显示自编后倒缝的花样号，自编倒缝花样是从自编花样中选取的
E	前倒缝自编倒缝摆宽	显示前倒缝自编倒缝摆宽。
F	后倒缝自编倒缝摆宽	显示后倒缝自编倒缝摆宽

2. 10 信息功能模式

在各个主界面下，按下信息键  进入信息功能模式，进入信息功能模式后，按  键或  键会退回到主界面。



功能说明：

序号	功能	内容
1	参数设置	进入参数设置界面
2	软件版本信息	进入面板、主控、驱动软件版本显示界面
3	检测模式	进入检测模式界面
4	花样传输	进入样式的输入、输出界面
5	初始化花样与参数	进入初始化参数界面

6	软件升级	进入主控、驱动软件升级界面
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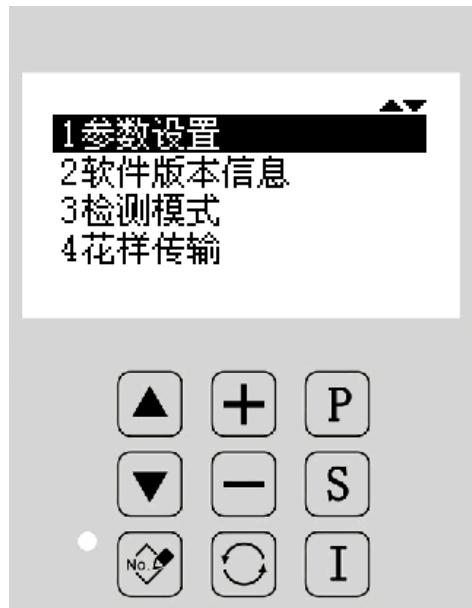
2. 10. 1 参数设置

参数设置主要用于设定各个参数，各个参数的说明请参阅【2.10.2 参数设定表】

设定方法：

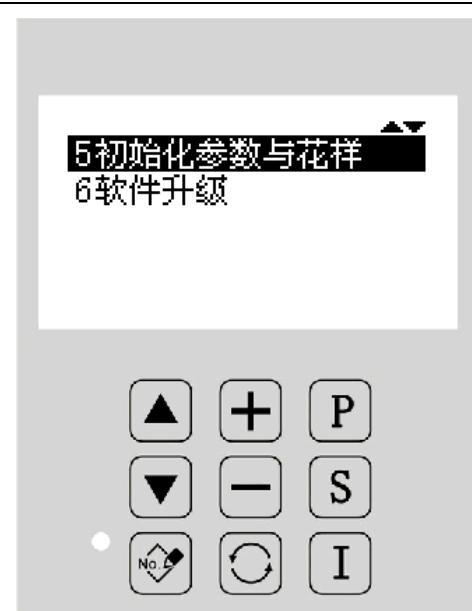
1、进入参数设置的方法：

在各个主界面下，按下信息键 **I** 进入信息功能模式，按 **▲** 或 **▼** 键将光标移动到参数“参数设置”选项，如图所示，再按 **S** 键进入参数设置选项。



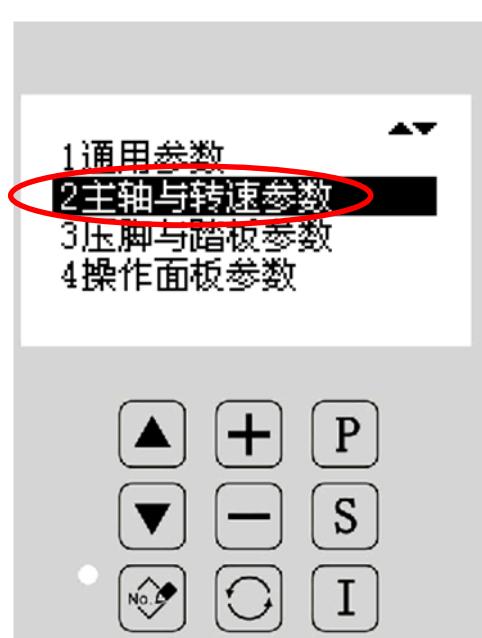
2、参数设置界面

进入参数设置界面以后，有很多参数项供选择，可以通过 **▲** 或 **▼** 键来翻阅画面（不同机型参数选项会有区别）。



3、实例说明：**① 参数类别选择**

所有参数都是按照类别划分的，这里我们选择「主轴和转速」。按 或 键，移动光标到“主轴与转速参数”选项，然后再按 键进入参数设置。

**② 内部参数设定界面**

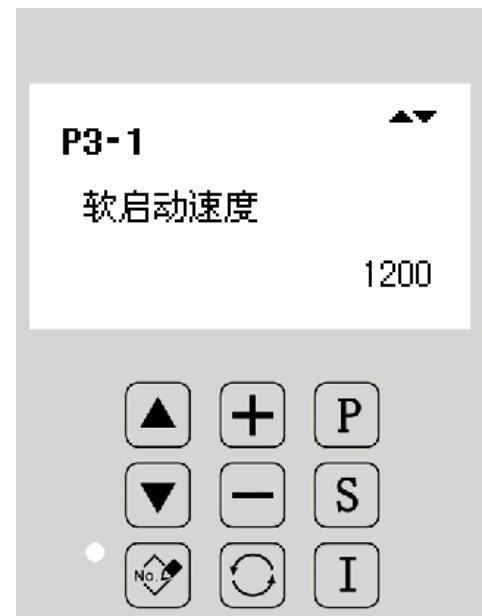
进入内部参数设置界面后，按 或 键，可以显示出所有该类别的参数

③ 更改参数设定值

选择需要更改的参数后，按 或 键修改参数值。

④ 回到参数类别选择界面

参数修改完成后，按 或 键返回到参数类别选择界面。

**2.10.2 参数设定表****1、通用参数：**

代号	简述	详述	单位	步长	范围	出厂值
P1-0	摆宽方式	系统摆宽方式设定			0:CEN:中心对称 1:LR:左右对称	0
P1-1	中心对称摆宽限制	中心对称摆宽值范围设定	毫米	0.1	0~10.0	10.0
P1-2	摆宽左限制值（左）	左右摆宽方式下	毫	0.1	-5.0~0	-4.0

	右摆宽)	左限制值设定	米				
P1-3	摆宽右限制值 (左 右摆宽)	左右摆宽方式下 右限制值设定	毫 米	0.1	0~5.0		4.0
P1-4	基准线位置	基准线位置设定			0:CEN:中心基准 1:L:左基准 2:R:右基准		0
P1-5	逆送量限制	逆送量限制设定	毫 米	0.1	-5.0~5.0		-5.0
P1-6	正送量限制	正送量限制设定	毫 米	0.1	-5.0~5.0		5.0
P1-7	镜像功能设定	镜像功能设定			0:SIG:单个图案对 称反转 1:CON:连续对称反 转		0

【注】P1-5 和 P1-6 参数 S 款、B 款没有。

2、倒缝参数：

代号	简述	详述	单位	步长	范围	出厂 值
P2-0*	途中倒缝功 能	途中倒缝功能设置			0:OFF:无 1:ON:有	ON
P2-1*	途中倒缝针 数	途中倒缝针数设置		1	0~19	4
P2-2	停止时途中 倒缝设置	停止时途中倒缝设 置			0:OFF:缝纫机停 止时无效 1:ON: 缝纫机停 止时有效	ON
P2-3*	开始倒缝后 的停止功能	开始倒缝后的停止 功能设置			0:OFF:无 1:ON:有	0
P2-4	倒缝开始的 减速功能	倒缝开始的减速功 能			0:OFF:不减速 1:ON:减速	0
P2-5*	倒缝保持时 间	设置倒缝电磁铁保 持时间	秒	1	2~250	60
P2-6*	倒缝全压输 出时间	设置倒缝电磁铁全 压控制时间	毫秒	1	50~250	100
P2-7*	倒缝输出占 空比	设定倒缝电磁铁保 持时电流		1	0~100	40

*带标注的参数需要在专业人员的指导下进行修改。

【注】B 款没有该类别参数。

3、主轴和转速参数：

代号	简述	详述	单位	步长	范围	出厂值

P3-0	软启动针数	设置缝制时软启动的针数	针	1	0~9	3
P3-1*	软启动速度	设置软启动时的速度	rpm	50	150~5000	1200
P3-2*	倒缝转速	设置倒缝时的最高转速	rpm	50	150~3000	1500
P3-3	低速转速	踏板最低速度	rpm	10	20~400	200
P3-4	一次缝制速度	设置一次自动缝纫时的转速	rpm	50	200~5000	3000
P3-5*	下停针角度	下停针角度	度	10	120~200	160
P3-6	切线后反转提针功能	设置切线后反转提针功能			0:OFF:无 1:ON:有	0
P3-7	反转提针角度	设置反转提针角度	度	1	0~45	20
P3-8*	主轴角度调整	设置主轴角度调整值，该参数只对一体化电机有效	度	1	-30~6	0
P3-9*	主轴电机类型选择	主轴电机类型选择			0: 普通电机 1: 一体化电机	1
P3-11	主轴校准设置	设置主轴是否需要校准		1	ON: 校准 OFF: 不校准	ON

*带标注的参数需要在专业人员的指导下进行修改。

【注】P3-2、P3-6、P3-5 参数 B 款和 S 款没有。

4、切线参数：

代号	简述	详述	单位	步长	范围	出厂值
P4-0	切线功能	设置切线功能是否有效			0:OFF:无效 1:ON:有效	1
P4-1*	切线转速	设置切线时的转速	rpm	10	20~300	300
P4-2	中途倒缝切线	设置倒缝时能否自动切线			0:OFF:无效 1:ON:有效	0
P4-3*	拨线维持时间	拨线维持时间	毫秒	1	0~250	70

*带标注的参数需要在专业人员的指导下进行修改。

【注】B 款和 S 款没有该类别参数。

5、压脚与踏板参数：

代号	简述	详述	单位	步长	范围	出厂值

P5-0*	压脚控制方式	选择压脚提升装置		MEC:机械式 MAG:电磁铁 AIR: 气阀	
P5-3*	开始运行的踏板行程	开始运行的踏板行程			
P5-4*	开始加速的踏板行程	开始加速的踏板行程			
P5-5*	压脚下降的踏板行程	压脚下降的踏板行程			
P5-6*	压脚升起的踏板行程	压脚升起的踏板行程			
P5-7*	开始切线踏板行程 2	开始切线踏板行程 2			
P5-8*	运行高速的踏板行程	运行高速的踏板行程			
P5-9*	踏板中立点的修正	踏板中立点的修正			
P5-10*	压脚自动提升保持时间	压脚自动提升保持时间			
P5-11*	踏板切线开始行程 1	踏板切线开始行程 1			
P5-12*	压脚提升下降时间	压脚提升下降时间			
P5-13	切线后压脚上升功能	切线后压脚上升功能			
P5-14*	抬压脚全压输出时间	抬压脚全压输出时间			
P5-15*	抬压脚输出占空比	抬压脚输出占空比			
P5-17*	选择踏板曲线	选择踏板曲线			
P5-18	压脚力度级别	压脚力度级别			
P5-19	踏板选择	踏板选择			

*带标注的参数需要在专业人员的指导下进行修改。

【注】P5-10、P5-12、P5-13、P5-14、P5-15 参数 B 款和 S 款没有。

6、操作面板参数：

代号	简述	详述	单位	步长	范围	出厂值
P7-3	语言选择	语言选择			0:CH:中文 1:EN:English 2:User(开机要求先选择语言)	0
P7-5	对比度调整	调整液晶显示的对比度			0~30	12

7、计数器参数：

代号	简述	详述	单位	步长	范围	出厂值
P8-0	计数器模式	计数器模式			0:不计数 1:底线计数	0

					2:切线计数	
P8-1	计数器设 定值	设定计数器目 标值			0~9999	0
P8-2	计数器当 前值	设定计数器当 前值			0~9999	9999
P8-6	计数器到 达后的操 作	到达计数器设 定值时缝纫机 的操作			OFF:报警 ON:不报警	ON
P8-8	底 线 计 数 器单 位	底 线 计 数 器 单 位			-20:减计数, 每缝 20 针 计数器减 1 -15: 减计数, 每缝 15 针 计数器减 1 -10: 减计数, 每缝 10 针 计数器减 1 -5: 减计数, 每缝 5 针计 数器减 1 0:底线不计数 5: 加计数, 每缝 5 针计 数器加 1 10: 加计数, 每缝 10 针 计数器加 1 15: 加计数, 每缝 15 针 计数器加 1 20: 加计数, 每缝 20 针 计数器加 1	0

8、其他参数：

代号	简述	详述	单 位	步长	范围	出 厂 值
P9-0	停针位	指定缝纫机停止时的 针杆位置			0:DN:下针位 1:UP:上针位	0
P9-1	补偿键设置	补偿键设置			0:HAF:半针补偿 1:ONE:1 针补偿	0
P9-7	安全开关	安全开关的有效性			ON:有效 OFF:无效	ON

*带标注的参数需要在专业人员的指导下进行修改。

9、特殊参数：

代号	简述	详述	单 位	步 长	范围	出 厂 值
P11-0*	最高转速	设定机头的最高转 速	rpm	50	50~5000	3000
P11-1*	动框方式	设置动框方式		1	0~5	1

P11-7*	挑线滞后时间	挑线滞后时间	毫秒	1	0~250	170
P11-8*	摆针动作角度调整	摆针动作角度调整		1	-50~50	0
P11-9*	送布动作角度调整	送布动框角度调整		1	-50~50	0
P11-10*	切线角度调整	切线角度调整		1	-30~30	0
P11-12*	摆针原点微调	摆针电机原点调整		1	-40~40	0
P11-13*	送布原点微调	送布电机原点调整		1	-25~25	0

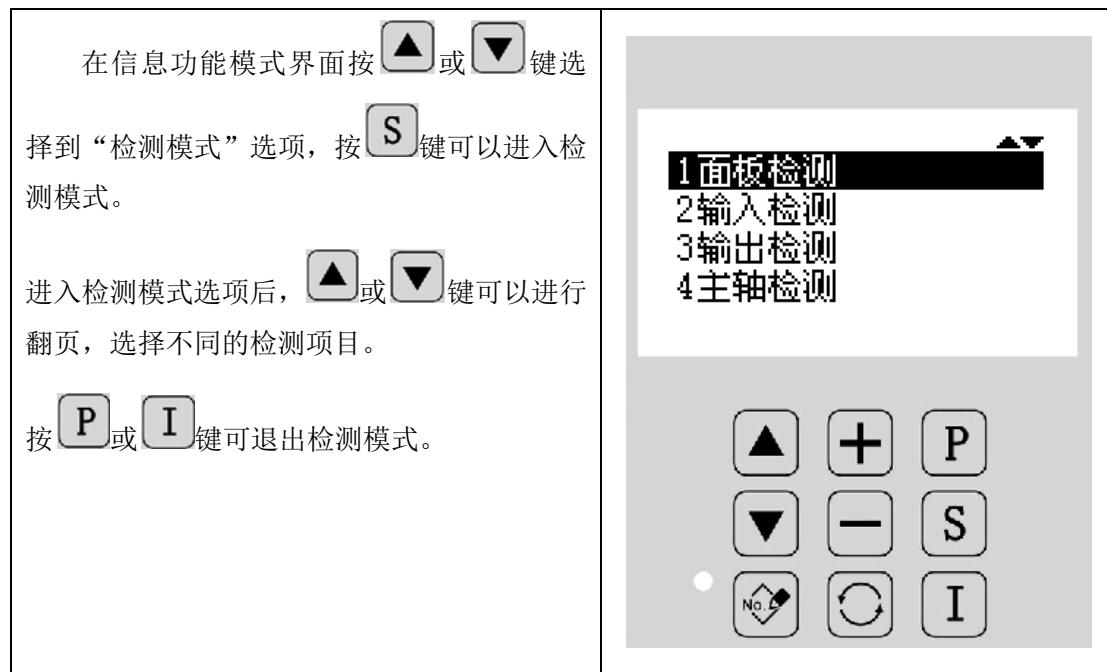
*带标注的参数需要在专业人员的指导下进行修改。

【注】P11-7、P11-9、P11-10 参数 B 款和 S 款没有。

2. 10. 3 软件版本

<p>1、进入软件版本查询的方法：</p> <p>在信息功能模式界面按 键或 键，选择“软件版本信息”选项，按 进入软件版本模式。</p>	
<p>2、版本查询</p> <p>当前界面下可以查询系统软件版本，按下 或 键可以分别查询面板、主控、驱动软件版本。</p>	

2.11 检测模式



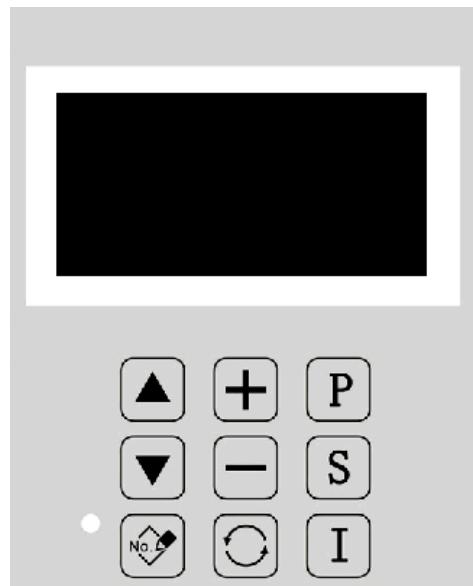
功能说明：

序号	功能	内容
1	面板检测	用于检测液晶及按键。
2	输入检测	用于检测各类开关、传感器等输入信号。
3	输出检测	用于检测各类压脚、剪线等电磁铁输出信号。
4	主轴检测	用于检测主轴马达转速。
5	步进检测与原点调整	用于检测摆针和送布马达及原点位置的微调。
6	旋梭调整	用于调整旋梭。
7	主轴电机校准	用于一体化电机的零位校准。
8	摆针送布电机老化	用于摆针和送布马达的老化测试。
9	整机老化	用于整机的老化跑和测试。

2.11.1 面板检测

检测模式界面下选择“面板检测”，按 **S** 键进入面板检测功能，液晶首先会全屏变成黑色的，此时可以查看液晶是否有坏点；然后系统进入按键检测，此时需要手动按按键即可，面板会提示当前按下的按键号，每个按键对应唯一的一个按键号。

按下 **P** 键返回到上一级画面。



2.11.2 输入检测

检测模式界面选择“输入检测”，然后按 **S** 键进入输入检测模式。按 **▲** 或 **▼** 键可以进行翻页显示。

ON：表示开启

OFF：表示关闭

输入信号种类：

- ① 倒缝开关
- ② 镜像开关
- ③ 安全开关
- ④ 上针位
- ⑤ 半针补偿开关
- ⑥ 脚踏板（范围为 0~1023）
- ⑦ 倒缝扳手（范围为 0~1023）
- ⑧ 主轴角度（范围 0~359）

按下 **P** 键返回到上一级画面。



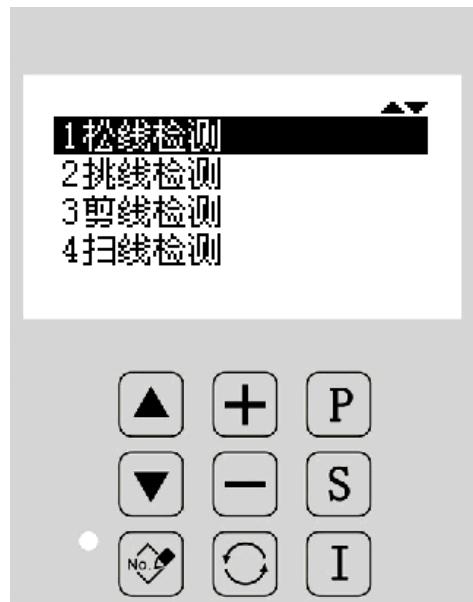
2.11.3 输出检测

检测模式界面下选择“输出检测”，然后按 **S** 键进入输出检测模式。按 **▲** 或 **▼** 键可以进行检测项目选择，按 **S** 键就可以检测电磁铁等输出信号的输出状态。

输出信号种类：

- ①松线检测
- ②挑线检测
- ③剪线检测
- ④扫线检测
- ⑤压脚检测
- ⑥倒缝检测
- ⑦镜像 LED 灯检测
- ⑧照明灯检测

按下 **P** 键返回到上一级画面。



【注】缝纫机会有实际动作。	
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2.11.4 主轴检测

检测模式界面下选择“主轴检测”，然后按 **S** 键进入主轴检测模式。

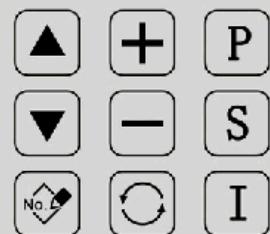
通过 **+** 和 **-** 键可以设置主轴马达目标转速，按下 **S** 键后，主轴马达会以设定的转速运转。此时，实际测得的转速会显示在实际转速输入栏。

按下 **P**，则主轴马达停止运转。

按下 **I** 键返回到上一级画面。



目标转速: 0600 rpm +-
实际转速: 0000 rpm
当前角度: 000



2.11.5 步进检测与原点调整

功能说明:

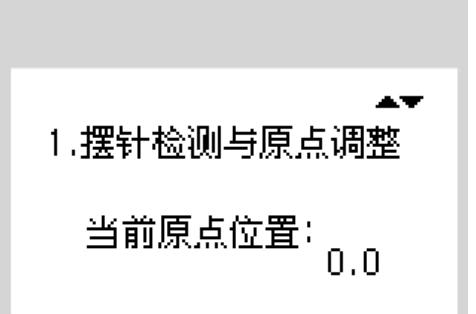
检测模式界面下选择“步进检测与原点调整”，然后按 **S** 键进入步进检测与原点调整模式，按 **▲** 或 **▼** 键选择需要检测的马达。

1、马达检测

进入该模式后，按 **+** 或 **-** 键，当前选择的马达会单步运行。按 **P** 键马达会进行找原点动作。

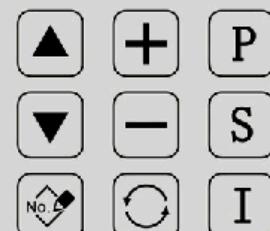
2、马达原点调整

- ① 按 **P** 键，先让步进进行找原点；
- ② 按 **No.D** 键进入原点调整状态，此时面板的 LED 指示灯会亮起；
- ③ 按 **+** 或 **-** 键进行原点位置的调



1.摆针检测与原点调整

当前原点位置: 0.0

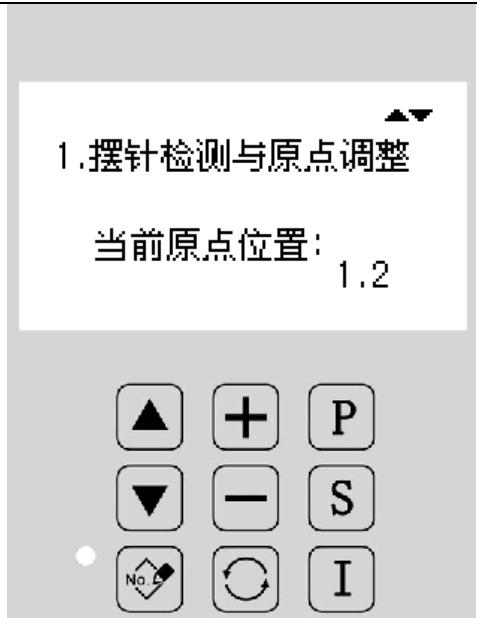


整，此时原点位置的显示数值会变化；

④ 按 **S** 键进行原点位置的确认，此时原点位置参数会被储存；

⑤ 按  键退出原点调整状态。

按下 **I** 键返回到上一级画面。



2.11.6 旋梭调整

检测模式界面下选择“旋梭调整”，然后按 **S** 键进入旋梭调整模式。

通过按  或  键选择调整的项目；

通过按 **+** 和 **-** 键可以更改相应选项的数值。

按下 **I** 键返回到上一级画面。



2.11.7 主轴电机校准

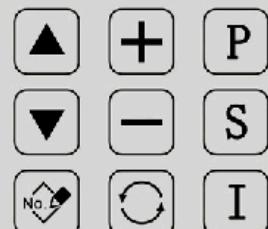
当 P3-9 参数（主轴电机类型选择）为一体化电机时，可以进行一体化电机校准，为普通电机，该功能无效。一体化电机校准需要专业人员操作。

检测模式界面下选择“主轴电机校准”，然后按 **S** 键进入主轴电机校准模式。

在该界面下，转动主轴电机到需要校准的位置，注意校准值必须在 6~30 度之间，按 **S** 键确认校准值。

按下 **I** 键返回到上一级画面。

转动手轮 校准零位
当前角度: 000
校准值: -353



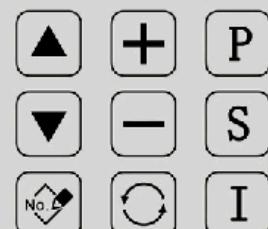
2.11.8 摆针送布电机老化

检测模式界面下选择“摆针送布电机老化”，然后按 **S** 键进入摆针送布电机老化模式。

在该模式下，按 **▲** 或 **▼** 键选择需要老化的电机；按 **+** 和 **-** 键设置老化时间，范围 0~200，单位：10ms。当设置为 255 时，停止老化。

按下 **I** 键返回到上一级画面。

摆针电机老化时间 255

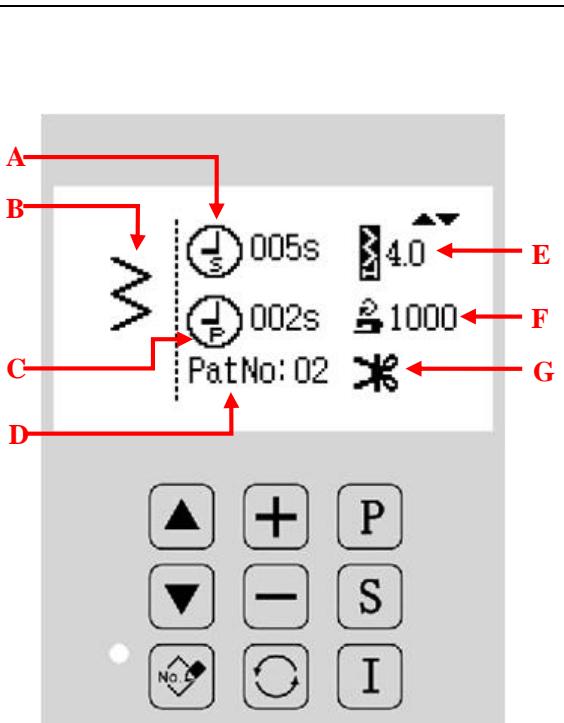


2.11.9 整机老化

检测模式界面下选择“整机老化”，然后按 **S** 键进入整机老化模式。

在该模式下，按 **▲** 或 **▼** 键选择需要修改的项目；通过 **+** 和 **-** 键可以设置当前项目的数值。按下 **S** 键后，系统开始进行老化跑和，此时面板的 LED 指示灯会亮起。按下 **P** 键，则系统停止老化运转。

按下 **I** 键返回到上一级画面，需要注意的是，如果系统已经进入了老化运转状态后，需要首先按 **P** 键停止老化运转，才能按 **I** 键退出老化模式。



功能说明：

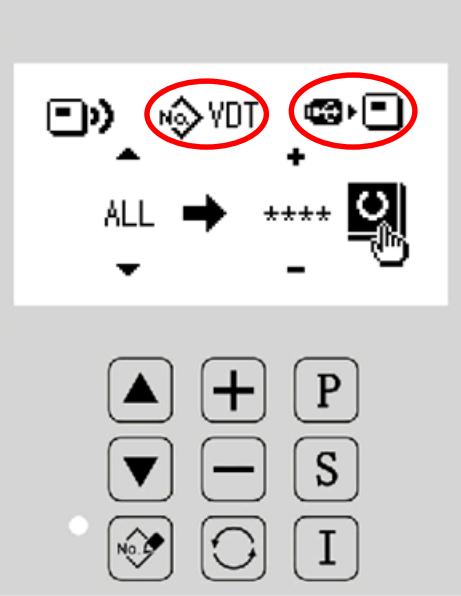
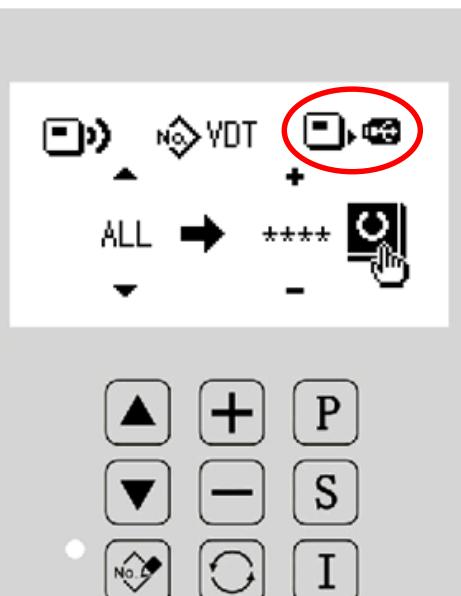
A	老化时间	显示及设置老化运行的时间
B	花样显示	显示及设置老化运行花样。
C	间隔时间	显示及设置老化间隔时间。
D	花样号显示	显示及设置老化运行花样号。
E	摆宽显示	显示及设置摆宽数值。
F	剪线设置	显示及设置是否自动剪线。

2.11.10 花样传输

- 提供两种传输方式：「面板输出到 U 盘」和「U 盘输入到面板」。
- 可以导入导出自编花样、自编前倒缝和自编后倒缝。
- 支持导入的数据格式为 VDT、VDTD。
- U 盘拷贝路径 DH_PAT，即必须将花样放置在 U 盘根目录下名称为 DH_PAT 的文件夹下才可实现花样的输入与输出。
- 花样名称必须以数字命名，且花样名字必须为 201~221。
- 最多可输入的花样总数为 20 个。
- 花样输出到 U 盘时，花样被命名为“BAK_2XX”以示区别，如果要想把输出的花样再输入到面板，需要更改花样名称为“2XX”。

<p>1、进入花样传输的方法:</p> <p>在信息功能模式界面按 键或 键, 选择“花样传输”选项, 按 进入软件版本模式。</p>	
<p>2、传输类型说明</p> <ul style="list-style-type: none"> ① VDT 花样输入: VDT 格式的花样输入 ② VDTD 花样输入: VDTD 格式的花样输入 ③ 花样输出到 U 盘: 将已输入的外部花样输出到 U 盘 ④ 清除已输入花样: 将已输入的外部花样全部清除 	

操作说明:

<h3>1、花样输入</h3> <p>① 将要输入的花样放置在 U 盘根目录下的 DH_PAT 文件夹下；</p> <p>② 进入到花样传输界面，根据要输入的花样格式，按 或 键选择是 VDT 格式花样输入或是 VDTD 花样输入(这里已 VDT 花样输入为例)，然后按 键进入花样输入，此时系统会自动检测是否有 U 盘且 U 盘中是否有花样文件，如果没有，系统会报错提示；</p> <p>③ 进入到输入界面后，按 或 键选择需要输入的花样，当显示为“ALL”时表示可以将 U 盘中的所有花样输入进去；默认条件下，输入到面板后的花样号与输入的花样号相同，但也可以通过按 或 键修改输入到面板后显示的花样号；</p> <p>④ 选择好要输入的花样后，按 键开始进行花样输入，在花样输入过程中 UXxx 的花样名称会消失，直到该花样名称再次出现，则表示花样输入成功了。</p>	
<h3>2、花样输出</h3> <p>① 如果面板中有外部输入的花样，则可以进入花样传输模式，选择“花样输出到 U 盘”，然后按 键进入花样输出，系统会自动检测面板中是否有已输入花样，如果没有，系统会提示内存中无花样；</p> <p>② 进入到输出界面后，按 或 键选择需要输出的花样，当显示为“ALL”时表示可以将面板中的所有花样输出到 U 盘；默认条件下，输出到 U 盘后的花样号与面板中的花样号相同，但也可以通过按 或 键修改输出到 U 盘后的花样号；</p>	

<p>③ 选择好要输出的花样后，按 S 键开始进行花样输出，在花样输出过程中 UXXX 的花样名称会消失，直到该花样名称再次出现，则表示花样输出成功了。</p>	
<p>3、花样清除</p> <p>① 进入到花样传输界面后，按 ▲ 或 ▼ 键选择到“清除已输入花样”选项； ② 按 S 键，系统会显示“数据清除中...” ③ 数据清除后，系统会自动跳转到信息选择界面。</p>	

【注1】 复制时内存和 U 盘里如有相同的图号时，会被新资料盖写。

【注2】 选择清除花样会将外部输入的所有花样都清除，如果想清除单个花样，需要参照**【2.4.2】** 的内容，在自编花样中进行删除。

2.11.11 软件升级

<p>1、进入软件升级模式的方法：</p> <p>在信息功能模式界面按 ▲ 键或 ▼ 键，选择“软件升级”选项，按 S 键可以进入软件升级模式。</p>	
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2、升级说明

升级软件需要放在 U 盘「update」目录下。

按 键或 键选择需要升级的软件，然后按下 键即可。

【注】如果要升级面板程序，需要在系统开电时，同时按住 、、 键。



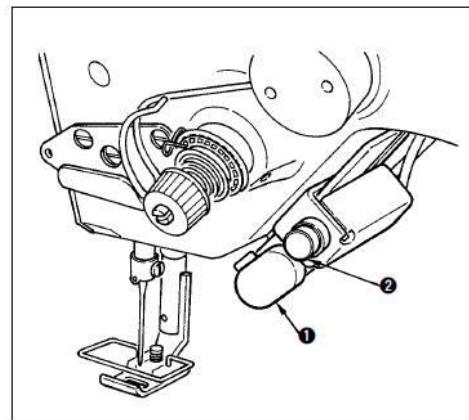
2.12 手持开关说明

1) 倒送开关①

按下倒送开关①之火，进行倒送。手放开之后，变为正送。

2) 对称缝制开关②

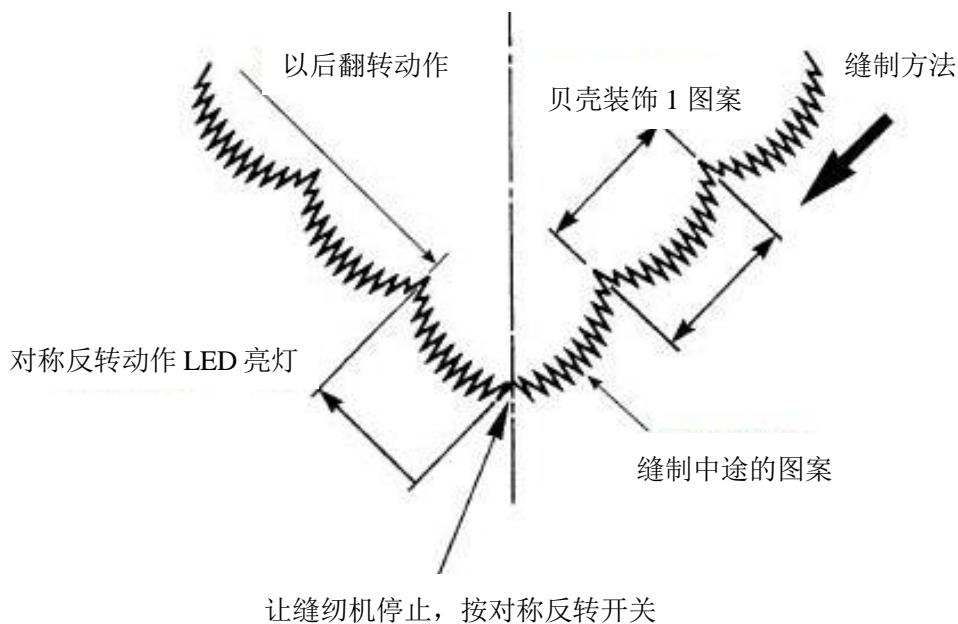
选择了扇形荷叶边、随即图案、连续缝时，变为对称缝制开关。



所谓对称翻转功能就是在缝制中途停止时，按对称翻转开关之后，缝制反图案的功能。

缝制方法：

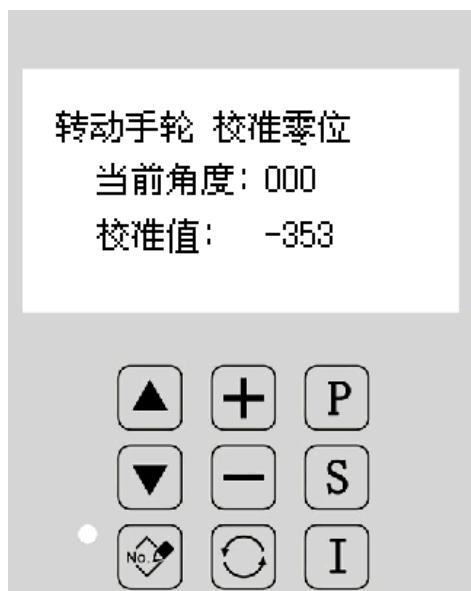
- 1) 缝制中，在让缝纫机对称翻转缝制的位置停止缝纫机。
- 2) 按下对称翻转开关②，对称翻转开关打开之后，LED 亮灯。（开关只在停止中起作用，缝纫机运转中不起作用）
- 3) 用缝纫机进行对称翻转缝制。
- 4) 切线或再次按对称翻转开关，结束翻转缝制。



3 附录 1

3.1 开机校准说明

如果所选机型的主轴电机配置为一体化电机时, 当电控系统第一次开机或进行过恢复默认参数操作, 那么重新上电开机时, 电控系统会进入主轴电机校准界面, 如下:



在该界面下进行主轴电机的校准, 该界面下会显示当前的主轴角度和校准值, 请转动手轮对主轴电机角度进行校准, 主轴电机校准的操作请参考“2.11.7 主轴电机校准”的介绍。

第一次操作时必须对一体化电机的主轴角度进行校准，否则不能进行正常的缝制操作。

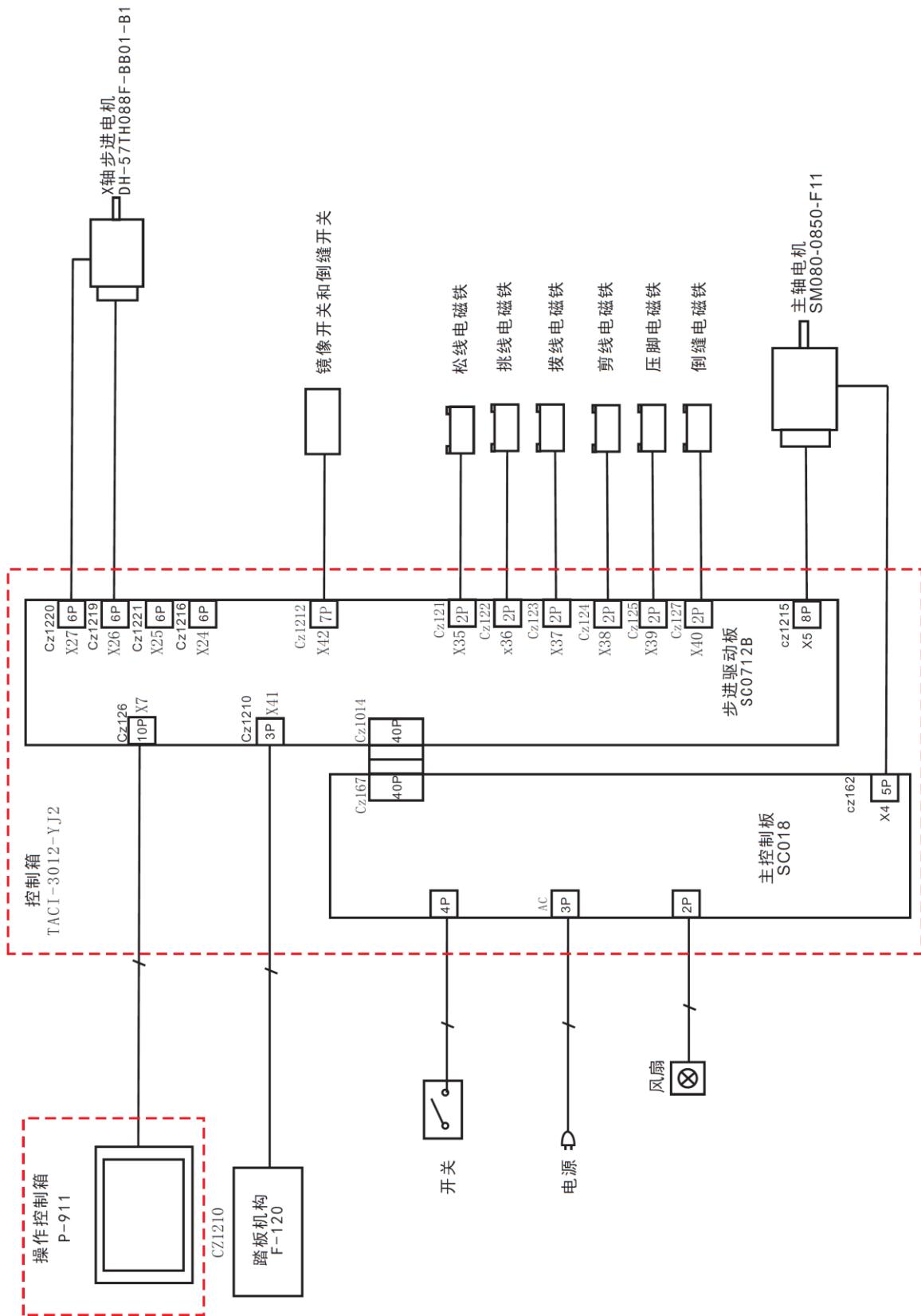
3.2 报警信息一览表

故障号	故障名称	故障处理及说明
E-003	机头翻倒	检查机头翻到开关安装是否正确，位置是否正常
E-004	主电压（300V）过低	检查电源是否稳定，电压是否正常
E-005	主电压（300V）过高	检查电源是否稳定，电压是否正常
E-007	IPM 过压或过流	1、检查主轴是否有卡点，主轴及下轴是否过重； 2、检查主轴电机是否正常； 3、检查电控是否正常。
E-008	辅助设备电压（24V）过高	1、将各电磁铁、风扇线缆逐个拔出，检查是否由于电磁铁问题引起的； 2、检测电控是否正常。
E-009	辅助设备电压（24V）过低	1、将各电磁铁、风扇线缆逐个拔出，检查是否由于电磁铁问题引起的； 2、检测电控是否正常。
E-013	编码器故障或未连	检测主轴电机的编码器线缆是否正常插接，插接端口是否正确
E-015	移动过程中超出缝制范围	检测所设置的花样缝制范围是否与实际的相匹配，是否在设置的缝制范围之内
E-016	针杆上位置异常	1、主轴位置不对，请转动手轮调整针杆位置直到错误自动消失。 2、检查主轴电机编码器线缆是否正常插接，插接端口是否正确； 3、检查主轴电机是否正常。
E-025	X 原点检测异常	1、检查摆针电机的线缆是否正常插接，插接端口是否正确； 2、检查摆针电机是否正确安装，安装位置是否正确； 3、检查摆针电机是否正常。
E-026	Y 原点检测异常	1、检查送布电机的线缆是否正常插接，插接端口是否正确； 2、检查送布电机是否正确安装，安装位置是否正确； 3、检查送布电机是否正常。
E-030	步进驱动器通讯异常	1、检查主控与步进驱动板连接是否可靠； 2、检查电控是否正常。
E-034	异常电流	1、检查主轴是否有卡点，主轴是否太重； 2、检查主轴电机是否正常； 3、检查电控是否正常。
E-035	IPM 频繁过流 1	1、检查主轴电机是否正常； 2、检查电控是否正常
E-036	IPM 频繁过流 2	1、检查主轴是否有卡点，主轴是否过沉；

故障号	故障名称	故障处理及说明
		2、检查主轴电机是否正常； 3、检查电控是否正常
E-037	电机堵转 1	1、检查主轴是否有卡点，主轴是否过沉； 2、检查主轴电机是否正常； 3、检查电控是否正常
E-038	电机堵转 2	1、检查主轴是否有卡点，主轴是否过沉； 2、检查主轴电机是否正常； 3、检查电控是否正常
E-039	电机超速	1、检查主轴电机的线缆是否正常连接； 2、检查主轴电机是否正常； 3、检查电控是否正常。
E-040	停车过流	1、检查主轴电机是否正常； 2、检查电控是否正常。
E-060	步进过流 1	1、检查摆针电机线缆是否正常连接； 2、检查摆针电机是否正常； 3、检查电控是否正常。
E-061	步进过流 2	1、检查送布电机线缆是否正常连接； 2、检查送布电机是否正常； 3、检查电控是否正常。
E-064	步进超差 1	1、检查摆针机械上是否有卡点，是否太重； 2、检查摆针电机的线缆是否正常插接，插接端口是否正确； 3、检查摆针电机是否正常； 4、检查电控是否正常。
E-065	步进超差 2	1、检查送布机械上是否有卡点，是否太重； 2、检查送布电机的线缆是否正常插接，插接端口是否正确； 3、检查送布电机是否正常； 4、检查电控是否正常。
E-201	花样数据错误	自编花样数据丢失或数据错误，需要重新输入自编花样
E-202	缝制范围超出左边界	花样参数设置不对，需要检查 P1-0、P1-1、P1-2、P1-3、P1-4 参数的设置是否在正确范围
E-203	缝制范围超出右边界	花样参数设置不对，需要检查 P1-0、P1-1、P1-2、P1-3、P1-4 参数的设置是否在正确范围
E-204	摆宽超限	花样参数设置不对，需要检查 P1-0、P1-1、P1-2、P1-3、P1-4 参数的设置是否在正确范围
E-205	针距超限	检查所选的花样单针针长是否超过了 12.7mm，单针针长需要控制在 12.7mm 以内
E-206	送量超限	检查送布的针距是否超过了 P1-5、P1-6 的限制
E-207	速度超限	检查速度的设置超过了 P3-3、P11-0 的范围
E-209	花样针数超限	所选花样的总针数过大，需要减少花样的总针数
E-210	倒缝针数超限	倒缝花样的针数超过了 64 针，需要减小倒缝花样

故障号	故障名称	故障处理及说明
		的总针数
E-211	没有花样文件	在升级花样时, 没有找到 U 盘中的花样花样, 需要检查 U 盘中是否有花样, 花样名称及花样放置位置是否正确
E-212	内存花样文件不存在	没有找到已登记花样, 需要重新进行花样登记
E-213	重叠针数超限	重叠缝针数过大, 需要减少重叠缝花样的针数
E-214	VDT 文件头错误	读取 VDT 时发现文件错误, 需要更改该文件, 检查文件格式是否正确
E-215	VDT 起始码错误	读取 VDT 时发现文件错误, 需要更改该文件, 检查文件格式是否正确
E-217	面板与主控板通信超时	检查面板与主控连接线缆是否正常, 插接是否可靠
E-218	面板与主控软件不符	面板软件与主控软件不匹配, 需要根据实际的机型配置升级主控软件或面板软件
E-219	面板与主控机型不符	面板软件与主控软件不匹配, 需要根据实际的机型配置升级主控软件或面板软件
E-220	计数器已满	计数器到达设定值, 按返回键后会自动清零, 如果还不正常, 则需要修改计数器相关参数
E-222	没有检测到 U 盘	在升级软件或花样传输时, 未能检测到有 U 盘, 需要检查 U 盘是否正确插接, 检查 U 盘是否正常
E-223	花样数据错误	在花样升级时, 未能检测到花样文件, 需要检查 U 盘中花样文件是否正常
E-225	花样已存满	内存中可输入花样已存满, 不能再存储花样, 需要删除部分花样才能继续输入或输出
E-226	文件写入失败	花样输出时, 不能正常的在 U 盘中存储数据, 需要检查 U 盘是否正常插接, U 盘是否正常

3.3 TASC300 曲折缝系统框图



Zigzag Sewing Machine – LCD M

Foreword

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

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

Safety Matters for Attention

3. Signs & Definitions of Safety Marks

This Operation 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 mark is “Matters for Attention”, and the figure inside the triangle is the content for attention. (Exp. The left figure is “Watch Your Hand!”)	
 This kind of mark is “Forbidden”.	
 This kind of mark means “Must”. The figure in the circle is the contents that have to be done. (Exp. The left figure is “Ground!”)	

4. Safety Matters for Attention

 Danger	
	For opening the control box, please turn off the power and take away the plug from socket firstly, and then wait for at least 5 minutes before opening the control box. Touching the part with high voltage will cause the person 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°C ~45°C. The operation of the sewing machine will be affected by environment with temperature beyond the above range.
	Relative Humidity: 35%~85%(No dew inside the machine), or the operation of sewing machine will be affected.
	The supply of 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 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 hand 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 mis-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 mis-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 mis-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 the entire Safety Matters for Attention.
	If the sewing machine damages due to the unauthorized modification, our company will not be responsible for it.

1 General Information

1.1 Overview

Computerized control system for zigzag sewing machine: 1) Adoption of the world leading AC servo control technology on main shaft motor provides high torque, good efficiency, stable speed and low noise; 2) Diversified design of control panel can meet the special requirement of users on attachment; 3) System adopts German style structure, which offers easy installation and maintenance to users.

1.2 Specifications

		B Version	S Version	SR Version
No.	Fabric	Thin ~ Middle Thick		
1	Max. Speed	5000rpm		
2	Max. Swing Width	10mm		
3	Max. Cloth-feeding Length	$\pm 5\text{mm}$		
4	Cloth-feeding Method	Mechanical	Solenoid	Stepping Motor
5	Thread-trimming	No	Yes	Yes
6	Data Memory	U disk		
7	Sewing Patterns	14 patterns	14 patterns	20 patterns
8	Rated Power	600W		
9	Working Temperature	0°C ~ 45°C		
10	Working Humidity	35% ~ 85% (without dew)		
11	Power Supply	AC 220V $\pm 10\%$; 50/60Hz		

* Effective standard for product: QCYXDK004—2016 “Computerized Control System for Industrial Sewing Machine”

1.3 Matters for Safe Using

● Installation

- Control Box
 - ◆ Please install the control box according to the instructions
- Attachments

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

● Maintenance, Inspection and Repair

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

● Other Safety Measures

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

● Abandonment

- Dispose it as common industrial trash.

● Warnings and Dangers

- Mistake operations may cause danger. For the severity of danger, please refer to the figures below:

	警告 Mistake operations may cause serious injury or death.		注意 Mistake operations may cause injury or damage to the house or properties.
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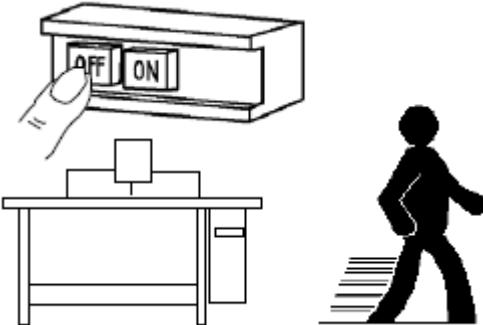
- The meaning of the following figures are as below:

	Please follow the instructions.		Watch the high voltage!
	Watch the high temperature!		Grounding is must.
	Operation is prohibited.		

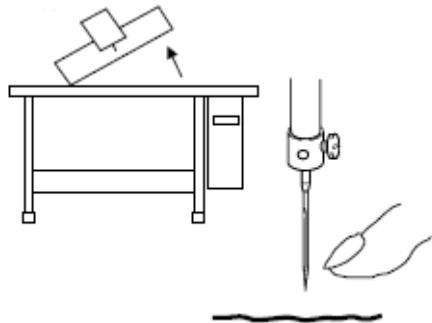
1.4 The Preventions for Usage



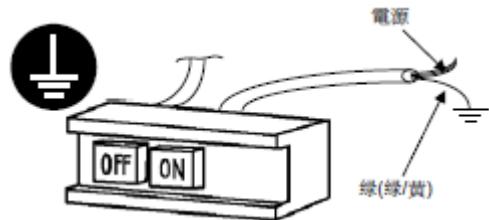
- When you leave the machine, please turn off the power.



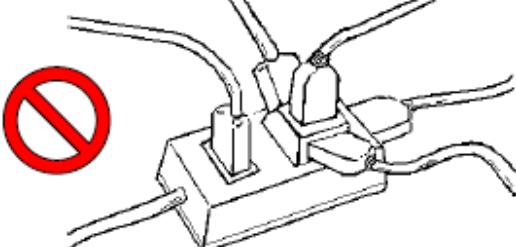
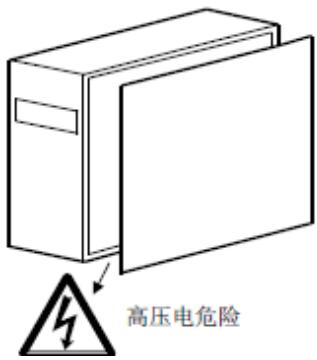
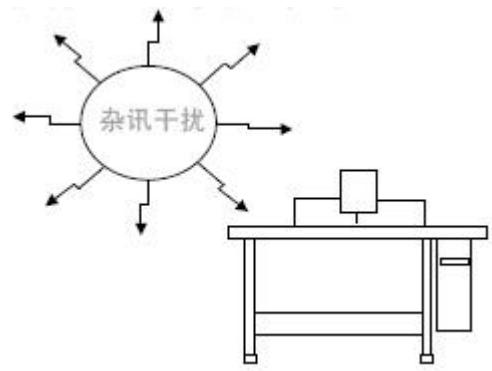
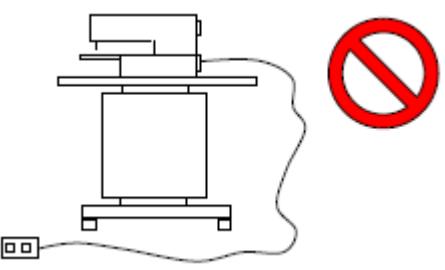
- If user needs tilt the head or replace the needle or thread the upper thread, please turn off the power.



- Ground the machine with ground cable.

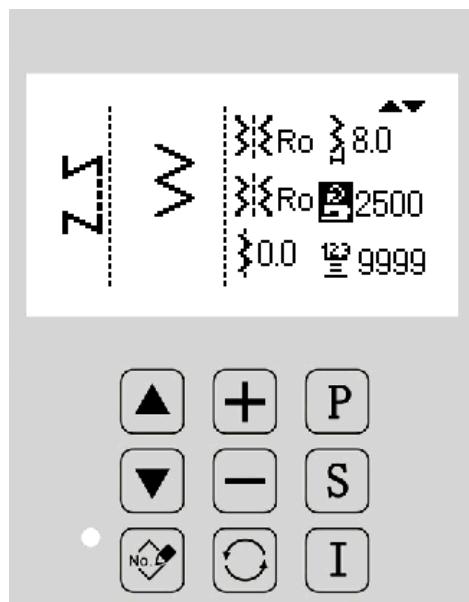


- Do not use the household terminal block for
- For opening the control box, please turn off

<p>machines to share one power supply.</p> 	<p>the power and take away the plug from socket firstly, and then wait for at least 5 minutes before opening the control box.</p> 
<p>8. Please keep it away from the machine creating the high frequency noise disturbance.</p> 	<p>9. If user needs the external signal socket to connect the attachments, the connecting wire shall be as short as possible. The long cable may cause the wrong operation. And the connection cable shall be the isolated cable.</p> 
<p>10. If the fuse is burnt, please solve the problem before replacing a new one with same capacity.</p>	

1.5 Operation Method

The operation panel adopts the operation method of black and white lattice LCD and buttons. User can press different keys to finish different operations.





Don't use the sharp object to touch the screen so as to avoid causing the permanent damage to the screen

1.6 Sewing Pattern List

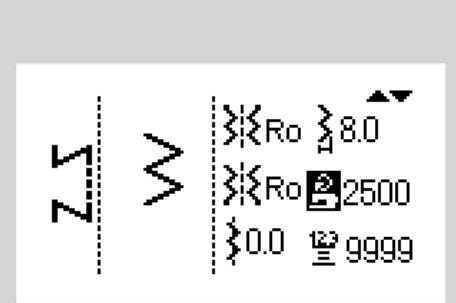
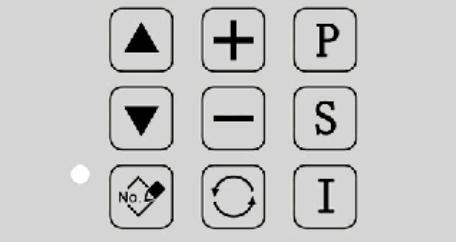
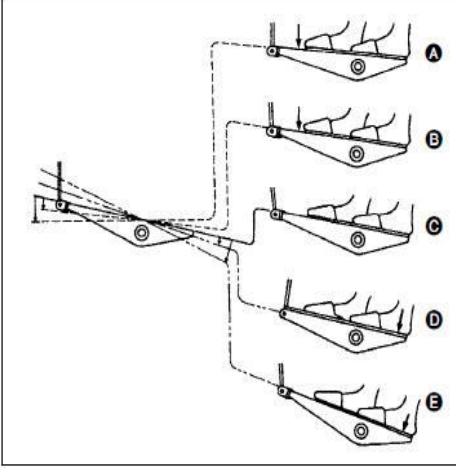
Pattern Name	Stitch Form	Stitch Number	Max. Swing Width
Linear		1	-
2-point zigzag		2	
3-point zigzag		4	10
4-point zigzag		6	
Falbala (right)	Standard		
	Lunar		24
	Average 24 Stitches		
	Average 12 Stitches		12
			10

Falbala (left)	Standard			
	Lunar		24	
	Average 24 Stitches			
	Average 12 Stitches		12	
Blind Stitch Form (Left)			2+a	
Blind Stitch Interval (Right)			2+a	
Left T-shape (unavailable for B version and S version)			3	
Right T-shape (unavailable for B version and S version)				
Pattern 1 (unavailable for B version and S version)				
Pattern 2 (unavailable for B version and S version)			6	10
Pattern 3 (unavailable for B version and S version)				

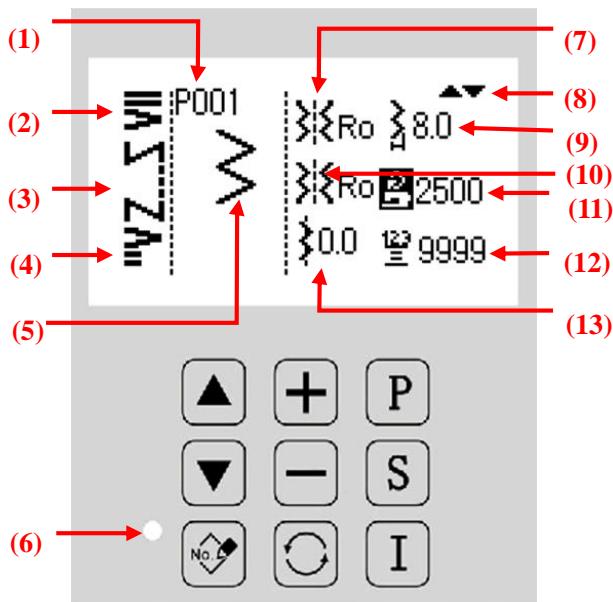
Pattern 4 (unavailable for B version and S version)			
Self-edit Patterns	-	500	

2 Operation Instructions

2.1 Basic Operations

<p>1. Turn on Power Switch</p> <p>When the needle rod is not at the upper position, the system will hint “Needle Up Posi. Error”. At this moment, user has to turn the wheel to move the needle rod to the upper position.</p>	 
<p>2. Modify Related Parameters</p> <p>Modify rotating speed, swing width and other related parameters in the main interface.</p>	
<p>3. Start Sewing</p> <p>The pedal has 4 levels of operation.</p> <p>Step the pedal forward slightly for slow speed sewing ⑧.</p> <p>Step the pedal further for high speed sewing ⑨ (when the auto reverse sewing switch is set, the machine will start high speed sewing after the reverse sewing).</p> <p>Step the pedal slightly to return, the machine will stop ⑩ (the needle stops at upper or down position).</p> <p>Step the pedal backward slightly to lift the presser foot ⑪ and step further to execute thread trimming ⑫.</p>	

2.2 Main Interface and Buttons



Function Description:

No.	Function	Description
(1)	Pattern No.	Display the current pattern no. for sewing. Only number of self-edit or registered patterns can be displayed.
(2)	Front Backstitch	The front backstitch type will be displayed after being set, and will not be displayed if it is closed. ■: standard ■: contraction ■: self-edit
(3)	Sewing Type	Display sewing type: free sewing, overlap sewing, routine sewing ■: free sewing ■: overlap sewing ■: routine sewing
(4)	Rear Backstitch	The rear backstitch type will be displayed after being set, and will not be displayed if it is closed. ■: standard ■: contraction ■: self-edit
(5)	Pattern Shape	Display the shape of the current sewing pattern.
(6)	Indicator Light	It will light on under status of registration or error report.
(7)	Needle Start Point	Display the position of current needle start point.
(8)	Operation Hint	Display hints of operation.
(9)	Swing Width	Display the current swing width.
(10)	Needle Stop Point	Display the position of current needle stop point.
(11)	Sewing Speed	Display the current sewing speed.
(12)	Counter	Display the current value of the counter.
(13)	Zero Line Position	Display the current zero line position.

	Pageup	Used to select setting items of parameters
	Pagedown	Used to select setting items of parameters
	Edit	Used to register or edit patterns.
	+	Used to increase the value.
	-	Used to decrease the value.
	Interface Switch	Used to shift different interfaces: main interface (pattern setting interface), pattern selection interface, sewing mode selection interface, and backstitch setting interface.
	Previous/Return	Used to return to the previous interface and quit the current operation interface.
	Select/Confirm	Used to confirm the current operation.
	Information	Used to enter or quit function selection mode.

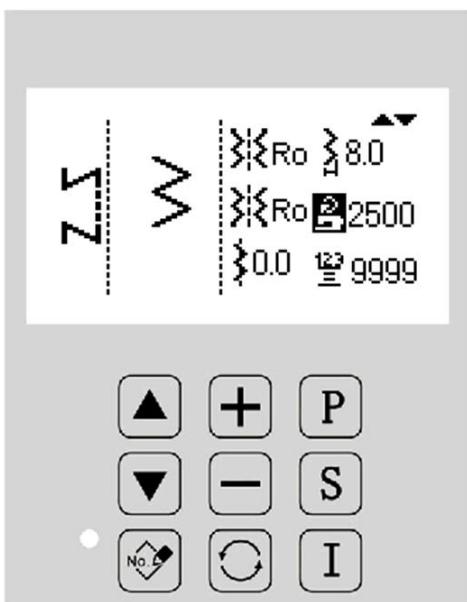
2.3 Interface Switch

- Power on the machine, the operation panel will display the main interface for pattern setting.
- Each time when user press , the main interface will shift in the following order, even though the displayed content may be different accordint to different settings.

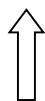
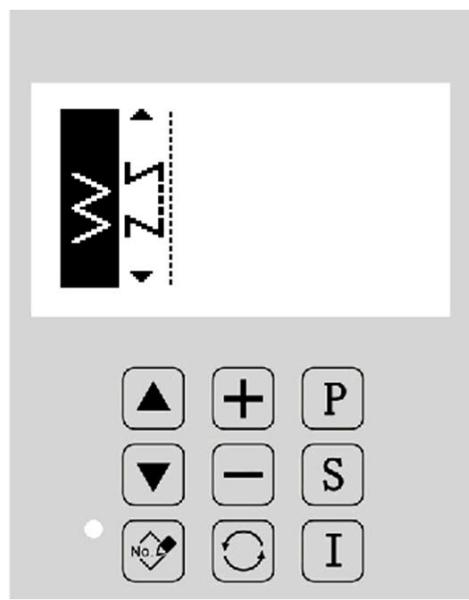
Example:

Here take 2-point zigzag (routine sewing) for example:

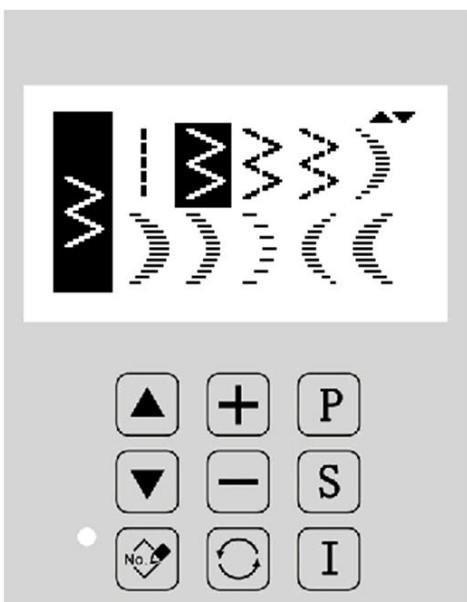
Pattern Setting



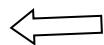
Sewing Mode Setting



Pattern Selection



Backstitch Setting



[Note 1] When sewing is not finished, to press will not enter sewing mode setting interface.



[Note 2] When overlap sewing mode is selected, to press will not enter backstitch setting interface.

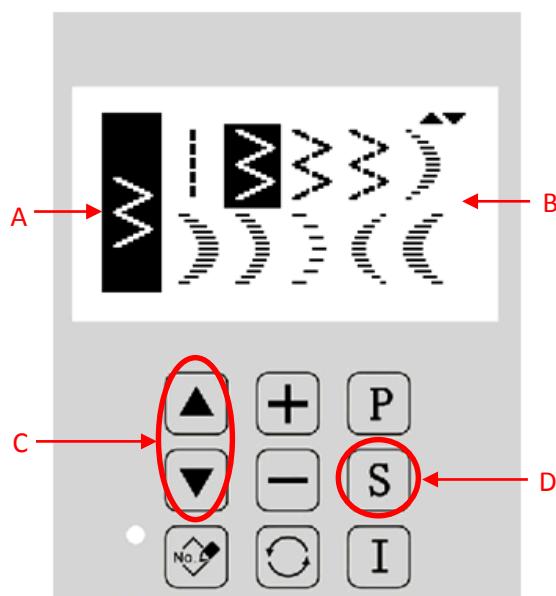


[Note 3] The above interfaces are for reference only, for different machine type may have different interfaces.

2.4 Pattern Selection

Here is the instruction on how to select one pattern for sewing.

Shift to the pattern selection interface where user can select basic pattern, self-edit pattern or memory pattern.

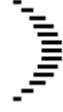
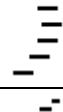
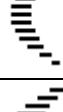
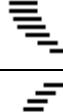
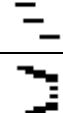
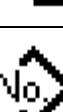


Function Description:

No.	Function	Description
A	Current Pattern	Display the shape of current sewing pattern
B	Pattern Selection Area	Used to select basic pattern, self-edit pattern or memory pattern
C	Page Keys	Used to turn page to display and select patterns
D	Selection Key	Used to confirm the current selection

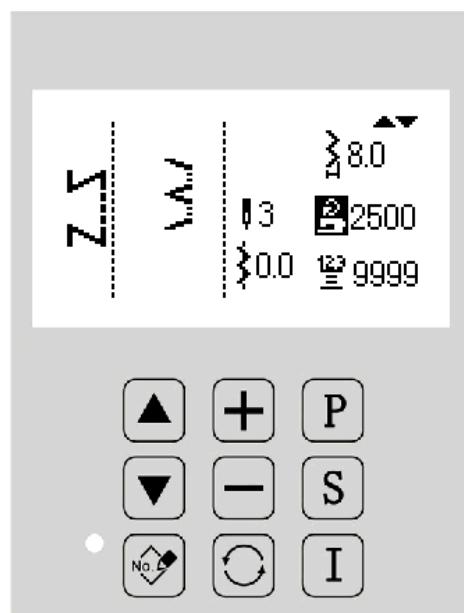
Pattern Description:

Icon	Description
---	Linear
>>	2-point zigzag
>>>	3-point zigzag

	4-point zigzag
	Right standard falgala
	Right lunar falgala
	Right 24-stitch average falgala
	Right 12-stitch average falgala
	Left standard falgala
	Left lunar falgala
	Left 24-stitch average falgala
	Left 12-stitch average falgala
	Left blind stitch
	Right blind stitch
	Self-edit pattern
	Memory pattern

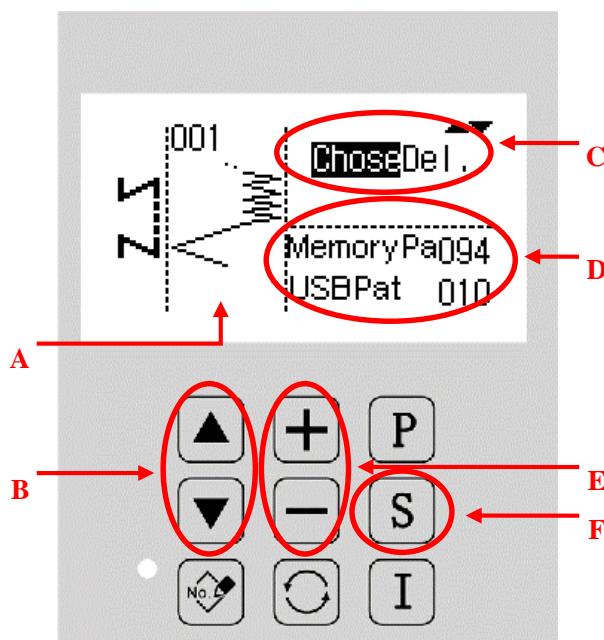
2.4.1 Standard Pattern Selection

Under pattern selection interface, press interface switch key to select among 14 basic patterns (20 patterns for SR version) and select to enter pattern setting interface.



2.4.2 Self-edit Pattern Selection

- Under pattern selection interface, select and press to enter self-edit pattern selection interface.
- Up to 200 self-edit patterns can be saved.
- Press to quit the interface.



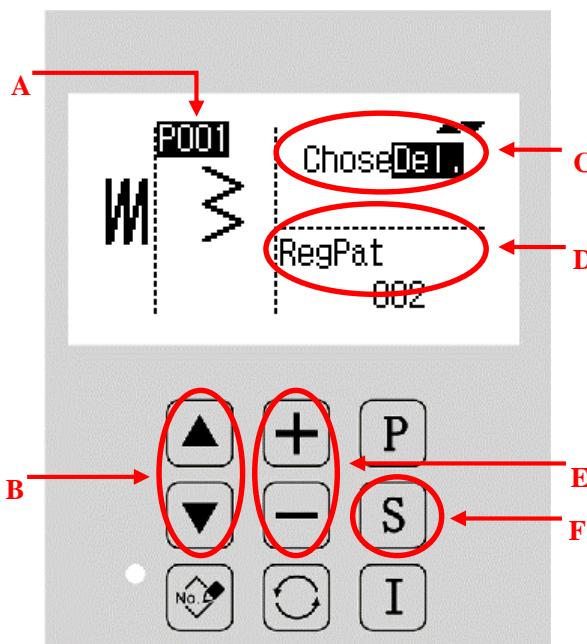
Function Description:

No.	Function	Description
A	Pattern display	Display the shape and number of the selected pattern. Note: numbers of memory patterns are 1-200; Numbers of imported patterns are 201-300.
B	Item modification	Used to modify current operation, to “select” or to “delete”
C	Operation	“Select” means to select current pattern; “Delete” means to delete current pattern, but only imported patterns can be deleted.
D	Information Display	Used to display the quantity of self-edit patterns which consist of memory patterns and imported patterns.
E	Pattern Selection	Used to change the displayed pattern.
F	Confirmation	Used to confirm the current selection and enter the setting interface of the self-edit pattern.

2.4.3 Existing Pattern Selection

- Existing patterns consist of registered basic patterns or self-edit patterns. The parameters, sewing mode and backstitch of existing patterns are independent.
- Up to 200 existing patterns can be registered.
- Under pattern selection interface, select and press to enter the existing pattern selection interface.
- Press to quit the interface.

[Note] If there is no existing pattern saved in the panel, corresponding hint message will be displayed.



Function Description

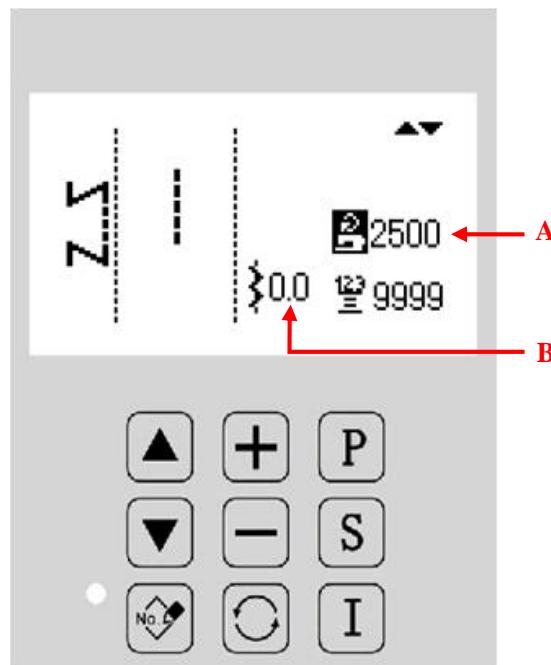
No.	Function	Description
A	Pattern display	Display the shape and number of the selected pattern. The number of registered pattern is Pxxx.
B	Item modification	Used to modify current operation, to “select” or to “delete”
C	Operation	“Select” means to select current pattern; “Delete” means to delete current pattern.
D	Information Display	Used to display the quantity of registered patterns.
E	Pattern Selection	Used to change the displayed pattern.
F	Confirmation	Used to confirm the current selection and enter the setting interface of the self-edit pattern.

2.5 Settings of Basic Patterns

Here are the instructions on how to set swing width, zero line, cloth-feeding length, rotation speed and other parameters for basic patterns.

Basic patterns refer to the built-in 14 patterns (20 patterns for SR version) in the system.

2.5.1 Settings of Linear



Function Description:

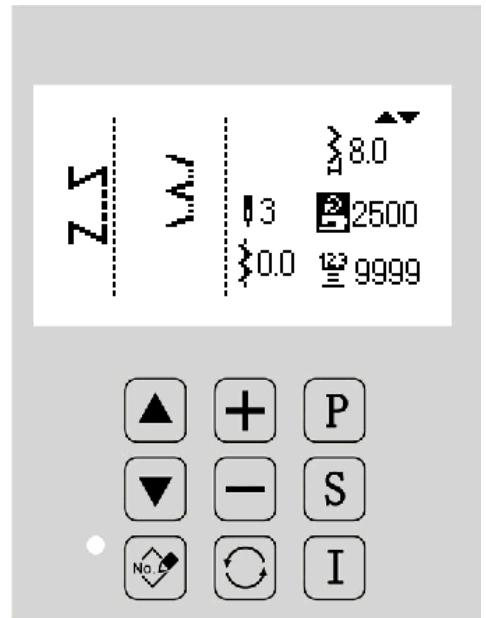
A	Display and setting of Max. rotation speed	Display the current pattern
B	Display and setting of zero line position	Display the zero line position

Setting Instructions:

Here take the settings of max. rotation speed and zero line position for example:

3、Setting of max. rotation speed

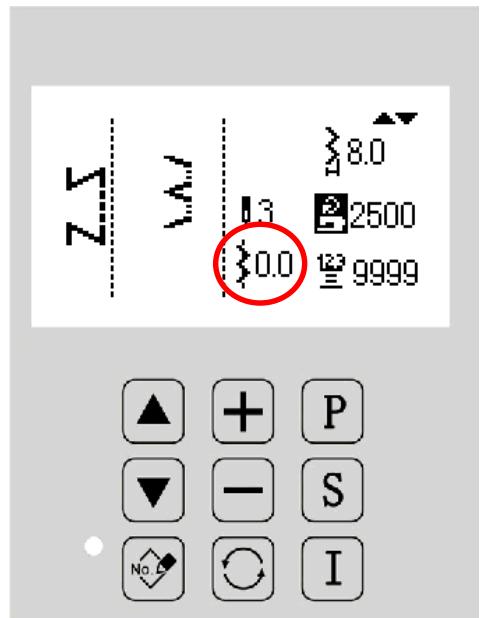
Under pattern setting interface, press or to move the cursor to the item of maximum rotation speed, and then press or to modify the speed value.



4、Setting of zero line position

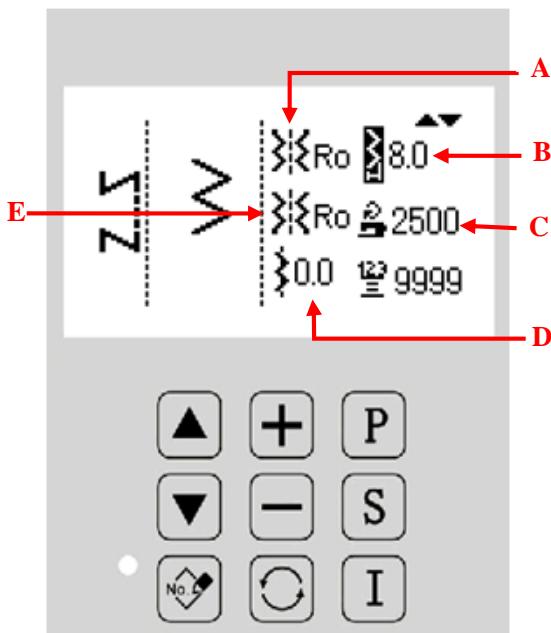
Under pattern setting interface, press or to move the cursor to the item of zero line position, and then press or to modify the speed value.

[Note] The value of zero line is limited by parameters P1-0, P1-1, P1-2, P1-3, P1-4 and others. During setting, the system will determine whether the value is beyond limit. If not beyond limit, the value change is valid; if beyond limit, the value will not be changed.



2.5.2 Settings of 2-point, 3-point, 4-point Zigzag

Here take the settings of 2-point zigzag for example.

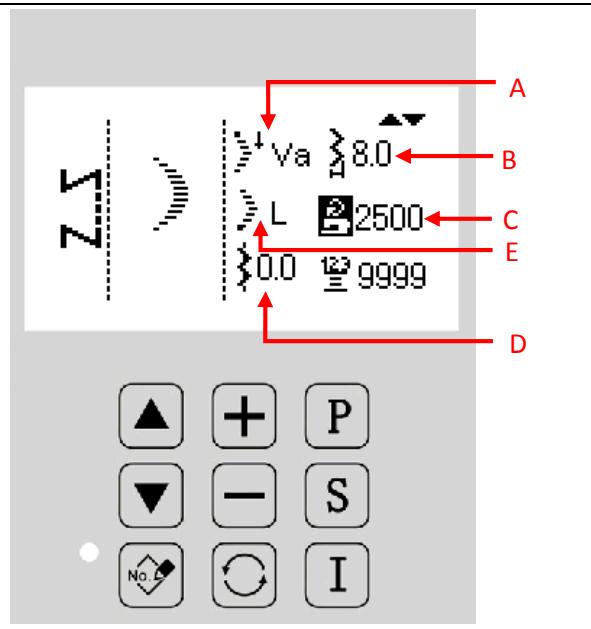


Function Description:

A	Display and setting of needle start point	Display the position of needle start point: ☒ Ro: arbitrary ☒ R: right ☒ L: left
B	Display and setting of swing width	Display the value of swing width.
C	Display and setting of Max. rotation speed	Display the maximum running speed.
D	Display and setting of zero line position	The value of zero line is limited by parameters P1-0, P1-1, P1-2, P1-3, P1-4 and others. During setting, the system will determine whether the value is beyond limit. If not beyond limit, the value change is valid; if beyond limit, the value will not be changed.
E	Display and setting of needle stop point	Display the position of needle stop point: ☒ Ro: arbitrary ☒ R: right ☒ L: left

2.5.3 Settings of Falbala

Here take the settings of right standard falbala for example.

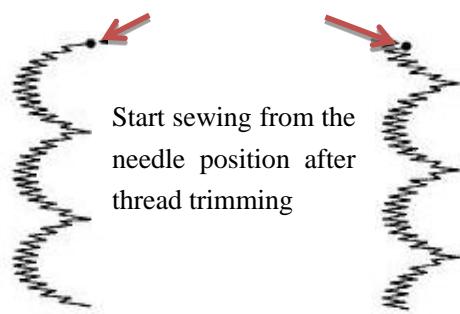


Function Description:

A	Display and setting of needle start point	Display the position of needle start point: ↙Va: valley ↘Ap: peak
B	Display and setting of swing width	Display the value of swing width.
C	Display and setting of Max. rotation speed	Display the maximum running speed.
D	Display and setting of zero line position	The value of zero line is limited by parameters P1-0, P1-1, P1-2, P1-3, P1-4 and others. During setting, the system will determine whether the value is beyond limit. If not beyond limit, the value change is valid; if beyond limit, the value will not be changed.
E	Display and setting of needle stop point	Display the position of needle stop point: ↙L: left ↘R: right ↗Ro: arbitrary ↙Va: valley

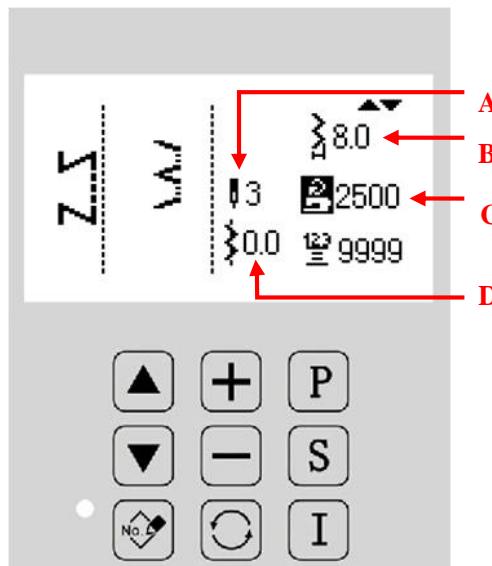
“Start from tooth top” and “start from tooth valley” for sawtooth edge:

Start from tooth top Start from tooth valley



2.5.4 Settings of Blind Stitch

Here take left blind stitch for example.



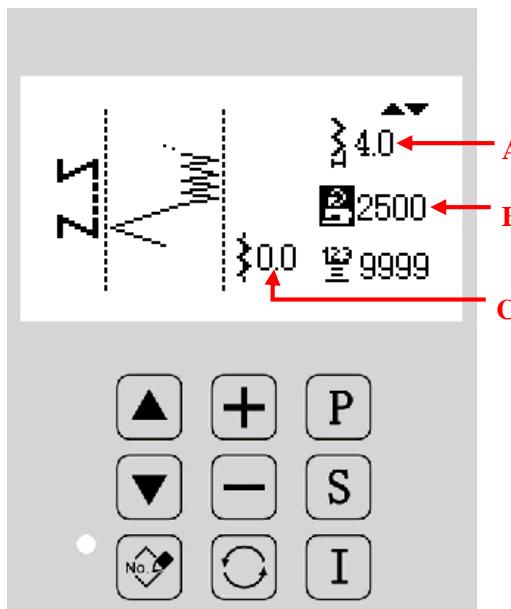
功能说明:

A	Display and setting of blind stitch number	Display the current number of blind stitches.
B	Display and setting of swing width	Display the value of swing width.
C	Display and setting of Max. rotation speed	Display the maximum running speed.
D	Display and setting of zero line position	The value of zero line is limited by parameters P1-0, P1-1, P1-2, P1-3, P1-4 and others. During setting, the system will determine whether the value is beyond limit. If not beyond limit, the value change is valid; if beyond limit, the value will not be changed.

2.6 Self-edit Patterns

- Self-edit patterns are those with free needle position and arbitrary needle swing set by user.

- Self-edit patterns can be imported via USB port.
 - Up to 20 self-edit patterns can be stored, each pattern consisting of up to 500 stitches.
- Refer to 2.4.2 on how to enter the setting interface for self-edit patterns.



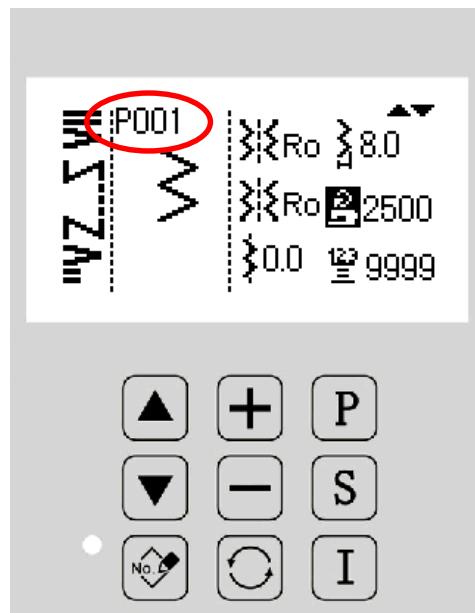
Function Description:

A	Display and setting of swing width	Display the value of swing width.
B	Display and setting of Max. rotation speed	Display the maximum running speed.
C	Display and setting of zero line position	The value of zero line is limited by parameters P1-0, P1-1, P1-2, P1-3, P1-4 and others. During setting, the system will determine whether the value is beyond limit. If not beyond limit, the value change is valid; if beyond limit, the value will not be changed.

2.7 Saved Patterns

- Saved patterns refer to registered basic patterns or self-edit patterns, only available for free sewing and overlap sewing.
- The registered self-edit patterns as saved patterns cannot be edited, but parameters of registered basic patterns can be modified.

Refer to 2.4.3 on how to enter the setting interface for saved patterns. The interface is nearly the same with normal interface, and only a pattern number like PXXX is displayed at the top left corner.



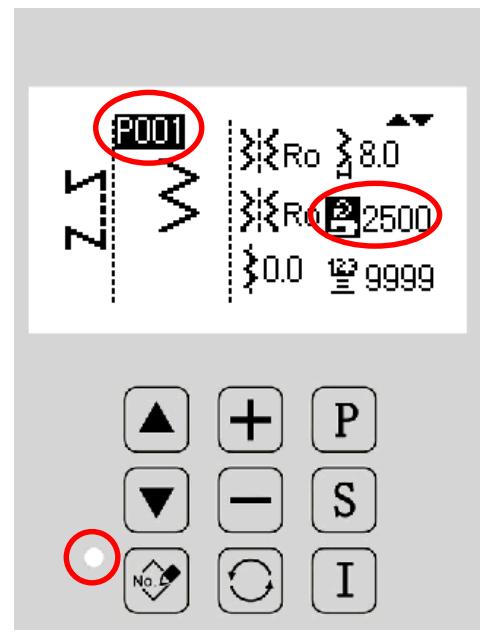
2.7.1 Pattern Registration

Here take 2-point zigzag pattern for example:

5、Select the pattern to be registered

set the pattern to be registered as well as the sewing mode and backstitch. In the pattern setting

interface, press to enter pattern registration interface. At this time, the indicator light will be on, pattern number like PXXX will be displayed at the top left corner and the cursor will flicker. Note: after entering registration mode, pattern setting item will automatically jump to the sped item. If the current pattern hasn't been registered, the default value of the speed is 2500rpm, otherwise, the displayed value is the actual speed value before registration.



6、Change registration number

After entering registration mode, press 

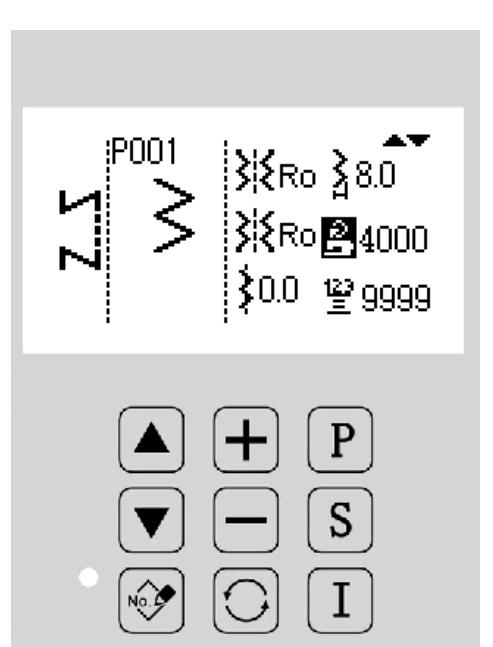
or  to change the pattern number to be registered.

7、Change pattern speed

After entering registration mode, press 

or  to change the speed of the pattern.

[Note] After registration, the sewing speed of the registered pattern will not exceed the registered speed.

**8、Complete registration**

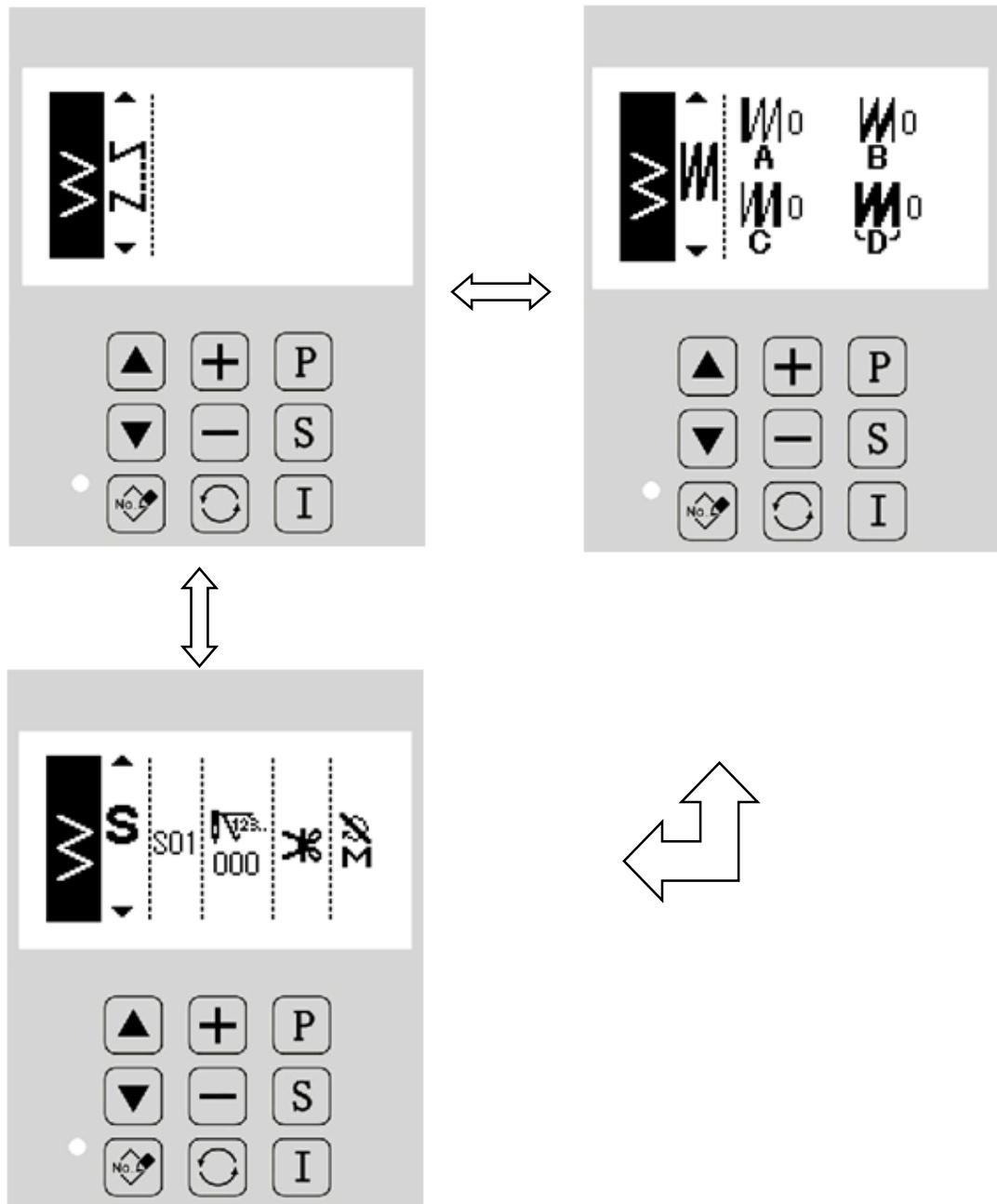
After setting the speed and pattern number,

press  to confirm. When the pattern number stops flickering, the registration is completed.

Press  to turn off the panel indicator light and enter the main interface for pattern settings. At this time, step the pedal to start sewing.

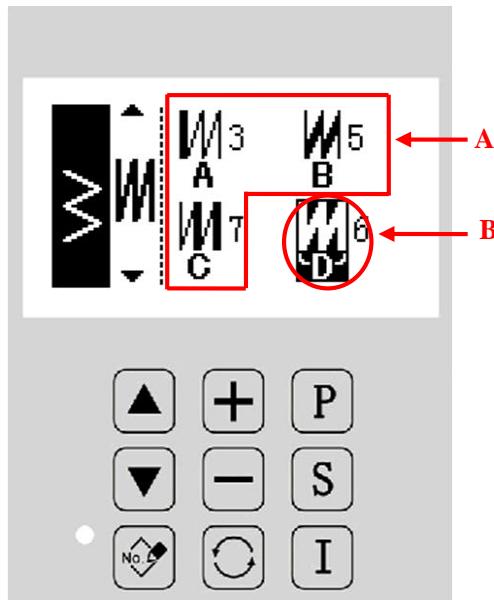
2.8 Settings of Sewing Mode

- Refer to 2.3 on how to enter sewing mode setting interface by pressing .
- Sewing mode consists of free sewing, overlap sewing and routine sewing.
- Press  or  to shift among these three sewing modes.



2.8.1 Overlap Sewing

Overlap sewing will activate one-time sewing as default.



Function Description:

A	Display and setting of the stitch number for processes A, B and C	Display the stitch number for processes A, B and C and press EDIT key to enter overlap sewing setting interface, the range being 0-19 stitches.
B	Display and setting of process D	Display the total number of processes A, B and C and press EDIT key to enter overlap sewing setting interface, the range being 0-9.

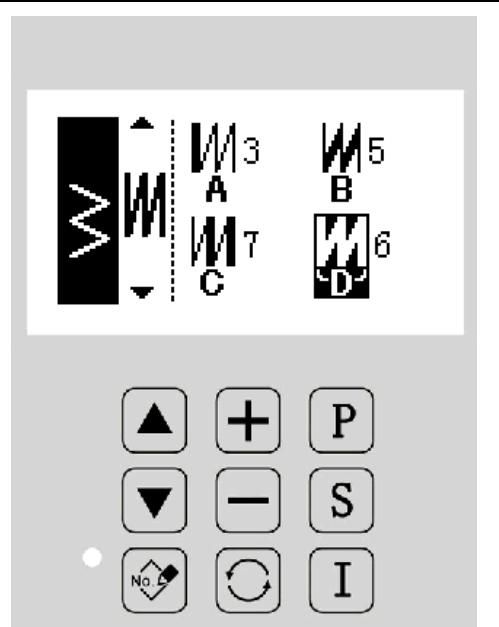
Operatin Description:

5、Select overlap sewing interface and press to enter the setting interface;

6、Press or to select the process to be set;

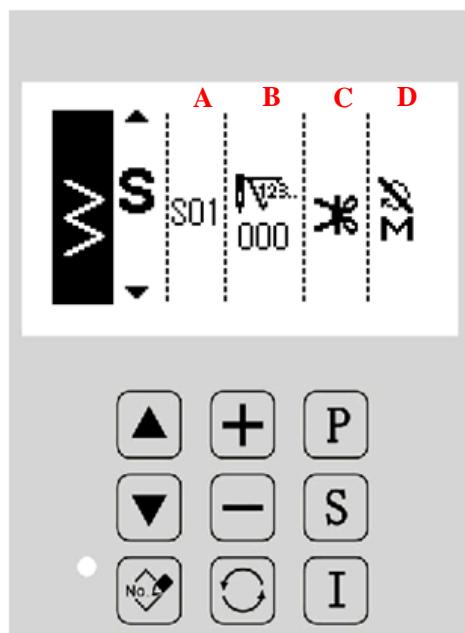
7、Press or to modify the value of selected process;

8、Press to save and quit.



2.8.2 Routine Sewing

Up to 20 steps can be set for one routine sewing, each step consisting of at most 500 stitches. When one step of routine sewing is set as thread trimming or the stitch number of that step as 0, the following steps will be canceled.



Function Description:

A	Step Information	Display the current step number
B	Stitch Number	Display the stitch number for the current step
C	Thread Trimming	Display whether there is automatic thread trimming
D	Sewing Mode	Display whether the current step is of one-time auto sewing or manual sewing

Setting Instructions:

Here take the setting of S01 for example.

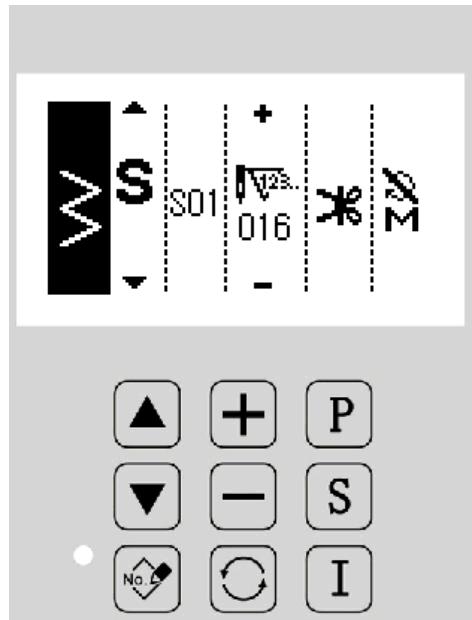
6、 After selecting routine sewing interface, press  to enter the setting interface, where **+** and **-** will appear for the operation;

7、 Press  or  to select the item for setting and symbols **+** and **-** will move to the selected item;

8、 Press  or  to modify the value of the current item;

9、 Press  to save the current setting and automatically jump to the setting of next step; repeat operation of steps 2, 3 and 4 to complete all settings;

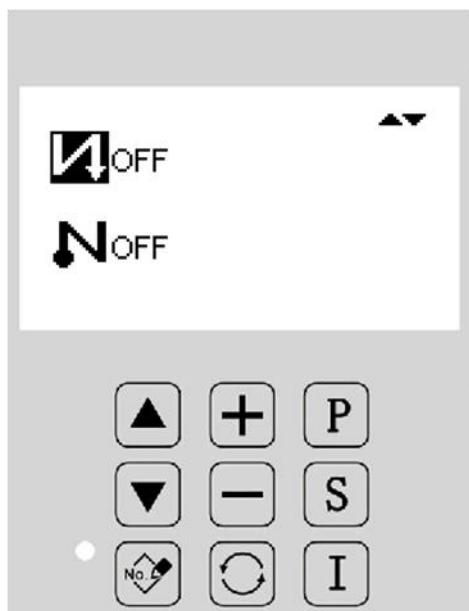
10、 Press  to quit.



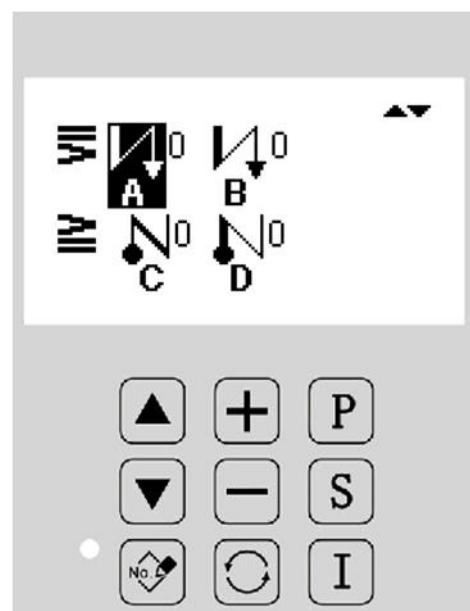
2.9 Settings of Backstitch

Backstitch is used for strengthening the beginning and end of the sewing, consisting of standard backstitch, 2-point backstitch and self-edit backstitch.

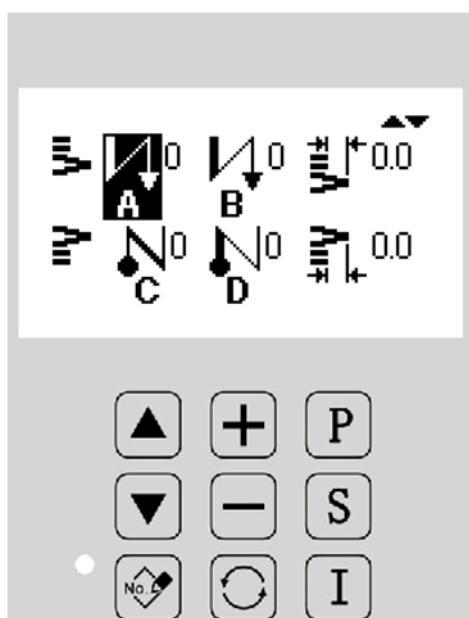
Refer to 2.3 on how to enter sewing mode interface by pressing .



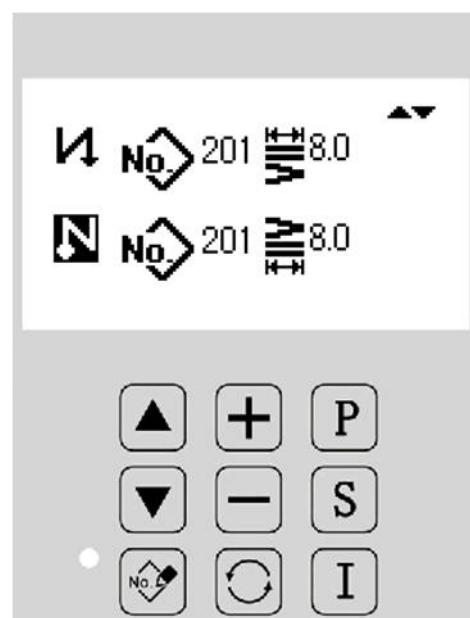
Backstitch Closed



Standard Backstitch



2-point Contraction Sewing



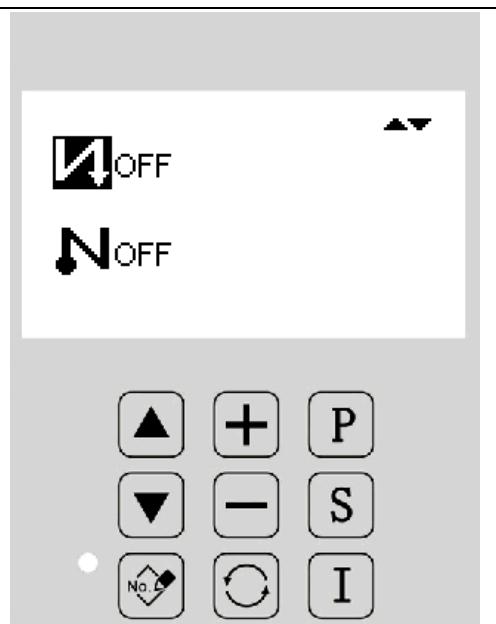
Self-edit Backstitch

Front Backstitch	Valid	Valid	Invalid	Valid
Sewing Pattern				
Rear Backstitch	Invalid	Invalid	Valid	Valid

Setting Method:

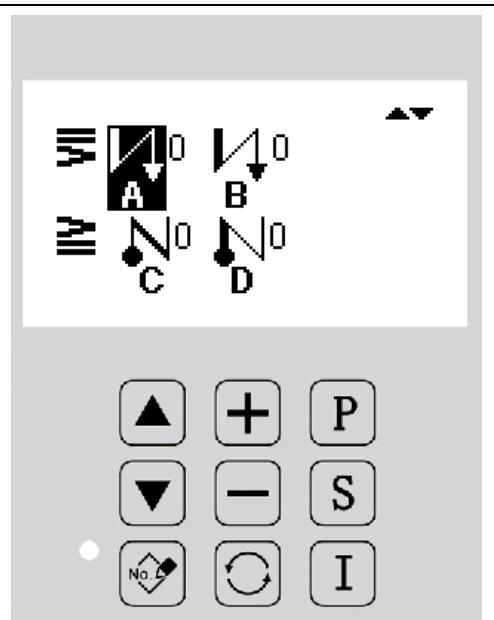
1. Enter backstitch setting interface

Press to enter backstitch setting interface, where press to enter backstitch edit mode and the panel indicator light will become on.



2. Modify backstitch type and parameters

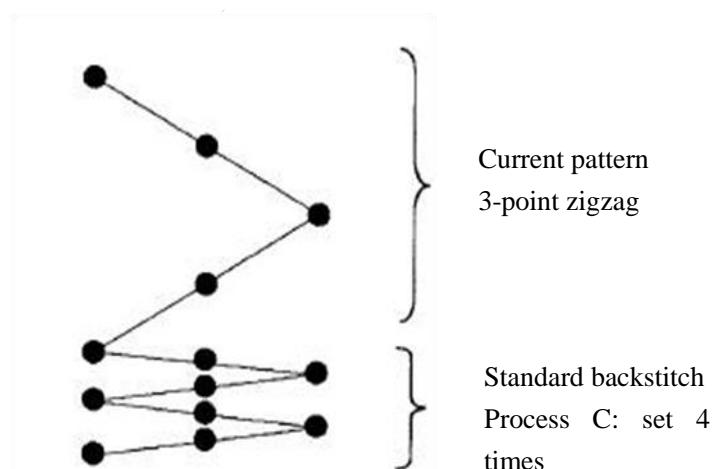
Press or to modify the backstitch parameter which need be modified and the cursor will change correspondingly; press or to change the value of that parameter.

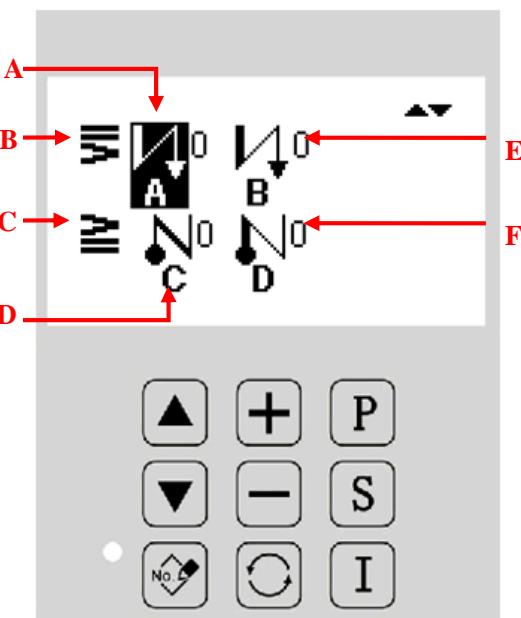


2.9.1 Standard Backstitch

- Standard backstitch can be used to make backstitch sewing with the same needle position of the current pattern.

Example:





Function Description:

A	Front Backstitch Process A	Display the stitch number of process A of front backstitch
B	Front Backstitch Type	Display the type of front backstitch ■: standard front backstitch
C	Rear Backstitch Type	Display the type of rear backstitch ■: standard rear backstitch
D	Rear Backstitch Process C	Display the stitch number of process C of rear backstitch
E	Front Backstitch Process B	Display the stitch number of process B of front backstitch
F	Rear Backstitch Process D	Display the stitch number of process D of rear backstitch

Two methods for the settings of backstitch are available according to different needle swing patterns:

1) Set by stitch number in case of linear, falbala, blind stitch, self-edit pattern and continuous sewing.

Front backstitch→A (positive direction): 0-19 stitches

B (negative direction): 0-19 stitches

Rear backstitch→ C (negative direction): 0-19 stitches

D (positive direction): 0-19 stitches

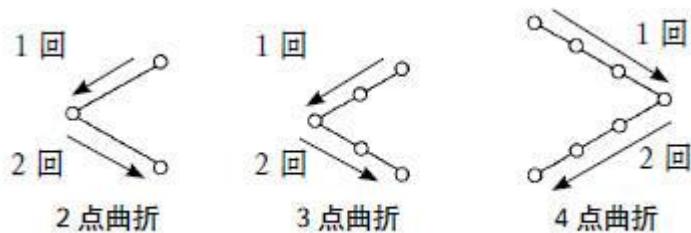
2) Set by swing times in case of 2-point zigzag, 3-point zigzag and 4-point zigzag. Needle swing pattern means the needle swing between points.

Front backstitch→A (positive direction): 0-19 times

B (negative direction): 0-19 times

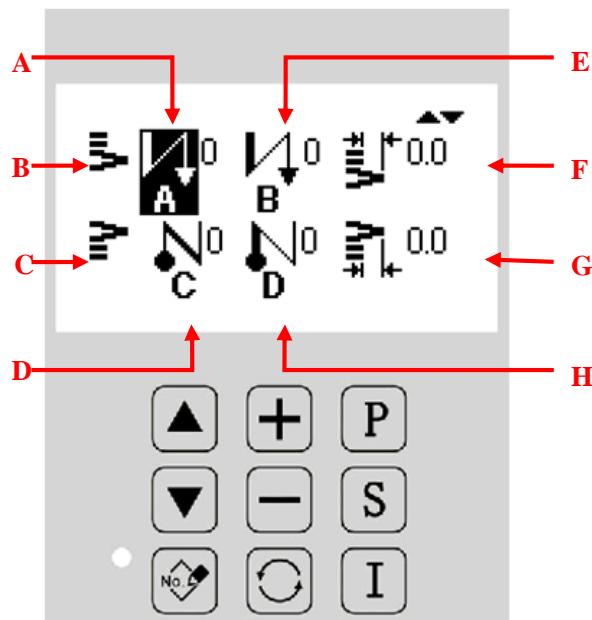
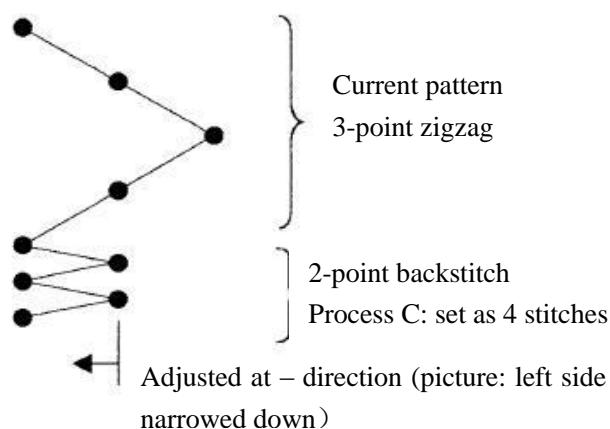
Rear backstitch→ C (negative direction): 0-19 times

D (positive direction): 0-19 times



2.9.2 2-point Contraction Sewing

- 2-point contraction sewing can make backstitch sewing between the current needle position and the next needle position of the current pattern.
- The width between two points can be adjusted at 「-」 direction.



Function Description:

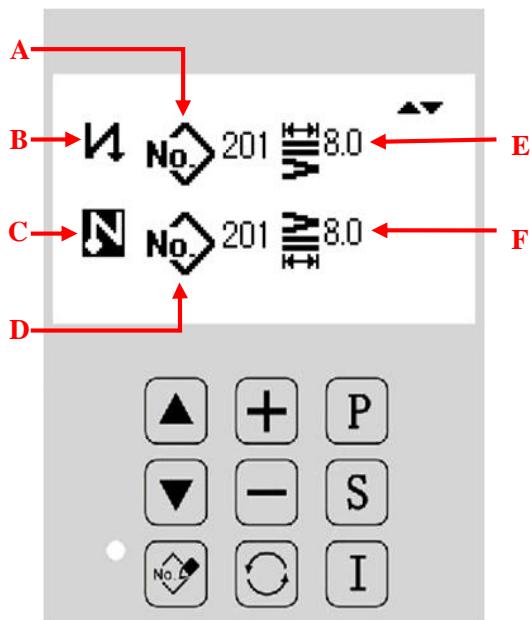
A	Front Backstitch Process A	Display the stitch number of process A of front backstitch
B	Front Backstitch Type	Display the type of front backstitch

		: 2-point contraction sewing of front backstitch
C	Rear Backstitch Type	Display the type of rear backstitch : 2-point contraction sewing of rear backstitch
D	Rear Backstitch Process C	Display the stitch number of process C of rear backstitch
E	Front Backstitch Process B	Display the stitch number of process B of front backstitch
F	2-point Contraction Width of Front Backstitch	Display the width of 2-point contraction sewing of front backstitch
G	2-point Contraction Width of Rear Backstitch	Display the width of 2-point contraction sewing of rear backstitch
H	Rear Backstitch Process D	Display the stitch number of process D of rear backstitch

[Note] The width of 2-point contraction sewing of backstitch can be adjusted to narrow down the width between the original needle position and the next needle position (when set as 0, there is no adjustment).

2.9.3 Self-edit Backstitch

- Self-edit backstitch can be used to make backstitch at any inputted needle position.
- Self-edit backstitch can support at most 64 stitches.



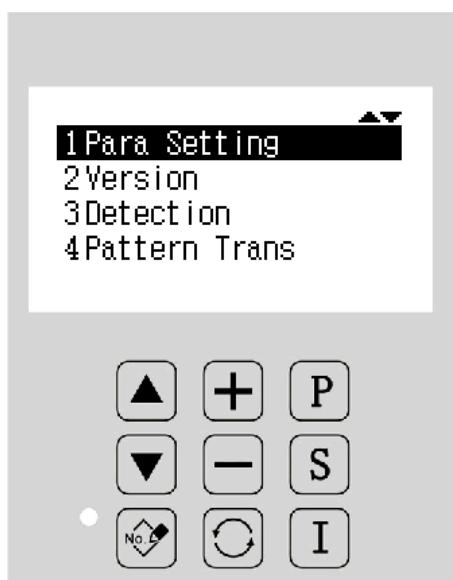
Function Description:

A	Pattern number for self-edit front backstitch	Display the pattern number for self-edit front backstitch, selected from the self-edit patterns
B	Front Backstitch Type	Display the type of front backstitch

		 : self-edit front backstitch
C	Rear Backstitch Type	Display the type of rear backstitch  : self-edit rear backstitch
D	Pattern number for self-edit rear backstitch	Display the pattern number for self-edit rear backstitch, selected from the self-edit patterns
E	Swing width for self-edit front backstitch	Display the swing width for self-edit front backstitch
F	Swing width for self-edit rear backstitch	Display the swing width for self-edit rear backstitch

2.10 Information Function Mode

Under any interface, press  to enter information function mode, where press  or  to return to the main interface.



Function Description:

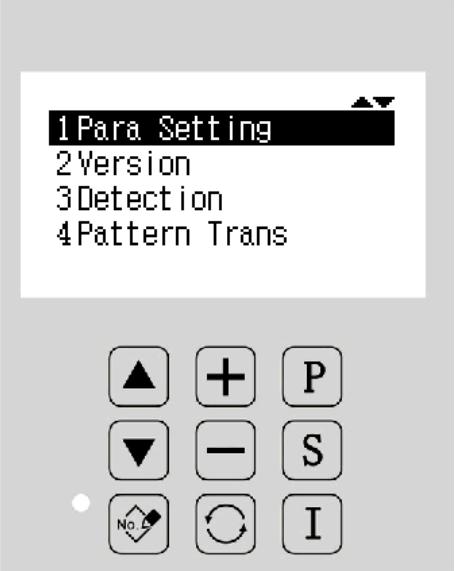
No.	Function	Description
1	Parameter Setting	Enter the parameter setting interface
2	Software Version	Enter the interface to display the software version of the panel, main control and drive
3	Test Mode	Enter the test mode interface
4	Pattern Transfer	Enter the interface to import or export patterns
5	Initialization	Enter the parameter initialization interface

6	Software Upgrade	Enter the interface for upgrading main control and drive software
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2.10.1 Settings of Parameters

Parameter setting is used to set parameters, please refer to 2.10.2.

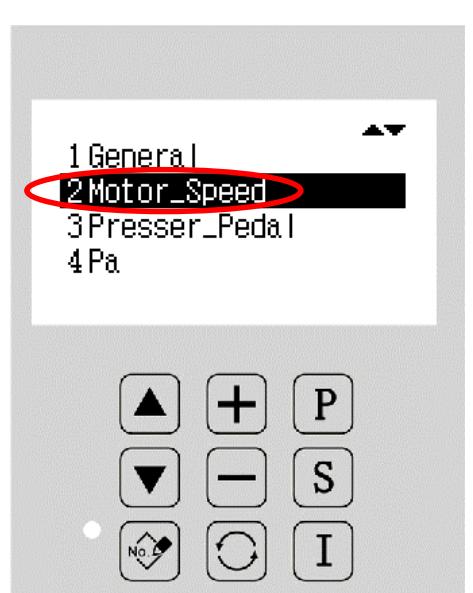
Setting Method:

<p>1. Enter parameter setting</p> <p>Under any interface, press I to enter information function mode, where press ▲ or ▼ to move the cursor to “parameter setting”. As shown in the picture, press S to enter parameter setting.</p>	
<p>2. Parameter setting interface</p> <p>After entering parameter setting interface, there are many items for selection, where press ▲ or ▼ to turn pages to view different parameter items.</p>	

3. Example**① Parameter Selection**

All parameters are classified by categories. Here, we select “main shaft and rotation speed”.

Press or to move the cursor to that item and then press to enter the setting of that item.

**② Internal parameter setting interface**

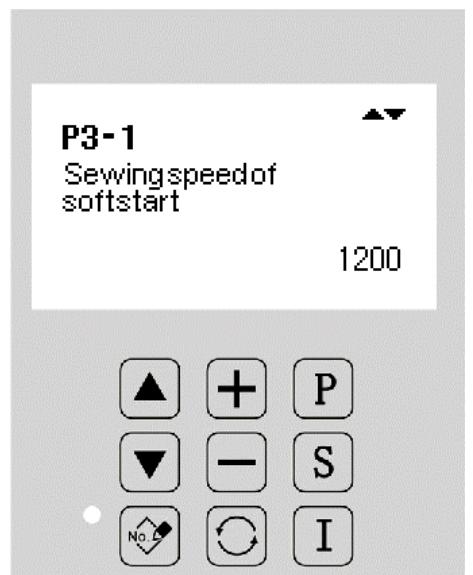
After entering the internal parameter setting interface, press or to display all the parameters under that category.

③ Modify parameter value

After selecting the parameter to be modified, press or to change the set value.

④ Return to parameter category selection interface

After modification, press or to return to parameter category selection interface.



2.10.2 Parameter List

1. Common Parameters

No.	Name	Description	Unit	Length	Range	Default
P1-0	Swing Type	Set the swing method in system			0: CEN: Center Symmetry 1: LR: LR Symmetry	0
P1-1	Center Symmetry Swing Limits	The swing range at center symmetry	mm	0.1	0~10.0	10.0
P1-2	Swing Left Limits (LR)	Set left limits in LR Swing	mm	0.1	-5.0~0	-4.0

	Swing)	method				
P1-3	Swing Right Limits (LR Swing)	Set right limits in LR Swing method	mm	0.1	0~5.0	4.0
P1-4	Zero Line Position	Set zero line position			0:CEN:Center 1:L:Left 2:R:Right	0
P1-5	Contrary Feeding Limits	Set the contrary feeding limits	mm	0.1	-5.0~5.0	-5.0
P1-6	Positive Feeding Limits	Set the positive feeding limits	mm	0.1	-5.0~5.0	5.0
P1-7	Symmetry Function Setting	Set the symmetry function			0:SIG:Single Pattern Symmetric Inversion 1:CON: Continuous Symmetric Inversion	0

[Note] No P1-5 and P1-6 for S version and B version.

2. Backstitch Parameters

No.	Name	Description	Unit	Length	Range	Default
P2-0*	Midway Backstitch	Set the backstitch function in midway			0:OFF:No 1:ON:Yes	ON
P2-1*	Midway Backstitch Stitch Number	Set the backstitch stitch number in midway		1	0~19	4
P2-2	Midway Backstitch Setting at Stop	Midway backstitch setting at stop			0:OFF: Ineffective at Machine Stop 1:ON: Effective at Machine Stop	ON
P2-3*	Stop Function at Starting Backstitch	Set the stop function at starting the backstitch.			0:OFF:No 1:ON:Yes	0
P2-4	Deceleration Function at Backstitch Start	Decelerating function at backstitch start			0:OFF:No 1:ON:Yes	0

P2-5*	Backstitch Holding Time	Set the holding time of the backstitch solenoid	s	1	2~250	60
P2-6*	Backstitch Total Pressure Output Time	Set the total pressure control time of the backstitch solenoid	ms	1	50~250	100
P2-7*	Backstitch Output Duty Cycle	Set the current when the backstitch solenoid is holding		1	0~100	40

The parameters with mark “*” should be changed under the guide of the professional technicians.

[Note] No such parameters for B version

3. Main Shaft and Rotation Speed Parameters

No.	Name	Description	Unit	Length	Range	Default
P3-0	Soft Start Stitch Number	Set the stitch number of soft start at sewing	stitch	1	0~9	3
P3-1*	Soft Start Speed	Set the speed at soft start	rpm	50	150~5000	1200
P3-2*	Backstitch Speed	Set the Max. speed of backstitch	rpm	50	150~3000	1500
P3-3	Min. Speed	Set the Min. speed of the pedal	rpm	10	20~400	200
P3-4	One-time Sewing Speed	Set the rotation speed of one-time sewing	rpm	50	200~5000	3000
P3-5*	Down Needle Stop Angle	Set the down needle stop angle	degree	10	120~200	160
P3-6	Reserval Needle Lift at Trimming	Set the reversal needle lift at trimming			0:OFF:No 1:ON:Yes	0
P3-7	Reserval Needle Lift Angle	Set the reversal needle lift angle	degree	1	0~45	20
P3-8*	Main Shaft Angle Adjustment	Set the adjustment of main shaft angle, onle effective for integrated motor	degree	1	-30~6	0
P3-9*	Main Shaft Motor Selection	Select the main shaft motor type			0: normal 1: integrated	1
P3-11	Main Shaft Calibration	Set whether the main shaft needs		1	ON: Yes OFF: No	ON

	Setting	calibration				
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The parameters with mark “*” should be changed under the guide of the professional technicians.

[Note] No parameters P3-2, P3-6 and P3-5 for B version and S version.

4. Trimming Parameters

No.	Name	Description	Unit	Length	Range	Default
P4-0	Trimming Function	Set the trimming function			0:OFF:invalid 1:ON:valid	1
P4-1*	Trimming Speed	Set the trimming speed	rpm	10	20~300	300
P4-2	Midway Backstitch Trimming	Set auto trimming at backstitch			0:OFF:invalid 1:ON:valid	0
P4-3*	Wiper Holding Time	Set the holding time of thread wiper	ms	1	0~250	70

The parameters with mark “*” should be changed under the guide of the professional technicians.

[Note] No such parameters for B version and S version.

5. Presser Foot and Pedal Parameters

No.	Name	Description	Unit	Length	Range	Default
P5-0*	Presser Foot Control Method	Select the control device of the presser foot			MEC: mechanical MAG: solenoid AIR: air valve	
P5-3*	Pedal Stroke at Start	Pedal stroke at sewing start				
P5-4*	Pedal Stroke at Speed Up	Pedal Stroke at speed up				
P5-5*	Pedal Stroke at Presser Foot Down	Pedal stroke at presser foot down				
P5-6*	Pedal Stroke at Presser Foot Up	Pedal stroke at presser foot up				
P5-7*	Pedal Stroke at Trimming Start 2	Pedal stroke at trimming start 2				
P5-8*	Pedal Stroke at High-speed Running	Pedal stroke at high-speed running				
P5-9*	Correction of	Correction of pedal's				

	Pedal Middle Position	middle position				
P5-10*	Presser Auto Up Holding Time	The holding time of presser auto-up				
P5-11*	Pedal Stroke at Trimming Start 1	Pedal stroke at trimming start 1				
P5-12*	Presser Foot Action Time	Presser foot action time				
P5-13	Presser Foot Up after Trimming	Presser foot goes up after trimming				
P5-14*	Presser Foot Full Output Time	The time for full pressure foot output at presser up				
P5-15*	Presser Up Output Duty Cycle	Output duty cycle at presser foot up				
P5-17*	Select Pedal Curve	Select pedal curve				
P5-18	Presser Foot Strength Level	Presser foot strength level				
P5-19	Pedal Selection	Pedal Selection				

The parameters with mark “*” should be changed under the guide of the professional technicians.

[Note] No parameters P5-10, P5-12, P5-13, P5-14 and P5-15 for B version and S version.

6. Operation Panel Parameters

No.	Name	Description	Unit	Length	Range	Default
P7-3	Language Selection	Select the language			0:CH: Chinese 1:EN:English 2:User (select language first after power on)	0
P7-5	Contrast Control	Adjust the contrast ratio of the LED			0~30	12

7. Counter Parameters

No.	Name	Description	Unit	Length	Range	Default
P8-0	Counter	Counter mode			0: no counter	0

	Mode				1: bobbin thread counter 2: trimming counter	
P8-1	Counter Set Value	Set the target value of the counter			0~9999	0
P8-2	Current Counter Value	Set the current value of the counter			0~9999	9999
P8-6	Operation after Counter Full	Operation after the counter reaches the set value			OFF: alarm ON: no alarm	ON
P8-8	Bobbin Thread Counter Unit	The unit of the bobbin thread counter			-20: counting down, deduce 1 for every 20 stitches -15: counting down, deduce 1 for every 15 stitches -10: counting down, deduce 1 for every 10 stitches -5: counting down, deduce 1 for every 5 stitches 0: no bobbin thread counting 5: counting up, add 1 for every 5 stitches 10: counting up, add 1 for every 10 stitches 15: counting up, add 1 for every 15 stitches 20: counting up, add 1 for every 20 stitches	0

8. Other Parameters

No.	Name	Description	Unit	Length	Range	Default
P9-0	Needle Stop Position	Appoint the needle rod position at machine stop			0:DN: Down 1:UP: Up	0
P9-1	Compensation	Set the			0:HAF: half	0

	Key Setting	compensation key			stitch compensation 1:ONE:1 stitch compensation	
P9-7	Safety Switch	Set the validity of the safety switch			ON: valid OFF: invalid	ON

The parameters with mark “*” should be changed under the guide of the professional technicians.

9. Special Parameters

No.	Name	Description	Unit	Length	Range	Default
P11-0*	Max. Speed	Set the maximum rotation speed of the head	rpm	50	50~5000	3000
P11-1*	Frame-moving Method	Set the frame-moving method		1	0~5	1
P11-7*	Thread Pick-up Delay Time	The delay time for thread pick-up	ms	1	0~250	170
P11-8*	Needle Swing Angle Adjustment	Adjust the angle of swing action		1	-50~50	0
P11-9*	Cloth-feeding Angle Adjustment	Adjust the angle of cloth-feeding action		1	-50~50	0
P11-10*	Trimming Angle Adjustment	Adjust the trimming angle		1	-30~30	0
P11-12*	Swing Origin Adjustment	Adjust the origin of the swing motor		1	-40~40	0
P11-13*	Cloth-feeding Origin Adjustment	Adjust the origin of the cloth-feeding motor		1	-25~25	0

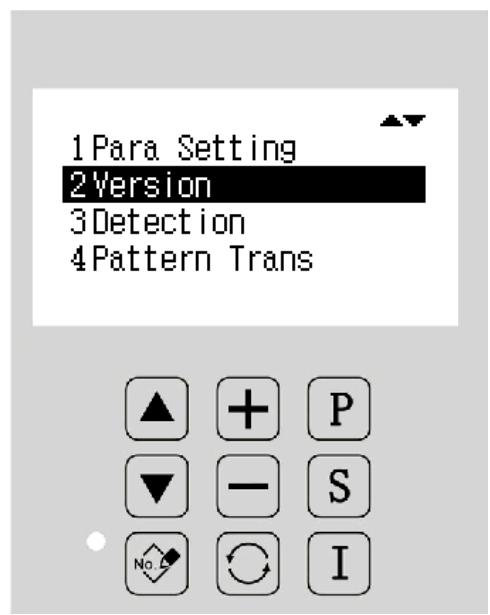
The parameters with mark “*” should be changed under the guide of the professional technicians.

[Note] No parameters P11-7, P11-9 and P11-10 for B version and S version.

2.10.3 Software Version

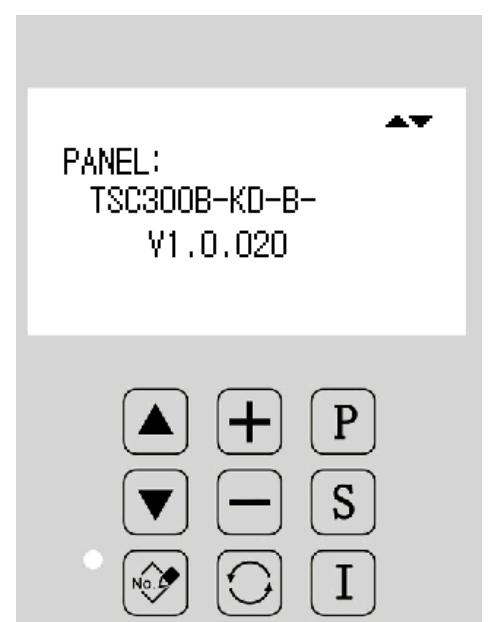
1. Enter software version inquiry

In information function mode, press  or  to select “software version information” and then press  to enter.

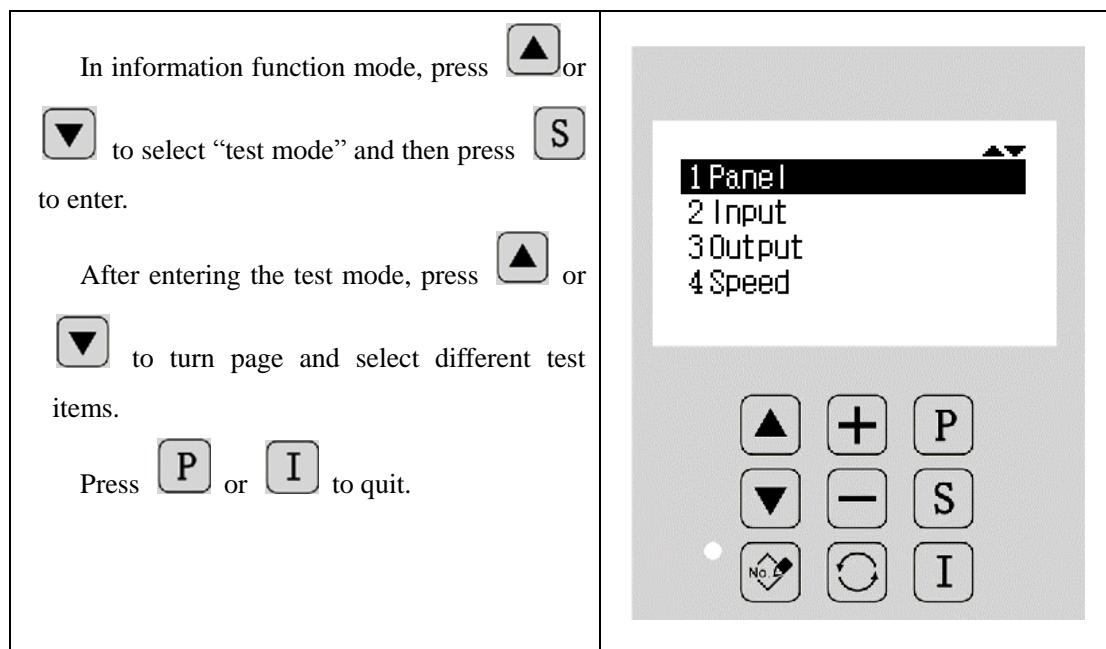


2. Version inquiry

In the current interface, user can press  or  to check the panel software verison, main control software version and drive software version.



2.11 Test Mode



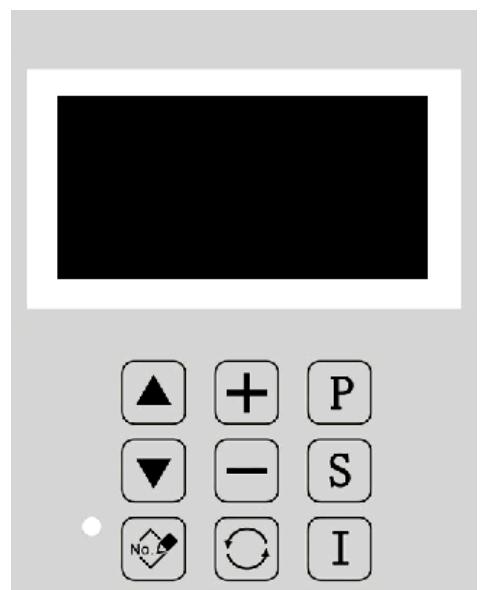
Function Description:

No.	Function	Description
1	Panel Test	Used to test LCD and buttons
2	Input Test	Used to test input signal of various switches and sensors
3	Output Test	Used to test output signal of solenoid for various presser feet and trimming
4	Main Shaft Test	Used to test the rotation speed of main shaft motor
5	Stepping Test and Origin Adjustment	Used to test swing needle, cloth-feeding motor and the adjustment of origin
6	Shuttle Adjustment	Used to adjust shuttle
7	Main Shaft Motor Calibration	Used for zero position calibration of integrated motor
8	Needle Swing and Cloth-feeding Motor Aging	Used for aging test of needle swing and cloth-feeding motor
9	Machine Aging	Used for aging and test of whole machine

2.11.1 Panel Test

In test mode, select “ panel test” and press **S** to enter. The LCD wil become black first and user can check whether there is dead pixel; then, the system will enter button test mode, when user can press button to check whether the button number will be displayed on the screen.

Press **P** to return to previous interface.



2.11.2 Input Test

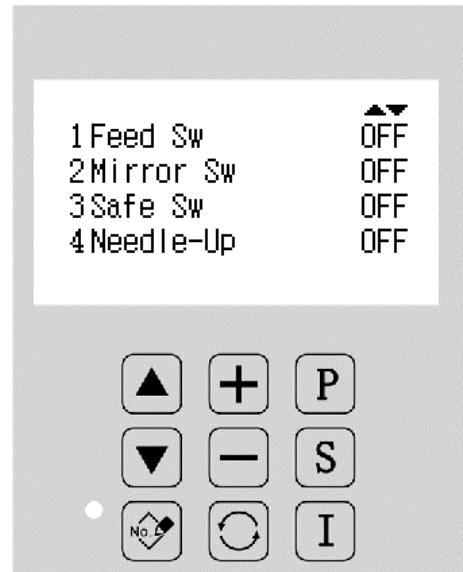
In test mode, select “input test” and then press **S** to enter, where user can press **▲** or **▼** to turn page.

ON: open
OFF: closed

Input signal type:

- ① backstitch switch
- ② image switch
- ③ safety switch
- ④ needle up position
- ⑤ half stitch compensation switch
- ⑥ pedal (range: 0~1023)
- ⑦ backstitch lever (range: 0~1023)
- ⑧ main shaft angle (range: 0~359)

Press **P** to return to previous interface.



2.11.3 Output Test

In test mode, select “output test” and press **S** to enter. Press **▲** or **▼** to select test item and press **S** to test the output status of the output signal of the tested solenoid.

Output signal type:

- ① thread loosing test
- ② thread pick-up test
- ③ thread trimming test
- ④ thread clearing test
- ⑤ presser foot test
- ⑥ backstitch test
- ⑦ image LED test
- ⑧ spotlight test

Press **P** to return to previous interface.



[Note] The sewing machine will make action during test.

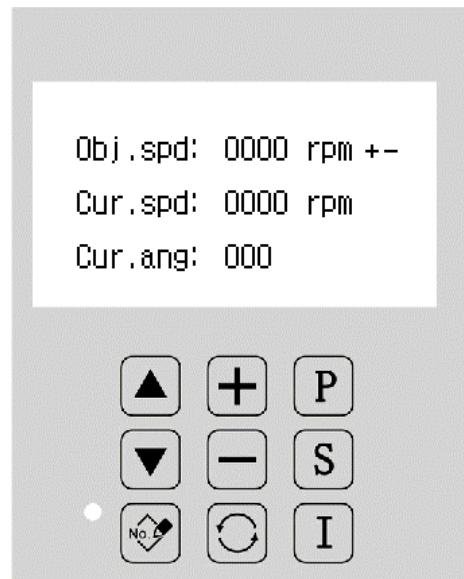
2.11.4 Main Shaft Test

In test mode, select “main shaft test” and press **S** to enter.

Press **+** or **-** to set the target rotation speed of the main shaft motor. At this time, the test result will be displayed as the actual speed.

Press **P** to stop the main shaft motor.

Press **I** to return to previous interface.



2.11.5 Stepping Test and Origin Adjustment

Function description:

In test mode, select “stepping test and origin adjustment” and press **S** to enter, where press **▲** or **▼** to select the motor for test.

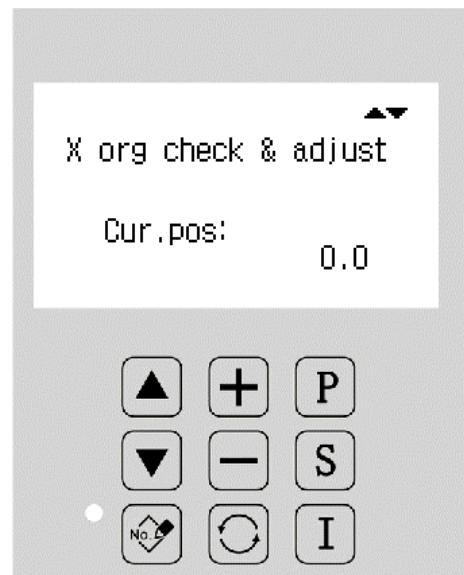
3、Motor Test

Press **+** or **-** to make the selected motor run step by step. Press **P** to make the motor search origin.

4、Motor Origin Adjustment

① Press **P** to make the stepping motor search origin first;

② Press **No. 2** to enter origin adjustment interface, at this time LED light on the panel will be on;



- ③ Press or to make origin adjustment and the displayed value of the origin will change accordingly;

- ④ Press to confirm the adjustment and this parameter will be saved;

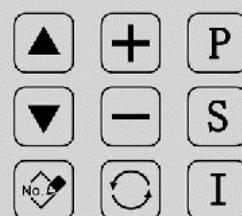
- ⑤ Press to quit the adjustment status.

Press to return to previous interface.

X org check & adjust

Cur.pos:

1.2



2.11.6 Shuttle Adjustment

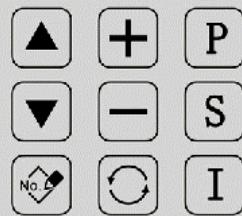
In test mode, select “shuttle adjustment” and press to enter.

Press or to select the item and press or to change the corresponding value.

Press to return to previous interface.

Wave: 8.0

Base: Mid



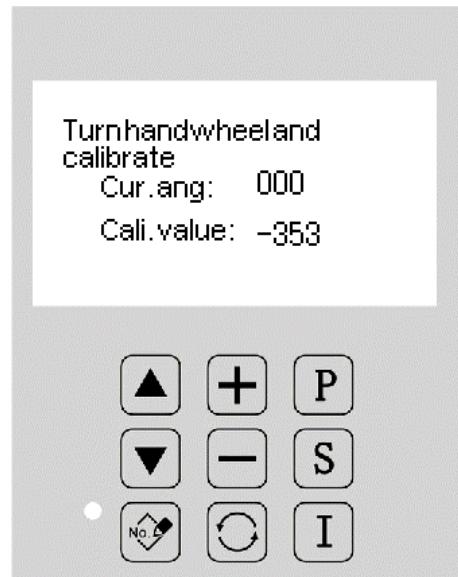
2.11.7 Main Shaft Motor Calibration

When parameter P3-9 (main shaft motor type) is integrated motor, the motor calibration is available, but in case of normal motor, this function is unavailable. The calibration of integrated motor shall be done by professionals.

In test mode, select “main shaft motor calibration” and press **S** to enter.

Then, rotate the main shaft motor to the corrected position. Please note that the calibration value shall be within 6~30 degree. Press **S** to confirm the calibration.

Press **I** to return to previous interface.

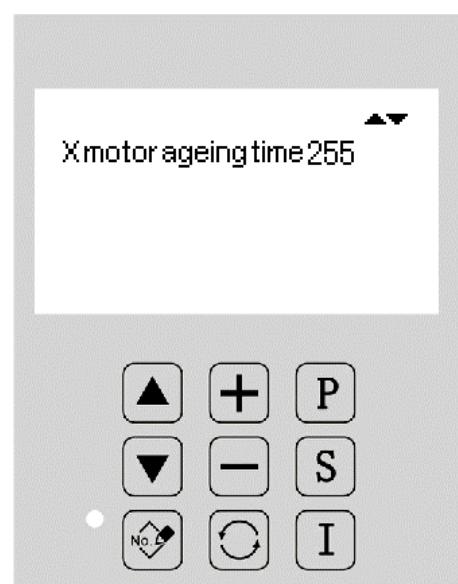


2.11.8 Needle Swing and Cloth-feeding Motor Aging

In test mode, select “needle swing and cloth-feeding motor aging” and press **S** to enter.

Then, press **▲** or **▼** to select the motor for aging. Press **+** or **-** to set the aging time (range: 0~200, unit: 10ms). When the value is set as 255, aging will stop.

Press **I** to return to previous interface.



2.11.9 Machine Aging

<p>in test mode, select “machine aging” and press S to enter.</p> <p>Then, press ▲ or ▼ to select the item for modification. Press + or - to set the value of current item. Press S to start aging. At this time, LED light on the panel will be on. Press P to stop aging.</p> <p>Press I to return to previous interface. During aging, user need press P to stop aging first before he can press I to quit.</p>	<p>The LCD screen shows the following settings:</p> <ul style="list-style-type: none"> A: Aging Time (005s) B: Pattern Display (PatNo: 02) C: Interval Time (002s) D: Swing Width (4.0) E: Trimming Setting (1000) <p>Below the screen are seven buttons:</p> <ul style="list-style-type: none"> A: Up arrow B: Plus sign C: Pattern icon D: Down arrow E: Minus sign F: Left arrow G: Right arrow
--	--

Function Description:

A	Aging Time	Display and set the time of aging operation
B	Pattern Display	Display and set the pattern for aging operation
C	Interval Time	Display and set the interval time of aging
D	Pattern Number Display	Display and set the pattern number for aging operation
E	Swing Width Display	Display and set the value of swing width
F	Trimming Setting	Display and set whether there is trimming action

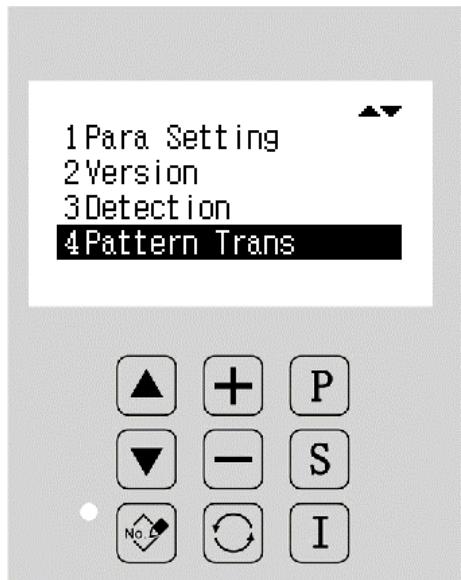
2.11.10 Pattern Transfer

- Two transfer methods: “from panel to U disk” and “from U disk to panel”
- Used to import or export self-edit patterns, self-edit front backstitch and self-edit rear backstitch.
- Support data format of VDT, VDTD.
- Patterns need be put within the file folder named DH_PAT under the root directory of U disk in order to be imported or exported.
- Patterns need naming by numbers between 201~221.
- Up to 20 patterns can be imported.
- When patterns are exported to U disk, patterns will be named in the form of “BAK_2XX” in

order to make distinction. If such patterns need importing again, they shall be renamed as “2XX”.

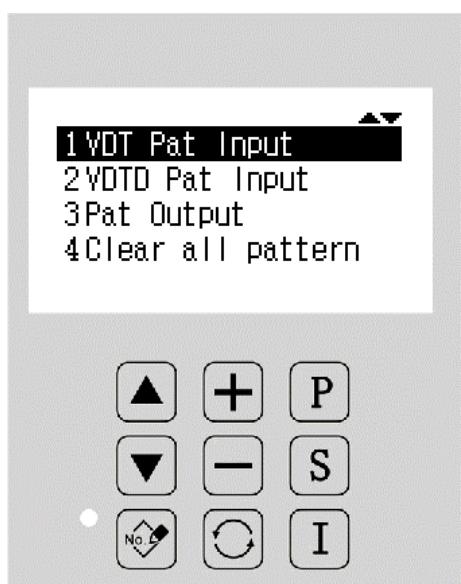
1. Enter pattern transfer

In information function mode, press  or  to select “pattern transfer” and then press  to enter.



2. Transfer type description

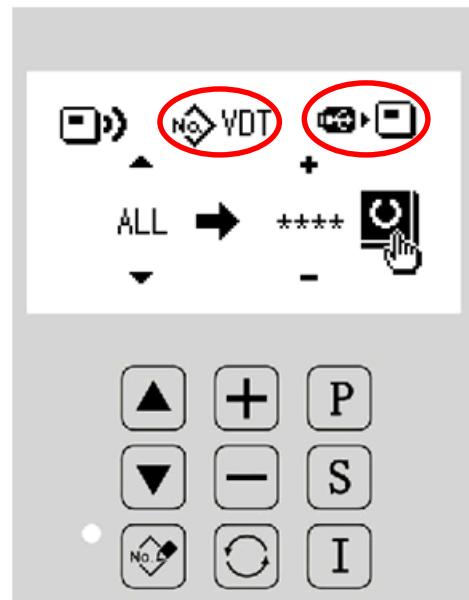
- ① VDT pattern input: import patterns of VDT format
- ② VDTD pattern input: import patterns of VDTD format
- ③ Export patterns to U disk: export imported external patterns to U disk
- ④ Clear all imported patterns: delete all the external patterns that have been imported

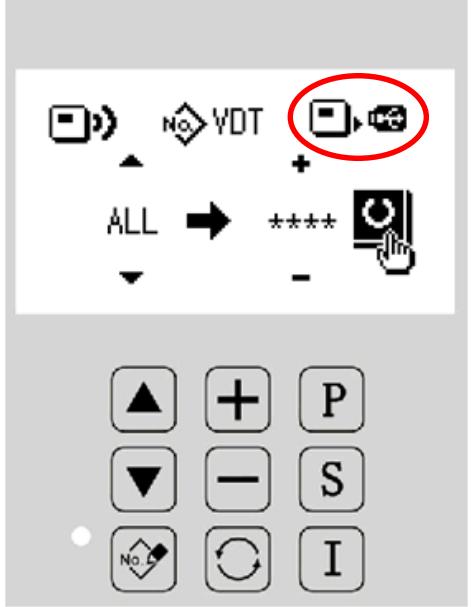


Operation Instructions:

1. Pattern Input

- ① Put patterns within the file folder named DH_PAT under the root directory of U disk;
- ② Enter pattern transfer interface, where press or to select “pattern input of VDT format” or “pattern input of VDTD format” according to the pattern format, and then press to enter. At this time, the system will automatically test whether there are pattern files in U disk; if not, the system will report error;
- ③ in pattern input interface, press or to select the pattern to be imported. When “ALL” is displayed, it means all patterns in U disk can be imported. Under default setting, the imported patterns will be saved in the panel by the same pattern numbers, unless user may press or to modify the pattern numbers to be saved in the panel;
- ④ After selecting the patterns to be imported, press to start importing. During transfer, the pattern name UXXX will disappear and when it appears again, it means the transfer is completed.



<h2>2. Pattern Output</h2> <p>① If any external patterns is stored in the panel, user can enter the pattern transfer mode, select “export patterns to U disk” and press S to enter pattern output interface. The system will automatically test whether there is any imported pattern saved in panel; if not, the system will hint no pattern in memory;</p> <p>② After entering pattern output interface, press ▲ or ▼ to select the pattern to be exported. When “ALL” is displayed, it means all patterns can be exported to U disk. Under default setting, the exported patterns will continue to have the same pattern number, but user may press + or - to modify the pattern number to be saved in U disk;</p> <p>③ Select the pattern to be exported and press S to start exporting. During transfer, the pattern name UXXX will disappear and when it appears again, it means the transfer is completed.</p>	
<h2>3. Pattern Clearance</h2> <p>① In pattern transfer interface, press ▲ or ▼ to select “clear imported patterns”;</p> <p>② Press S and system will hint “clearing data...”</p> <p>③ After clearing data, system will automatically jump to the information selection interface.</p>	

[Note 1] When copying patterns, those with the same pattern numbers will be covered.

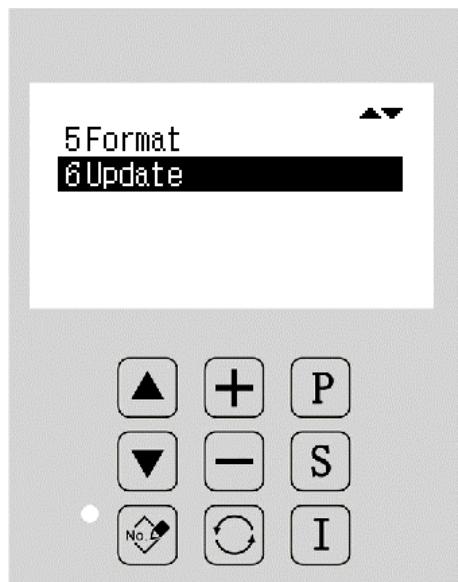
[Note 2] When user selects to clear patterns, all imported external patterns will be deleted. If

user need delete single pattern, please refer to 2.4.2 on how to delete self-edit patterns.

2.11.11 Software Upgrade

1. Enter software upgrade mode

In information function mode, press  or  to select “software upgrade” and press  to enter.



2. Upgrade Instructions

Software upgrade file shall be put under the ‘update’ category of U disk.

Press  or  to select the software to be updated, and press  to update.

[Note] In case of upgrade of panel software, user need press ,  and  at the same time after power on.



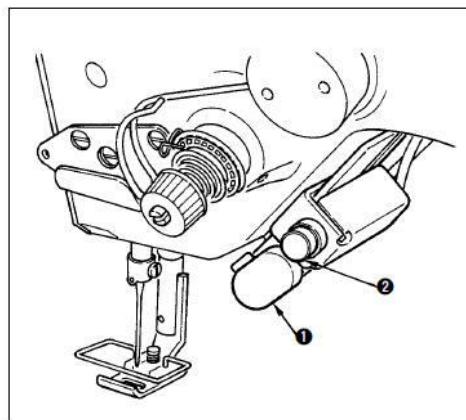
2.12 Manual Switches

3) Reverse Feeding Switch ①

After user presses and holds the reverse feeding switch ①, the machine will feed the cloth reversely. Release to return to normal feeding.

4) Symmetric Sewing Switch ②

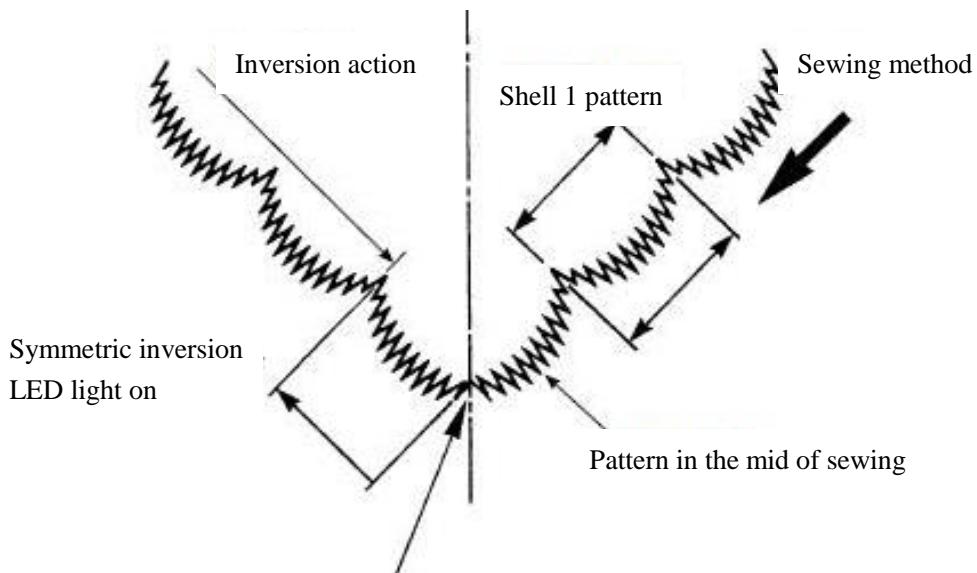
When user selects falbala, random pattern or continuous sewing, this switch will function as symmetric sewing switch.



Symmetric Inversion: when machine stops at the middle of sewing, user can press the symmetric inversion switch to sew the mirror image of the pattern.

Sewing Method:

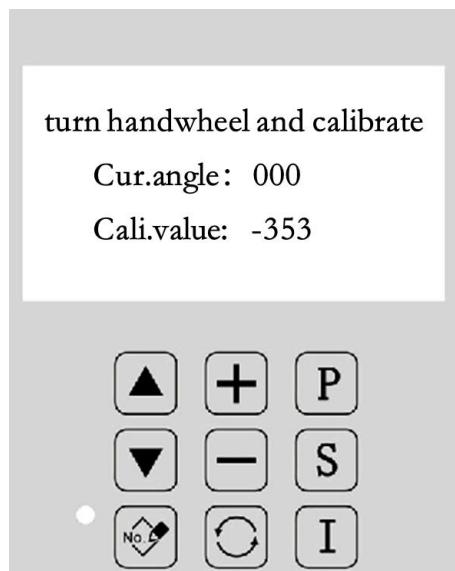
- 5) During the sewing, stop the machine at the position for symmetric inversion sewing.
- 6) Press the symmetric inversion switch ②. After the switch is pressed, the LED will be on. (The switch only functions when machine stops, and it will become useless at running.)
- 7) Use the machine to do the symmetric inversion sewing.
- 8) Cut the thread or press the symmetric inversion switch again to end the sewing.



3 Appendix 1

3.1 Instructions on Calibration after Power-on

If the main shaft motor is integrated motor, when the control system is used for the first time or operation to restore default parameters is made, the system will automatically enter main shaft calibration interface after power-on.



The calibration of the main shaft motor will be made in this interface, where current main shaft angle and calibration value will be displayed. Please rotate the wheel to make the calibration. Please refer to 2.11.7 for detailed introduction.

The main shaft angle must be calibrated for the first use, and otherwise normal sewing operations cannot be done.

3.2 Error Information List

No.	Fault	Solutions
E-003	Head tilt	Check the installation and position of the head turnover switch.
E-004	Main voltage (300V) is too low	Check the stability of the power supply and the condition of the voltage.
E-005	Main voltage (300V) is too high	Check the stability of the power supply and the condition of the voltage.
E-007	IPM over-voltage or over-current	4、Check whether the main shaft is stuck or the main shaft and lower shaft are too heavy; 5、Check the main shaft motor; 6、Check the control system.
E-008	Voltage of assistant device (24V) is too high	3、Pull out the cables of solenoid and fun one by one to check whether there is problem with solenoid; 4、Check the control system.
E-009	Voltage of assistant device (24V) is too low	1. Pull out the cables of solenoid and fun one by one to check whether there is problem with solenoid; 2. Check the control system.
E-013	Encoder fault or disconnection	Check the connection of the encoder cable and whether the connection port is correct.
E-015	Beyond Sewing Range	Check whether the set sewing range matches the actual pattern range.
E-016	Needle Rod Up Position Error	4、Main shaft position is not correct. Please turn the hand wheel to adjust the needle rod position until error is released. 5、Check the connection of main shaft motor encoder. 6、Check the main shaft motor.
E-025	X Origin Test Error	4、Check the connection of the needle swing motor. 5、Check the installation of the needle swing motor. 6、Check the needle swing motor.
E-026	Y Origin Test Error	3、Check the connection of the cloth-feeding motor. 4、Check the installation of the cloth-feeding motor. 5、Check the cloth-feeding motor.
E-030	Stepping Drive	3、Check the connection between main control and

No.	Fault	Solutions
	Communication Error	stepping drive. 4、Check the control system.
E-034	Abnormal Current	4、Check whether main shaft is stuck or too heavy; 5、Check the main shaft motor. 6、Check the control system.
E-035	IPM Frequent Over-current 1	3、Check the main shaft motor. 4、Check the control system.
E-036	IPM Frequent Over-current 2	1. Check whether main shaft is stuck or too heavy; 2. Check the main shaft motor. 3. Check the control system.
E-037	Motor Stalling 1	1. Check whether main shaft is stuck or too heavy; 2. Check the main shaft motor. 3. Check the control system.
E-038	Motor Stalling 2	1. Check whether main shaft is stuck or too heavy; 2. Check the main shaft motor. 3. Check the control system.
E-039	Motor Over-speed	4、Check the connection of main shaft motor. 5、Check the main shaft motor. 6、Check the control system.
E-040	Machine Stop Over-current	1. Check the main shaft motor. 2. Check the control system.
E-060	Stepping Over-current 1	4、Check the connection of needle swing motor. 5、Check the needle swing motor. 6、Check the control system.
E-061	Stepping Over-current 2	1. Check the connection of cloth-feeding motor. 2. Check the cloth-feeding motor. 3. Check the control system.
E-064	Stepping Position Error 1	5、Check whether the swing needle is stuck or too heavy. 6、Check the connection of the needle swing motor. 7、Check the needle swing motor. 8、Check the control system.
E-065	Stepping Position Error 2	1. Check whether the cloth-feeding mechanics is stuck or too heavy. 2. Check the connection of the cloth-feeding motor. 3. Check the cloth-feeding motor. 4. Check the control system.
E-201	Pattern Data Error	In case of data missing or error of self-edit patterns, such patterns need re-importing.

No.	Fault	Solutions
E-202	Byong Sewing Range at Left Border	Wrong setting of pattern parameters, check the set value of parameters P1-0, P1-1, P1-2, P1-3 and P1-4
E-203	Byong Sewing Range at Right Border	Wrong setting of pattern parameters, check the set value of parameters P1-0, P1-1, P1-2, P1-3 and P1-4
E-204	Beyong Swing Width Limits	Wrong setting of pattern parameters, check the set value of parameters P1-0, P1-1, P1-2, P1-3 and P1-4
E-205	Beyong Stitch Length Limits	Check whether the stitch length is over 12.7mm, which shall be within 12.7mm.
E-206	Beyong Feeding Limits	Check whether the set feeding stitch length is beyond the limits of P1-5 and P1-6.
E-207	Beyond Speed Limits	Check whether the set speed is beyond the limits of P3-3 and P11-0.
E-209	Beyond Stitch Number Limits	The total stitch number of selected pattern is too large and need reducing.
E-210	Beyond Stitch Number Limits of Backstitch	If the total stitch number of backstitch is over 64, please reduce the total number.
E-211	No Pattern File	In case of pattern update, no pattern is found in U disk. User need check whether there is any pattern in U disk and whether patterns are named correctly and put within the right file folder.
E-212	No Memory Pattern	There is no registered pattern found. User need re-register patterns.
E-213	Beyond Overlap Stitch Number Limits	The stitch number for overlap sewing is too large and needs reducing.
E-214	VDT File Name Error	Error is found when VDT file is read. User need modify the file and check the file format.
E-215	VDT Start Code Error	Error is found when VDT file is read. User need modify the file and check the file format.
E-217	Panel and Main Control Communication Delay	Check the connection between panel and main control.
E-218	Panel and Main Control Software Disagreement	When the panel software disagrees with the main control software, user need update the main control or panel software.
E-219	Panel and Main Control Type Disagreement	When the panel software disagrees with the main control software, user need update the main control or panel software.
E-220	Counter Full	When the counter reaches the set value, press RETURN to clear. Otherwise, user need modify the counter parameters.
E-222	No U Disk Found	In case of software upgrade or pattern transfer, if U disk is not found, user need check the connection of U disk and the condition of U disk.
E-223	Pattern Data Error	If no pattern file is found during pattern upgrade,

No.	Fault	Solutions
		please check the pattern files in U disk.
E-225	Memory Full	There is no memory left for more patterns. Deletion shall be made before transfer.
E-226	File Write-in Failure	In case of pattern output, data fails to be stored in U disk. User need check the connection or the condition of U disk.

3.3 TASC300 System Diagram

