

# SIRUBA

使用説明書

INSTRUCTIONS BOOK

■ ASL-PSM103 SX/GD



## 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

## **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.











## 安全注意事项






### 1. 安全操作的标志及含义

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

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

### 2. 安全注意事项

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

<b>缝纫</b>	
	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。
<b>维护和检查</b>	
	只有经过训练的技术人员才能进行缝纫机的维修、保养和检查。
	与电气有关的维修、保养和检查请及时与电控厂家的专业人员进行联系。
	发生下列情况时，请关闭电源并拔下电源插头。否则误按启动开关时，会导致受伤。 1. 检查、调整和维修    2. 更换弯针、切刀等易损零部件
	在检查、调整和修理任何使用气动设备之前，请先断开气源，并等压力表指针下降到“0”为止。
	在必须接上电源开关和气源开关进行调整时，务必十分小心遵守所有的安全注意事项。
	未经授权而对缝纫机进行改装而引起的缝纫机损坏不在保修范围内。










## Safety Matters for Attention

















### 3. Signs & 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:

 <b>Danger</b>	The incorrect operation due to negligence will cause the serious personal injury or even death.
 <b>Caution</b>	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

 <b>Danger</b>	
	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.
 <b>Caution</b>	
<b>Usage Environment</b>	
	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.
<b>Installation</b>	

	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.
<b>Sewing</b>	
	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.
<b>Maintenance &amp; Inspection</b>	
	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.

# 目录

1 概要说明 .....	1
1.1 概述 .....	1
1.2 功能和参数 .....	1
1.3 安全使用注意事项 .....	2
1.4 使用上的预防措施 .....	3
2 操作界面介绍 .....	5
2.1 模板机操作界面介绍 .....	5
2.1.1 主界面 P1 .....	5
2.1.2 主界面 P2 .....	6
2.1.3 主界面 P1-多目录状态 .....	6
2.2 主界面 P1 说明 .....	7
2.2.1 车缝物料厚度设定 .....	8
2.3 主界面 P2 说明 .....	9
2.3.1 绕线模式 .....	10
2.3.2 计数器功能说明: .....	11
3 模板机功能操作说明 .....	12
3.1 便捷基准操作 .....	12
3.1.1 进入基准操作界面 .....	12
3.1.2 双基准 .....	13
3.2 花样读取 .....	13
3.2.1 进入花样读取界面 .....	13
3.2.2 读取模式选择（内存或 U 盘） .....	15
3.2.3 花样显示及选取 .....	16
3.2.4 读取花样 U 盘导入 .....	17
3.2.5 跳转到非标准格式花样 .....	18
3.3 花样保存 .....	18
3.3.1 进入花样保存模式 .....	18
3.3.2 设定名称和号码 .....	18
3.4 参数设定 .....	19
3.4.1 进入功能参数设定 .....	19
3.4.2 参数设定更改方法 .....	19
3.4.3 参数的还原与备份 .....	20
3.4.4 参数表 .....	21
3.5 检测模式说明 .....	32
3.5.1 液晶检测 .....	33
3.5.2 触摸屏校正 .....	33
3.5.3 输入信号检测 .....	33
3.5.4 速度检测 .....	34
3.5.5 输出信号检测 .....	35
3.5.6 连续运转 .....	36

3.5.7XY 马达原点检测.....	36
3.5.8 主轴马达安装角度调整 .....	36
3.5.9 网络设定 .....	37
3.5.10 中压脚检测 .....	37
3.5.11 压框/剪线电机检测 .....	38
3.5.12 RFID .....	38
3.6 功能设定说明 .....	38
3.6.1 图形传输 .....	40
3.6.2 图形连接 .....	42
3.6.3 软件版本查询 .....	43
3.6.4 还原备存 .....	43
3.6.5 默认参数 .....	43
3.6.6 花样快捷键管编辑 .....	44
3.6.7 报警记录 .....	44
3.6.8 运转记录 .....	45
3.6.9 时间设置 .....	45
3.6.10 升级软件 .....	46
3.6.11 功能快捷键设置 .....	46
3.7 RFID 操作说明 .....	47
3.7.1 RFID 的使用说明 .....	47
3.7.2 RFID 的设定方法 .....	48
4 附录 1 .....	49
4.1 报警信息一览表.....	49
4.2 提示信息一览表.....	54
5 附录 2 .....	60
5.1 电控箱尺寸 .....	60
5.2 操作箱 .....	62
5.3 MASC447-2H-AF-MBJ 控制系统框图.....	63

# CONTENTS

1 GENERAL INFORMATION .....	1
1.1 OVERVIEW .....	1
1.2 FUNCTIONS AND PARAMETERS .....	1
1.3 MATTERS FOR SAFE USING.....	2
1.4 PREVENTIVE MEASURES IN USE.....	3
2 OPERATION INTERFACE INTRODUCTION .....	5
2.1 OPERATION INTERFACE.....	5
2.1.1 Main Interface P1 .....	5
2.1.2 Main Interface P2 .....	5
2.1.3 Main Interface P1 – Catalogue Mode .....	6
2.2 INSTRUCTIONS ON MAIN INTERFACE P1.....	6
2.2.1 Sewing fabric thickness setting.....	7
2.3 INSTRUCTIONS ON MAIN INTERFACE P2.....	9
2.3.1 Winding Mode .....	10
2.3.2 Instructions on Counter.....	10
3 FUNCTION OPERATION INSTRUCTIONS .....	12
3.1 MODIFY SEWING START .....	12
3.1.2 double benchmark.....	13
3.2 LOAD PATTERN .....	13
3.2.1 Enter the Interface to Load Pattern .....	13
3.2.2 Select mode of loading (from memory or U disk).....	15
3.2.3 Pattern Display and Selection .....	16
3.2.4 Load Pattern from U Disk.....	17
3.2.5 Jump to Patterns of Non-standard Format .....	18
3.3 SAVE PATTERN .....	18
3.3.1 Enter Pattern Saving Mode.....	18
3.3.2 Set Name and Number.....	18
3.4 PARAMETER SETTING .....	19
3.4.1 Enter Function Parameter Setting .....	19
3.4.2 Parameter Modification Method.....	19
3.4.3 Recovery and Back-up of Parameters.....	20
3.4.4 Parameter List.....	21
3.5 TEST MODE .....	33
3.5.1 LCD Test .....	34
3.5.2 Touch Screen Correction .....	35
3.5.3 Input Signal Test.....	35
3.5.4 Speed Test.....	36
3.5.5 Output Signal Test.....	36
3.5.6 Continuous Running .....	37
3.5.7 XY Motor Origin Test .....	38

3.5.8 Main Shaft Motor Installation Angle Adjustment .....	38
3.5.9 Network Setting .....	39
3.5.10 Intermediate Presser Test.....	39
3.5.11 Frame-pressing/thread-trimming Motor Test .....	40
3.5.12 RFID .....	40
3.6 FUNCTION SETTING .....	40
3.6.1 Data Transfer .....	42
3.6.2 Pattern Connection.....	44
3.6.3 Software Version Inquiry.....	45
3.6.4 Back-up Recovery .....	45
3.6.5 Default Parameter .....	45
3.6.6 Hotkey Management.....	46
3.6.7 Alarm Record.....	46
3.6.8 Running Record .....	47
3.6.9 Time Setting.....	48
3.6.10 Software Update .....	48
3.6.11 Function Hotkey Setting .....	49
3.7 RFID OPERATION INSTRUCTION.....	49
3.7.1 RFID Operation instruction .....	49
3.7.2 RFID Setting Method .....	50
4 APPENDIX 1.....	52
4.1 ERROR LIST .....	52
4.2 HINT MESSAGE LIST.....	55
5 APPENDIX 2.....	62
5.1 INSTALLATION SIZE OF CONTROL BOX.....	62
5.2 CONTROL PANEL .....	64
5.3 MASC447-2H-AF-MBJ CONTROL SYSTEM DIAGRAM .....	65

## 1 概要说明

### 1.1 概述

本系列工业缝纫机电脑控制系统，主轴电机采用具有世界先进水平的交流伺服控制技术驱动，具有力矩大、效率高、车速稳定和噪音低等特点。操作面板设计多样化可以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 功能和参数

控制器型号	模板机
缝制范围	X(左右)Y(方向) ASC44X: 1200 (mm) x 750(mm)
最高缝纫速度	3000rpm (间距 3mm 以下时)
缝迹长度	0.1~12.7mm, (最小分辨率 0.1mm)
压脚送布	间断送布 (脉冲马达双轴驱动方式)
针杆行程	40~41.2mm
使用机针	DP×5、DP×17
外压脚上升量	标准 18mm 最大 22mm (气动式最大 25mm)
中压脚	气动 (可选步进电机)
中压脚上升量	22mm
旋梭	半旋转倍旋梭
花样数据存储	内存/U 盘
暂停功能	在缝制途中可以让缝纫机停止
放大、缩小功能	可以选择缝迹缝制花样时, 可以独立地放大缩小 X、Y 轴。 10.0%~400.0% (0.1%单位)
放大、缩小方式	增减缝迹长度/增减花样针数方式
缝纫速度限制	200~3000rpm
花样选择	模板识别和花样号选择
加计数器	不计数/按花样计数/按循环计数方式 (0~99999)
减计数器	不计数/按花样计数/按循环计数方式 (0~99999)
缝纫机马达	伺服马达
针杆上死点停止功能	缝制后, 可以让针杆返回到上死点位置。
额定功率	600W
使用温度范围	0℃~45℃
使用湿度范围	35%~85% (无结露)
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，请务必必要关电。
- 请使用正厂的零件。

#### ● 其它的安全对策



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

#### ● 废弃处理

- 请以一般产业废弃物处理。




#### ● 警告示意和危险示意

- 错误的行为可能会发生危险，其程度如后述的标示区别说明。

 <b>警告</b>	错误的行动可能会发生重伤或死亡	 <b>注意</b>	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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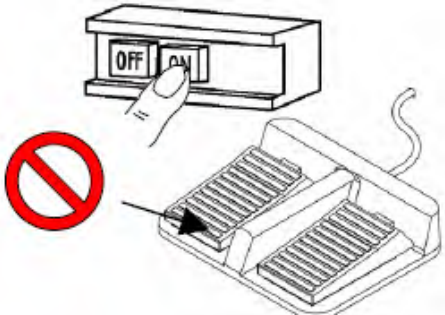
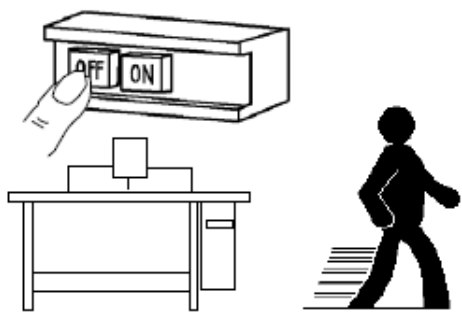
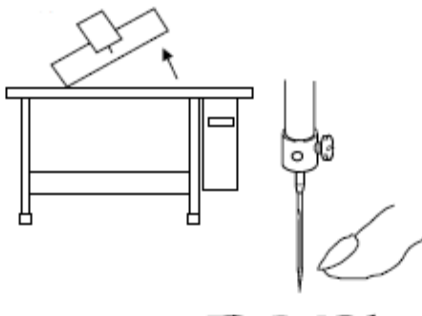
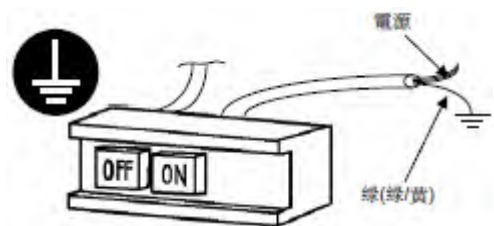
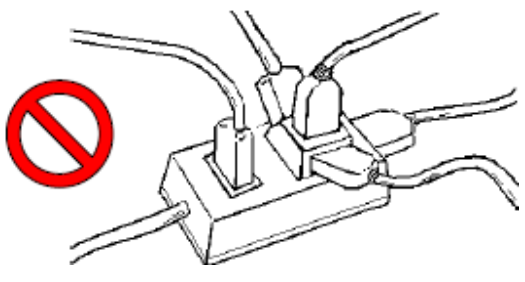
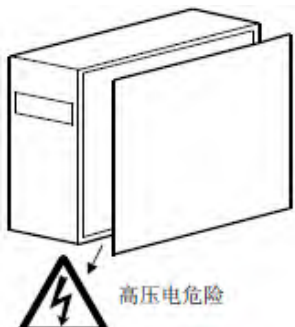
- 标示符号的表示如下说明。

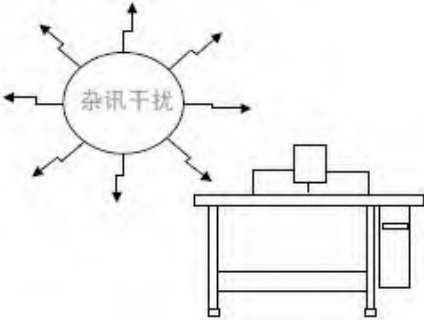
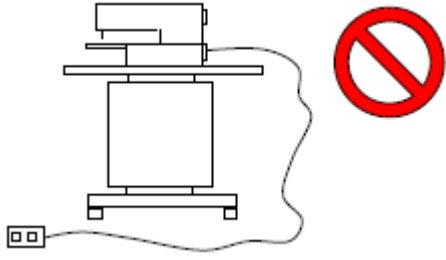
	请遵照指示内容作业		注意高压电（电击）的危险
---	-----------	---	--------------

	<p>注意高温</p>		<p>务必接上接地线</p>
	<p>绝对不要执行</p>		

### 1.4 使用上的预防措施

#### 警告

<p>1、当手要按开关 [ON] 时，脚定要离开脚踏板。</p> 	<p>2、要离开工作岗位时，请务必关掉电源。</p> 
<p>3、如要横倒头部或更换机针或穿面线时，请务必关掉电源。</p> 	<p>4、接地线要做好接地。</p> 
<p>5、不要用家庭用多插孔式延长线。</p> 	<p>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。</p> 
<p>7、更换电机后，请务必参照本资料所示设置主轴电机安装角度。</p>	<p>8、请远离会产生高周波噪声干扰的机器。</p> <p>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。</p>

	
<p>10、用户在使用过程中应该注意避免使用尖锐的物体触碰屏幕，以免对触摸屏造成永久性损伤。</p>	

## 2 操作界面介绍

### 2.1 模板机操作界面介绍

模板机功能按键采用业界公认的标识，采用国际化通用语言，方便用户识别。

#### 2.1.1 主界面 P1



图标显示

文本显示

文本界面与图标界面转换（仅语言模式为中文时可切换）：

##### (1) 文本界面转换成图标界面

依次按下列功能键 **菜单** → **功能模式** → **面板设定**，找到主界面按钮风格设置栏，按 **↑**、**↓** 可设置主界面 P1 的文本和图标的显示风格。



##### (2) 图标界面转换成文本界面

若开机显示为图标界面，切换为文本界面的操作方法：

依次按下列功能键 **MENU** → **Function** → **Function**，之后同上述操作方式操作即可。



文本按钮风格与图标按钮风格转换：

##### (1) 文本按钮风格转换成图标按钮风格

依次按下列功能键 **菜单** → **功能模式** → **面板设定**，找到文本按钮风格设置栏，按 **↑**、**↓** 可设置目录模式的文本和图标风格。





## (2) 图标按钮风格转换成文本按钮风格

若开机显示为图标界面，切换为文本界面的操作方法：

依次按下列功能键  →  → ，之后同上述操作方式操作即可。



## 2.1.2 主界面 P2



主界面 P1 按下  或 ，进入主界面 P2 界面。



图标显示

文本显示

## 2.1.3 主界面 P1-多目录状态

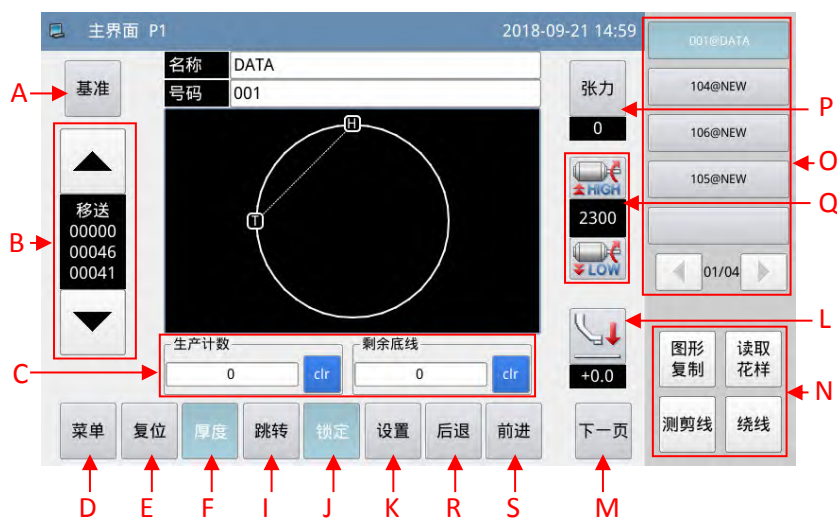
按下主界面 P1 的  或  键，显示出多目录的状态栏。








图标显示

文本显示

## 2.2 主界面 P1 说明



### 功能说明:

标号	功能键	功能键说明
A	修改起缝点	修改起缝点
B	花样针数显示和前移/后移键	缝制资料针数信息显示和试缝操作。
C	生产计数和剩余底线计数	生产计数：累积记录缝制件数，可以通过清除键  把显示内容清零，然后重新开始计数。 剩余底线计数：显示剩余底线（针数）。
D	目录键	打开多类目功能键
E	回原点键	回原点
F	设定中压脚	设定物料厚度
I	快速移动设定键	设置跳转到指定针数
J	启用/关闭模板识别键	 模板识别功能启用，此时禁止手动切换花样。  关闭模板识别，手动切换花样。
K	快捷参数	可设置参数： P1 起缝加固参数 P2 起缝加固针数 P3 结束加固方式 P4 底线报警针数 P5 取消范围保护
L	中压脚移动	按下后中压脚会根据箭头方向移动。  ：按下后中压脚上升  ：按下后中压脚落下
M	进入主界面 P2	按下按钮后此时屏幕显示第主界面 P2

N	快捷功能键设置	用户可自行设置 4 个常用的功能按键
O	花样号码快捷键	显示最近使用过的花样号码，最多可存储 40 个。 选择一个花样号码键按下后会改变当前缝制资料。
P	线张力设定	显示线张力的基准值，按下后进行设置。
Q	主轴转速	设置主轴转速
R	后退	后退
S	前进	前进

### 2.2.1 车缝物料厚度设定

中压脚下降时的高度（最低点位置）是可以修改的，比如出厂时所设置的中压脚最低点位置比实际缝制物料厚度低时，可使用该机能进行修正。


**【注】**如果当前中压脚位置在下时进入该界面，会提示「升高中压脚」。

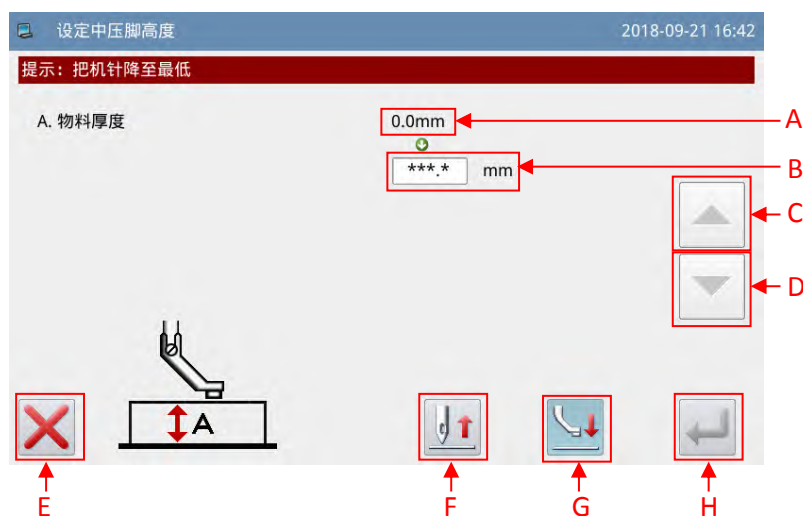
**【注】**进入物料厚度设置界面后，只有中压脚落下时才能够设置。

**【注】**设置范围是 0.0~8.0mm。

提示：





只有中压脚是电机驱动才可以设定物料厚度,气缸驱动机型没有此功能。

主界面 P1 下，按下  键，进入中压脚高度设定界面。




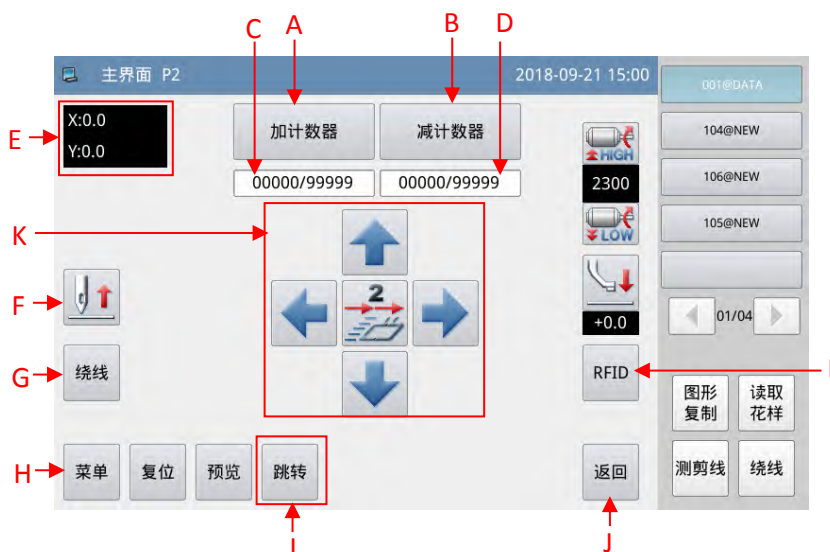
功能说明：

序号	说明
A	中压脚当前高度显示
B	中压脚设置高度显示
C	中压脚高度增加键 中压脚会随动，每次增加 0.2mm
D	中压脚高度减小键 中压脚会随动，每次减小 0.2mm

E	退出当前界面，返回前一画面。
F	上下移动缝针。  : 针下降  : 针上升
G	按下后中压脚会根据箭头方向移动。  : 中压脚上升  : 中压脚落下
H	保存并退出

### 2.3 主界面 P2 说明

主界面P1按下 ，进入主界面P2界面。




#### 功能说明:

序号	功能	内容
A	加计数器设置键	进入加计数器设置界面。
B	减计数器设置键	进入减计数器设置界面。
C	加计数器值	显示内容为加计数器当前值/设定值。
D	减计数器值	显示内容为减计数器当前值/设定值。
E	X,Y 坐标值	显示当前 X, Y 坐标值。

F	机针位置调整键	 : 使针下降  : 使针上升
G	绕线模式	进行绕线设置
H	目录键 (MENU 键)	打开后显示多类功能目录
I	功能按键	跳转指定针数设置
J	返回键	返回主界面 P1
K	调整移框速度	可调整移框速度
L	RFID	扫码识别器

### 2.3.1 绕线模式

要绕线芯时必须进入到此界面（在主界面P2里按下绕线芯键时，中压脚会降下）。踏一下外压板开关使外压板降下，然后踏下运转开关时，缝纫机就依设定的速度转动，而X-Y移动轴不会移动，脚放开运转开关时，缝纫机就停在上停位置。

**【注】**绕线芯的动作是由操作设定模式下的「绕线芯」参数的设定而执行。（参照【3.4.5 参数设定表】中参数说明）



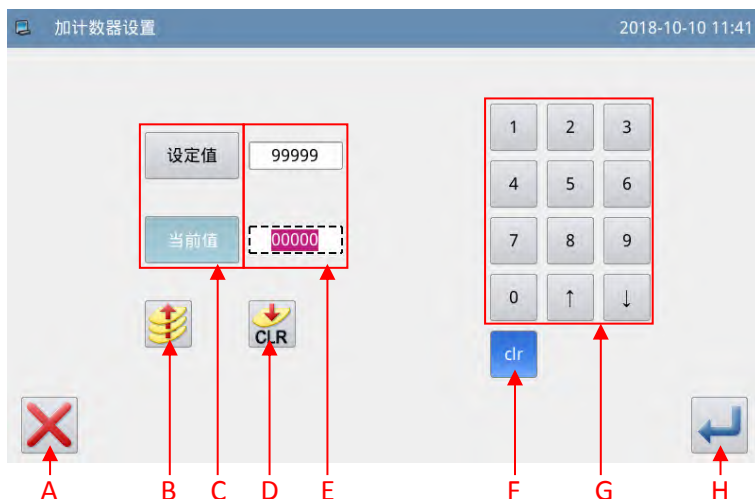
功能说明:

序号	说明
A	绕线芯设定速度显示。 <b>【注】</b> 由参数「绕线芯」->「绕线速度设置」决定。
B	实际绕线速度显示。
C	绕线芯操作方式显示。
D	绕线时间设定时间显示
E	绕点时间剩余时间显示

### 2.3.2 计数器功能说明:


主界面 P2 下按下加计数器设置键  进入到加计数器设置界面。

**【注】**加/减计数器计数方式是由操作设定模式下的「计数器」参数决定的（参照【3.4.5 参数设定表】中参数说明）。



#### 功能说明:

序号	说明
A	退出计数器设置模式，返回上一级画面。
B	加计数器有效开关（蓝色底色时为有效状态）。
C	切换输入设定值和当前值（蓝底白字为选中状态）。
D	清除当前值。
E	设定值和当前值显示（虚线框表示处于输入状态）。
F	清除当前输入数值。
G	数字键盘，用于输入设定值和当前值。
H	确定设置。

**【注】**减计数器设置操作同加计数器操作，仅仅是减计数器有效/无效键图标不同（）。


### 3 模板机功能操作说明

本章模板机功能操作说明主要介绍模板机常用的功能按键操作，主要包括：花样读取、花样保存、功能参数设定、检测模式说明、功能设定说明。



#### 3.1 便捷基准操作

##### 3.1.1 进入基准操作界面

在主界面 P1 界面上按基准键 ，可打开基准操作界面，如下图。



序号	作用
A	可沿试缝轨迹前进或后退
B	花样显示
C	回到前一画面
D	显示图形
E	放大图形，有 x1,x2,x3,x4,四个放大倍数

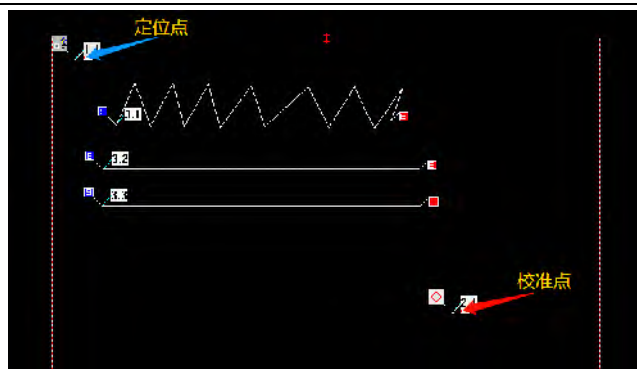
F	中压脚上升或下降
G	取消
H	确定
I	起缝点针位和光标位置
J	移动光标位置

### 3.1.2 双基准

双基准可以分基准一、基准二。

基准一主要是对模板进行定位功能，可对模板花样进行平移；（常用）

基准二可在模板做的不标准时进行手动校准，可对模板花样进行旋转或者缩放；



#### 通过 pds 制作双基准花样的方法：

自动：制作 DXF 花样时，如果有小于等于半径 1mm 红色圆，pds 转换花样时会将之自动转换成校准点（基准二）。如果有小于等于半径 1mm 蓝色圆，pds 转换花样时会将之自动识别为定位点（基准一）。

手动：pds 在花样上画一个圆，右键点击圆心可根据弹出菜单项确认该圆心是校准点还是定位点。


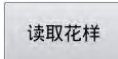
花样导入操作头后，在主界面直接进入修改起缝点界面，如果没有基准二（校准点），就正常移动到起缝点流程，如果有基准二（校准点），会将其基准二（校准点）用红色标出，操作头的界面右下角可以选择直接跳转到基准二（校准点）的位置，然后通过方向键微调；

基准一（定位点），即我们需要校对基准的点；花样导入操作头后，在主界面直接进入修改起缝点界面，如果存在基准一（定位点），会移动到基准一（定位点）位置，通过方向键进行微调，如果没有此基准一（定位点），就正常移动到起缝点流程通过方向键微调；

**备注：如果导入操作头内的花样存在基准一（定位点），但修改时会自动移动到起缝点位置修改，需要将菜单=操作设定=其他=（RFM）起缝点修改基准设置=（2H）次原点**

## 3.2 花样读取




### 3.2.1 进入花样读取界面






在主界面 P1 界面上操作目录键 ，即打开多类目录模式，然后再按下写存图形资料键 ，如下图为花样读取模式界面。

**【注】**如果不在原点位置，是无法读取图形资料的，请先执行回原点操作。




## 功能按键说明:

序号	功能	内容
A	页数显示	显示内容为当前页码/总页数
B	花样列表	显示已存花样列表（显示号码和名称） 【注 1】如果选择了其它格式花样，会显示提示信息进行花样格式转换。 【注 2】如果选择花样针数超出范围或者数据损坏，会显示对应的提示信息不能选择该花样。
C	内存/U 盘对象显示	 : 内存花样列表  : U 盘花样列表 【注】: 默认每次进入该界面都是从内存读取花样。
D	剩余内存显示	显示内存中存储的花样总数
E	直接读取键	指定花样号码进入直接读取模式
F	删除键	删除指定花样 【注】当前缝制花样不能被删除。
G	排序键	按照修改时间或号码大小进行排序重新显示花样列表
H	返回主界面	直接返回主界面
I	花样图形显示键	花样预览
J	选择 U 盘文件夹	U 盘导入花样时，按下  键后，即可显示 U 盘下所有文件夹。
K	跳转到非标准格式花样	按下后选择花样会跳转到非标准格式区
L	翻页键	支持前后翻页查找界面
M	选择内存/U 盘	选择读取内存或者 U 盘花样

		 : 内存读取模式使能, 此时 U 盘读取模式禁止  : 内存读取模式禁止, 此时 U 盘读取模式使能  : U 盘读取模式使能, 此时内存读取模式禁止  : U 盘读取模式禁止, 此时内存读取模式使能  : 切换选择 U 盘或内存
N	确定键	确定操作, 操作成功后缝制花样会切换为新选择的花样

### 3.2.2 读取模式选择 (内存或 U 盘)

进入该界面是默认选择内存读取模式, 此时操作界面左上方显示 。



内存读取模式

通过切换键  切换到 U 盘读取模式, 此时操作界面上方显示 。




U 盘读取模式

#### 选择图号并确定

选择要缝制的图号然后按下确定键 , 选择成功后会直接返回到主界面。

**【注】** 未插入 U 盘时执行上述操作, 会显示「USB 盘已经拔出」的提示信息。

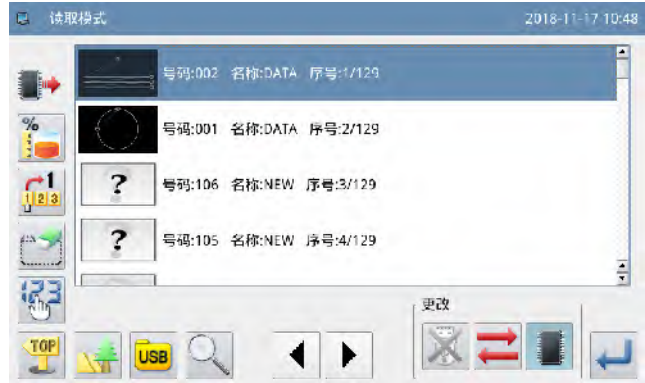
**【注】** 如果在当前界面下插入 U 盘, 需要 5s 左右的挂载时间, 挂载成功后按下  才能够进入 U 盘读取模式。只要不拔下 U 盘, 下次再进入 U 盘读取模式时就不再需要挂载时间。

**【注】** 如果从 U 盘读取花样时, 所选择的号码也同样在内存中存在的话, 会显示「是否覆盖内存中花样数





据」的提示信息，按照指定信息进行操作即可。

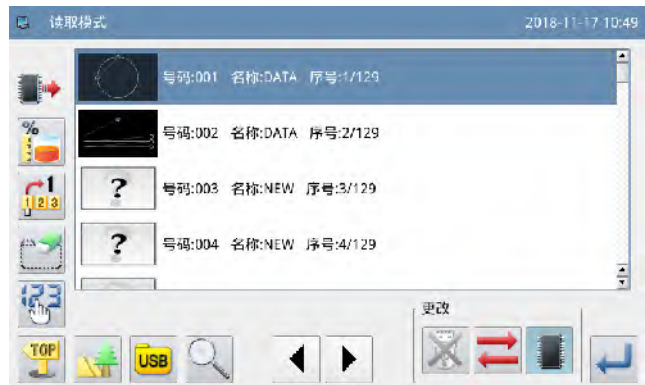
### 3.2.3 花样显示及选取

进入花样读取界面时，系统默认花样显示为按照花样的修改时间排列显示。



花样按照时间修改排列

此时按下 ，花样的显示形式则会变为按照花样序号由小到大的方式排列。如果花样比较多，可以通过翻页键   来翻阅画面，并且通过排序键  可以更直观的查阅花样列表。



样按照花样号码排列

**【注】** 花样信息显示设置：依次按下列功能键  →  → 

再通过翻页键   翻页找到花样选择显示风格项，按 、 可设置花样显示风格。



**【注】** 目前可以导入的花样格式有：NSP 格式、B 格式、BA 格式、VDT 格式、EMB 格式、DST 格式、DSB 格式、DSZ 格式、PLT、DXF、VDTD 和 NSPD 格式。

花样的显示风格可以分为两种：号码列表显示和花样形状显示。

【注】花样形状列表只能显示已使用过的花样形状。




号码列表显示

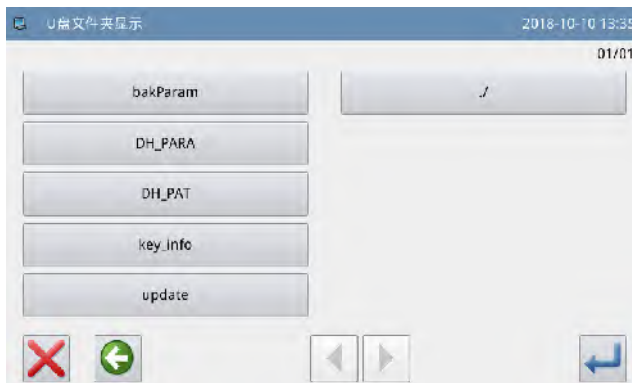


花样形状显示




### 3.2.4 读取花样 U 盘导入

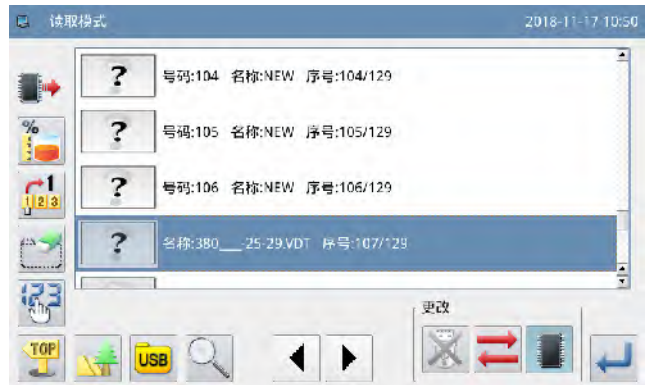
当有花样需要导入时，插入 U 盘后，按下

 键后，即可显示 U 盘下存入花样的所有文件夹。




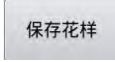
### 3.2.5 跳转到非标准格式花样

花样导入时，为了方便用户查找，按下  键后，花样选择会默认跳转到非标准格式花样下，按下翻页键  ，即可查找所需花样。方便用户对花样的查找。



## 3.3 花样保存

### 3.3.1 进入花样保存模式

在主界面 P1 界面上按下操作目录键 ，打开多类目录模式，然后再按下 （保存花样）功能模式键，进入花样保存模式。

**【注】** 如果不在原点位置，是无法写存图形资料的，请先执行回原点操作




将花样保存到本地



将花样保存到 U 盘

### 3.3.2 设定名称和号码

进入到花样保存模式后，对其名称和号码进行写入操作，设置时支持中文命名，通过键盘的 En 键切换，设置完成后按下 （确认键），完成并保存花样名称的命名，操作成功后直接返回到主界面。

**【注】** 一个花样可以自由选择号码进行存储。花样文件格式为：“花样号@花样名.nsp”。


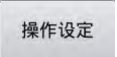
**【注】** 如果存入的花样号与已存花样号相同，操作中会显示「是否覆盖内存中花样数据」的提示信息，

不覆盖操作按下取消键 ，覆盖操作按下确定键 。

### 3.4 参数设定

本章主要介绍关于模板机常用参数、及参数的设定方法。


#### 3.4.1 进入功能参数设定

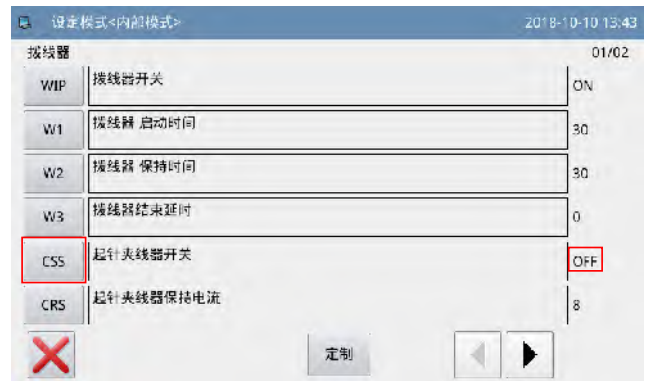
在主界面 P1（或 P2）界面上操作目录键 ，即打开多类目录模式，然后再按下操作设定键 ，进入功能参数设置界面，如下图所示





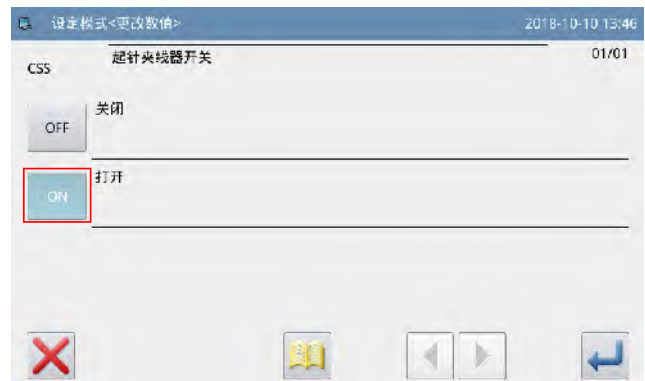
#### 3.4.2 参数设定更改方法

列举其中一项参数进行设定进行参考，如下：

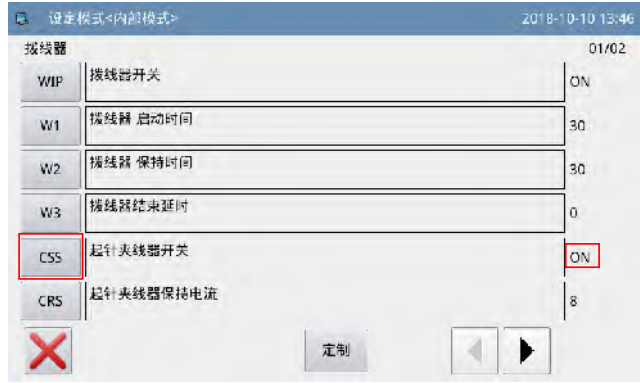
设定[拔线器]参数，按下  参数键，进入到【拔线器参数设置界面】，选取其中一项参数进行设置，此时【起针夹线器开关的状态】为【OFF】，打开状态。



按下  【起针夹线器开关】键选项，进入参数设置界面，选择想要更改的模式键【ON】，按下  【确认键】后，即可完成对相应参数的设定更改。


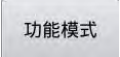


此时返回上一级界面后，【起针夹线器开关】的状态已更改为【ON】，完成参数的设置。



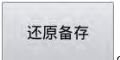
### 3.4.3 参数的还原与备份

#### (1)参数还原与备份的方法:

在主界面 P1 界面上操作目录键 ，即打开多类目录模式，然后再按下功能设定键 ，此时会进入到功能设定界面。




在功能设定界面下按下还原备存键



#### (2)、备存参数

进入还原备存参数界面，默认情况下是备份用户参数。

插入 U 盘之后按下确定键 ，一旦操作成功就会在 U 盘上自动建立一个「bakParam」目录，该目录下的「backup.param」文件即为参数备存文件。




【注】如有同档名文件的话会被盖写上新资料，

原有资料会消失掉。

还原参数操作需要按下后翻页键  切换到还原模式。

### (3)、还原参数

切换到还原模式后，按下确定键  即可执行参数还原操作，操作成功之后返回上一级画面。



## 3.4.4 参数表

### (1) 拨线器

代号	简述	详述	范围	出厂值
WIP	拨线器开关	拨线器(W)输出开关	0:OFF:拨线器 无效 1:ON:拨线器 有效	1
W1	拨线器 启动时间	拨线器(W)启动时间可以设定，根据剪线时序而设定，通常无需更改	0~998	30
W2	拨线器 保持时间	拨线器(W)保持时间可以设定，根据剪线时序而设定，需要时可以加长时间	0~998	80
W3	拨线器结束延时	拨线器动作后延时等待机构复位	0~255	100
CSS	起针夹线器开关	起针夹线器开关	0:OFF:关闭 1:ON:打开	0
CRS	起针夹线器保持电流	起针夹线器保持电流	0~16	8
WAM	拨线时机选择	拨线时机选择	0:UP:中压脚上拨线 1:MID:中压脚上拨线 (中压脚下降位置) 2:DOWN:中压脚下拨线	0
CTO	夹线器类型	夹线器类型选择	0:MCN:机械夹线 1:ELC:电子夹线	1
CBA	起针夹线开始角度	起针夹线开始角度	0~360	180
CEA	起针夹线结束角度	起针夹线结束角度	0~360	310
CTA	剪线夹线角度	剪线夹线角度	0~360	30
WSA	拨线开始角度	拨线开始角度	0~360	280

## (2) 起步慢针

代号	简述	详述	范围	出厂值
ST1	第一针启动速度	第一针启动速度	2~27	4
ST2	第二针启动速度	第二针启动速度	2~27	9
ST3	第三针启动速度	第三针启动速度	2~27	15
ST4	第四针启动速度	第四针启动速度	2~27	20
ST5	第五针启动速度	第五针启动速度	2~27	23

## (3) 压板

代号	简述	详述	范围	出厂值
SYN	压板抬起时能否缝纫	压板抬起时能否缝纫	0:OFF:不能缝纫 1:ON:能缝纫	0
TFS	缝制结束后压板状态	缝制结束后压板状态	0:SUP:返回到起缝点以后,压板再上升 1:SLU:缝制结束后压板立即上升 2:SBU:先回到起缝点,等到踏板后压板再上升	0
ATU	自动加工完成后压板抬起	自动加工完成后压板抬起	0:PUP:缝制完成后压板自动抬起 1:NUP:缝制完成后压板不抬起	0
POP	脚踏板操作方式	脚踏板操作方式	0:BUD:控制大压板抬起/落下 1:IUD:间隔控制大压板和辅助压板抬起/落下 2:ILR:间隔控制左右压板 3:TAP:三联踏板	0
LRD	左右分离压板下降动作	左右分离压板下降动作	0:LRU:左右压板同时下降 1:LRN:压板先左再右下降 2:RLD:压板先右再左下降	0
LRU	左右分离压板上升动作	左右分离压板上升动作	0:LRT:加工完成后压板抬起 1:LTD:加工完成后左压板持续压下 2:RTD:加工完成后右压板持续压下	0
DYN	支持翻转、伸缩压脚	支持翻转、伸缩压脚 0-无 1-翻转压脚(F1 压脚)	0~255	0

		2-伸缩压脚 3-F2 压脚 4-K 压脚		
PSS	中途停止时压板状态	中途停止时压板状态	0:UP:压板压下 1:DN:压板抬起	0
OPT	压板类型选择	压板类型选择	0:AIR:气动 1:MAG:电磁铁 2:MOTOR:电机	0
2PE	二段位压板使能	二段位压板使能	0:OFF:禁止 1:ON:使能	0
OPR	压板行程设定	压板行程设定	0~200	180
OPC	压板电流设定	压板电流设定	0~15	2
POD	伸缩压脚伸出延时	伸缩压脚伸出延时	0~255	30
ASD	伸缩压脚上升延时	伸缩压脚上升延时	0~255	45
DSD	伸缩压脚下下降延时	伸缩压脚下下降延时	0~255	30

**(4) 范围限制**

代号	简述	详述	范围	出厂值
ALC	取消范围保护	取消范围保护	0:OFF:范围保护 关闭 1:ON:范围保护 打开	1
XL	设置 X 左方向有效范围	设置 X 左方向有效范围	0~2000	600
XR	设置 X 右方向有效范围	设置 X 右方向有效范围	0~2000	600
YU	设置 Y 上方向有效范围	设置 Y 上方向有效范围	0~2000	3
YD	设置 Y 下方向有效范围	设置 Y 下方向有效范围	0~2000	790
FXM	禁止 X 方向移动	禁止 X 方向移动	0:OFF:关闭 1:ON:打开	0
SSD	显示形状点范围	显示形状点范围	0:OFF:关闭 1:ON:打开	0

**(5) 断线检出器**

代号	简述	详述	范围	出厂值
PRT	断线检测	断线检测	0:OFF:断线检测 关闭 1:ON:断线检测 打开	1
ISD	断线检测时缝制开始的无效针数	断线检测时缝制开始的无效针数	0~15	8
IND	断线检测时缝制中途的无效针数	断线检测时缝制中途的无效针数	0~15	3
TRM	断线检测时是否剪线	断线检测时是否剪线	0:ON:发生断线时进行剪线 1:OFF:发生断线时不进行剪线	1

**(6) 原点位置**

代号	简述	详述	范围	出厂值
PTR	加电时回原点	加电时回原点	0:OFF:不回原点	0

			1:ON:回原点	
PRF	压板抬起回原点禁止	压板抬起回原点禁止	0:OFF:允许回原点 1:ON:禁止回原点	0
DOG	缝制结束后是否检索原点	缝制结束后是否检索原点	0:OFF:无原点检索, 停止在原位 1:ON:有原点(次原点)检索 2:RET:回起缝点 3:ORG:直接回原点	1
RST	设置起缝点复位路径	设置起缝点复位路径	0:LIN:直线返回起缝点 1:PAT:按花样图案返回起缝点 2:ORG:先原点检索再到起缝点	0
DED	原点检索时是否选择上死点	原点检索时是否选择上死点	0:OFF:原点检索时不选择上死点 1:ON:原点检索时选择上死点	0
OPA	原点压板动作	原点压板动作	0:DNW:回原点后压板压下 1:UP:回原点后压板抬起	1
NRM	平时原点检索/原点复位线路选择	平时原点检索/原点复位线路选择	0:NRM:标准 1:REV:反转 2:YTX:Y轴到X轴 3:XTY:X轴到Y轴 4:XAY:XY轴同步	3
REV	反转时原点检索/原点复位线路选择	反转时原点检索/原点复位线路选择	0:NRM:标准 1:REV:反转 2:YTX:Y轴到X轴 3:XTY:X轴到Y轴 4:XAY:XY轴同步	0
XSP	X传感器在机头的左侧还是右侧	X传感器在机头的左侧还是右侧	0:L:左侧 1:R:右侧	0

## (7) 暂停

代号	简述	详述	范围	出厂值
POS	暂停时机针位置	暂停时机针位置	0:DWN:机针下定位 1:UP:机针上定位	1
ACT	暂停时压板动作	暂停时压板动作	0:DWN:压板压下 1:UP:压板抬起	0

TYP	暂停开关类型	暂停开关类型	0:AUT:自锁型 1:NRM:普通型	1
TRM	暂停时自动剪线	暂停时自动剪线	0:AUT:自动剪线 1:OFF:不剪线	1
SYP	安全开关类型	安全开关类型	0:NCT:常关型 1:NOT:常开型	0

## (8) 计数器

代号	简述	详述	范围	出厂值
UCM	加计数器模式	加计数器模式	0:OFF:加计数器禁止 1:PAT:按花样加计数 2:CYC:按循环加计数	1
DCM	减计数器模式	减计数器模式	0:OFF:减计数器禁止 1:PAT:按花样减计数 2:CYC:按循环减计数	1
URV	导入花样时加计数器值是否保留	导入花样时加计数器值是否保留	0:CLR:清除 1:RSV:保留	1
DRV	导入花样时减计数器值是否保留	导入花样时减计数器值是否保留	0:CLR:清除 1:RSV:保留	1
POC	电源重开时消除计算器	电源重开时消除计算器	0:CLR:清除 1:RSV:保留	1
NUP	禁止加算器 (UP) 被修改	禁止加算器 (UP) 被修改	0:OFF:允许修改 1:ON:禁止修改	0
NDP	禁止减算器 (DN) 被修改	禁止减算器 (DN) 被修改	0:OFF:允许修改 1:ON:禁止修改	0
UTO	到达加算器 (UP) 设定值时缝纫机的操作	到达加算器 (UP) 设定值时缝纫机的操作	0:OFF:停止缝纫 1:ON:可继续缝纫	0
DTO	到达减算器 (DN) 设定值时缝纫机的操作	到达减算器 (DN) 设定值时缝纫机的操作	0:OFF:停止缝纫 1:ON:可继续缝纫	0
NPC	禁止生产计数被修改	禁止生产计数被修改	0:OFF:允许修改 1:ON:禁止修改	1

## (9) 中压脚

代号	简述	详述	范围	出厂值
SYN	中压脚下降同步	中压脚下降同步	0:BEF:缝纫机机头启动之前 1:OUT:与最后的外压脚同步	0
CUR	中压脚电流	中压脚电流	1~32	8

MDY	中压脚抬起后延时	延时防止移动撞模具	0~255	0
TYE	中压脚类型	中压脚气阀、步进、电磁铁选择	0:AIR:气阀 1:STP:步进 2:MAG:电磁铁 3:FLU:随动	3
PLP	中压脚行程设定	中压脚上下值设定	0~220	214
PDD	中压脚下降延时	中压脚下降延时	0~255	0
MSP	中压脚动作速度	中压脚动作速度	8~17	13
THS	穿线后提示信息显示	穿线后提示信息显示	0:OFF:关闭 1:ON:打开	1
FSH	随动高度	随动高度	1~100	35
FST	随动时间微调	随动时间微调	-127~127	0
FSA	随动角度微调	随动角度微调	-360~360	40
FRT	随动起针重复针次数	随动起针重复针次数	0~2	0
FRH	随动起针压脚下压高度	随动起针压脚下压高度	1~40	1

**(10) 绕线芯**

代号	简述	详述	范围	出厂值
SPD	绕线速度设置	绕线速度设置	2~27	13
STP	绕线器停止方式设置	绕线器停止方式设置	0:UTS:抬起踏板停止绕线 1:RTS:再次踩踏板停止绕线 2:TTS:定时停止绕线	1
TPD	定时停止绕线时间设置 (单位 秒)	定时停止绕线时间设置(单位 秒)	2~498	30

**(11) 移送方式**

代号	简述	详述	范围	出厂值
STP	缝纫类型选择	缝纫类型选择	0:TIN:薄 1:MID:中 2:TIC:厚	0
THIN	薄物料厚度	薄物料厚度	0~255	0
MID	中物料厚度	中物料厚度	0~255	0
THCK	厚物料厚度	厚物料厚度	0~255	0
SUI	打版跟随动作设定	打版跟随动作设定	0:OFF:禁止 1:ON:使能	0
SSM	试缝方式	试缝方式	0:STP:抬起停止 1:MOV:抬起继续移动	0
MCX	X 轴动框曲线号	X 轴动框曲线号	0~10	0
MCY	Y 轴动框曲线号	Y 轴动框曲线号	0~10	0
FTX1	方式 1X 轴动框时间微调	方式 1X 轴动框时间微调	-100~100	0

FAX1	方式 1X 轴动框角度微调	方式 1X 轴动框角度微调	-150~150	0
FTY1	方式 1Y 轴动框时间微调	方式 1Y 轴动框时间微调	-100~100	0
FAY1	方式 1Y 轴动框角度微调	方式 1Y 轴动框角度微调	-150~150	0
XSO	X 间隙补偿	X 间隙补偿	-50~50	0
YSO	Y 间隙补偿	Y 间隙补偿	-50~50	0
JSS	微动开关选择	微动开关选择	0:ICA:模板识别全自动 1:NIA:模板识别半自动 2:MSR:全手动	0
PDL	落踏板时间延时	落踏板时间延时	0~255	0

**(12) 速度**

代号	简述	详述	范围	出厂值
HSP	高速设定	高速设定	2~30	30
LSP	低速设定	低速设定	2~30	2
MHS	中高速设定	中高速设定	2~30	25
MLS	中低速设定	中低速设定	2~30	10
EDL	移送延时设置	移送延时设置	0~500	0
SEW	缝纫速度设置(档位)	缝纫速度设置(档位)	0~9	4
REL	缝纫速度设置(真值)	缝纫速度设置(真值)	2~30	26
FED	移送速度设置	移送速度设置	0~9	9
FRM	动框速度设置	动框速度设置	1~3	2
SPS	回起缝点速度设置	回起缝点速度设置	0~9	9
HPS	找原点时间间隔	找原点时间间隔(数值越大时间越长)	5~10	9
SMS	单步移动速度设置	单步移动速度设置	0~40	30
SRT	缝纫速度比率	缝纫速度比率	70~100	100

**(13) 剪线时序**

代号	简述	详述	范围	出厂值
TRM	剪线开关	剪线开关	0:OFF:关闭 1:ON:打开	1
SPD	剪线速度	剪线速度	10~40	20
ANG	剪线后机针定位角度	剪线后机针定位角度	0:UP:上针位 1:DED:上死点	0
TDY	剪线开延时	剪线开延时	0~255	0
TST	剪线输出启动时间/角度	剪线输出启动时间/角度	0~998	310
TMD	剪线模式	剪线模式	0:MAG:电磁铁 1:AIR:气阀 2:MOTOR:电机	2
OPT	松线开延时	松线开延时	0~255	30
OSA	松线启动时间/角度	松线启动时间/角度	0~998	200
TFE	打版时自动添加剪线	打版时自动添加剪线	0:OFF:关闭	1

			1:ON:打开	
TBE	缝制时空送前是否剪线	缝制时空送前是否剪线	0:OFF:关闭 1:ON:打开	0
TBD	缝制结束时是否剪线	缝制结束时是否剪线	0:OFF:关闭 1:ON:打开	1
UAT	剪线后上位置停车角度修正值	剪线后上位置停车角度修正值	0~100	0
TMC	剪线电机电流档位	剪线电机电流档位	1~32	12
TMT	剪线电机行程	剪线电机行程	1~255	105
TTI	时间微调	时间微调	-127~127	0
BLA	扣线开始角度	扣线开始角度	0~360	250

## (14) 液晶屏幕

代号	简述	详述	范围	出厂值
WRN	蜂鸣器声音设定	蜂鸣器声音设定	0:OFF:无蜂鸣音 1:PAR:操作盘音 2:ALL:操作盘+报警音	2
DEL	触摸屏灵敏度调节	触摸屏灵敏度调节	1~5	3
LIG	背光亮度调节	背光亮度调节	20~100	100
ATO	背光自动关闭开关	背光自动关闭开关, OFF: 不自动关闭, ON: 自动关闭	0:OFF:不自动关闭 1:ON:自动关闭	0
TIM	背光自动关闭等待时间	背光自动关闭等待时间	1~9	3
BTN	按键显示风格	设置检测模式和功能模式下按键显示风格	0:ICN:图标 1:TXT:文本	1
BKC	主界面花样显示设定	设置主界面花样显示背景色 0: 黑色 1: 青色 2: 红色 3: 绿色 4: 蓝色 5: 紫色 6: 黄色	0~6	0
SES	花样选择显示风格	设置花样选择界面下显示风格 注: 仅显示使用过的图形形状	0:CLS:经典(号码列表显示) 1:SHP:显示花样形状	1
ZST	放大方法	花样打版放大方法	0:SQA:面积 1:L-W:长宽	1
DPN	是否显示落针点	是否显示落针点	0:NO:否 1:YES:是	1
CCS	组合花样连续缝	组合花样连续缝	0:NO:否 1:YES:是	0
LPT	大针数花样支持	大针数花样支持	0:OFF:关闭	1

			1:ON:打开	
CSM	花样转换选择方法	多重缝、偏移缝、倒缝、曲折缝、首尾交换等修改位置选择方法	0:STI:针迹 1:ELE:要素	0
PSU	缩放单位	缩放单位	0:%:百分比 1:SIZ:尺寸	0
MSM	多重缝缩放方式	多重缝缩放方式	0:VAR:间距可变 1:FIX:间距不变	1
PMR	修改完成后返回方式	修改完成后返回方式(点和功能码)	0:FUN:功能选择 1:CNT:继续修改	0
OFM	多重缝、偏移缝、段插入修改方式	多重缝、偏移缝、段插入修改方式(转换影响后面要素的位置)	0:REL:相对修改 1:ABS:绝对修改	0
MBN	主界面按键显示风格	设置主界面下按键显示风格	0:ICN:图标 1:TXT:文本	0
RSS	打版空送后还原车缝的风格	设置打版空送后还原车缝的风格	0:KPS:保持 1:SLN:直线	0
SMC	缩放功能下尺寸计算方式	缩放功能下尺寸计算方式	0:FHM:从原点开始 1:FSR:从起缝点开始	0
RME	打版后针法还原	打版后针法还原	0:OFF:否 1:ON:是	0

## (15) 其他

代号	简述	详述	范围	出厂值
NLD	机针冷却有无	机针冷却有无	0:OFF:无 1:ON:有	0
PEM	单脚踏板操作允许	单脚踏板操作允许	0:OFF:禁止 1:ON:允许	0
LAG	语言选择	语言选择	0:CH:中文 1:EN:English 2:Bur:Burmese 3:KR:??? 4:TK:Turkish 5:JP:日本語 6:VI:Vietnamese	0
SSW	语音设定	语音功能设定	0:OFF:关闭 1:ON:打开	1
VOL	按键语音音量大小	按键语音音量大小	30~63	50
NSW	网络设定	网络设定	0:OFF:关闭	0

			1:Wifi:无线连接 2:Wired:有线连接	
LED	LED 灯的亮度	LED 灯的亮度	0~100	50
DLY	穿线时松线器打开延时	穿线时松线器打开延时	0~255	20
CUR	穿线时松线器打开电流	穿线时松线器打开电流	0~255	100
SEC	是否第一条空送后自动添加次原点	是否第一条空送后自动添加次原点	0:OFF:关闭 1:ON:打开	0
EMM	打版中压脚是否随动	打版中压脚是否随动	0:OFF:关闭 1:ON:打开	0
MAH	用于自动送料等机型	用于自动送料等机型	0~10	0
DSP	踩踏板后延时启动设置	踩踏板后延时启动设置	0:OFF:禁止 1:ON:允许	0
DEP	踩踏板后启动延时	踩踏板后启动延时	0~200	20
FEP	空送针距设置	空送针距设置	10~120	120
PTP	矢量图形转换针距设置	矢量图形转换针距设置	10~127	30
JAC	是否自动关闭跳转界面	确认跳转针数后, 是否自动关闭跳转界面	0:OFF:否 1:ON:是	0
CNA	形成角点角度标准	形成角点角度标准: 0: 无角点, 180: 全角点	0~180	90
LGS	开机是否进入语言选择	开机是否进入语言选择	0:OFF:否 1:ON:是	0
RFM	起缝点修改基准设置	起缝点修改基准设置	0:ST:起缝点 1:2H:次原点	0

**(16) 维修保养**

代号	简述	详述	范围	出厂值
NRT	更换机针剩余值	更换机针剩余值	0~9999	0
NST	更换机针设定值	更换机针设定值	0~9999	0
HRT	清扫时间剩余值	清扫时间剩余值	0~9999	0
HST	清扫时间设定值	清扫时间设定值	0~9999	0
ORT	机油更换剩余值	机油更换剩余值	0~9999	0
OST	机油更换设定值	机油更换设定值	0~9999	0
BLR	底线更换剩余值(针数)	底线更换剩余值(针数)	0~60000	0
BLS	底线更换设定值(针数)	底线更换设定值(针数)	0~60000	0
OLI	注油间隔时间	注油间隔时间	0~60000	90
OLW	注油工作时间	注油工作时间	0~9999	1000
XOI	抽油间隔时间	抽油间隔时间	0~240	0
XOW	抽油工作时间	抽油工作时间	0~60	0

**(17) 特殊**

代号	简述	详述	范围	出厂值
HSP	最高缝制速度	最高缝制速度	2~30	30

MAE	主轴电机停车角度	主轴电机停车角度	30~80	53
DEB	字母绣功能使能	字母绣功能使能	0:OFF:关闭字母绣功能 1:ON:打开字母绣功能	0
DAE	上死点角度设定	设定停车到上死点的角度值	0~50	3
RSC	针长降速曲线	内置针长降速曲线选择	0~8	5
HSL	最高不降速针长	保持最高转速时的最大针长	1~127	30
MTS	主轴类型选择	支持 550W 和 750W 类型	0:550:550W 1:D00:750W-D00 2:F00:750W-F00	2
xDIR	x 电机转向	x 电机转向	0:POS:正向 1:NEG:反向	1
yDIR	y 电机转向	y 电机转向	0:POS:正向 1:NEG:反向	0
zDIR	z 电机转向	z 电机转向	0:POS:正向 1:NEG:反向	1
ADR	主控烧录地址	主控烧录地址: 0xA0000:655360 0xB0000:720896 0xC0000:786432 0xD0000:851968 0xE0000:917504	655360~917504	917504
CVE	平行曲线算法	平行曲线算法	0:A1:算法 1 1:A2:算法 2 2:A3:算法 3	2
MUS	多重缝下倒缝算法	多重缝下倒缝算法	0:ALL:按段生成 1:SE:头尾生成	0
TID	模板识别设置	模板识别设置	0:OFF:关闭 1:ON:打开	0
PFT	模板对应花样号段	0: 001~031    5: 501~531 1: 101~131    6: 601~631 2: 201~231    7: 701~731 3: 301~331    8: 801~831 4: 401~431    9: 901~931	0~9	0
PXO	记号笔 X 向偏移	记号笔 X 向偏移	-5000~5000	0
PYO	记号笔 Y 向偏移	记号笔 Y 向偏移	-2000~2000	0
PSP	记号笔运行速度	记号笔运行速度	1~9	1
TTY	模板识别设备	模板识别设备	0:SEN:传感器 1:BAR:条码扫描设备 2:RF:RFID 读写设备	2
ICS	通讯速率提升	通讯速率提升	0:OFF:关闭 1:ON:打开	1
PIT	模板识别有效启动时间	模板识别有效启动时间	0~60	0
CXO	激光切割 X 向偏移	激光切割 X 向偏移	-5000~5000	0

CYO	激光切割 Y 向偏移	激光切割 Y 向偏移	-2000~2000	0
UMD	升级方法	升级方法	0:PA:参数 1:AU:自动	0

【注】参数「NRT」（更换机针剩余值）、参数「HRT」（清扫时间剩余值）、参数「ORT」（机油更换剩余值）、参数「BRT」（底线更换剩余值）、参数「BLR」（底线更换剩余值(针数)）都不能执行设定操作，只能在「内部参数设定画面」下观察数值变化。

【注】维修保养设定值参数修改后，其对应的剩余值参数也同时会被修改为相同的数值。

【注】维修保养设定值参数被设定后（大于 0 的数值），对应的维修保养计数功能也同时会开启。

### 3.5 检测模式说明

进入检测模式界面：在主界面 P1（或 P2）界面上操作目录键 **菜单**，即打开多类目录模式，然后再按下检测模式键 **检测模式**，即进入到检测模式。



#### 功能说明：

序号	功能	内容
A	液晶检测	用于检测液晶显示。
B	触摸屏校正	用于校正触摸屏。
C	输入信号检测	用于检测各类开关、传感器等输入信号。
D	速度检测	用于检测主轴马达转速。
E	输出信号检测	用于检测各类压脚、剪线等输出信号。
F	连续运转	用于设定连续运转参数，进入老化状态。
G	XY 原点	用于检测 X 轴和 Y 轴马达原点。
H	主轴马达安装角度调整	用于显示和设定主轴马达安装角度。
I	网络设定	用于网络相关设置。
J	中压脚检测	通过移动中压脚、切换中压脚位置进行中压脚检测。
K	压框/剪线电机检测	通过移动压框/剪线电机，对相应位置进行检测。
L	RFID 设置	此功能对识别卡片进行读写检测
M	退出	退出检测模式，返回到主界面。

### 3.5.1 液晶检测

检测模式界面下按下【液晶检测】按钮 ，进入液晶检测功能，现液晶屏检测为自动模式。

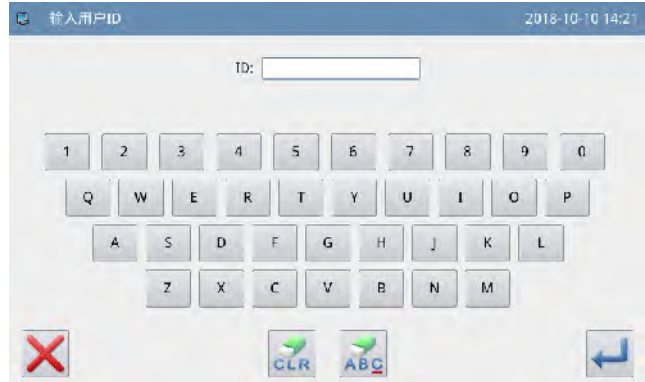
检测状态:进入液晶屏检测功能后，液晶屏会自动依次按照白、黑、红、绿、蓝颜色循环切换。(用于判断液晶是否存在失色)，检测无误后按下【退出】键  即可退出检测模式。

### 3.5.2 触摸屏校正

#### 功能说明:

检测模式界面下按下触摸屏校正键

，输入密码后进入触摸屏校正功能。



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

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



### 3.5.3 输入信号检测

#### 功能说明:

检测模式界面下按下输入信号检测按钮

，进入输入信号检测功能。

ON: 表示开启

OFF: 表示关闭

输入信号种类:

- ① 启动开关（踏板）
- ② 压脚开关（踏板）

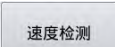


- ③ 暂停开关
- ④ 断线检测
- ⑤ X 马达传感器
- ⑥ Y 马达传感器
- ⑦ 中压脚原点
- ⑧ 安全开关
- ⑨ 外部输入 1 (PORG)
- ⑩ 外部输入 2 (PSENS)
- ⑪ 外部输入 3 (CORG)
- ⑫ 外部输入 4 (CSENS)
- ⑬ 外部输入 5 (AORG)
- ⑭ 三联脚踏板


按下退出键  返回到上一级画面。

### 3.5.4 速度检测

#### 功能说明:

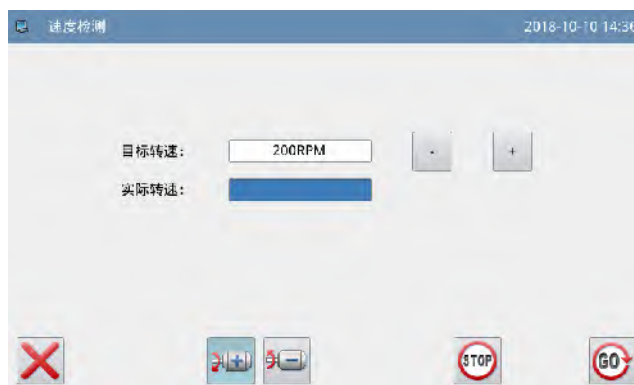
检测模式界面下按下速度检测按钮 ，进入主轴转速检测功能。

通过  和  可以设置主轴马达目标转速，按

下运转键  后，主轴马达会以设定的转速旋转。此时，实际测得的转速会显示在实际转速输入栏。

按下停止键 ，则机器停止运转。

按下退出键  返回到上一级画面。



### 3.5.5 输出信号检测

#### 功能说明:

检测模式界面下按下输出信号检测按键

输出信号

，进入输出信号检测功能。

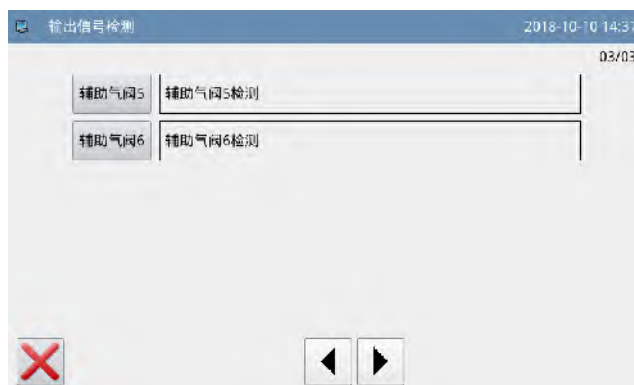
在该界面下按下输出信号按键，就可以检测电磁铁等输出信号的输出状态。

输出信号种类:

- ① 拨线
- ② 剪线
- ③ 压框
- ④ 压脚
- ⑤ 松线
- ⑥ 翻转压脚
- ⑦ 辅助气阀 1
- ⑧ 辅助气阀 2
- ⑨ 辅助气阀 3
- ⑩ 辅助气阀 4
- ⑪ 辅助气阀 5
- ⑫ 辅助气阀 6

按下退出键  返回到上一级画面。

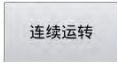
**【注】**缝绉机会有实际动作。



### 3.5.6 连续运转

#### 功能说明:

检测模式界面下按下连续运转按钮



，进入连续运转设定功能。

点击动作间隔输入栏或收针原点检测输入栏，通过数字键盘输入想要设定的数值，按下确定键

返回到上一级画面。

可以通过踏板或者原点两种老化启动方式，设置完毕后返回到主界面 P1（或 P2），踩下脚踏板或者按下回原点按钮使缝纫机运转起来，即进入到连续运转模式。



### 3.5.7 XY 马达原点检测

#### 功能说明:

检测模式界面下按下 XY 马达原点检测按钮



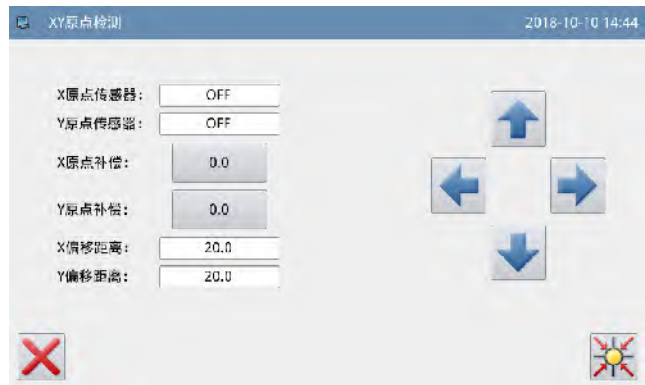
，进入 XY 马达原点检测功能。

在该界面下通过方向键驱动 XY 马达移动，过程中可以实时显示出传感器的 ON/OFF 状态。

ON: 检测到传感器

OFF: 未检测到传感器

按下退出键返回到上一级画面。



**【注】** 缝纫机会有实际动作。

### 3.5.8 主轴马达安装角度调整

#### 功能说明:

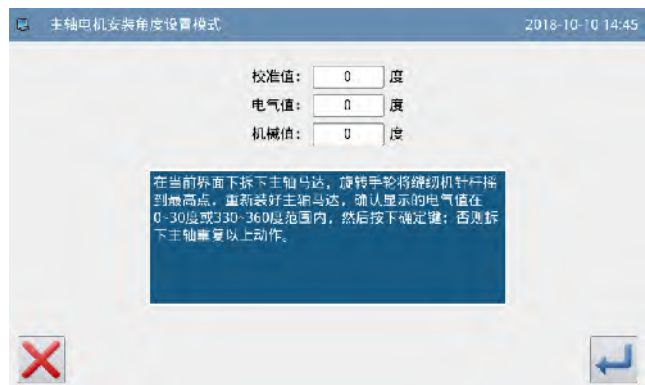
检测模式界面下按下主轴马达安装角度设置按钮



，进入主轴马达安装角度设置功能。

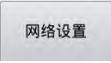
在当前界面下拆下主轴马达，旋转手轮将缝纫机针杆摇到最高点，重新装好主轴马达，用手拧主轴联轴结使显示的电气角度值在 30 度范围内，重新装好主轴马达，然后按下确定键



。



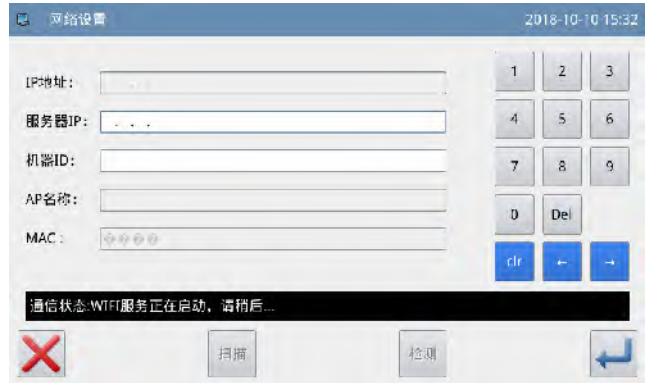
### 3.5.9 网络设定

#### 功能说明:

检测模式界面下按下网络设置按钮 ，进入网络设置功能。当需要使用操作头的网络功能时，需要设置网络相关参数。

通过数字键盘输入网络设置内容，要确保「IP地址」和「服务器 IP」在一个字段内， 和  按钮用于左右移动光标，设置完毕后点击“连接”即可跟计算机进行网络连接。

**【注】**该功能仅限可联网的电控支持。




### 3.5.10 中压脚检测

#### 功能说明:

检测模式界面下按下中压脚检测按钮 ，进入中压脚检测功能。

：降低中压脚

：提升中压脚

：切换中压脚位置

**【注】**在此界面踩下启动踏板后中压脚将返回原点位置（中压脚最高位置）；最高点对应 71mm,中间点 35mm,最低点 0mm,调整位置就是物料厚度位置；

该功能仅限 G 款机型。



### 3.5.11 压框/剪线电机检测

#### 功能说明:

检测模式界面下按下压框/剪线电机检测按

键 ，进入压框/剪线电机检测功能。

: 降低压框/剪线电机

: 提升压框/剪线电机

: 切换压框/剪线电机位置

**【注】**在此界面踩下启动踏板后压框/剪线电机将返回原点位置。




### 3.5.12 RFID

#### 功能说明:

检测模式界面下按下 RFID 按钮 ，进入 RFID 设置功能。


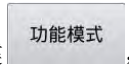
号码范围: 0~999

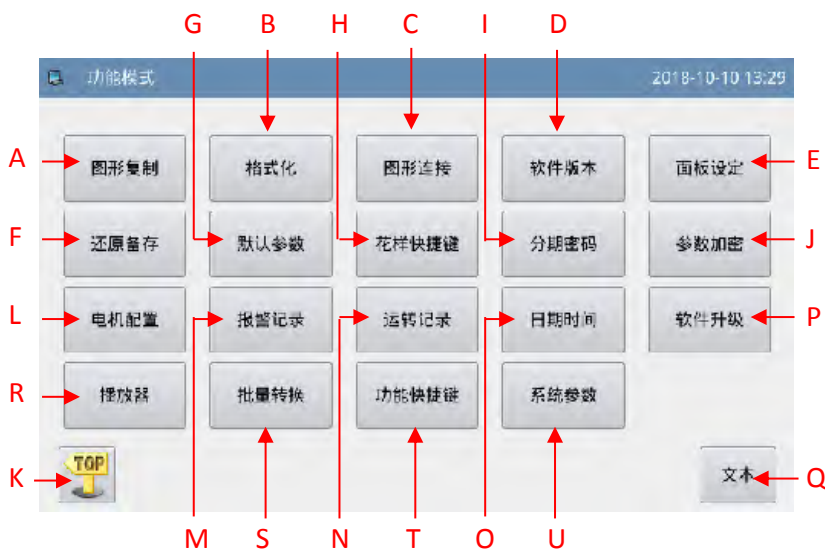
: 将花样号码写入 RFID

: 从 RFID 中读取花样号码



## 3.6 功能设定说明

**进入功能设定模式:** 在主界面 P1 界面上操作目录键 ，即打开多类目录模式，然后再按下功能设定键 ，即进入到功能设定模式。



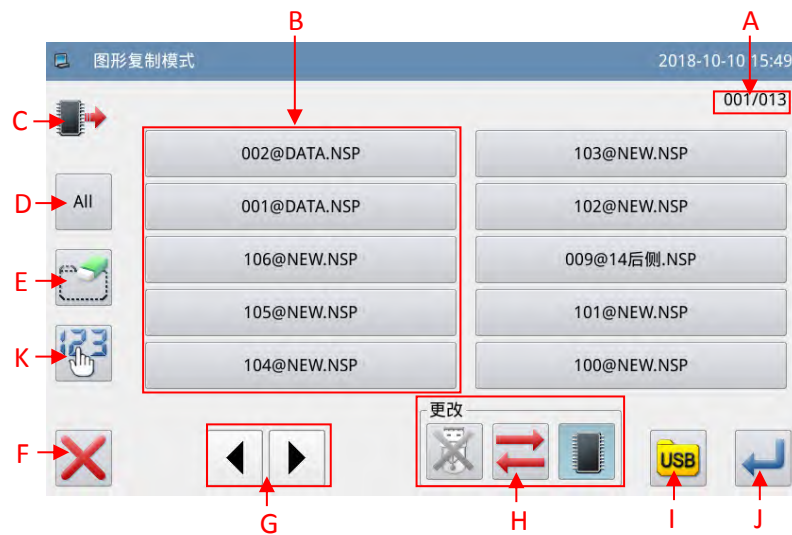
功能说明:

序号	功能	内容
A	图形传输	内存与 U 盘之间传输拷贝花样文件。
B	格式化	格式化 U 盘、内存和花样号码快捷键。
C	图形连接	编辑组合花样。
D	软件版本查询	查询系统软件版本。
E	显示设定模式	提供背光、按键锁、亮度等显示设定。
F	还原备存	参数设定值保存到 U 盘中，用于以后的还原操作。
G	默认参数	提供默认参数的恢复和自定义读写功能。
H	花样快捷键编辑	编辑花样号码快捷键内容。
I	密码模式	提供用户分期密码功能。
J	参数加密	参数模式下的各个操作入口设定密码。
K	退出	返回主界面。
L	电机配置	进入主轴电机、步进电流配置模式。
M	报警记录	查看报警统计信息。
N	运转记录	查看机器运转信息。
O	日期和时钟设置	设置日期和时间。
P	软件升级	进入软件升级模式。

Q	图标和文字的转换	实现快捷键在图形和文字间的转换。
R	播放器	可以播放格式为 mp3,avi 格式的音频。
S	进入花样格式批量转换模式	把非标准的花样格式都修改为标注花样格式 <b>注：标准花样格式为 nsp 格式。</b>
T	快捷键设置	用户可根据自己常用的功能，编辑此快捷键，显示在主页面上，方便用户操作便捷。
U	系统参数	系统参数相关






### 3.6.1 图形传输

功能设定界面下按下数据传输键 ，即进入数据传输模式。提供两种传输方式：「内存复制到 U 盘」和「U 盘复制到内存」。



功能说明：

序号	说明
A	页数显示，显示内容为当前页/总页数
B	花样列表
C	 : 内存花样列表  : U 盘花样列表
D	选择全部花样
E	删除花样
F	退出，返回上一级画面
G	翻页查询
H	选择读取内存或者 U 盘花样

	 : 内存读取模式使能, 此时 U 盘读取模式禁止  : 内存读取模式禁止, 此时 U 盘读取模式使能  : U 盘读取模式使能, 此时内存读取模式禁止  : U 盘读取模式禁止, 此时内存读取模式使能  : 切换选择U盘或内存
I	切换U盘文件夹
J	确定操作
K	按照修改时间或号码大小进行排序重新显示花样列表

操作说明:

1、复制模式选择


默认进入该界面是内存花样复制到 U 盘模


式, 可以通过切换键  切换复制模式。

2、选择文件


在花样列表中选择要复制的花样文件, 如果


花样较多可以通过翻页键   来翻阅画面。

如果想要复制全部花样按下  键, 删除花

样按下  键。

3、确定复制

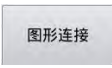
选择好了花样文件之后, 按下确定键  , 此时会显示「是否拷贝指定的花样数据」的提示

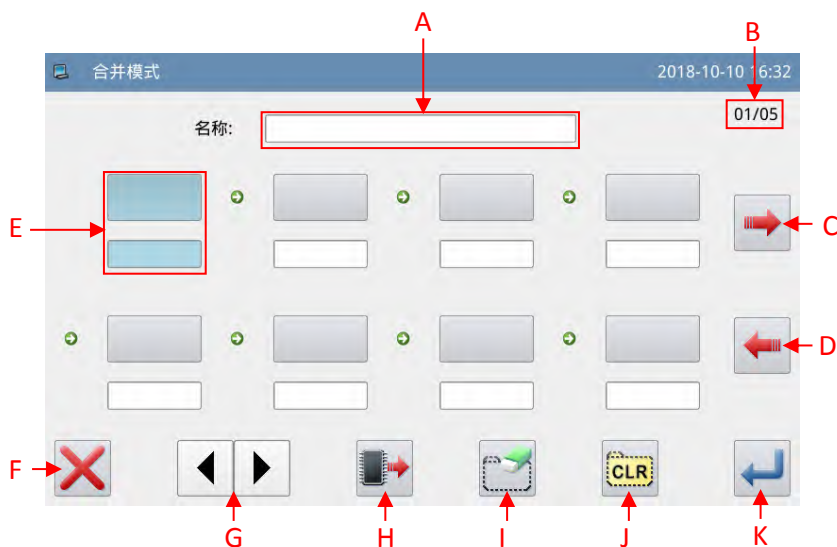
信息, 按下确定键  执行复制操作。如果是从内存复制到 U 盘, 会在 U 盘跟目录下自动创建「DH\_PAT」目录, 花样文件会拷贝到该目录下, 也可以通过切换 U 盘文件夹改变花样读写位置。

**【注】**从 U 盘拷贝花样到内存时, 如果存在相同的图号, 会有被新资料盖写的提示信息。



### 3.6.2 图形连接

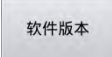
功能设定界面中按下图形连接键 ，即进入图形连接模式。图形连接模式主要用于创建和编辑组合花样，也就是在已有的花样基础上进行组合编辑，构成组合花样的文件称为子花样文件。




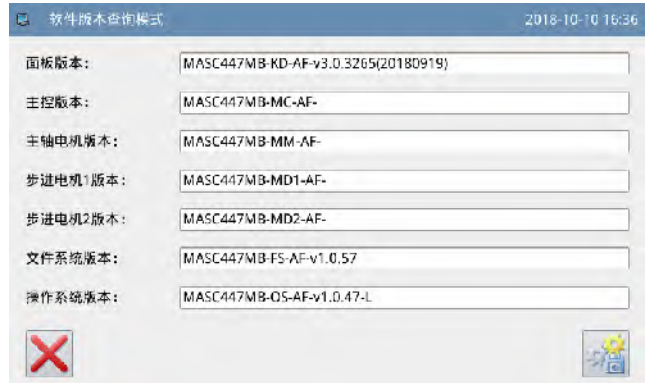
功能说明：

序号	说明
A	组合花样名称显示
B	页数显示
C	读取组合花样
D	存储组合花样
E	子花样文件显示
F	退出，返回上一级画面
G	翻页
H	从内存读取已有的花样添加到组合花样中
I	删除组合花样中的子花样文件
J	取消组合花样
K	确定当前操作

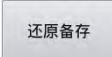
### 3.6.3 软件版本查询

功能设定界面中按下版本查询键 ，即进入版本查询模式。

按下  键可以把软件版本导出到 U 盘根目录下，文件名为 version.png。



### 3.6.4 还原备存

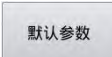
功能设定界面中按下还原备存键 ，即进入还原备存模式。

可以把更改后的参数设定值保存到 U 盘中，用于以后的还原操作。

详细内容参照【3.3.4 参数的还原与备存】节。



### 3.6.5 默认参数

功能设定界面中按下默认参数键 ，即进入默认参数模式。

主要用于恢复出厂参数，以及用户自定义保存当前参数设定值，用于以后的调用。

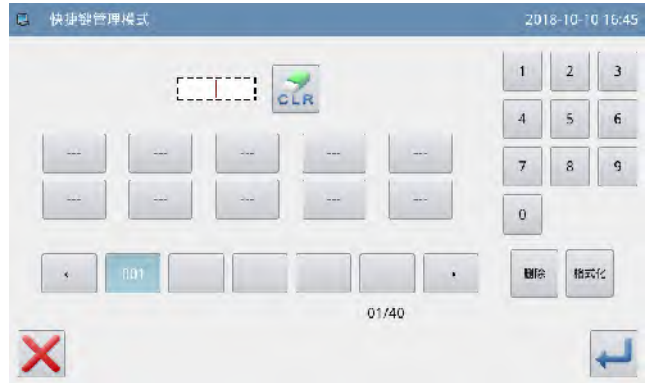


### 3.6.6 花样快捷键管编辑

功能设定界面中按下快捷键管理键

花样快捷键

，即进入快捷键管理模式，主要用于花样号码快捷键的编辑。



### 3.6.7 报警记录

功能设定界面中按下报警记录键

报警记录

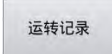
，会要求输入厂家 ID，输入正确后可以进入报警记录模式。

报警记录模式下显示了系统最近发生的报警内容，序号越小表示该报警信息发生的时间越新。另外还记录了每次报警发生的时间。

按下数字键后，会显示报错信息和解决措施



### 3.6.8 运转记录

功能设定界面中按下运转记录键 ，会要求输入厂家 ID，输入正确后可以进入运转记录模式。

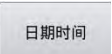
- ① 累积运转时间：记录机器缝纫时间总和
  - ② 累积缝纫件数：记录缝纫花样总件数
  - ③ 累积上电时间：记录机器上电时间总和
  - ④ 累积缝纫针数：记录机器缝纫针数总和
- 另外点击「清除」键可以清除掉该项计数值。

**【注】**如果清除了累积缝纫件数，也同时会把主界面辅助信息栏的「累积计数」清零。

按下开机时间键  记录的是每次开机的时间，按下删除键 ，再按下确定键  清除键记录。



### 3.6.9 时间设置

功能设定界面中按下日期时间设置键 ，会要求输入密码（初始密码为厂家 ID），可以进入日期与时间设置模式。



### 禁止修改系统时间

一旦设置了分期密码，则禁止修改系统时间，清除全部密码后可以解除禁制。



### 3.6.10 升级软件

功能设定界面中按下升级键 软件升级，会要求输入厂家 ID，输入正确后可以进入软件升级模式。

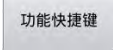
升级软件需要放在 U 盘「update」目录下。点击需要升级的内容（蓝底白字为选择状态），然后按下 键即可。




### 3.6.11 功能快捷键设置

快捷键功能用于设置主界面右下角四个功能键，用户可自行设置常用的功能键。



按下  快捷功能键进入快捷功能设置。分别设置查找花样、读取花样、图形复制、测试剪线四个功能的快捷键。



快捷功能设置：  
在快捷功能内容选择界面下，选择希望设置成快捷方式的功能，按下  确认键，保存并退出。



## 3.7 RFID 操作说明

### 3.7.1 RFID 的使用说明

**RFID** 是本模板机特有的功能，方便用户用于花样模板识别，下面是模板机 **RFID** 的使用方法。

可以将花样通过自身的花样号，写入感应识别卡片内，通过 **RFID** 识别器再读取识别卡片内的存储信息，进而实现花样模板识别，快速调取使用花样。

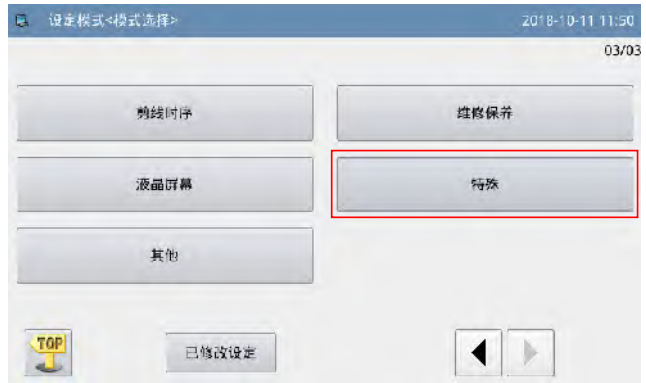


### 3.7.2 RFID 的设定方法

在主界面 P1（或 P2）界面上操作目录键 **菜单**，即打开多类目录模式，然后再按下操作设定键 **操作设定**。

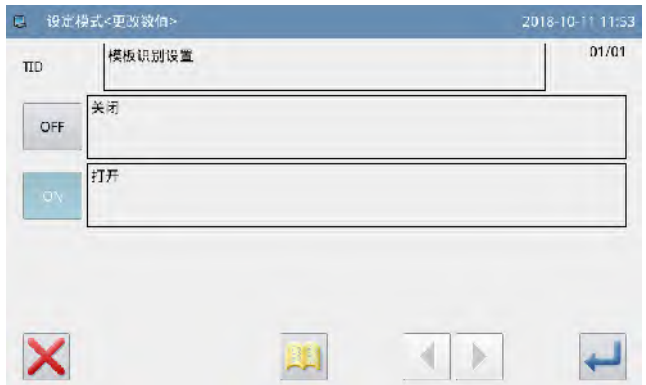
选定特殊参数设定

按下 **特殊** 键，输入密码，找到 **TID** 模板识别设置



按下 **TID** 键，选择模板识别设备是否启用，ON 为启用模板识别设置，OFF 为不启用模板识别设备。

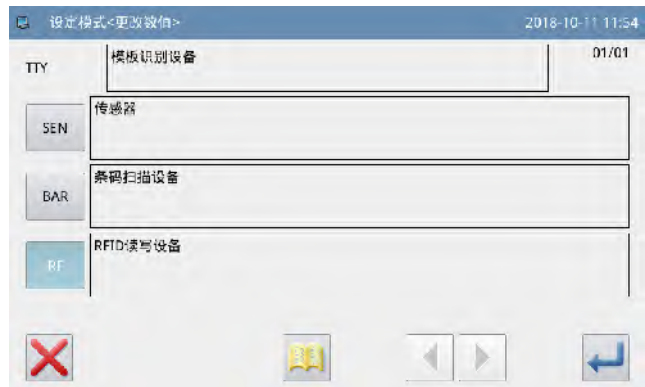
按下 **ON** 键，之后按确认键 **↵**，此时模板识别设备已启用。



接下来在特殊参数设定下找到 **TTY** 模板识别设置



按下  键，选中 RFID 读写设备 ，再按下  键，此时模板识别设备的 RFID 设备已经启用。



#### 4 附录 1

##### 4.1 报警信息一览表

故障号	故障名称	子信息内容
[E-002]	机器进入急停状态	请检查急停开关状态，旋转释放急停按钮，如果仍显示此信息，按以下方法检查： 1、检查急停按钮是否损坏； 2、检测急停按钮到机头转接板之间的连线是否有损坏； 3、检测机头板到电控箱之间的连线，检查电控箱的接线端子是否松动、破损。
[E-003]	机头翻转	1、检测安全开关是否正确触发，正常工作时，处于压下状态。 2、检查安全开关与机头板的连线是否损坏。
[E-004]	输入电压过低	请关闭电源，检查系统硬件。 1、检测交流供电电压是否异常波动，看设备周围是否有大功率设备步频繁启停，最好配备稳压器； 2、如果交流供电正常，则很可能是硬件电路故障，返厂检修主控板硬件。
[E-005]	交流市电过高	1、检测交流供电电压是否异常波动，看设备周围是否有大功率设备步频繁启停，最好配备稳压器； 2、如果交流供电正常，则很可能是硬件电路故障，返厂检修主控板硬件。
[E-007]	IPM 过压或过流	请关闭电源，检查系统硬件。 1、检测一下主轴电机是否有短路，各项绕阻是否相等，并且不为 0； 2、用万用表测一下 U\\V\\W 三项输出是否有直接与地或 300V 电源短路的情况，判定 IPM 是否损坏。
[E-008]	辅助电源过流	请关闭电源，检查系统硬件。 1、检测外围的电磁铁、气阀是否出现短路。拔掉所有外部电磁铁、气阀，然后再逐一插上，确定故障器件； 2、检查一下电控箱与机头板两端插头内线芯是否有短路； 3、检查机头转接板安装时是否与机头短路。

故障号	故障名称	子信息内容
[E-009]	辅助电源过低	请关闭电源，检查系统硬件。 1、检测外围的电磁铁、气阀是否有损坏； 2、检查一下电控箱与机头板连接线两端插头内线芯是否有短路； 3、检查机头转接板安装时是否与机头短路。
[E-010]	风扇故障	请关闭电源，检查系统硬件。 检测风扇是否旋转，电源是否出现问题。
[E-011]	步进电机超速	如果是闭环电机，请检查： 1、检查电机编码器是否有损坏； 2、检查编码器线缆是否破损。
[E-012]	步进电机超差	如果是闭环电机，请检查： 1、检查电机编码器是否有损坏； 2、检查编码器线缆是否破损。
[E-013]	编码器故障或未连	1、关机检测编码器线缆与控制箱接头是否松动。 2、检测编码器线缆是否破损。
[E-014]	电机运行异常	请关闭电源，检查系统硬件。 1、检查主轴是否被负载卡住，造成无法旋转； 2、拧手轮，使主轴换个角度再重新上电开机； 3、检查编码器线缆是否破损，或更换电机。
[E-015]	移动过程中超出缝制范围	请按下确定键解除故障。 1、花样数据处理异常。重选花样，先找原点再重新缝制一下； 2、检查一下操作头设置的缝制范围是否与所选花样不符。
[E-016]	请转动主轴电机码盘位置	先摇手轮，将针杆调到上位置或是上死点后，再踏启动踏板。
[E-017]	断线检测异常	请按下确定键解除故障。 1、正常工作时检测到断线信号； 2、关闭断线检查功能可禁止报告此错误。
[E-019]	急停开关未在正常位置或气压不足	一般提示信息，不是故障，手动放开急停开关即可。 旋转释放急停按钮，如果仍显示此信息，按以下方法检查： 1、检查急停按钮是否损坏； 2、检测急停按钮到机头转接板之间的连线是否有损坏； 3、检测 X9 端与机头转接板端联接是否松动。查看线缆是否有断线。
[E-020]	读 E2PROM 错误	
[E-021]	写 E2PROM 错误	
[E-025]	X 原点检测异常	请关闭电源。 1、使用调试功能-手动移框进行测试，测试是否有光耦信号显示； 2、开机情况下，用金属触及接近传感器，看是否有响应指示； 3、调整接近开关的安装位置，保证可靠触发； 4、检测步进电机工作是否正常，无失步； 5、检测步进线缆和传感器线缆是否有损坏； 6、检查电控箱与机头板连接线缆是否有松动，两端接头是否有短接、断线。

故障号	故障名称	子信息内容
[E-026]	Y 原点检测异常	<p>请关闭电源。</p> <ol style="list-style-type: none"> <li>1、使用调试功能-手动移框进行测试，测试是否有光耦信号显示；</li> <li>2、开机情况下，用金属触及接近传感器，看是否有响应指示；</li> <li>3、调整接近开关的安装位置，保证可靠触发；</li> <li>4、检测步进电机工作是否正常，无失步；</li> <li>5、检测步进线缆和传感器线缆是否有损坏；</li> <li>6、检查电控箱与机头板连接线缆是否有松动，两端接头是否有短接、断线。</li> </ol>
[E-029]	中压脚原点检测异常	<p>请关闭电源。</p> <ol style="list-style-type: none"> <li>1、使用调试功能-手动移框进行测试，测试是否有光耦信号显示；</li> <li>2、开机情况下，用金属触及接近传感器，看是否有响应指示；</li> <li>3、调整接近开关的安装位置，保证可靠触发；</li> <li>4、检测步进电机工作是否正常，无失步；</li> <li>5、检测步进线缆和传感器线缆是否有损坏；</li> <li>6、检查电控箱与机头板连接线缆是否有松动，两端接头是否有短接、断线。</li> </ol>
[E-030]	步进驱动器通讯异常	<p>请关闭电源。</p> <ol style="list-style-type: none"> <li>1、检测主控板与步进板的连接线是否松动；</li> <li>2、确认步进板电源是否正常，电源灯和工作灯正常闪亮。步进板无电源指示要更换步进板。</li> </ol>
[E-031]	步进电机过流	<p>请关闭电源。</p> <ol style="list-style-type: none"> <li>1、步进电机损坏，更换步进电机；</li> <li>2、步进驱动板损坏，更换步进驱动板。</li> </ol>
[E-034]	异常电流	
[E-035]	IPM 频繁过流 1	<p>请关闭电源。</p> <ol style="list-style-type: none"> <li>1、关闭电源，旋转手轮检测主轴运行是否流畅，机械是否卡死；</li> <li>2、关闭电源，检查主轴电机联轴器连接是否紧密，联轴器间隙较大大会造成电机过流；</li> <li>3、关闭电源，测量主轴电机三相电阻阻值是否相等，若不相等，则电机损坏；</li> <li>4、关闭电源，用万用表检测 IPM 模块是否损坏，若损坏，则不要再次上电，请更换维修；</li> <li>5、观察报错时，是否处于缝纫剪线和停车过程，若处于剪线和停车过程报错，则可以通过调整主轴参数尝试解决问题。</li> </ol>
[E-036]	IPM 频繁过流 2	<p>请关闭电源。</p> <ol style="list-style-type: none"> <li>1、关闭电源，旋转手轮检测主轴运行是否流畅，机械是否卡死；</li> <li>2、关闭电源，检查主轴电机联轴器连接是否紧密，联轴器间隙较大大会造成电机过流；</li> <li>3、关闭电源，测量主轴电机三相电阻阻值是否相等，若不相</li> </ol>

故障号	故障名称	子信息内容
		等, 则电机损坏; 4、关闭电源, 用万用表检测 IPM 模块是否损坏, 若损坏, 则不要再次上电, 请更换维修; 5、观察报错时, 是否处于缝纫剪线和停车过程, 若处于剪线和停车过程报错, 则可以通过调整主轴参数尝试解决问题。
[E-037]	电机堵转 1	请关闭电源。 1、由于主轴角度定位不对, 造成剪线时剪刀卡在机针上, 主轴被卡死。解决办法: 从新定位主轴角度; 2、针杆动作时被卡在中压脚上, 造成主轴被卡死。解决办法: 检查中压脚动作是否正确, 气阀与电磁阀连接是否正确; 3、剪线时力度不够, 剪刀无法剪断线, 造成主轴被卡死。解决办法: 调整主轴参数, 增大剪线力度; 4、机械存在死点, 造成主轴被卡死。解决办法: 调整机械; 5、主轴电机编码器有问题, 信号反馈错误, 造成电机卡死。解决办法: 更换主轴电机。
[E-038]	电机堵转 2	请关闭电源。 1、缝纫机使用材料较厚, 机针无法穿透材料。解决办法: 调整主轴参数, 或更换升级更大功率电机。 2、针杆动作时被卡在中压脚上, 造成主轴被卡死。解决办法: 检查中压脚动作是否正确, 气阀与电磁阀连接是否正确。 3、机械存在死点, 造成主轴被卡死。解决办法: 调整机械。 4、主轴电机编码器有问题, 信号反馈错误, 造成电机卡死。解决办法: 更换主轴电机。
[E-039]	电机超速	请关闭电源。 主轴电机编码器有问题, 信号反馈错误。
[E-040]	停车过流	请关闭电源。 主轴电机编码器有问题, 信号反馈错误
[E-045]	压脚没有落下	请踩压脚踏板。
[E-046]	不在原点, 无法操作	请按回原点键。
[E-047]	主轴过载	请关闭电源。 1、关闭电源, 旋转手轮检测主轴运行是否流畅, 机械是否卡死; 2、检测主轴电机的控制参数是否正常; 3、检测主轴电机的连接线、编码器线是否松动、破损; 4、更换主轴电机。
[E-048]	中压脚原点位置异常	请关闭电源。
[E-050]	X 电机过流	1、关机查检电机线缆和接头情况。 2、互换电机确认电机出现问题还是驱动板出现问题。
[E-051]	Y 电机过流	1、关机查检电机线缆和接头情况。 2、互换电机确认电机出现问题还是驱动板出现问题。
[E-052]	X 电机大电流	X 电机大电流
[E-053]	Y 电机大电流	Y 电机大电流
[E-054]	X 电机超差	1、关机查检电机线缆和接头情况。

故障号	故障名称	子信息内容
		2、互换电机确认电机出现问题还是驱动板出现问题。
[E-055]	Y 电机超差	1、关机查检电机线缆和接头情况。 2、互换电机确认电机出现问题还是驱动板出现问题。
[E-056]	X 电机失速	X 电机失速
[E-057]	Y 电机失速	Y 电机失速
[E-058]	曲线计算错误	曲线计算错误
[E-059]	伺服通讯错误 1	伺服通讯错误 1
[E-060]	伺服通讯错误 2	伺服通讯错误 2
[E-061]	伺服通讯错误 3	伺服通讯错误 3
[E-062]	X 电机堵转	X 电机堵转
[E-063]	Y 电机堵转	Y 电机堵转
[E-064]	X 电机指令覆盖	请关闭电源。
[E-065]	Y 电机指令覆盖	请关闭电源。
[E-066]	X 电机快走指令覆盖	请关闭电源。
[E-067]	Y 电机快走指令覆盖	请关闭电源。
[E-068]	伺服动框曲线计算异常	请关闭电源。
[E-069]	电源电压过高	请关闭电源。
[E-070]	前后移动传感器故障	请关闭电源。
[E-071]	左侧传感器故障	请关闭电源。
[E-072]	右侧传感器故障	请关闭电源。
[E-073]	左右传感器故障	请关闭电源。
[E-074]	X 电机超速	请关闭电源。
[E-075]	Y 电机超速	请关闭电源。
[E-076]	X 电机电流基准值异常	请关闭电源。
[E-077]	Y 电机电流基准值异常	请关闭电源。
[E-078]	XY 电机电流基准值异常	请关闭电源。
[E-079]	伺服电机通讯异常	请关闭电源。
[E-080]	底线气缸动作不到位	请重试。
[E-081]	底线不足	按下确认键解除报警。
[E-082]	油量不足	
[E-083]	花样数据错误 1	
[E-084]	花样数据错误 2	
[E-085]	剪线电机未找到原点	
[E-086]	写驱动器程序失败	请重启系统后再次进行升级操作。
[E-087]	机械限位	
[E-088]	请更换自动换梭装置卡盘	
[E-089]	自动换梭装置异常	
[E-090]	换梭自动更换完成	
[E-160]	写驱动器程序失败	数据长度异常
[E-161]	写驱动器程序失败	文件校验错误
[E-162]	写驱动器程序失败	数据包自校验错误
[E-163]	写驱动器程序失败	SPI 通信校验错误

故障号	故障名称	子信息内容
[E-164]	写驱动器程序失败	flash 擦除错误
[E-165]	写驱动器程序失败	flash 烧写错误
[E-166]	写驱动器程序失败	flash 校验错误
[E-167]	写驱动器程序失败	数据包 CRC 校验错误
[E-168]	写驱动器程序失败	EEPROM 写错误
[E-169]	写驱动器程序失败	EEPROM 写错误
[E-170]	写驱动器程序失败	数据功能码错误
[E-175]	写驱动器程序失败	等待延时异常
[E-091]	未识别模板	请重新放置模板
[E-092]	主控步进曲线参数不匹配	请升级曲线参数
[E-093]	中压脚电机过流	请关闭电源。
[E-094]	剪线电机过流	请关闭电源。
[E-095]	中压脚电机异常	请关闭电源。
[E-096]	剪线电机异常	请关闭电源。
[E-097]	读卡模块异常	请断电检查读卡模块是否损坏或未连接
[E-098]	主电源保护	请关闭电源。
[E-099]	控制箱与操作头类型不符	请更换面板
[E-100]	电磁阀故障	请关闭电源。
[E-101]	气阀动作超时	请检查气阀
[E-102]	气压不足	请检查气阀

## 4.2 提示信息一览表

信息号	信息名称	子信息内容
M-001	上计数器达到设定值	请按下确定键
M-002	下计数器达到最大值	请按下确定键
M-003	不在原点, 无法操作	请先回原点
M-004	花样数据不存在	请重新读取或打版输入
M-005	设定数值太大	请输入范围内数值
M-006	设定数值太小	请输入范围内数值
M-007	请按下回原点键	
M-008	存储参数异常	请按下确定键恢复出厂值
M-009	内存中没有花样	请按下确定键加载出厂花样
M-010	内存花样个数已满	请删除不使用的缝制数据
M-011	从内存中删除花样数据?	无
M-012	覆盖内存中花样数据?	无
M-013	花样数据不能删除	被选中的缝制数据正被使用
M-014	格式化内存?	内存中的全部花样数据会被删除掉
M-015	通讯错误	操作头与控制箱通讯发生异常, 请关闭电源后检查
M-016	超出缝制范围	请确保花样数据在缝制范围以内
M-017	字母绣字库文件读取失败	无

信息号	信息名称	子信息内容
M-018	操作头与缝纫机类型不符	请核对机型和软件版本
M-019	内存花样数据空间不足	请删除不使用的缝制数据
M-020	输入花样号码不正确	请输入正确的花样号码
M-021	超过最大针距	无
M-022	密码错误	请重新输入密码
M-023	硬件时钟故障	发现硬件时钟故障, 请联系厂家维修!
M-024	针数超出范围	请减少花样针数
M-025	针间距输入值太小	请输入范围内数值
M-026	针间距输入值太大	请输入范围内数值
M-027	已存在第二原点	只能输入一个第二原点
M-028	快速移动设定太少或太多	请输入范围内数值
M-029	请按下回原点键返回	无
M-030	拷贝指定的花样数据?	无
M-031	拷贝全部花样数据?	无
M-032	确定恢复出厂设置?	无
M-033	USB 盘已拔出	USB 盘已经拔出!
M-034	U 盘中没有发现花样数据	无
M-035	至少输入一个字母	字母绣打版需要至少输入一个字母
M-036	无报警记录	
M-037	更换机针	更换机针设定值已到达, 请更换机针!
M-038	更换机油	更换机油时间设定值已到达, 请更换机油!
M-039	清扫机器	清扫机器时间设定值已到达, 请清扫机器!
M-040	数据格式不同	请确认数据格式
M-041	无法生成曲线	请根据曲线输入注意事项重新输入
M-042	当前位置无法插入剪线	请在缝制数据后加入剪线
M-043	不能在同一位置加入相同的功能码	
M-044	当前位置无法插入第二原点	请在移送后加入第二原点
M-045	输入点无法生成圆或圆弧	请重新输入
M-046	无法生成重叠缝数据	请在封闭图形后加入重叠缝
M-047	无法在下暂停后加入剪线	无
M-048	无法在剪线前加入下暂停	无
M-049	没有偏移缝数据	偏移缝数据转换功能不能被使用
M-050	没有多重缝数据	多重缝数据转换功能不能被使用
M-051	选择位置不正确	无
M-052	无法进行缩放	无
M-053	距离超过 12.7mm	无
M-054	花样数据不正确	无
M-055	生成圆弧数据?	无
M-056	生成圆数据?	无
M-057	生成曲线数据?	无
M-058	生成多边形数据?	无

信息号	信息名称	子信息内容
M-059	压脚未放下	请踏下脚踏板
M-060	输入用户 ID 有误	请重新输入
M-061	确认密码失败	请重新输入密码
M-062	禁止修改系统时间	设置了分期密码，不能修改系统时间
M-063	密码文件写入失败	无
M-064	密码文件读取失败	无
M-065	密码保存成功	无
M-066	清除全部密码失败	密码文件无法被删除
M-067	清除密码失败	密码清除后，文件写入异常
M-068	密码文件被恶意删除	用户设置的分期密码被恶意删除，请关机
M-069	用户 ID 文件损坏	
M-70	输入花样名称	请输入不超过 8 个文字的花样名称
M-71	请清除当前的合并资料	按下“CLR”，清除当前合并资料
M-72	输入不能为空	输入密码不能为空
M-73	当前密码不符	当前密码输入错误
M-74	新密码不一致	新密码与重试密码不一致
M-75	触摸屏校正成功	校正成功，请关闭电源后重启
M-76	确定清除报警记录	是：Enter 否：X
M-77	是否删除选中的文件	是：Enter 否：X
M-78	复制所有图形	是否覆盖原本图形？ 是：Enter 否：X
M-79	拷贝文件失败	请检查磁盘空间是否已满！
M-80	拷贝文件失败	请检查是否拔出了 USB 盘！
M-81	打开文件失败	打开文件失败
M-82	格式不匹配	格式不匹配，放弃当前读入
M-83	参数超出范围	参数超出范围，确定后超出范围的参数将按默认参数恢复！
M-84	请创建目录和文件	请在 U 盘下创建 bakParam 目录，并将备份文件命名为 backup.param，并拷贝到 bakParam 目录下！
M-85	文件读写错误	文件读写错误
M-86	请选中条目	请选中要读写的条目
M-87	文件不存在	当前条目对应文件不存在
M-88	未输入移动量	请输入移动量
M-89	确定进入触摸屏校正模式？	是：Enter 否：X
M-90	确定清除累积运转时间？	是：Enter 否：X
M-91	确定清除累积缝纫件数？	是：Enter 否：X
M-92	确定清除累积上电时间？	是：Enter 否：X
M-93	确定清除累积缝纫针数？	是：Enter 否：X
M-94	分期密码不能和总密码相同	请重新输入密码
M-95	禁止修改加算器(NUP)	当修正时，请关闭设定(NUP)
M-96	禁止修改减算器(NDP)	当修正时，请关闭设定(NDP)

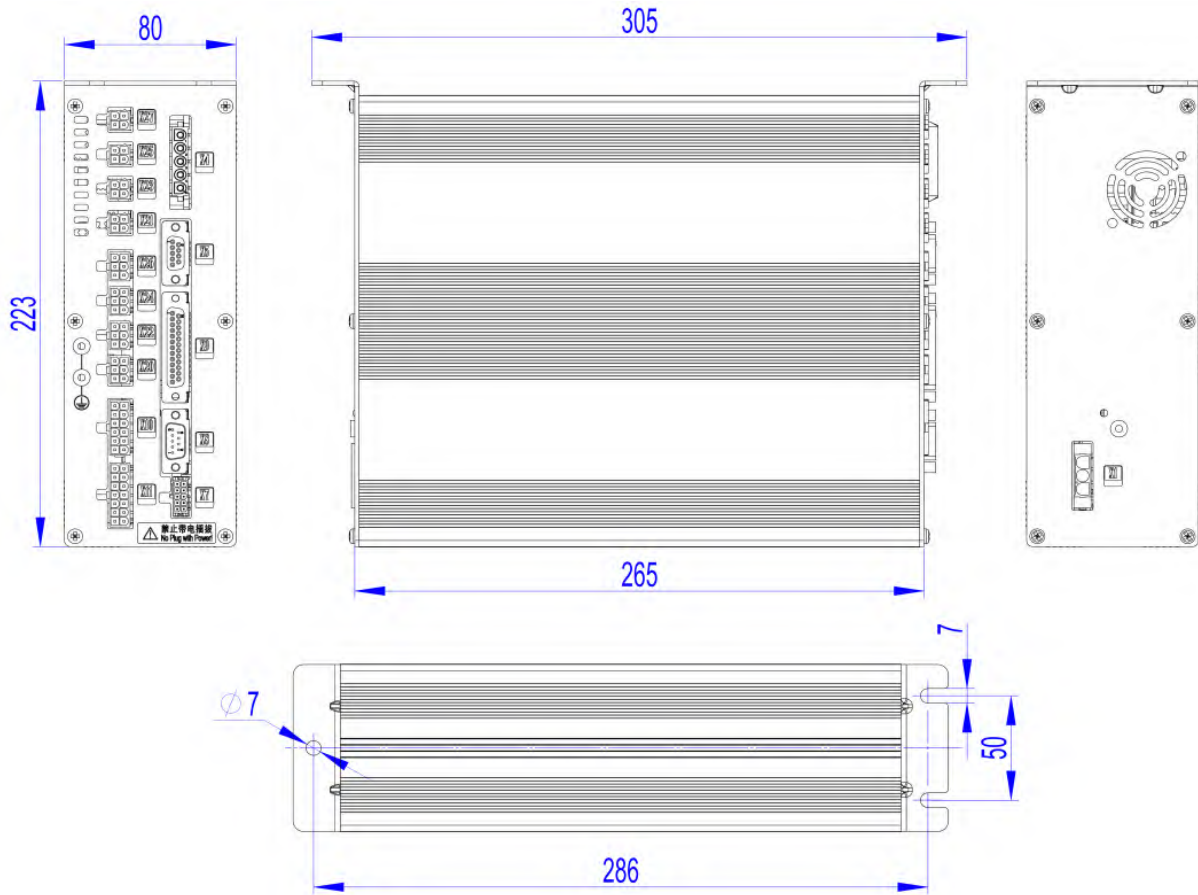
信息号	信息名称	子信息内容
M-97	花样列表(快捷键)为空	如果花样列表为空,系统会自动将当前打开花样导入列表
M-98	没有选中升级条目	请选中要升级的条目,至少要选中一个条目
M-99	选中的升级条目中有些不存在	不存在升级文件的条目返回后将会取消选中,如果要升级剩下的条目,请再次确认
M-100	升级成功	升级成功,请重新启动机器
M-101	是否格式化 U 盘	按下确定键执行格式化操作,按下取消键退出当前操作。 U 盘格式化后会删除全部 U 盘文件!
M-102	U 盘不存在	请插入要格式化的 U 盘!
M-103	成功	已成功执行当前操作!
M-104	失败	当前操作失败!
M-105	是否格式化花样列表(快捷键)	按下确定键执行格式化操作,按下取消键退出当前操作。
M-106	是否覆盖 U 盘中同名花样	按下确定键覆盖文件,按下取消键退出当前操作。
M-107	触摸屏校正失败	请重新校正
M-108	字母绣花样保存成功	请进入数据读取界面下选择新生成的字母绣花样
M-109	选中的花样不是正常格式,需要进行格式转换	按下确认键执行转换操作,按下取消键取消当前操作
M-110	该花样不能进行转换	请确认花样文件
M-111	是否还原所有设定	是: Enter 否: X
M-112	是否还原选择项目	是: Enter 否: X
M-113	未选择项目	请选择一个或几个参数项
M-114	SRAM 初始化	清除掉 SRAM 中全部数据,请关电并将拨码开关位置还原
M-115	不能拷贝覆盖当前花样	拷贝队列里存在当前花样号码,不能覆盖当前花样
M-116	需要转换花样格式	转换花样格式后可以进行花样预览
M-117	组合花样不能进行该操作	请进入图形连接模式,按下“CLR”解除组合花样
M-118	是否删除原始花样	格式转换后是否删除原始花样 是: Enter 否: X
M-119	中压脚处于下降位置	请升高中压脚
M-120	关机,再见	无
M-121	20mm 针间距花样文件格式	该花样格式本系统不支持
M-122	转换花样格式错误	请确认花样文件
M-123	转换花样数据超长	请确认花样文件
M-124	转换花样无法打开	请确认花样文件
M-125	转换花样精度错误	请确认花样文件
M-126	恢复参数成功	恢复参数成功,请重新启动机器
M-127	软件版本保存成功	软件版本已成功保存到 U 盘根目录下
M-128	参数设置成功	需要重新启动机器
M-129	usb 盘不存在	请插入包含 mp3 文件的 usb 盘
M-130	没有视频文件 video.avi	请将 video.avi 文件存放在 u 盘的 update 目录,并进入

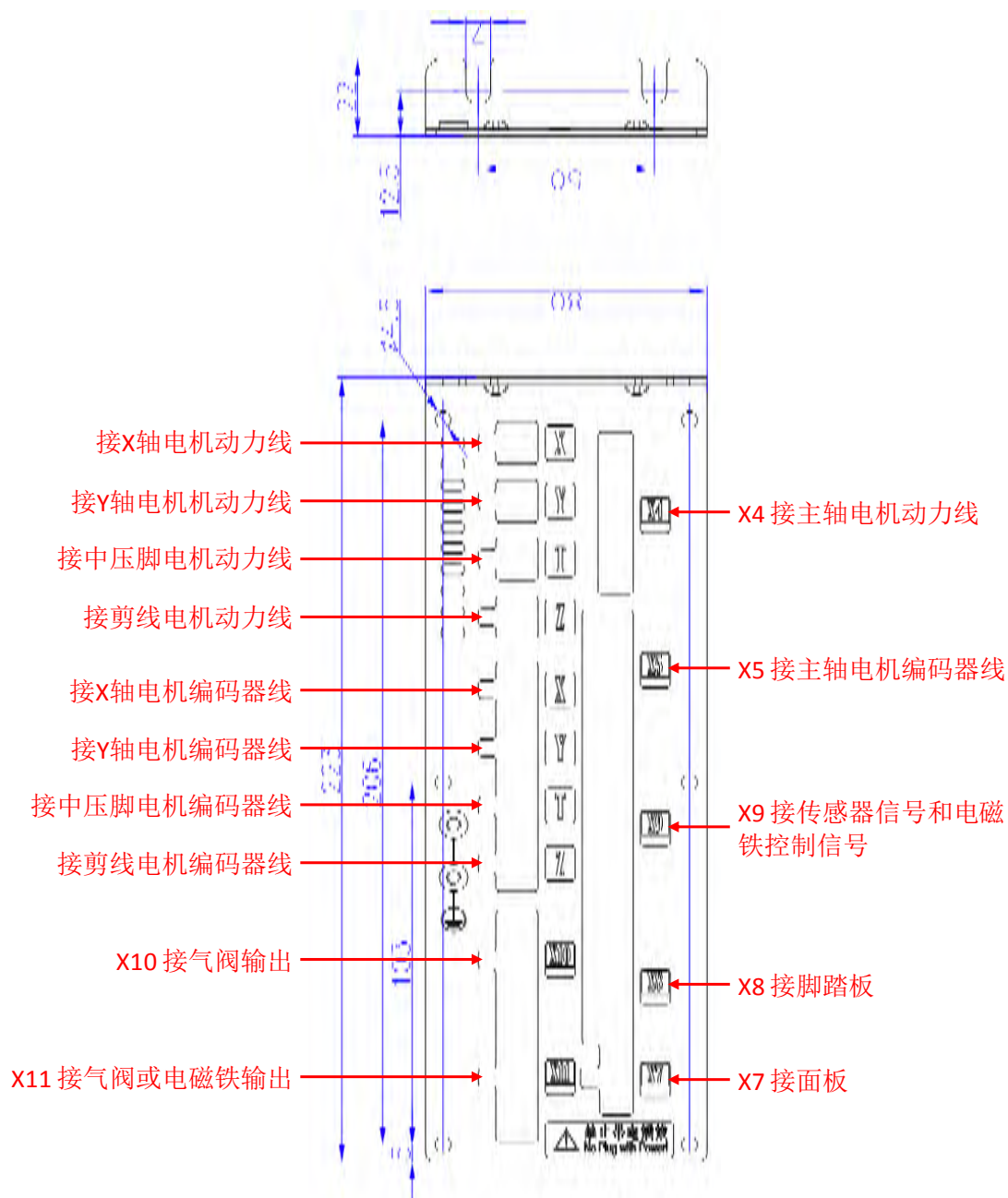
信息号	信息名称	子信息内容
		到升级界面升级视频文件
M-131	外压脚处于下降位置	请升高外压脚
M-132	不存在第二原点	当前花样不存在第二原点
M-133	网络设置失败	
M-134	网络连接失败	
M-135	升级主控程序时校验失败	
M-136	正在穿线...	
M-137	是否恢复已存自定参数	确定键执行操作，取消键退出操作
M-138	当前花样被模板锁定	请解除模板锁定
M-139	参数加载失败	请联系厂家维修！
M-140	底线不足	请更换底线，按下确定键后重新计数
M-141	不能生成多重缝数据	
M-142	完成图形复制？	
M-143	内存分配错误	
M-144	数据错误，继续使用会转换为点缝	
M-145	面板与主控不匹配	当前系统存在分期密码，需要联系厂家解锁锁定！
M-146	当前面板存在密码，需要同步	面板存在密码，主控没有密码！
M-147	当前主控存在密码，需要同步	主控存在密码，面板没有密码！
M-148	需要更换字库，请关电重启	特殊语种会关闭语音功能
M-149	主板 ID 不存在	
M-150	是否恢复机型参数	
M-151	缺少语言字库	请升级所需字库文件
M-152	C 花样打开失败	花样文件错误，将会被删除！
M-153	花样快捷键内容错误	
M-154	不能进入批量转换功能	
M-155	号码已被占用	
M-156	转换操作结束	
M-157	无法生成线迹	
M-158	内部数据异常	
M-159	存在圆弧	椭圆将转换为点缝
M-160	确定清除生产记录？	是否确定？是：Enter 否：X
M-161	打卡成功	
M-162	打卡失败	
M-163	是否要将缩缝作为独立部分	确定键分离缩缝，取消键保持一体
M-164	缩缝转换成功	缩缝部分已变成点缝，无法再次转换缩缝，建议保存原始花样，以便下次修改
M-165	当前花样用于铣刀模式	
M-166	FTP 访问错误	请检查连接、权限、路径、文件是否存在问题
M-167	文件移动失败	
M-168	确定清楚开关机记录？	是否确定？是：Enter 否：X
M-169	无开关机记录	

信息号	信息名称	子信息内容
M-170	升级驱动器程序失败	
M-171	已打开网络功能, 请关闭电源后重启	网络功能将在系统重启后加载
M-172	密码信息保存成功	
M-173	升级文件不存在	/sysParam 目录不存在或者该目录下没有文件
M-174	请设置加计数器无效	
M-175	请设置减计数器无效	
M-176	确定进行主轴校正?	是否确定? 是: Enter 否: X
M-177	分组号无效	
M-178	拒绝当前操作	
M-179	接收参数为空	
M-180	参数未发生变化	
M-181	二维码显示失败	
M-182	由于读取新的花样, 当前位置需要修正	请按下确认键
M-183	缩缝针数超出实际针数	
M-184	不能生成缩缝数据	
M-185	确定进行上轴校正?	是否确定? 是: Enter 否: X
M-186	确定进行下轴校正?	是否确定? 是: Enter 否: X
M-187	不能输入点	与上一次输入点位置重合
M-188	生成曲线数据?	
M-189	软件与文件系统不匹配	
M-190	机型切换成功	请关电重启
M-191	密码日期修改失败	输入日期应在下一次密码发作日期之前
M-192	是否确定绕线	是否确定? 是: Enter 否: X
M-193	起始针包含功能码, 请确认是否修改	确定键表示修改该功能码, 取消键退出重新选择. 如果希望保留功能码, 请参照界面右侧代码信息继续移动, 使起始针为功能码.

## 5 附录 2

### 5.1 电控箱尺寸





## 5.2 操作箱



操作箱



Automatic Pattern Sewing Machine Controller  
Touching Panel H

2019-02

# 1 General Information

## 1.1 Overview

This series of computerized control system for industrial sewing machine has the following features: (1) adoption of the world leading AC servo control technology on main shaft motor provides large torque, high efficiency, stable speed and low noise; (2) diversified design of control panel can meet the special requirements of users on attachment; and (3) system adopts German style structure, which greatly facilitates the installation and maintenance.

## 1.2 Functions and Parameters

Type of Controller	Pattern Machine
Sewing Area	X (Lateral) Direction      Y (Longitudinal) Direction ASC44X:                      1200(mm)      x      1000(mm)
Max. Sewing Speed	3000rpm (with stitch interval below 3mm)
Stitch Length	0.1~12.7mm (Min Resolution: 0.1mm)
Feed Motion of Frame	Intermittent feeding (2-shaft driven by pulse motor)
Needle Bar Stroke	40~41.2mm
Needles	DP×5, DP×17
Lift of Frame	Standard 18mm to Max. 22mm (Pneumatic type: Max. 25mm)
Intermediate Presser	Pneumatic (Optional: Stepping Motor)
Lift of Intermediate Presser	22 mm
Rotating Shuttle	Double-capacity semi-rotary hook
Memory of Pattern Data	Memory/U Disk
Pause Function	Stop the machine during the sewing
Scaling Up/Down Function	Allows a pattern to be scaled up/down on the X axis and Y axis independently when user sews a pattern. Ratio: 10.0% to 400.0% (by increment of 0.1%)
Scaling Up/Down Method	Increasing/decreasing stitch length & Increasing/decreasing stitch number
Sewing Speed Limitation	200~3000rpm
Pattern Selection	Pattern Recognition or Pattern Number Selection
Up Counter	No Count/Count of Pattern/Count of Cycle (0~99999)
Down Counter	No Count/Count of Pattern/Count of Cycle (0~99999)
Sewing Machine Motor	Servo Motor
Stop Needle at Highest Position Function	After finishing sewing, the needle can return to its highest position.
Rated Power	600W

Working Temperature	0°C ~45°C
Working Humidity	35% ~85% (no dew)
Voltage of power	AC220±10%; 50~60HZ

※ Executive product standard: Computerized Control System for Industrial Sewing Machine (QCYXDK004 - 2016).

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

#### ● Maintenance, Inspection and Repair

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

#### ● Others

- Do not touch the rotating or moving parts 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 this control device without authorization.

● **Abandonment**






- Dispose it as common industrial trash.

● **Warning and Danger**

- Mistake operations may cause danger. For the serious level, please refer to the figure below:


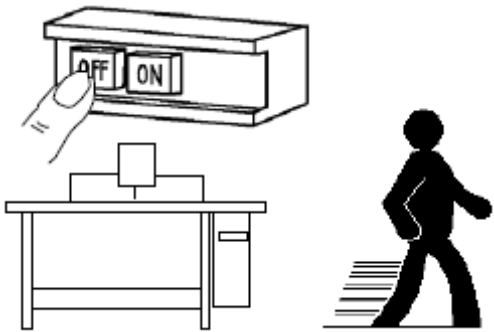
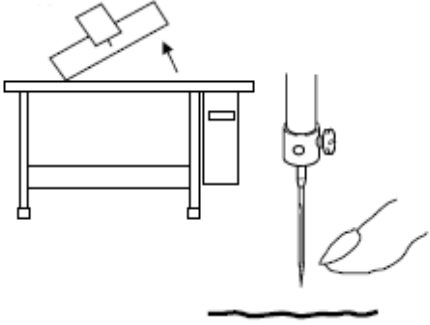
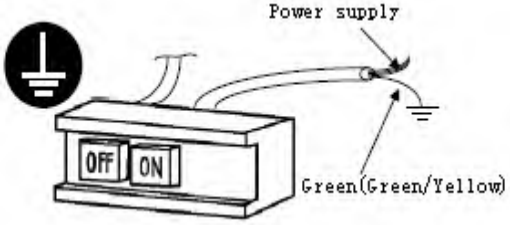
 <b>警告</b>	Wrong operation may cause serious injury or death.	 <b>注意</b>	Wrong operation may cause personal injury or loss of property.
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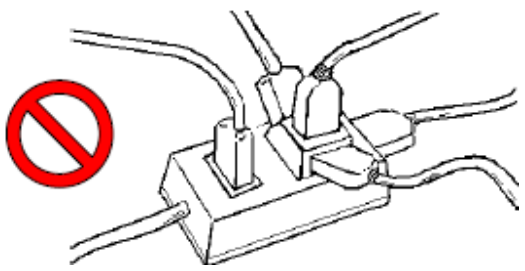
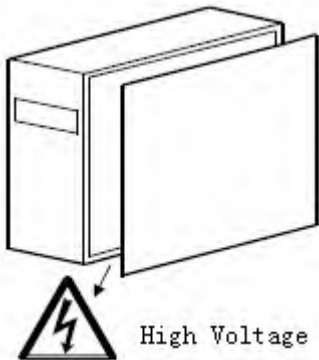
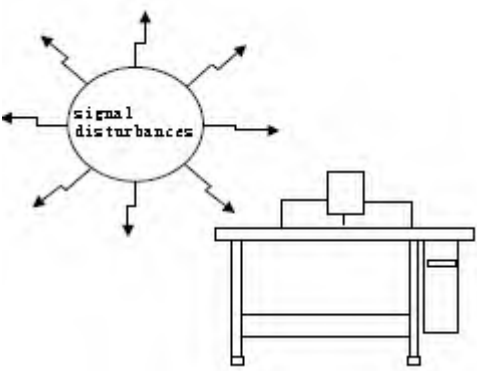
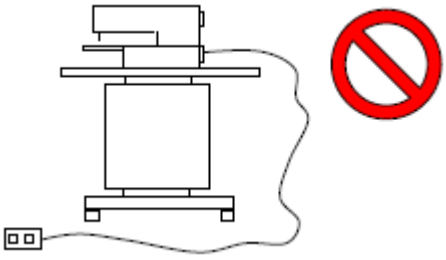
- The meanings of the marks are shown below:

	Please operate according to instructions.		Caution: high voltage
	Caution: high temperature		Grounding is a must.
	Prohibited!		

**1.4 Preventive Measures in Use**



<p>1. When you press the switch [ON], please do not step the pedal.</p> 	<p>2. When you leave the machine, please turn it off.</p> 
<p>3. If user needs to tilt the head or replace the needle or thread the upper thread, please turn off the power.</p> 	<p>4. Ground well the grounding cable.</p> 
<p>5. Do not use the household terminal block to let machines to share one power supply.</p>	<p>6. For opening the control box, please turn off the power and pull out the plug from socket firstly, and then</p>

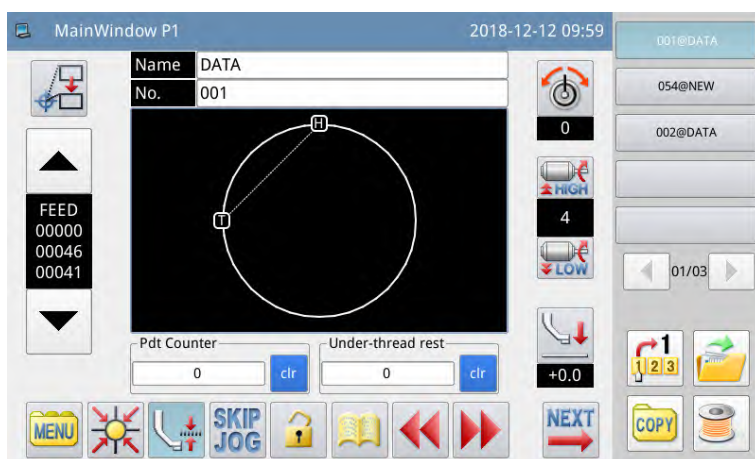
	<p>wait for at least 5 minutes before opening the control box.</p> 
<p>7. After replacing the motor, user has to adjust the main motor installation angle according to this manual.</p>	
<p>8. Please keep it away from the disturbance of high frequency machines.</p> 	<p>9. If user needs the external signal socket to connect the attachments, the connecting wire shall be as short as possible. The long cable may cause mistake operations. And the connection cable shall be the shielded.</p> 
<p>10. User should not use sharp objects to touch the screen, in order to avoid permanent damage to the touch screen.</p>	

## 2 Operation Interface Introduction

### 2.1 Operation Interface

The function keys use icons commonly recognized within the industry. Icons, as international language, are recognizable to users in every country.


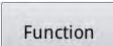
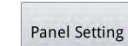


#### 2.1.1 Main Interface P1



Icon Interface

Shift between button text style and button icon style:

(1) From button text style to button icon style:

Press in order  →  →  to find out the setup bar for button text style, press  or  to set up the text or icon style of the catalogue mode;



(2) From button icon style to button text style:

If the default interface is of icon style, user can shift it to text style by the following method:

Press in order  →  → , then follow the same operations with (1).




#### 2.1.2 Main Interface P2

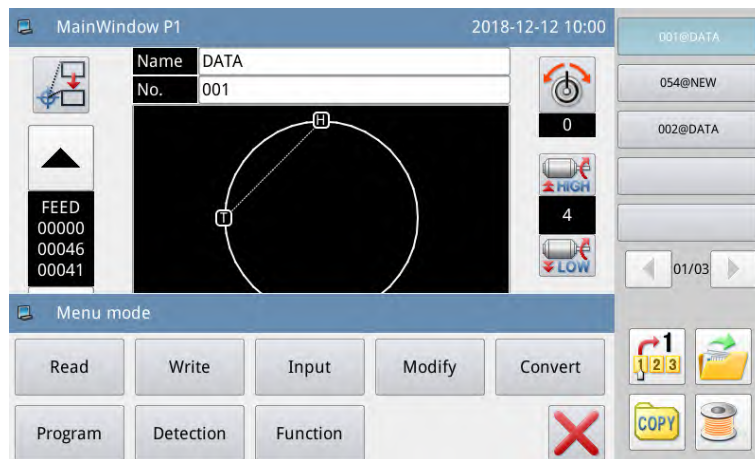
Press  in main interface P1 to enter main interface P2.



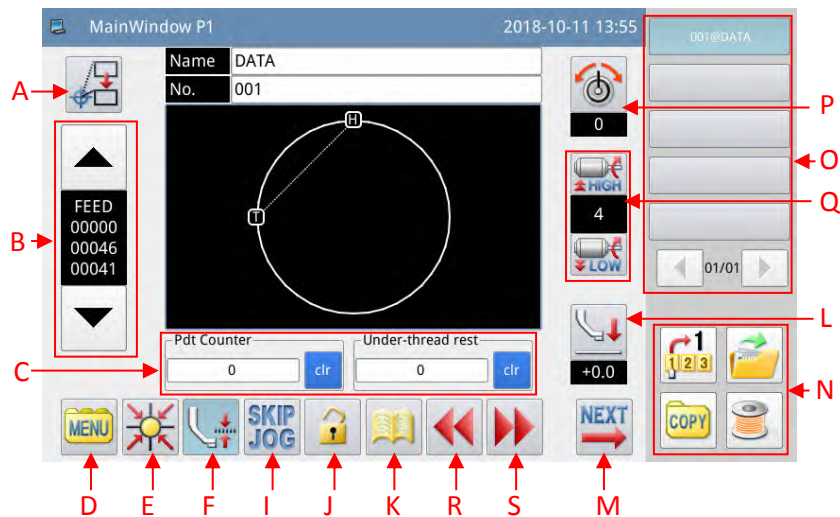
Icon Interface

### 2.1.3 Main Interface P1 – Catalogue Mode






Press  in main interface P1 to display the catalogue status bar.



### 2.2 Instructions on Main Interface P1



**Function Description:**

No.	Function Key	Function Key Description
A	Change sewing start	Change sewing start
B	Pattern Stitch Number Display Area and Forward/ Backward Moving Keys	Display the stitch number and perform the trial sewing.
C	Product Counter and Bobbin Thread Counter	Product Counter: to record the accumulated sewing number, but user can use  to clear the value and restart counting; Bobbin Thread Counter: display the length of remained bobbin thread
D	MENU	Display the catalogue
E	Back to Origin	Back to Origin
F	Set up Intermediate Presser	Set up the thickness of sewing material
I	Fast Moving Setting	Set to jump to designated stitch number
J	Turn on/off pattern recognition	 : turn on pattern recognition  : turn off pattern recognition, to start manual recognition
K	Parameter Hotkey	Parameters to be set up: P1 bartacking at sewing start P2 bartacking stitch number at sewing start P3 bartacking at sewing end P4 bobbin thread alarm stitch number P5 cancel range protection
L	Move Intermediate Presser	Press the key to move the intermediate presser in the appointed direction.  : Press it to lift the intermediate presser  : Press it to drop the intermediate presser
M	Enter Main Interface P2	Press it to display Main Interface P2 on the screen
N	Hotkey Setting	User can set 4 frequently-used functions.
O	Pattern Number Hot Key	Display the recently used pattern numbers, at most 40 numbers can be saved. Pressing the pattern number will activate that pattern for sewing.
P	Thread Tension Setting	Display the reference value of thread tension and press it for setting.
Q	Main Shaft Rotation Speed	Adjust main shaft rotation speed
R	Backward	Go backward
S	Forward	Go forward

**2.2.1 Sewing fabric thickness setting**

The lowest position of the intermediate presser is changeable. If the lowest position of intermediate presser in

the default setting is lower than the thickness of the used fabric, user can use this function to change it.


[Note]: If users enter this interface when the intermediate presser is at down position, the system will hint “Lift Intermediate Presser”.

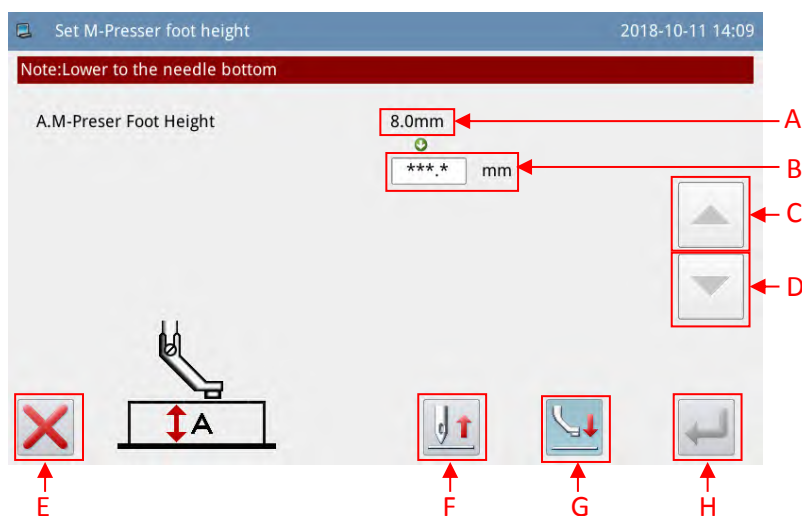
[Note]: After entering the interface for setting the fabric thickness: only when the intermediate presser goes down, can user set this parameter.

[Note]: The range of this parameter is 0.0~8.0mm.



**Note:**



Only when the intermediate presser is driven by motor can fabric thickness be set up. This function is not available for machines driven by air cylinder.

Press  in main interface P1 to enter set up Intermediate presser interface.



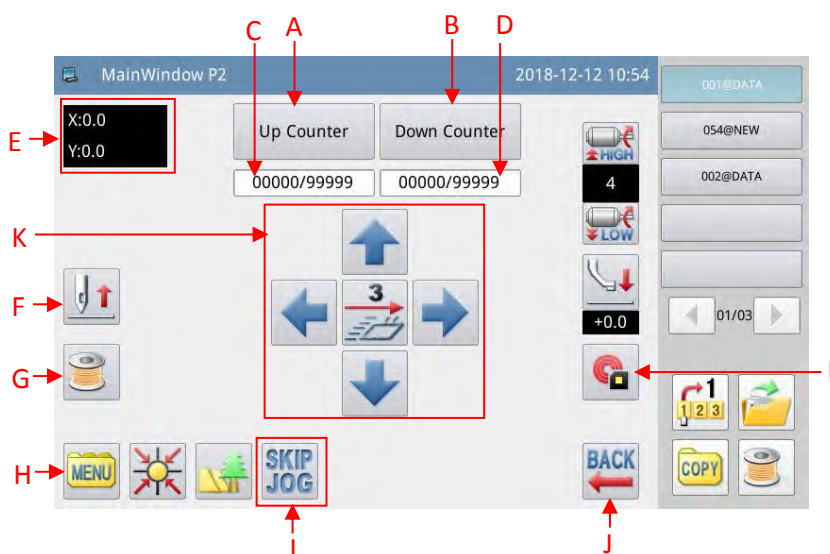
**Function Description:**

No.	Description
A	Current Height of Intermediate Presser
B	Target Height of Intermediate Presser
C	Increase Height The intermediate presser goes up by 0.2mm at each pressing
D	Decrease Height The intermediate presser goes down by 0.2mm at each pressing
E	Quit the current interface and return to the previous interface.
F	Move needle vertically.  : Needle down  : Needle up
G	Press it to move the intermediate presser in the arrow direction



	 : Intermediate presser up  : Intermediate presser down
H	Save and Quit

### 2.3 Instructions on Main Interface P2


Press  in main interface P1 to enter main interface P2.



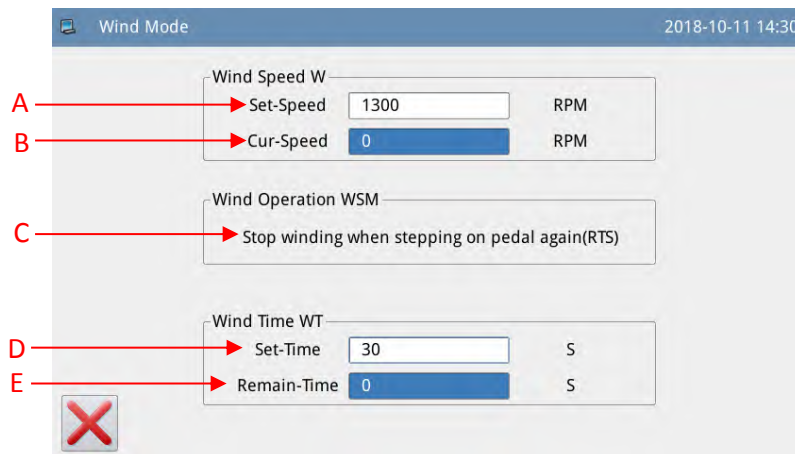
#### Function Description:

No.	Function	Content
A	Up Counter	Enter interface for setting up counter
B	Down Counter	Enter interface for setting down counter
C	Up Counter Value	Display the current value/set value of up counter
D	Down Counter Value	Display the current value/set value of down counter
E	Coordinates	Display the current coordinates
F	Needle Position	 : Needle down  : Needle up
G	Winding	Set up the winding speed and time
H	MENU	Open the catalogue menu
I	Function Keys	set up the number of jump stitches
J	Return	Return to main interface P1
K	Adjust Frame-moving Speed	Can adjust the frame speed
L	RFID	Radio frequency identification

### 2.3.1 Winding Mode

For winding, user has to activate this interface (Press  in main interface P2 and the intermediate presser will go down). Step the frame switch to lower the frame and then step the running switch to run the sewing machine at the set speed. But the X & Y axis will not move. When user releases the running switch, the sewing machine will stop at the upper stop position.

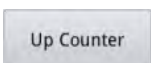
**[Note]: The winding action is determined by the parameter “Winding” set in the Operation Setting Mode. (Please refer to [2.7.6 Parameter List])**



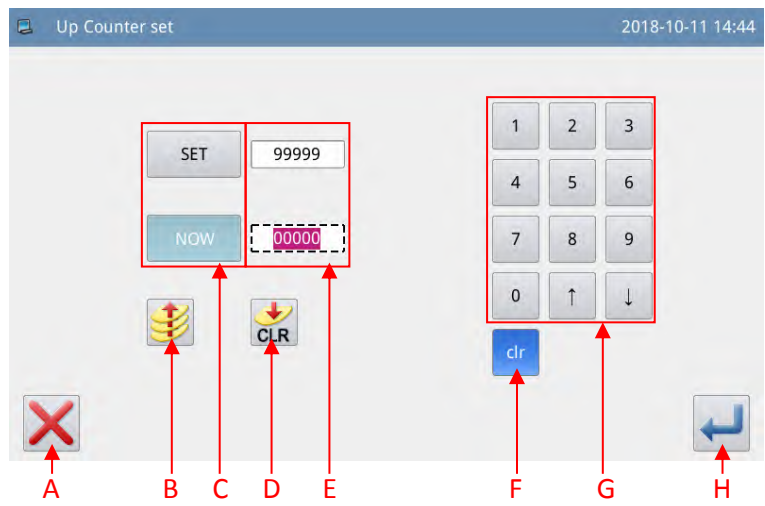
#### Function Description:

No.	Description
A	Set Speed of Winding <b>[Note]: Determined by Parameter “Winding” -&gt; “Winding Speed Setting”</b>
B	Actual Speed of Winding
C	Winding Operation Method
D	Set Time of Timing Winding
E	If the operation method of winding is the timing winding, this place will display the time leftover.

### 2.3.2 Instructions on Counter

Press  in main interface P2 to enter the interface for setting the up counter.

**[Note]: The counting method of the up/down counter is determined by the parameter “Counter” set in Operation Setting Mode (Please refer to [3.3.5 Parameter List]).**



**Function Description:**

No.	Content
A	Quit counter setting mode and return to previous interface.
B	Up Counter Switch (This button will be effective when it is in blue background).
C	Shift the input between the set value and the current value (The button in shadow is the selected one).
D	Clear current value.
E	Display the set value and current value (User can input the value in the dotted frame)
F	Clear the value inputted currently
G	Number keyboard, used to input set value and current value
H	Confirm the setting

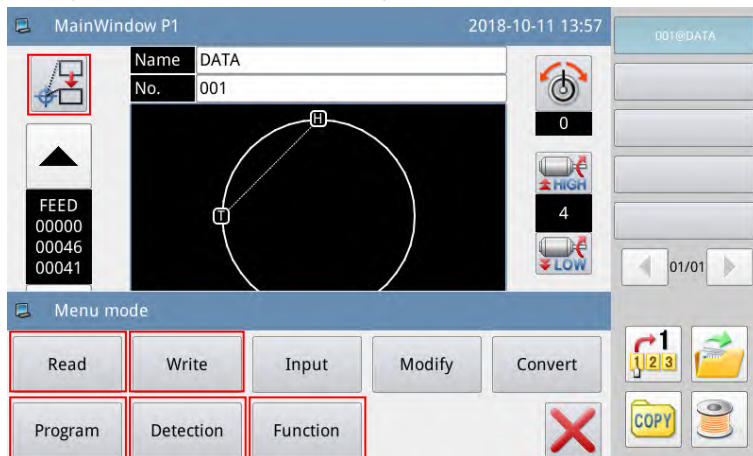
[Note]: The setting of the down counter is the same as that of the up counter, and the only difference is the

icon indicating the effective status of the down counter ( ).




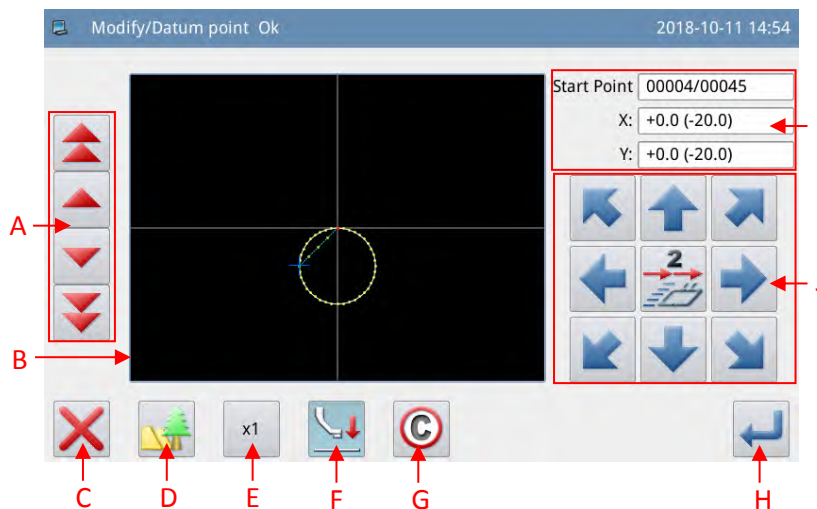
### 3 Function Operation Instructions

This part is about the instructions on the operation of frequently-used function keys, such as load pattern, save pattern, parameter setting, test mode, function setting.



#### 3.1 Modify Sewing Start

Press  in main interface P1 to open the interface for modifying sewing start as below.



No.	Function
A	Move backward or forward along the trace for test sewing
B	Display pattern
C	Return to previous interface
D	Display pattern shape
E	Enlarge pattern by x1, x2, x3, x4
F	Lift or lower down intermediate presser
G	Cancel

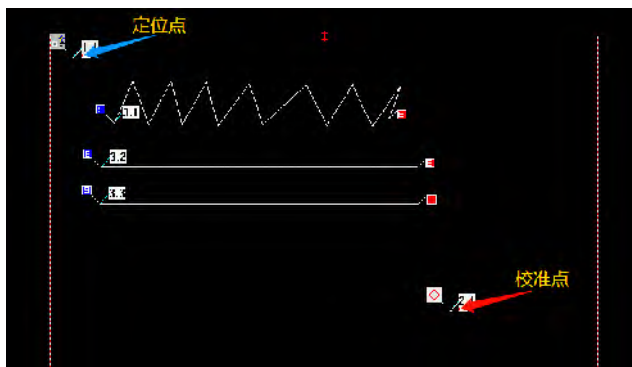
H	Jump to appointed stitch number
I	Enter
J	Sewing start and cursor position
K	Move the cursor

### 3.1.2 double benchmark

Double benchmark function could divide into benchmark 1 and benchmark2.

benchmark 1 is mainly used for locating the follow board, and it could move the pattern on the board; (Common Function)

benchmark 2 is used to calibrate the atypia follow board manually.



#### making double benchmark pattern by using PDS:

Auto mode: when making DXF pattern, if there is the red circle which its diameter is less than 1mm, the PDS will make this circle to the origin point in benchmark 2 when transfer the pattern. If there is the blue circle which its diameter is less than 1mm, the PDS will make it to the origin point in benchmark 1 when transfer the pattern.

Manual mode: draw a circle and right click the circle center to choice the point to be origin of the calibration point or the location point.


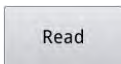
when the pattern file transfer to the control panel, the interface will turn to the adjusting start point page, if there is no benchmark 2 (the calibration point), the machine move to the normal start point. If there is a benchmark 2 (the calibration point), the calibration point will be marked red, and user could choose to adjust the point on the lower right corner on the control panel.

benchmark 1 (the location point), which is used to adjust the location of the follow board. when the pattern file transfer to the control panel, the interface will turn to the adjusting start point page, if there is no benchmark 1 (the location point), the machine move to the normal start point. If there is a benchmark 1 (the location point), the user could choose to adjust the point by using the direction key.

**[note] if the pattern has the benchmark 1 (the location point), but when adjusting the point the machine move to the start point, then the user need move the menu > control setting > other > RFE and choose the second origin point (2H).**

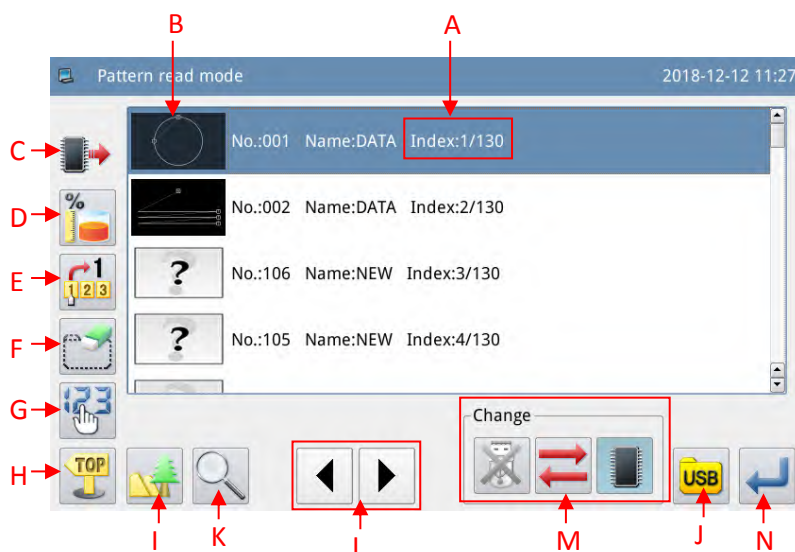
## 3.2 Load Pattern

### 3.2.1 Enter the Interface to Load Pattern

Press  in main interface P1 to activate the catalogue mode, and then press  to enter the interface to Load Pattern as follows:






**[Note]: If the frame is not at the origin, the system will be unable to load pattern. Therefore, please**

perform the operation for returning to origin first.




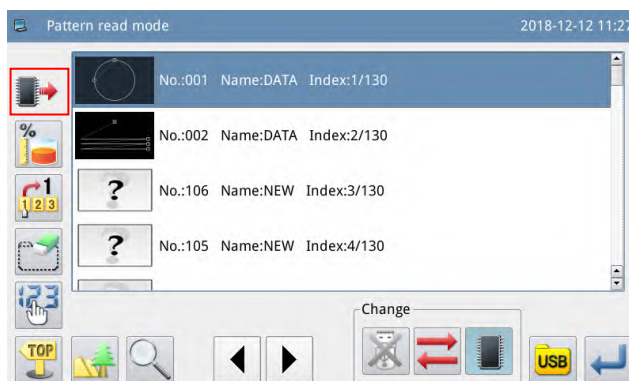
**Function Description:**

No.	Functions	Content
A	Page Number	Display current page number/ total page number
B	Pattern List	Display the list of the saved pattern (Both number and name will be displayed). [Note 1]: If user selects pattern in other formats, system will ask user to transform the pattern format. [Note 2]: If the stitch number of the selected pattern is over range or the data is damaged, the system will hint that the pattern is unable to be selected.
C	Memory / U Disk Object Display	: Memory Pattern List. : U Disk Pattern List [Note]: The default setting is to load pattern from memory
D	Free Memory	Display the total number of the patterns saved in memory
E	Direct Loading	Input the pattern number to load that pattern directly.
F	Delete Pattern	Delete the selected pattern. [Note]: The currently sewing pattern cannot be deleted.
G	Sequencing	Sequence the patterns according to their modification time or number.
H	Return to Main Interface	Return to main interface directly
I	Pattern Display	Same as this function key in main interface P1.
J	Select U Disk File Folders	Load pattern from U disk: press  to display all the pattern file folders under U disk



K	Jump to Patterns of Non-standard Formats	Load patterns of non-standard formats
L	Page Up/Down	Page up and down to look up interface
M	Select U Disk or Memory	<p>Select to load pattern from U disk or memory</p> <p> : activate loading from memory</p> <p> : prohibit loading from memory</p> <p> : activate loading from U disk</p> <p> : prohibit loading from U disk</p> <p> : shift between loading from U disk and from memory</p>
N	Enter	Confirm the operation. After the operation, the sewing pattern will turn to the newly selected pattern.

### 3.2.2 Select mode of loading (from memory or U disk)

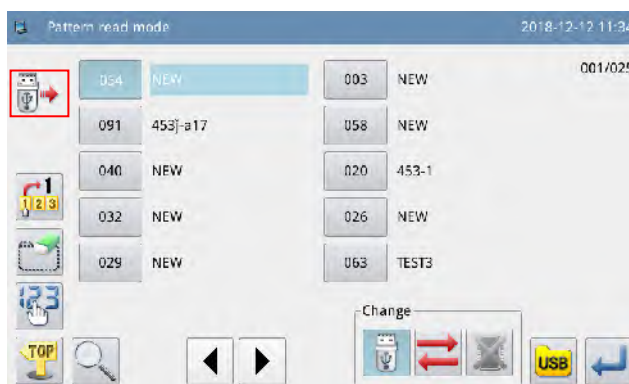
The default mode of loading is from memory, with  displayed at top left of the interface.



loading from memory


Press  to shift into loading from U disk, with  displayed at top left of the interface.

After shift into loading from U disk, display style will automatically switch to number.




loading from U disk

#### Select and confirm pattern number

Select the pattern number for sewing and then press  and after the selection, the system will return to the main interface directly.

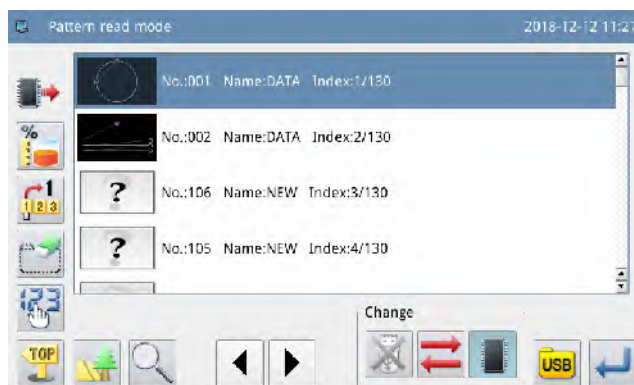
**[Note]:** If user performs the above operation without inserting the U disk, the system will display “U Disk Is Pulled Out”.

**[Note]:** If user inserts the U disk in the current interface, the system will need 5 seconds to identify the U disk. After the identification, user can press  to enter the U Disk Load Mode. As long as the U disk is not pulled out, the system will not need to identify the U disk again whenever user enters the U Disk Load Mode.




**[Note]:** If the pattern with the same number exists in the memory, when user loads pattern from U disk, the system will display “Replace Pattern in Memory?” At this moment, user need follow the given instructions.

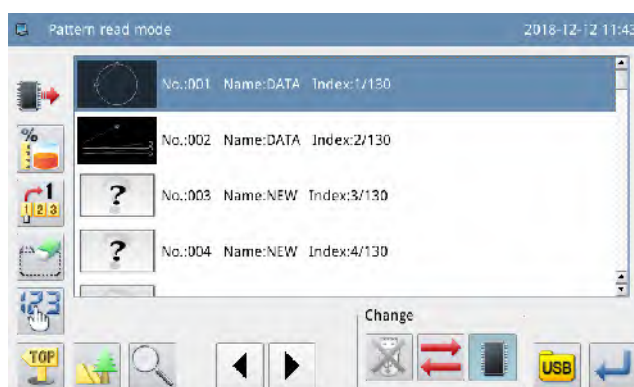
### 3.2.3 Pattern Display and Selection

After entering the interface to load pattern, the default setting is to display the patterns according to modification time.


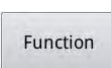
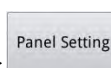





the default setting is to display the patterns according to modification time.

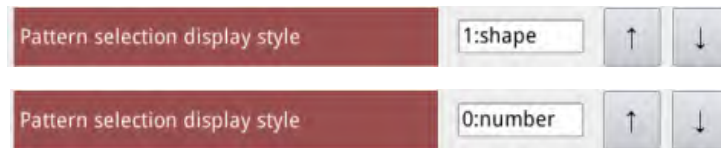
At this time, press  to sequence the patterns according to pattern number. If there are many patterns, press  for page turning and press  to view the pattern list more directly.



sequence the patterns according to pattern number.

**[Note] Pattern information display setting:** press the following keys in order  →  → 

Then press  to find out the pattern display style items, where user can press  or  to select the display style.



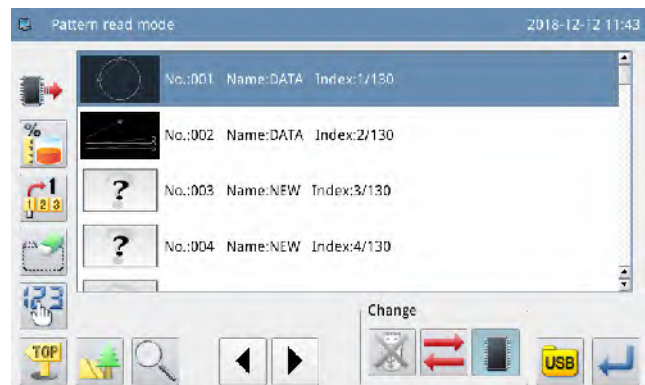
[Note] At present, the following formats are able to be imported: NSP format, B format, BA format, VDT format, EMB format, DST format, DSB format, DSZ format, PLT format, DXF format, VDTD format and NSPD format.

There are two display styles: classic (number list display) and pattern shape display.

[Note]: Only can the used patterns be displayed in the pattern shape list.




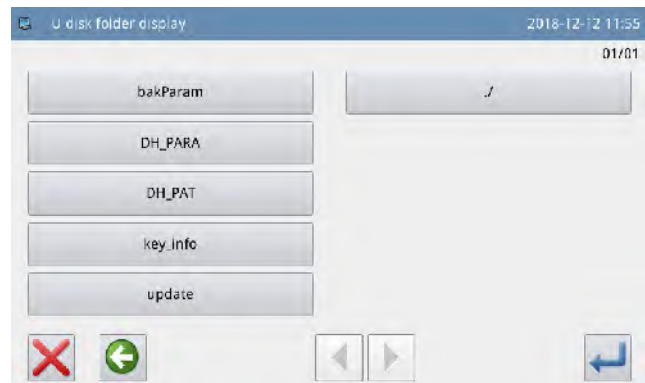
Classic (Pattern Number Display)






Pattern Shape Display

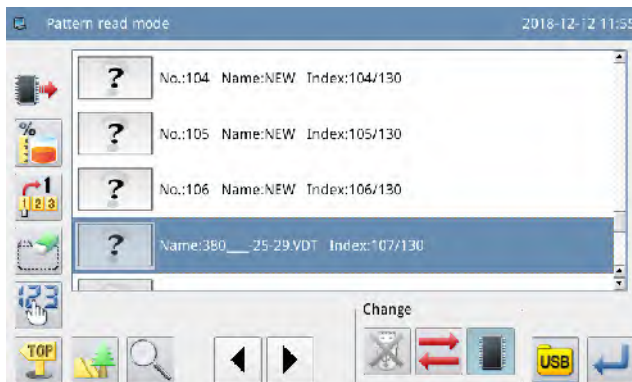
### 3.2.4 Load Pattern from U Disk

Insert U disk and press  to display all the pattern file folders under U disk.




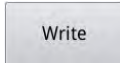
### 3.2.5 Jump to Patterns of Non-standard Format

When loading patterns, press  to list patterns of non-standard formats. User can press   to search the needed pattern, which is very convenient.

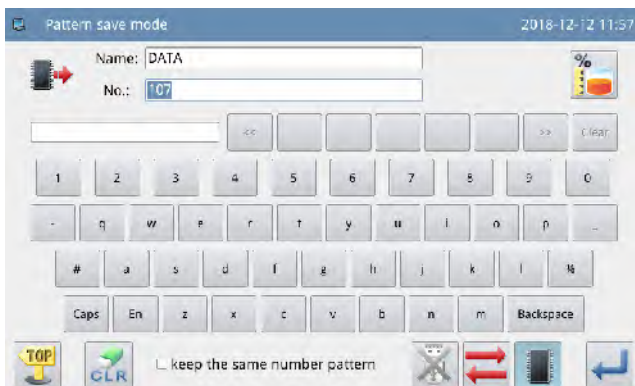


### 3.3 Save Pattern

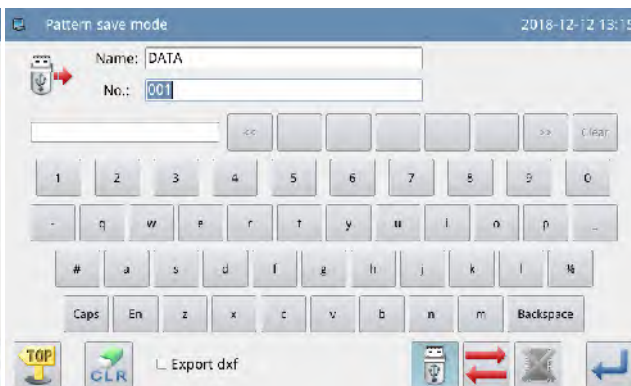
#### 3.3.1 Enter Pattern Saving Mode

In main interface P1, press  to activate the catalogue mode, and then press  to enter pattern saving mode.

**[Note]: If the frame is not at the origin, the system will be unable to save pattern. Therefore, please perform the operation for returning to origin first.**




Save Pattern to Memory



Save Pattern to U Disk

#### 3.3.2 Set Name and Number

After entering pattern saving mode, input the name and number of the pattern (Chinese name is available, and press En key to shift input method) and press  (Enter) to finish the pattern naming and return to the main interface.

**[Note]: User can decide the number for a pattern before saving; the format of the filename is “Pattern Number@Pattern Name.nsp”.**


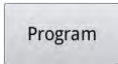
**[Note]: If the memory contains a pattern with the same number of the inputted one, the system will**

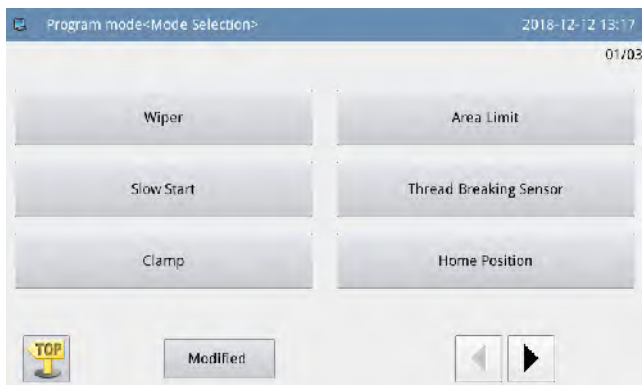
display “Replace Pattern in Memory?” Press  to cancel the replacement; press  to perform the replacement.

### 3.4 Parameter Setting

This part is about the description and setting of common parameters.


#### 3.4.1 Enter Function Parameter Setting

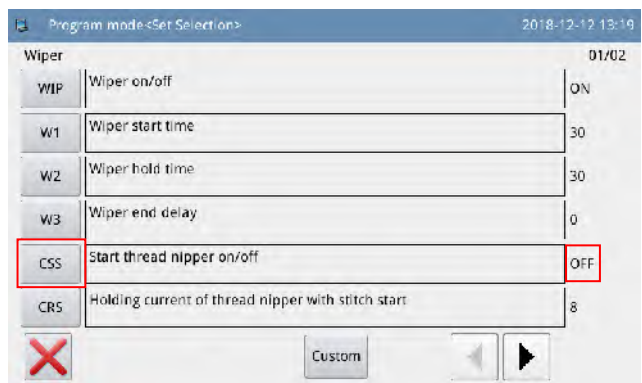
In main interface P1 (or P2), press  to activate the catalogue mode, and then press  to enter function parameter setting interface as below:





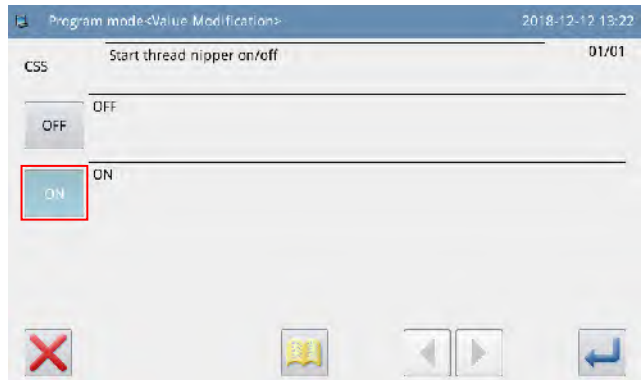
#### 3.4.2 Parameter Modification Method

Take one parameter for example: to set “Wiper”

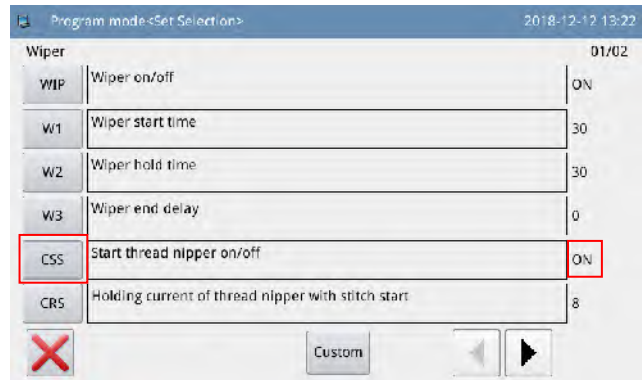
Press  to enter the parameter setting interface for wiper. Select one item for setting, for example, the status of wiper switch which is now set as [OFF] (open status).



Press  to enter the parameter setting interface, select [ON], and press  (Enter) to finish the parameter setting.


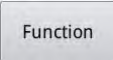


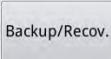
At this time, the system will return to the previous interface, where the status of wiper switch has already been changed into [ON].

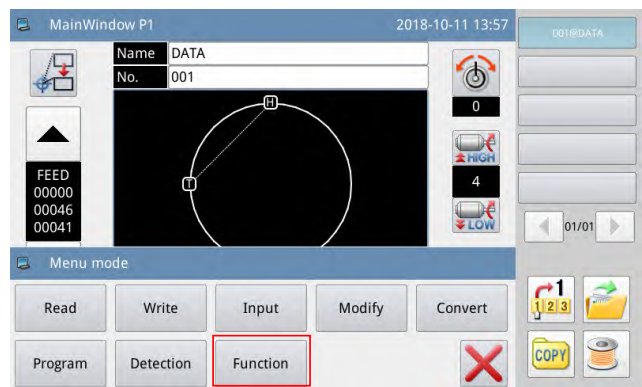


### 3.4.3 Recovery and Back-up of Parameters

#### (1) Method of parameter recovery and back-up:


In main interface P1, press  to activate the catalogue mode, and then press  to enter the interface for setting functions.

Press  in the function setting interface.




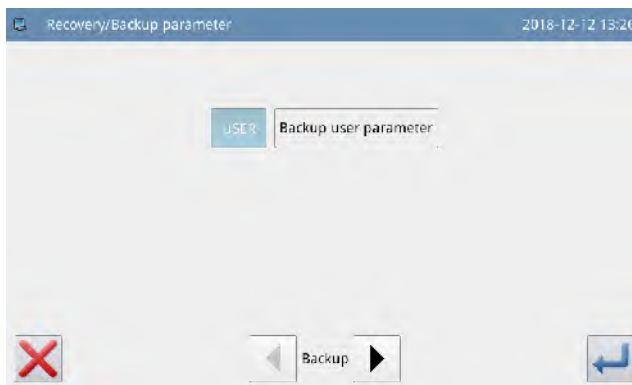
**(2) Parameter Back-up**

In the interface of parameter recovery and back-up, the default setting is to back-up the parameters.


Press  after inserting U disk. After the operation, the system will create a catalogue named “bakParam” in U disk automatically. The file “backup.param” within that catalogue is the parameter back-up file.

**[Note]: the file with the same name will be replaced with new data. The original data will be lost.**

In case of parameter recovery operation, user need press  to shift to recovery mode.



**(3) Parameter Recovery**

At recovery mode, press  to recover the parameters. After the operation, the system will return to the previous interface.



**3.4.4 Parameter List**

**(1) Wiper:**

Code	Description	Unit	Step Length	Range	Default Value	Type
WIP	Wiper Switch			0: OF: Wiper off 1: ON: Wiper on	1	Selection
W1	Wiper Start Time	ms	1	0~998	30	Input
W2	Wiper Holding Time	ms	2	0~998	30	Input
W3	Wiper Stop Delay	ms	1	0~255	0	Input
CSS	Needle Thread Clamp Switch at Sewing Start			OFF ON	OFF	Selection
CRS	Needle Thread Clamp Holding Current at Sewing Start			0~16	8	Input
WAM	Wiper Opportunity			0: UP: intermediate presser	0	Selection

	Selection			up 1: MID: intermediate presser up (going down) 2: DOWN: intermediate presser down		
CTO	Wiper Type			0:MCN:mechanical 1:ELC:electronic	1	Selection
CBA	Needle Thread Clamp Start Angle at Sewing Start		1	0~360	180	Input
CEA	Needle Thread Clamp End Angle at Sewing Start		1	0~360	310	Input
CTA	Needle Thread Clamp Trimming Angle		1	0~360	30	Input
WSA	Wiper Start Angle	degree	1	0~360	280	Input

**(2) Slow Start Stitch:**

Code	Description	Unit	Step Length	Range	Default Value	Type
ST1	Start Speed of 1 <sup>st</sup> Stitch	100RPM	1	2~27	4	Input
ST2	Start Speed of 2 <sup>nd</sup> Stitch	100RPM	1	2~27	9	Input
ST3	Start Speed of 3 <sup>rd</sup> Stitch	100RPM	1	2~27	15	Input
ST4	Start Speed of 4 <sup>th</sup> Stitch	100RPM	1	2~27	20	Input
ST5	Start Speed of 5 <sup>th</sup> Stitch	100RPM	1	2~27	23	Input

**(3) Frame:**

Code	Description	Unit	Step Length	Range	Default Value	Type
SYN	Sewing When Frame Is Up			0: OF: No 1: ON: Yes	0	Selection
TFS	Frame Status at Sewing End			0: SUP: Back to start point and go up 1: SLU: Go up at sewing end. 2: SBU: Back to start point. It goes up when user steps pedal.	0	Selection
ATU	Frame Auto Up after Work			0: PUP: Auto UP 1: NUP: Not Auto Up	0	Selection
POP	Pedal Operation Method			0: BUD: Frame Up/Down 1: IUD: Indirect Control of Frame & Help Frame Up/ Down 2: ILR: Indirect Control of	0	Selection

				L/R Frame		
LRD	Lower Action of L/R Separate Frames			0: LRU: Down at Same Time 1: LRN: Left Then Right 2: RLD: Right Then Left	0	Selection
LRU	Lift Action of L/R Separate Frames			0: LRT: Up after work 1: LTD: Left Frame Down after Work 2: RTD: Right Frame Down after Work	0	Selection
DNY	Support Reverse & Stretch Pressers		1	0-255 0: none 1: reverse presser (F1 presser) 2: flexible presser 3: F2 presser 4: K presser	0	Input
PSS	Presser Status at Mid-way Stop			0: UP: Presser Down 1: DN: Presser Up	0	Selection
OPT	Frame Type Selection			0: AIR: pneumatic 1: MAG: solenoid 2: Motor: motor	0	Selection
2PE	2-phase Frame Availability			0: OFF: prohibited 1: ON: available	0	Selection
OPR	Frame Stroke Setting			0~200	180	Input
OPC	Frame Electricity Setting		1	0~15	2	Input
POD	Flexible Presser Motion Delay		1	0~255	30	Input
ASD	Flexible Presser Up Delay		1	0~255	45	Input
DSD	Flexible Presser Down Delay		1	0~255	30	Input

**(4) Range Limitation:**

Code	Description	Unit	Step Length	Range	Default Value	Type
ALC	Cancel Range Protection			0:OF:Protection Off 1:ON:Protection On	1	Selection
XL	Set effective range in left X direction	mm	1	2~255	101	Input
XR	Set effective range in right X direction	mm	1	2~255	101	Input
YU	Set effective range in up Y direction	mm	1	2~255	51	Input

YD	Set effective range in down Y direction	mm	1	2~255	51	Input
FXM	Forbit movement at X direction			0: OFF: turn off 1: ON: turn on	0	Selection
SSD	Select shape range			0: OFF: turn off 1: ON: turn on	0	Selection

[Note] parameter ALC all become “off” automaticall after power on.

### (5) Thread-breakage Detector:

Code	Details	Unit	Step Length	Range	Default Value	Type
PRT	Thread-breakage Detection			0: OF: OFF 1: ON: ON	0	Selection
ISD	Invalid Stitches at Sewing Start for Thread-breakage Detection		1	0~15	8	Input
IND	Invalid Stitches during Sewing for Thread-breakage Detection		1	0~15	3	Input
TRM	Trim at Thread-breakage Detection			0: ON: Trim at Thread-breakage 1: OFF: Not Trim at Thread-breakage	0	Selection

### (6) Origin Position:

Code	Brief	Unit	Step Length	Range	Default Value	Type
PTR	Return to Origin at Power-on			0: OF: Not Return 1: ON: Return	0	Selection
PRF	Forbid Returning to Origin at Presser Up			0: OF: Permitted 1: ON: Forbidden	0	Selection
DOG	Search Origin at Sewing End			0: OFF: Not Search Origin, Stop at End Point 1: ON: Search Origin (Sub-origin) 2: RET: Return to Sewing Start	1	Selection
RST	Set Sewing Start Resetting Path			0: LIN: Linear Return to Sewing Start 1: PAT: Return to Origin along Pattern 2: ORG: Search Origin Then Return to Sewing Start	0	Selection
DED	Select Highest Position at Searching Origin			0: OF: Not Select 1: ON: Select	0	Selection

OPA	Origin Presser Action			0: DNW: Presser Down 1: UP: Presser UP	1	Selection
NRM	Search/Return to Origin Path			0: NRM: Standard 1: REV: Reverse 2: YTX: Y to X 3: XTY: X to Y 4: XAY: X and Y at the same time	0	Selection
REV	Search/ Return to Origin Path at Revers			0: NRM: Standard 1: REV: Reverse 2: YTX: Y to X 3: XTY: X to Y 4: XAY: X and Y at the same time	0	Selection
XSP	X Axis Sensor Position			0:L:Left 1:R:Right	0	Selection

**(7) Pause:**

Code	Description	Unit	Step Length	Range	Default Value	Type
POS	Needle Position at Pause			0: DWN: Needle Down 1: UP: Needle Up	1	Selection
ACT	Presser Action at Pause			0: DWN: Presser Down 1: UP: Presser Up	0	Selection
TYP	Pause Switch Type			0: AUT: Auto Lock 1: NRM: Normal	1	Selection
TRM	Auto Trimming at Pause			0: AUT: Auto 1: OFF: No trim	1	Selection
SYP	Security Switch Type			0: NCT: always off 1: NOT: always on	0	Selection

**(8) Counter:**

Code	Description	Unit	Step Length	Range	Default Value	Type
UCM	Up Counter Mode			0: OFF: Up Counter Off 1: PAT: Count by Pattern 2: CYC: Count by Cycle	1	Selection
DCM	Down Counter Mode			0: OFF: Down Counter Off 1: PAT: Count by Pattern 2: CYC: Count by Cycle	1	Selection
URV	Reserve Up Counter Value at Inputting Pattern			0: CLR: Clear 1: RSV: Reserve	1	Selection
DRV	Reserve Down Counter Value at Inputting Pattern			0: CLR: Clear 1: RSV: Reserve	1	Selection

POC	Clear Counter at Repowering			0: CLR: Clear 1: RSV: Reserve	1	Selection
NUP	Cannot Change Up Counter (UP)			0: OF: Permitted 1: ON: Forbidden	0	Selection
NDP	Cannot Change Down Counter (DN)			0: OF: Permitted 1: ON: Forbidden	0	Selection
UTO	Sewing Machine Action at Reaching Up Counter (UP) Set Value			0: OF: Stop Sewing 1: ON: Continue Sewing	0	Selection
DTO	Sewing Machine Action at Reaching Down Counter (DN) Set Value			0: OF: Stop Sewing 1: ON: Continue Sewing	0	Selection
NPC	No Change of Production Amount			0: OFF: Change Permitted 1: ON: Change Forbidden	1	Selection

**(9) Intermediate Presser:**

Code	Description	Unit	Step Length	Range	Default Value	Type
SYN	Down Synchronization			0: BEF: Before Head Start 1:OUT: Same with Last Outer Presser	0	Selection
CUR	Intermediate Presser Current		1	1~32	8	Input
MDY	Intermediate Presser Up Delay	ms	1	0~255	0	Input
TYE	Intermediate Presser Type			0:FLU: follow-up	0	Selection
PLP	Intermediate Presser Stroke Setting	0.1mm	1	0~220	214	Input
PDD	Intermediate Presser Down Delay		1	0~255	0	Input
MSP	Intermediate Presser Moving Speed		1	8~17	13	Input
THS	Hint Display after Threading			0:OFF: turn off 1:ON: turn on	1	Selection
FSH	Follow-up Height	0.1mm	1	1~100	35	Input
FST	Follow-up Time Adjustment		1	-127~127	0	Input
FSA	Follow-up Angle Adjustment		1	-360~360	40	Input
FRT	Follow-up Stitch Repetition	Stitch	1	0~2	0	Input
FRH	Follow-up Presser Down Angle	0.1mm	1	1~40	1	Input

**(10) Winding:**

Code	Description	Unit	Step Length	Range	Default Value	Type
SPD	Winding Speed	100RPM	1	2~27	13	Input
STP	Winding Device Stop Method			0: UTS: Release Pedal to Stop winding 1: RTS: Step Pedal again to stop winding 2: TTS: Set Time to Stop Winding	1	Selection
TPD	Set Stop winding time (Unit: second)	S	1	2~498	30	Input

**(11) Feed Method:**

Code	Description	Unit	Step Length	Range	Default Value	Type
STP	Sewing Type Selection			0: TIN: Thin 1: MID: Middle 2: TIC: Thick	0	Selection
THIN	Thin Fabric		1	0~255	0	Input
MID	Middle Fabric		1	0~255	0	Input
THCK	Thick Fabric		1	0~255	0	Input
SUI	Pattern-making Follow-up Action Setting			0: OF: Forbid 1: ON: Permit	0	Selection
SSM	Trial Sewing Method			0:STP: lift to stop 1:MOV: lift to continue moving	0	Selection
MCX	X Axis Frame-moving Curve No.		1	0~10	0	Input
MCY	Y Axis Frame-moving Curve No.		1	0~10	0	Input
FTX1	Method 1 X Axis Frame-moving Time Adjustment	ms	1	-100~100	0	Input
FAX1	Method 1 X Axis Frame-moving Angle Adjustment	°	1	-150~150	0	Input
FTY1	Method 1 Y Axis Frame-moving Time Adjustment	ms	1	-100~100	0	Input
FAY1	Method 1 Y Axis Frame-moving Angle Adjustment	°	1	-150~150	0	Input
XSO	X Gap Compensation	0.1mm	1	-50~50	0	Input

YSO	Y Gap Compensation	0.1mm	1	-50~50	0	Input
JSS	Adjustment Switch Selection			0: ICA: auto pattern recognition 1: NIA: semi-auto pattern recognition 2: MSR: full-auto	0	Selection
PDL	Pedal Down Delay	ms	1	0~255	0	Input

**(12) Speed:**

Code	Description	Unit	Step Length	Range	Default Value	Type
HSP	High Speed	100RPM	1	2~30	30	Input
LSP	Low Speed	100RPM	1	2~30	2	Input
MHS	Middle High Speed	100RPM	1	2~30	25	Input
MLS	Middle Low Speed	100RPM	1	2~30	10	Input
EDL	Feed Delay		1	0~500	0	Input
SEW	Sewing Speed (Set Level)		1	0~9	4	Input
REL	Sewing Speed (Real)	100RPM	1	2~30	26	Input
FED	Feed Speed		1	0~9	9	Input
FRM	Frame-moving Speed		1	1~3	2	Input
SPS	Returning to Start Point Speed		1	0-9	9	Input
HPS	Search Origin Speed		1	5~10	9	Input
SMS	Single Step Move Speed		1	0~40	30	Input
SRT	Sewing Speed Ratio	%	1	70~100	100	Input

**(13) Thread-trimming Sequence:**

Code	Description	Unit	Step Length	Range	Default Value	Type
TRM	Trimming Switch			0: OFF: off 1: ON: on	1	Selection
SPD	Trimming Speed	10RPM	1	10~40	20	Input
ANG	Needle Position Angle After Trimming			0:UP: upper needle position 1:DED: upper dead point	0	Selection
TDY	Thread-trimming delay	0.01s	1	0~255	0	Input
TST	Trimming Output Start Time/ Angle	ms/°	2	0~998	310	Input
TMD	Trimming Mode			0: MAG: solenoid valve 1: AIR: air valve 2: MOTOR: motor	2	Selection
OPT	Thread-loosing Delay		1	0~255	30	Input
OSA	Thread-loosing Start Time/Angle	ms/°	2	0~998	200	Input

TFE	Thread-trimming Automatically Added When Pattern-making			0: OFF: off 1: ON: on	1	Selection
TBE	Thread-trimming before Empty Feed during Sewing			0: OFF: off 1: ON: on	0	Selection
TBD	Thread-trimming after Sewing			0: OFF: off 1: ON: on	1	Selection
UAT	Upper Position Stop Angle Adjustment after Thread-trimming	°	1	0~100	0	Input
TMC	Thread-trimming Motor Current Level		1	1~32	12	Input
TMT	Thread-trimming Motor Stroke		1	1~255	105	Input
TTI	Time Adjustment	ms	1	-127~127	0	Input
BLA	Thread-holding Start Angle	°	1	0~360	250	Input

**(14) LCD Screen:**

Code	Description	Unit	Step Length	Range	Default Value	Type
WRN	Warning of Buzzer			0: OFF: No Voice 1: PAR: Panel Voice 2: ALL: Panel + Warning Voice	2	Selection
DEL	Touching Panel Sensitivity Adjustment		1	1~5	3	Input
LIG	Back Light Adjustment		1	20~100	100	Input
ATO	Back Light Auto Turn-off			0: OF: Not Auto Turn-off 1: ON: Auto Turn-off	0	Selection
TIM	Back Light Auto Turn-Off Waiting Time	Min.	1	1~9	3	Input
BTN	Button Display Style			0:ICN: icon 1:TXT: text	1	Selection
BKC	Background Color Setting		1	0~6	0	Input
SES	Display Style of Pattern Selection			0: CLS: Classic (Display Number List) 1: SHP: Display Pattern Shape	1	Selection
ZST	Scale Up Method			0: SQA: square 1: L-W: length & width	1	Selection
DPN	Display Needle Entry Position			0: NO: no 1: YES: yes	1	Selection

CCS	Continuous Sewing of Combined Patterns			0: NO: no 1: YES: yes	0	Selection
LPT	Pattern of Large Number of Stitches			0: OFF: off 1: ON: on	1	Selection
CSM	Pattern Transfer Selection Method			0: STI: stitch 1: ELE: elements	0	Selection
PSU	Scaling Down Unit			0: %: percentage 1: SIZ: size	0	Selection
MSM	Multiple Sewing Scaling Down Method			0: VAR: variable interval 1: FIX: flexible interval	1	Selection
PMR	Return after Modification			0: FUN: function selection 1: CNT: continue modification	0	Selection
OFM	Multiple Sewing and Offset Sewing Altermode			0: REL: relative 1: ABS: absolute	0	Selection
MBN	Main Interface Display Style			0: ICN: icon 1: TXT: text	0	Selection
RSS	Sewing Style after Empty Feed of Pattern-designing			0: KPS: keep 1: SLN: linear	0	Selection
SMC	Scale Computation Method of Scaling Function			0: FHM: from origin 1: FSR: from sewing start	0	Selection

**(15) Others:**

Code	Description	Unit	Step Length	Range	Default Value	Type
NLD	Needle-cooling			0: OFF: Off 1: ON: Yes	0	Selection
PEM	Single Pedal Operation			0: OFF: forbid 1: ON: permit	0	Selection
LAG	Language Selection			0: CH: Chinese 1: EN: English 2: Bur: Burmese 3: KR: Korean 4: TK: Turkish 5: JP: Japanese 6: Vietnamese	0	Selection
SSW	Sound Setting			0: OFF: Off 1: ON: Yes	1	Selection
VOL	Volume of Operation Voice			30~63	50	Input
NSW	Network Connection			0: OFF: off 1: Wifi: wireless 2: Wired: wired	0	Selection

LED	LED Brightness		1	0~100	50	Input
DLY	Thread-loosing Device Open Delay at Threading		1	0~255	20	Input
CUR	Thread-loosing Device Open Current at Threading		1	0~255	0	Input
SEC	Sub-origin Automatic Add after First Empty Feed			0: OFF: Off 1: ON: Yes	0	Selection
EMM	Follow-up Action of Presser during Pattern Designing			0: OFF: Off 1: ON: Yes	0	Selection
MAH	Used for Auto-feed Type Machine		1	0~10	0	Input
DSP	Set Start Delay after Stepping Pedal			0: OFF: forbid 1: ON: permit	0	Selection
DEP	Start Delay after Stepping Pedal		1	0~200	20	Input
FEP	Stitch Length for Empty Feed	0.1mm	1	10~120	120	Input
PTP	Vectorgraph to Stitch Lenght	0.1mm	1	10~127	30	Input
JAC	Jump Interface Auto Off			0: OFF: Off 1: ON: Yes	0	Selection
CNA	Angle Standard for Forming Angular Point	deg	1	0~180	90	Input
LGS	Language Selection after Power on			0: OFF: Off 1: ON: Yes	0	Selection
RFM	Sewing Start Modification Reference			0: ST: sewing start 1: 2H: sub-origin	0	Selection

**(16) Repair & Maintenance:**

Code	Description	Unit	Step Length	Range	Default Value	Type
NRT	Needle Replacement Left Value	1000 Sti	1	0~9999	0	Input
NST	Needle Replacement Set Value	1000 Sti	1	0~9999	0	Input
HRT	Clearing Time Left Value	Hour	1	0~9999	0	Input
HST	Clearing Time Set Value	Hour	1	0~9999	0	Input
ORT	Oil Replacement Left Value	Hour	1	0~9999	0	Input
OST	Oil Replacement Set Value	Hour	1	0~9999	0	Input
BLR	Residual Value for Bobbin Thread Replacement (Stitches)		1	0~60000	0	Input
BLS	Set Value for Bobbin Thread		1	0~60000	0	Input

	Replacement (Stitches)					
OLI	Oiling Interval	s	1	0~999	90	Input
OLW	Oiling Work Time	ms	1	0~9999	1000	Input
XOI	Oil Pumping Interval	min	1	0~240	0	Input
XOW	Oil Pumping Work Time	s	1	0~60	0	Input

[Note]: Parameters, like NRT, HRT, ORT, BRT and BLR can not be set. User can only check them in the Internal Parameter Setting Interface

[Note]: After the modification of parameters for repair and maintenance, the corresponding parameters of “Left Value” will be changed to the set value


[Note]: After the parameter value of repair and maintenance are set (value over 0), the corresponding counting function for repair and maintenance will be activated as well.

### (17) Special Parameters:

Code	Description	Unit	Step Length	Range	Default Value	Type
HSP	Max Speed	100RPM	1	2~30	30	Input
MAE	Main Stop Angle	°	1	30~80	53	Input
DEB	Letter Embroidery			0: OFF: off 1: ON: on	0	Selection
DAE	Upper Dead Point Angle	°	1	0~50	3	Input
RSC	Stitch Length Deceleration Curve		1	0~8	5	Input
HSL	Max Stitch Length at Keeping Speed	0.1mm	1	1~127	30	Input
MTS	Main Shaft Motor Type Selection: 550W or 750W			0: 550: 550W 1: D00: 750W-D00 2: F00: 750W-F00	2	Selection
xDIR	X Motor Rotating Direction			0: POS: positive direction 1: NEG: negative direction	1	Selection
yDIR	Y Motor Rotating Direction			0: POS: positive direction 1: NEG: negative direction	0	Selection
zDIR	Z Motor Rotating Direction			0: POS: positive direction 1: NEG: negative direction	1	Selection
ADR	Main Control Write Address: 0xA0000:655360 0xB0000:720896 0xC0000:786432 0xD0000:851968 0xE0000:917504		1	655360~917504	917504	Input
CVE	Parallel Curve Algorithm			0: A1: algorithm 1 1: A2: algorithm 2 2: A3: algorithm 3	2	Selection
MUS	Reverse Sewing			0: ALL: end to end	0	Selection

	Algorithm under Multiple Sewing				1: SE: by segment		
TID	Pattern Recognizer Setting				0: OFF: off 1: ON: on	0	Selection
PFT	Corresponding Pattern Number Selection for Pattern Template: 0:001~031 5:501~531 1:101~131 6:601~631 2:201~231 7:701~731 3:301~331 8:801~831 4:401~431 9:901~931		1		0~9	0	Input
PXO	Marker X Direction Deviation	0.1m	1		-5000~5000	0	Input
PYO	Marker Y Direction Deviation	0.1m	1		-2000~2000	0	Input
PSP	Marker Running Speed		1		1~9	1	Input
TTY	Pattern Recognizer				0: SEN: sensor 1: BAR: barcode scanning device 2: RF: RFID read-write device	2	Selection
ICS	Improve Communication Speed				0: OFF: off 1: ON: on	1	Selection
PIT	Pattern Recognition Starting Time		1		0~60	0	Input
CXO	Laser Cutting Excursion at X Direction	0.1m	1		-5000~5000	0	Input
CYO	Laser Cutting Excursion at Y Direction	0.1m	1		-2000~2000	0	Input

### 3.5 Test Mode

**Enter test mode interface:** In main interface P1 (or P2), press  to activate the catalogue mode, and then


press  to enter test mode.




**Function Description:**

No.	Function	Description
A	LCD Test	Test LCD displayer
B	Touch Screen Correction	Correct the touch screen
C	Input Signal Test	Test the input signal of switches and sensors
D	Speed Test	Test the speed of main shaft motor
E	Output Signal Test	Test the output signal of pressers and thread-trimming devices
F	Continuous Running	Set continuous running parameter and enter aging status
G	XY Motor Origin Test	Test the motor origins of X /Y motors
H	Main Shaft Motor Installation Angle Adjustment	Display and set the installation angle of main shaft motor
I	Network Setting	Set the related parameters of network
J	Intermediate Presser Test	Test intermediate presser by moving or changing position
K	Frame-pressing/thread-trimming Motor Test	Test corresponding position by moving frame-pressing or thread-trimming motor
L	RFID Setting	Make read-and-write test of RFID card
M	Quit	Quit test mode and return to main interface

**3.5.1 LCD Test**

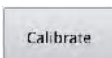
In the test mode, press  to activate LCD test function, and the default test mode is automatic test.

Test status: after entering LCD test, the LCD will automatically change color in the following order: white, black, red, green, and blue, in order for the user to judge whether LCD has color problem. If LCD is ok, press

 to quit the test mode.

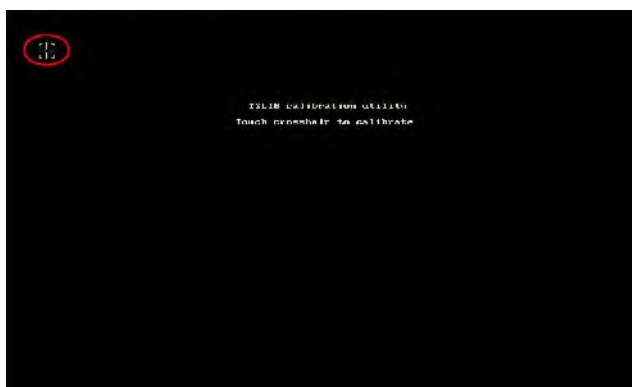
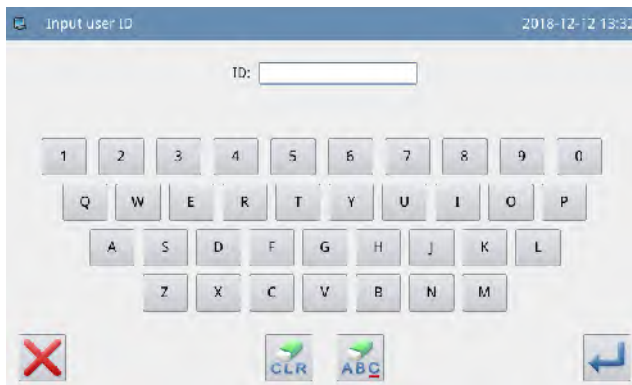
### 3.5.2 Touch Screen Correction

#### Function Description:

Press  in the test mode. Input the correct password to enter the correction function.

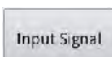
User has to test 5 spots. Touch pen is recommended to touch the cross icon on the interface. After the correction, the system will display the result of this operation.

**[Note]: During the correction, please perform the operation strictly according to the position of the cross icon, otherwise the touch screen may be unable to be used normally after the correction.**



### 3.5.3 Input Signal Test

#### Function Description:

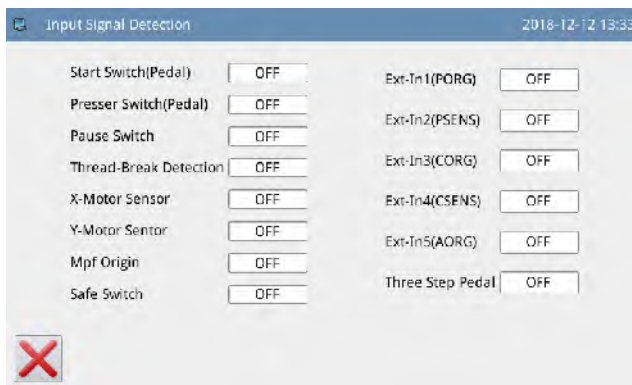
In the test mode, press  to activate the Input Signal Test Function.

ON: activated


OFF: unactivated

Types of Input Signal:

- ① Start switch (Pedal)
- ② Presser switch (Pedal)
- ③ Pause Switch
- ④ Thread-breakage Detection
- ⑤ X Motor Sensor
- ⑥ Y Motor Sensor
- ⑦ Intermediate presser origin
- ⑧ Security switch

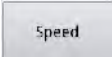


- ⑨ External input 1 (PORG)
- ⑩ External input 2 (PSENS)
- ⑪ External input 3 (CORG)
- ⑫ External input (CSENS)
- ⑬ External input (AORG)
- ⑭ Three-in-one Pedal


Press  to return to the previous interface.

### 3.5.4 Speed Test


#### Function Description:

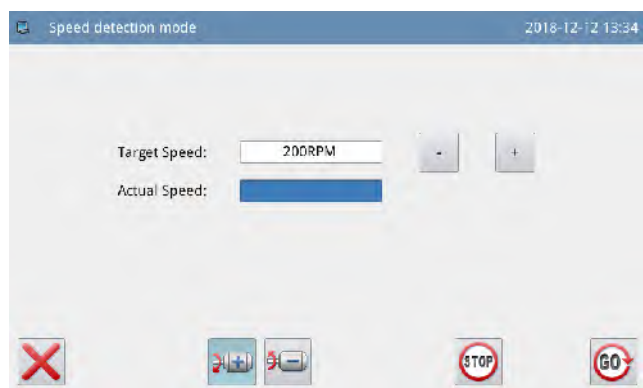
In the test mode, press  to enter the main shaft speed test function.

Use  and  to set the target speed of

main shaft motor. After user presses , the main shaft motor will rotate at the set speed. At this moment, the actual speed will be displayed in the input column of actual speed.

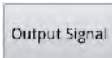
Press  to stop running.

Press  to return to the previous interface.



### 3.5.5 Output Signal Test

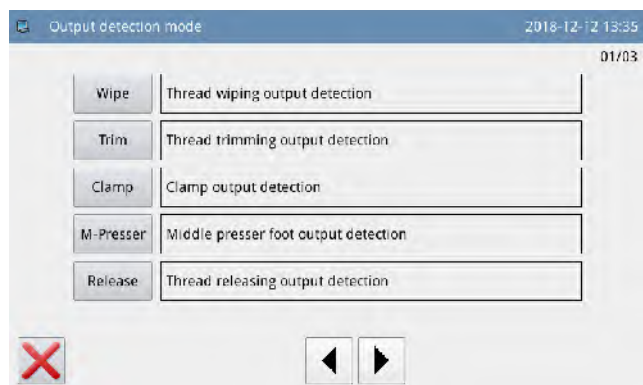
#### Function Description:

In the test mode, press  to activate the output signal test function.


In this interface, user can press output signal button to test the status of output signals of solenoids and others.

Types of output signals:

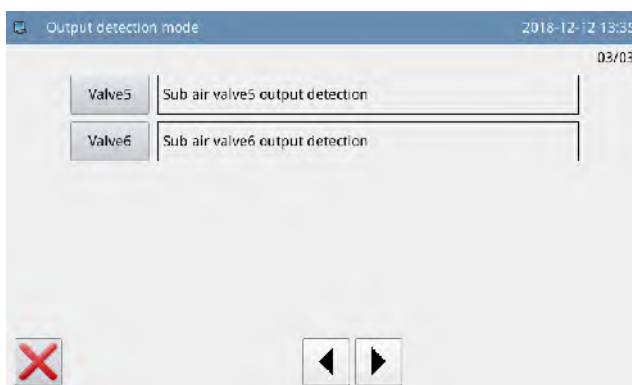
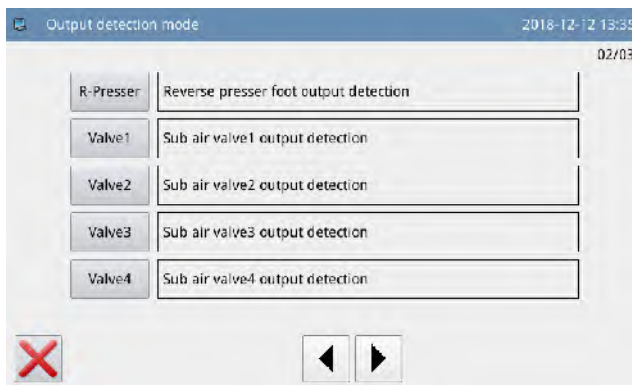
- ① Thread-wiping
- ② Thread-trimming
- ③ Frame
- ④ Presser



- ⑤ Thread-loosing
- ⑥ Reverse Presser
- ⑦ Auxiliary air valve 1
- ⑧ Auxiliary air valve 2
- ⑨ Auxiliary air valve 3
- ⑩ Auxiliary air valve 4
- ⑪ Auxiliary air valve 5
- ⑫ Auxiliary air valve 6

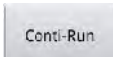
Press  to return to the previous interface.


**[Note]: The sewing machine will have the actual movement.**



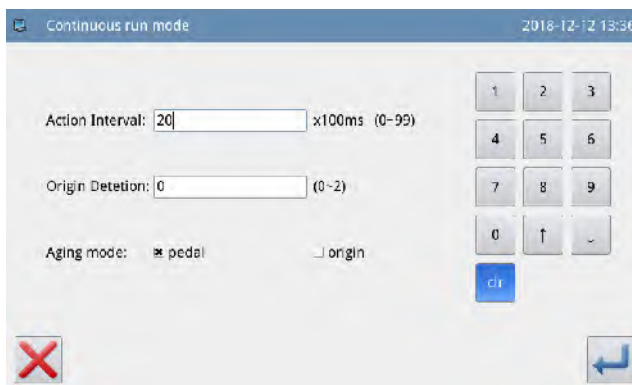
### 3.5.6 Continuous Running

#### Function Description:

In the test mode, press  to enter the continuous running function

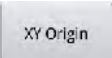
Click Action Interval bar or Origin Detection of Needle-withdrawing bar and use number keys to input the figures. Press  to return to the upper level interface.

There are two ways to activate the aging status: pedal or origin; after setting this parameter, return to main interface P1 (or P2). Step pedal or press the Return to Origin key to run the machine, and enter continuous running mode.



### 3.5.7 XY Motor Origin Test


#### Function Description:

In the test mode, press  to activate the XY Motor Origin Detection Function.

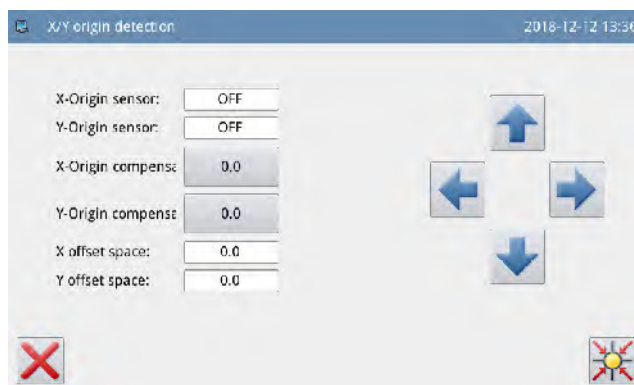
In this interface, use direction keys to move XY motor. During this process, the system will display the ON/OFF status of the sensors.

ON: Sensor Detected

OFF: Sensor Undetected

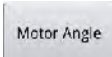
Press  to return to the previous interface.

**[Note]: The sewing machine will have the actual movement.**




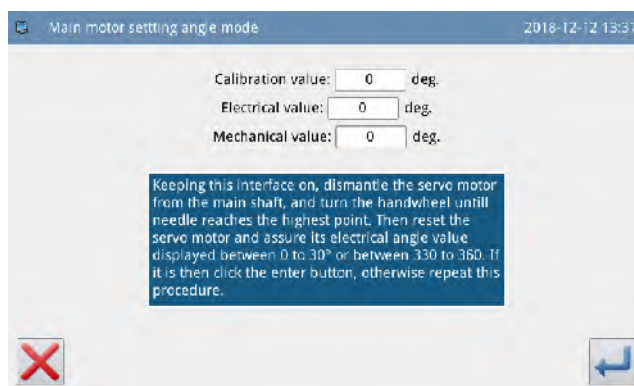
### 3.5.8 Main Shaft Motor Installation Angle Adjustment

#### Function Description:

In the test mode, press  to enter the main shaft motor installation angle adjustment.


In the current interface, remove the main shaft motor, turn the hand wheel to lift the needle bar to the highest point and turn the main shaft joint to adjust the electrical angle within less than 30 degree. After that, reinstall the main motor and press



 to confirm.



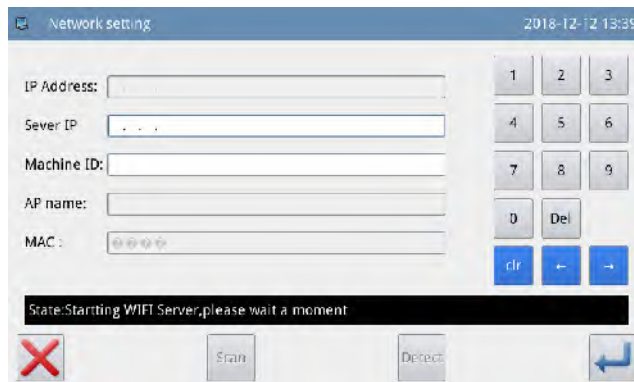
### 3.5.9 Network Setting

**Function Description:**

In the test mode, press  to enter the network setting function. If user needs the network function of operation panel, he should set the related parameters of network.

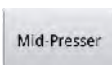
Use number keys to input parameters, make sure the “IP Address” and “Server IP” are within the same section. Use  and  to move the cursor. After finishing the setting, press the Connection key to get connected with the computer via internet.


**[Note] This function is only available for controllers with networking function.**




### 3.5.10 Intermediate Presser Test

**Function Description:**

In the test mode, press  to enter intermediate presser test.

: Intermediate Presser Down

: Intermediate Presser Up

: Shift Position of Intermediate Presser

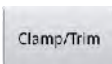
**[Note]: In this interface, step pedal to return the intermediate presser to origin (the highest position of intermediate presser); the highest point is 71 mm, middle point is 35 mm, and the lowest point is 0 mm. The adjusted position is the fabric thickness.**


**This function is only available for G Type.**





### 3.5.11 Frame-pressing/thread-trimming Motor Test

**Function Description:**

In the test mode, press  to enter frame-pressing/thread-trimming motor test function.

 : lower down frame-pressing / thread-trimming motor

 : lift frame-pressing / thread-trimming motor


 : shift position of frame-pressing / thread-trimming motor

**[Note] In this interface, step start pedal to return frame-pressing / thread-trimming motor to origin.**

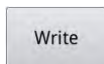


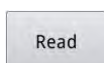
### 3.5.12 RFID

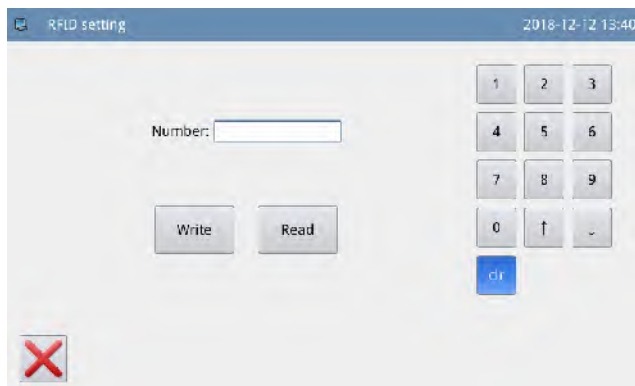
**Function:**

In the test mode, press  to enter the RFID setting function.


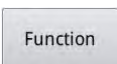
Number Range: 0~999

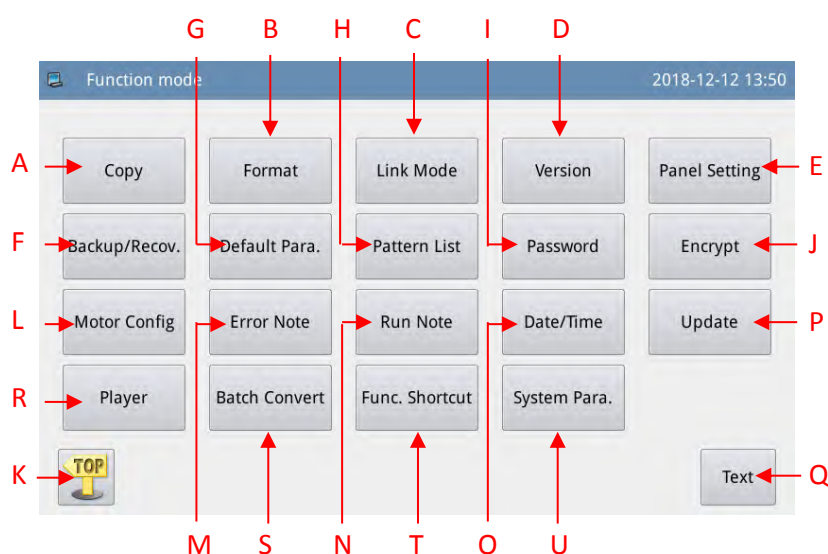
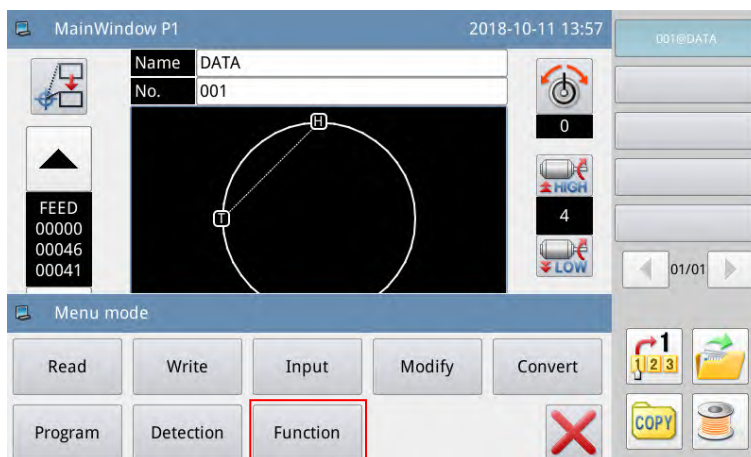
 : Write the pattern number to RFID

 : Read the pattern number from the RFID.



### 3.6 Function Setting

**Enter function setting mode:** in main interface P1, press  to activate the catalogue mode, and then press  to enter the Function Setting Mode.

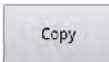


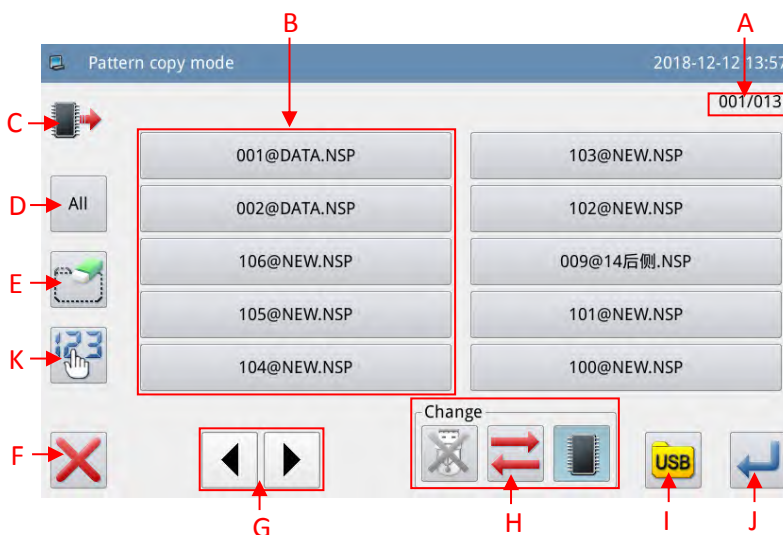
**Function Description:**

No.	Functions	Description
A	Data Transfer	Transfer pattern file between memory and U disk
B	Formatting	Initialize the U disk, memory and pattern number hotkeys.
C	Pattern Connection	Edit combined pattern
D	Version Inquiry	Inquire the version of system software
E	Display Setting	Set background light, keyboard lock, lightness and so on
F	Back-up Parameter Recovery	Save parameter values into U disk for the parameter recovery in future
G	Default Parameters	Recovery and self-defined read-write function of the default parameter values
H	Pattern Number Hotkey Edition	Edit the content of pattern number hotkey
I	Password Mode	Provide periodical password function
J	Parameter Encryption	Set passwords for each operation entrance in parameter mode.
K	Quit	Return to main interface
L	Motor Configuration	Enter main motor, stepping current configuration mode



M	Alarm Record	Check the alarm statistic information
N	Running Record	Check running information of machine
O	Date & Time Setting	Set data and time
P	Software Update	Enter software update mode
Q	Shift between Icon and Text	Shift between the icon and text description of the hotkeys
R	Player	Play audio in the formats of mp3, AVI, etc.
S	Pattern Transformation in Batch	Change the patterns of non-standard formats into standard formats. <b>Note: standard format means nsp format.</b>
T	Shortcut key settings	Edit and display hotkeys in the main interface for convenient operation by the users according to their habits
U	Sestem parameter	With the Sestem parameters






### 3.6.1 Data Transfer

In function setting interface, press  to enter data transfer mode, where two ways are provided: “Memory to U Disk” and “U Disk to Memory”.




#### Function Description:

No.	Description
A	Page information, displaying the present page/total pages
B	Pattern List
C	 : Memory Pattern List  : U Disk Pattern List
D	Select All Patterns
E	Delete Pattern
F	Quit and Return to Upper Interface



G	Page Key
H	Load pattern from memory or U disk
	 : Activate the Memory Load Mode: At this moment, user cannot load pattern from U disk.
	 : Deactivate the Memory Load Mode: At this moment, user can load pattern from U disk.
	 : Activate the U Disk Load Mode: At this moment, user can not load pattern from memory.
	 : Deactivate the U Disk Load Mode: At this moment, user can load pattern from memory.
	 : Shift between U Disk and Memory
I	Display the file folders of the U disk
J	Enter
K	Sequence and display pattern list according to modification time or pattern number

**Operation Instructions:**

**1. Copy Mode Selection**

The default setting is to copy pattern from memory to U disk, user can press  to change the copy mode.


**2. File Selection**


Select the pattern for copy from the pattern list (here, we select No.400, 401 and 600). If the patterns are so many, please use   to turn the page.

For copying all the patterns, please press 

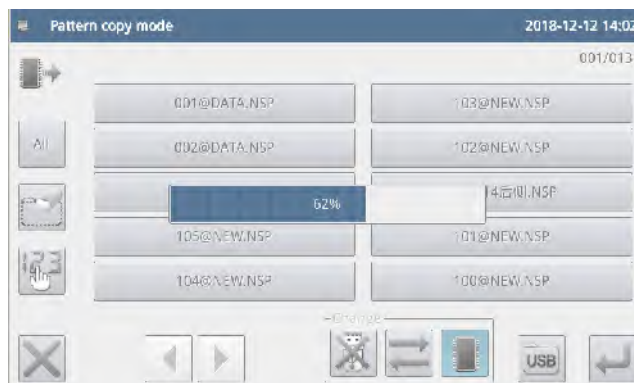
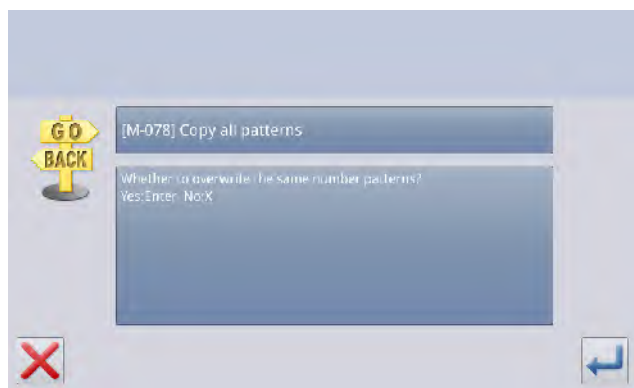
and please press  to delete patterns.

**3. Confirm the Copy**

After selecting pattern file, press  and the system will display “Copy the Selected Pattern?”,

and user can press  to perform the operation. If the pattern is copied from memory to U disk, the system will automatically create a catalogue naming “dh\_pat” at the base catalogue of U disk and save the pattern under that catalogue.

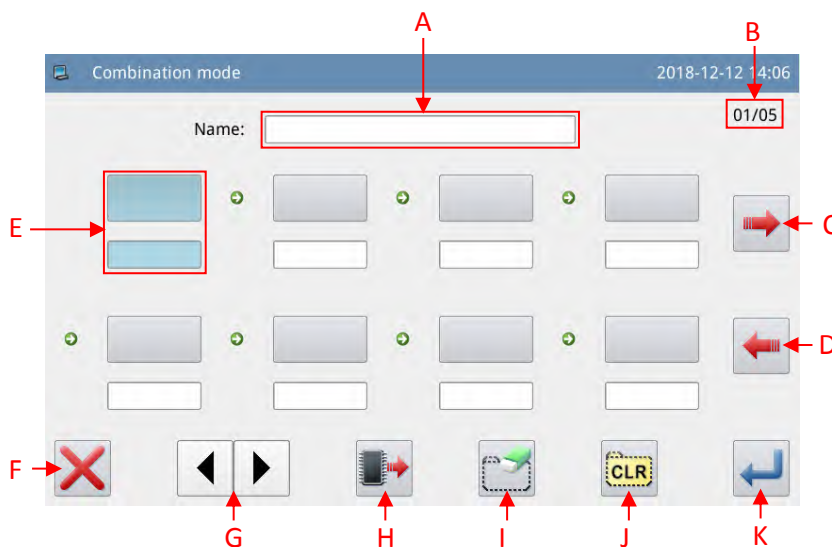
**[Note]: During the copy process, if the memory contains the pattern with the number same to**



that of the pattern in the U disk, the new pattern will replace the old one.

### 3.6.2 Pattern Connection

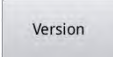
In function setting interface, press **Link Mode** to enter Pattern Connection Mode. The pattern connection mode is mainly used to create and edit combined patterns, that is, to perform combination edition of the existing patterns. The patterns used in combined pattern are called as sub-patterns.




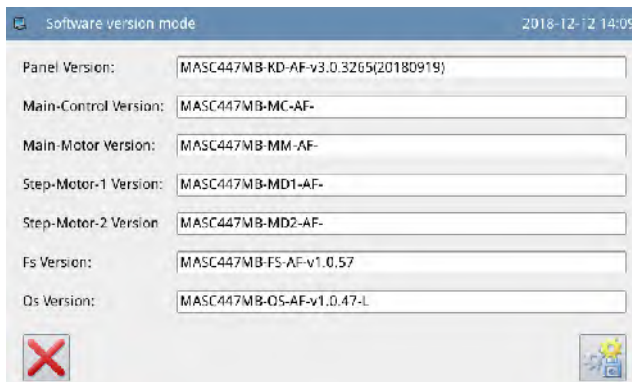
#### Function Description:

No.	Description
A	Name of Combined Pattern
B	Page Number
C	Load Combined Pattern
D	Save Combined Pattern
E	Display Sub-pattern
F	Quit & Return to Previous Interface
G	Page Up/Down
H	Add Pattern from Memory to Combined Pattern
I	Delete Sub-pattern from Combined Pattern
J	Cancel Combined Pattern
K	Enter

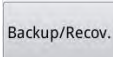
### 3.6.3 Software Version Inquiry

In function setting interface, press  to enter version inquiry mode.

Press  to output the software version to the base catalogue of the U disk with name “version.png”.

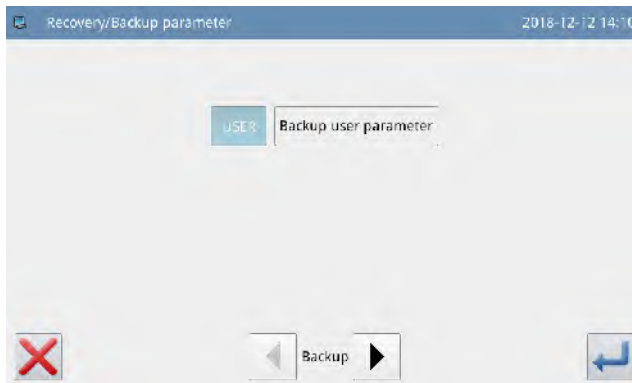


### 3.6.4 Back-up Recovery

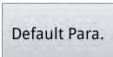
In function setting interface, press  to enter back-up recovery mode.

User can save the value of changed parameter into the U disk for the parameter recovery in future.

For details, please refer to [3.3.4 Recovery and Back-up of Parameter].



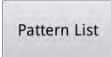
### 3.6.5 Default Parameter

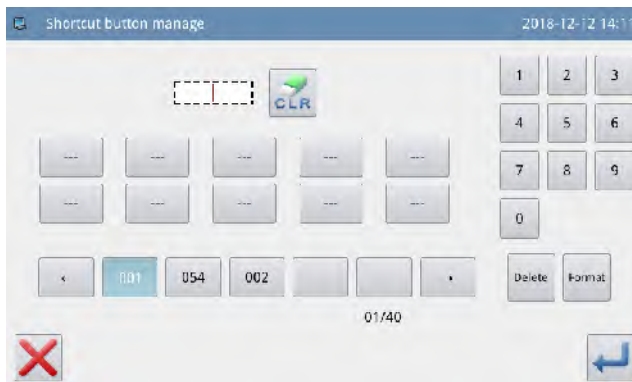
In function setting interface, press  to enter default parameter mode.

It is used to recover the default parameters and to save the self-defined parameter values for future use.

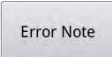


### 3.6.6 Hotkey Management

In function setting interface, press  to enter Hotkey Management Mode, which is mainly used to edit the pattern number hotkeys.

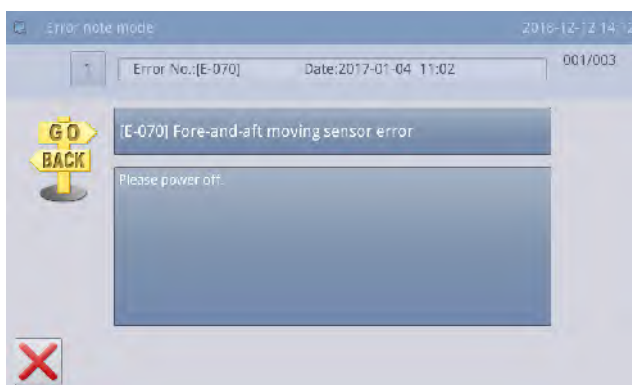
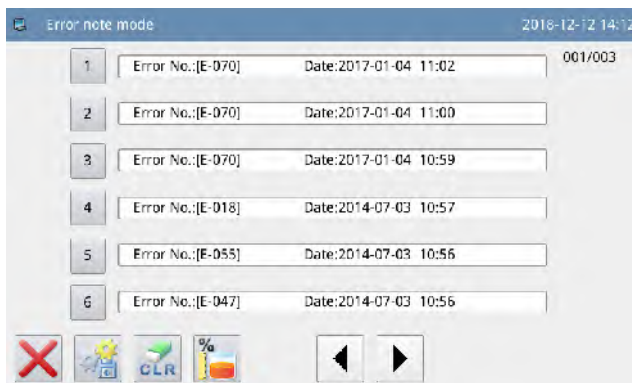


### 3.6.7 Alarm Record

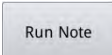
Press  in function setting interface, and system will ask for the manufacturer ID. After user inputs the right ID, the system will enter the alarm record mode.

In this mode, the current alarms will be recorded. The smaller the number, the later the time of the alarm.

Press the number to display the error information and its solution.



### 3.6.8 Running Record

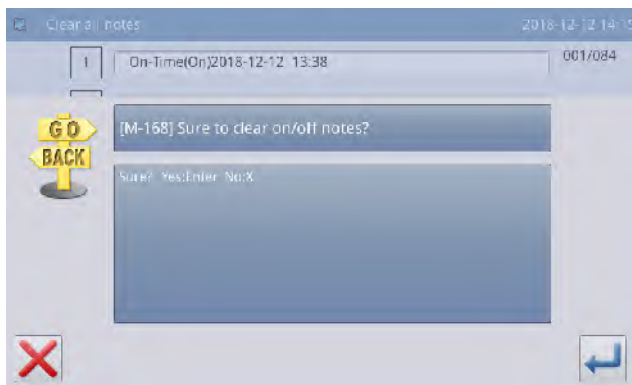
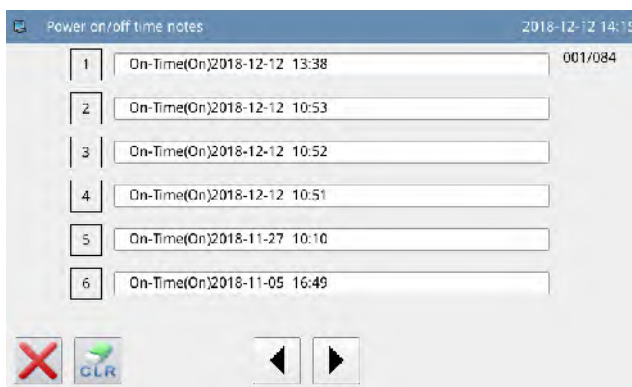
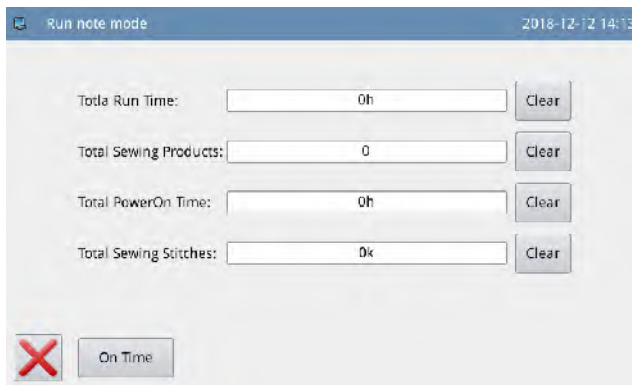
Press  in function setting interface and system will ask for the manufacturer ID. After user inputs the right ID, the system will enter the running record mode.

- ① Accumulated Running Time: Record total sewing time of machine.
- ② Accumulated Sewing Pieces: Record the total number of the sewn patterns.
- ③ Accumulated Power-on Time: Record the total time of power-on
- ④ Accumulated Stitch Number: Record the total stitch number of the machine.

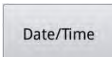
Additionally, click “Clear” to clear the counting value.

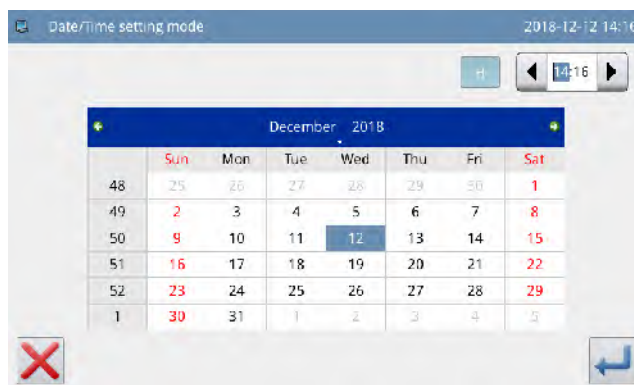
**[Note]: If the value of Accumulated Sewing Pieces is cleared, the system will also clear the Accumulated Counter in the assistant information bar at main interface.**

Press  to display the time of each start-up, press  and then  to clear all records.



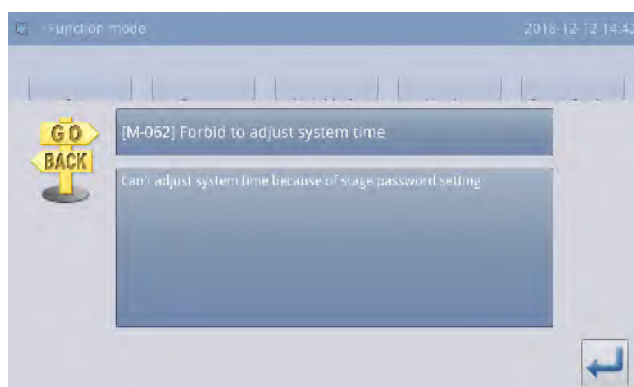
### 3.6.9 Time Setting

Press  in function setting interface and system will ask for password (the default password is the manufacturer ID). Input the correct password to enter data and time setting mode.

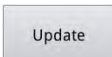


#### Forbid to Change System Time


Once the machine is set with the periodical passwords, the system will deny the change on the system time. After all the passwords are cleared, the system will unlock the setting of the system time.

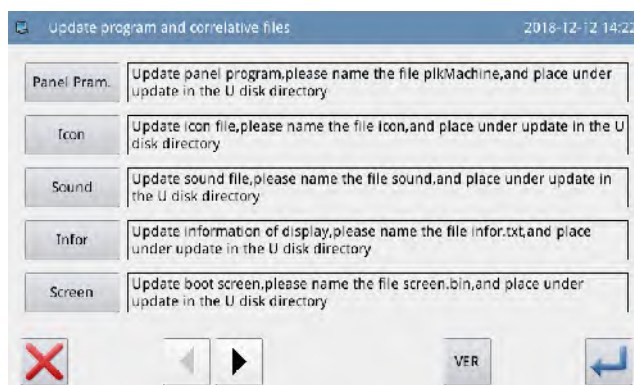


### 3.6.10 Software Update

Press  in function setting interface and system will ask for the manufacturer ID. After user inputs the right ID, the system will enter software update mode.

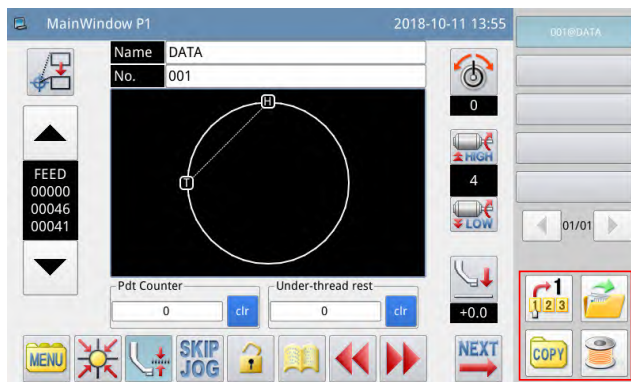
The updating software shall be located in the catalogue “Update” in the U disk.

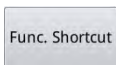
Click the content for update (the selected content will become white words with blue background), then press  to update.



### 3.6.11 Function Hotkey Setting


Hotkey function is used to set the four function keys at the lower right corner according to the user’s habits.

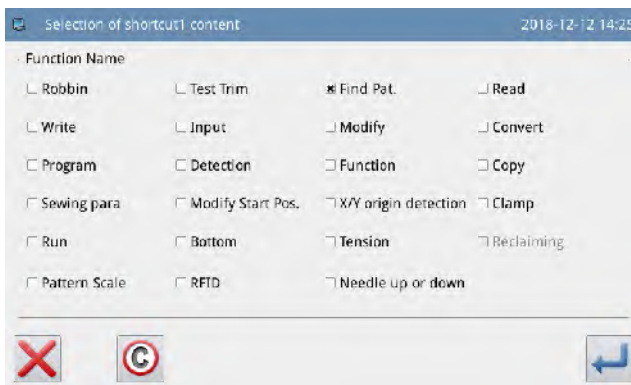


Press  to enter hotkey function setting interface. User can set hotkeys for these four functions respectively: pattern searching, pattern loading, pattern copying, and thread-trimming test.



Hotkey setting:

In the interface for selecting functions for hotkeys, make the selection and then press  to confirm, save and quit.

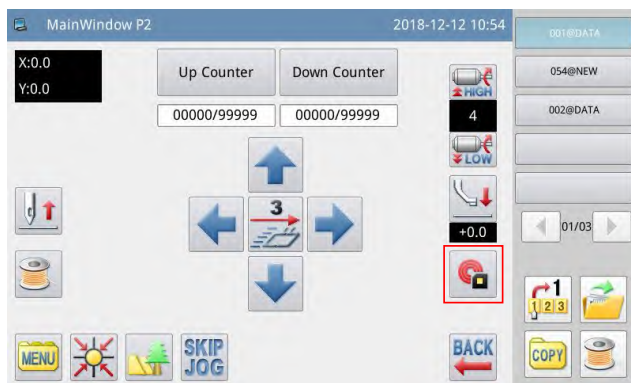


## 3.7 RFID Operation instruction


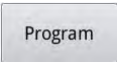


### 3.7.1 RFID Operation instruction

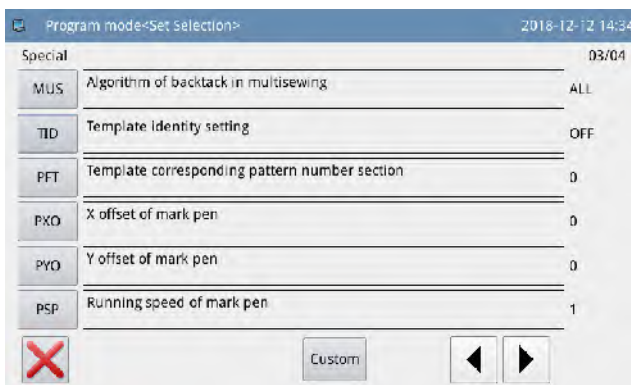
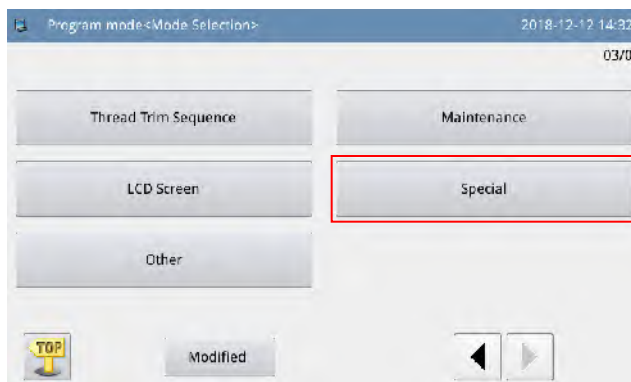
**RFID is the characteristic function of the pattern machine, making it convenient for users to recognize RFID.**


The user could reach the pattern by using the pattern NO. and write the pattern NO. into the RFID card. The RFID reader could read the pattern NO. in the RFID card get the pattern information to load the pattern quickly.





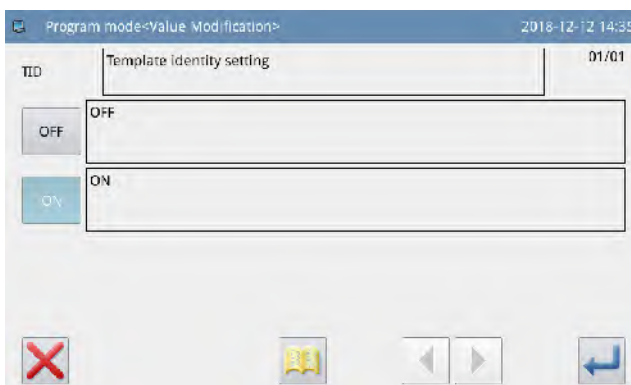
### 3.7.2 RFID Setting Method


In main interface P1 (or P2), press  to activate the catalogue mode, and then press . Select “Special” parameter setting. Press  to find out .

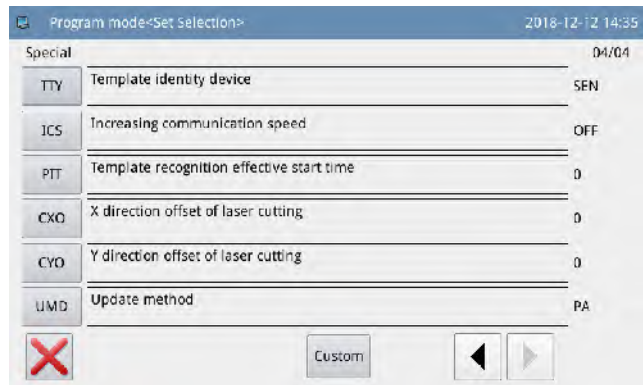





Press  to set the status of barcode recognizer: ON to activate, OFF to deactivate.

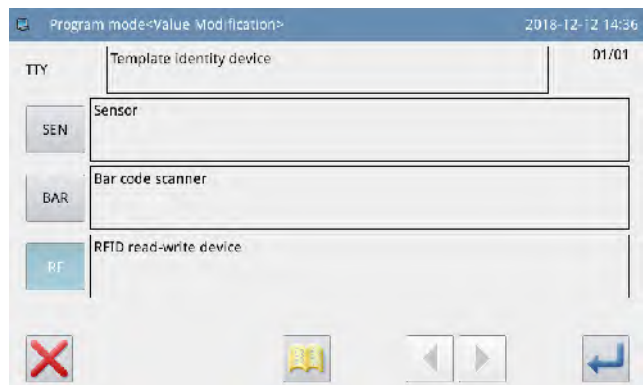
Press  and then press  to activate the pattern recognizer.



In “Special” parameter setting, press  to set pattern recognizer.



Press  to select  (RFID read-and-write device) and then press  to activate RFID device.



## 4 Appendix 1

### 4.1 Error List

Number	Fault Name	Sub-information Content	Solution
E-002	Machine is in emergency stop	Check the condition of emergency switch	Turn and release the emergency button. If the screen keep displaying this hint, please check in the following way: 1. Check the condition of emergency button. 2. Check the connection between the emergency button and head transfer board. 3. Check the connection between the X9 terminal and the head transfer board. Open cable to seek breakage.
E-004	Main voltage is too low (300V)	Please turn off power and check system hardware	1. Check if the AC power supply has abnormal fluctuation; make sure there is no high-power device that is turned on/off frequently; equip the voltage regulator. 2. If the AC power supply is normal, the problem may be at the hardware. Please return the main control board for repair.
E-005	Main voltage is too high (300V)	No	
E-007	IPM is over-voltage or over- current	Please turn off power and check system hardware	1、 Make sure no short circuit at main motor; check if the value of each winding is equal and not 0; 2、 Check whether the output at U\V\W is shorted out to earth or the 300V power supply, so as to judge the condition of IPM.
E-008	Voltage of assistant device (24V) is too high	Please turn off power and check system hardware	1. Check if the peripheral solenoids and valves are shorted. 2. Make sure the cores in both plugs of the cable are not shorted. Check whether the head transfer board is shorted out to head at installation
E-009	Voltage of assistant device (24V) is too low	Please turn off power and check system hardware	1. Check if the peripheral solenoids and valves are damaged 2. Check whether cores in both plugs of the cable are shorted. 3. Check whether the head transfer board is shorted to head at installation. 4. Check the power part at the main control board; check the pin on CPU for collecting 24V power signal
E-010	Valve (Fan) has problem	Please turn off power and check system hardware	1. Check whether the power of fan has problem 2. Check the condition of 24V for head board 3. Search short connecting at peripheral valve
E-013	Encoder is error or unconnected.	Please turn off power and check system hardware	1. Turn off the machine and check the connection between the encoder cable and the plug at control box.
E-014	Motor running	Please turn off power and	1. Check whether the main shaft is blocked

Number	Fault Name	Sub-information Content	Solution
	abnormal	check system hardware	by the load. 2. Turn the hand wheel and repower the machine when the main shaft is at another angle. 3. Motor reply signal error, replace motor
E-015	Exceeds sewing area	Please press Enter.	1. Pattern data process is abnormal. Re-pick the pattern and search the origin for sewing again. Make sure the problem is at pattern or caused by BUG in software. 2. Check whether the sewing range set in operation panel matches to the selected pattern.
E-017	Thread breakage detection error	Please press Enter.	Check CZ424 port on head transfer board and cable L433.
E-019	Emergency switch is not at the right position	Check the condition of emergency switch.	1. It is common hint, not the problem. Please release the emergency switch. 2. Refer to the solution in EB002
E-025	X origin detection abnormal	Please turn off power.	1. Use debugging function to move the frame manually and test whether the coupler signal is displayed; 2. When the machine is on, user can use a piece of metal sheet to approach the proximity switch. This is to test whether the system can give the vocal warning. 3. Adjust the installation position of the proximity switch to ensure its reliable actions.
E-029	Intermediate presser origin detection abnormal	Please turn off power.	4. Test the working condition of the stepping motor and make sure they have no step missed; 5. Test the conditions of the stepping cables and sensor cables 6. Check the connection of L433 cable, make sure this cable has no short or breakage at the connectors at both ends
E-030	Stepping driver communication abnormal	Please turn off power.	1. Check the connection of cable between the main control board and the stepping board 2. Make sure the stepping board power is normal. Ensure the power indicator and the working indicator are sparking normally
E-031	Stepping motor over-current	Please turn off power.	1. The stepping motor is broken; user needs to replace the stepping motor 2. The stepping drive board is broken; user needs to replace the stepping drive board
E-034	Abnormal current	Please turn off power.	1. Turn off the power. Turn the hand wheel to test the running of the main shaft. Check whether any mechanism is blocked.
E-035	IPM over current frequently 1	Please turn off power.	2. Turn off the power. Check the connection at the coupling of the main shaft motor. The large interval at the coupling will cause the over-current at the motor
E-036	IPM over current frequently 2	Please turn off power.	3. Turn off the power. Measure whether the resistance values at the three-phase

Number	Fault Name	Sub-information Content	Solution
			<p>resistance are equal. If not, the motor is damaged.</p> <p>4. Turn off the power. Use the multimeter to test the IPM module, if IPM is damaged, please do not repower the machine. User needs to replace or repair it.</p> <p>5. When the system gives warning, please make sure whether the machine is at the process of trimming or stop. If so, please adjust the main shaft parameters to solve this problem.</p>
E-037	Motor is blocked 1	Please turn off power.	<p>1. Due to the wrong location of the main shaft angle, the trimmer is jammed on the needle when cutting the thread, thus causes the main shaft to be blocked. Solution: Relocate the main shaft angle</p> <p>2. The needle rod is jammed on the intermediate presser at moving, which causes the blockage of the main shaft. Solution: check the action of the intermediate presser and the connection between the air valve and the solenoid valve.</p> <p>3. The trimmer can't cut the thread due to lacking of strength, which causes the blockage of the main shaft. Solution: adjust the main shaft parameter and increase the strength of trimming.</p> <p>4. The mechanism has dead point, so the main shaft is blocked. Solution: adjust the mechanism;</p> <p>5. The encoder at the main shaft motor has problem, which responses the wrong signal, thus causes the blockage of the motor. Solution: replace the main shaft motor</p>
E-040	Machine stop over-current	Please turn off power.	
E-045	Presser not down	Step the pedal	
E-046	Not at origin, cannot operate	Press key to return to origin	
E-050	X motor over-current	X motor over-current	<p>1. Check the motor cable and connections;</p> <p>2. Change motor to determine whether there is problem with motor or with drive board.</p>
E-051	Y motor over-current	Y motor over-current	
E-054	X motor position error	X motor position error	
E-055	Y motor position error	Y motor position error	
E-079	Servo motor communication error	Please turn off power	
E-081	Not enough bobbin thread		
E-086	Write driver software unsuccessfully		

Number	Fault Name	Sub-information Content	Solution
E-087	Machanical limitation		
E-088	Please replace the chuck of the automatic shuttle changing device		
E-089	Automatic shuttle changing device error		
E-090	Shuttle automatic changing completed		
E-091	Template recognition failed	Please reset the template	
E-092	Main control stepping curve parameters mismatch	Please upgrade the curve parameters	
E-093	Intermediate presser motor over-current	Please turn off power	
E-094	Thread-trimming motor over-current	Please turn off power	
E-095	Intermediate presser motor error	Please turn off power	
E-096	Thread-trimming motor error	Please turn off power	
E-097	Card reading module error	Please turn off power and check whether card reading module is damaged or disconnected	
E-098	90V over-load	Please turn off power	
E-099	Control box and panel mismatch	Please replace panel	

#### 4.2 Hint Message List

No.	Name	Content of Sub-information
M-001	Up counter reaches set value	Press Enter
M-002	Down counter reaches set value	Press Enter
M-003	Not at origin, cannot operate	Return to origin firstly
M-004	Pattern data not exist	Please reload or input again
M-005	Set value is too large	Please input value within valid range
M-006	Set value is too small	Please input value within valid range
M-007	Please press “Return to Origin”	
M-008	Save parameter abnormal	Press Enter to restore the default values
M-009	Cannot find pattern in memory	Press Enter to load the default patterns
M-010	Memory full	Please delete the idle sewing data

No.	Name	Content of Sub-information
M-011	Delete pattern data from memory?	No
M-012	Replace pattern data in memory?	No
M-013	Can not delete pattern data.	The selected sewing data is being used
M-014	Format memory?	All the patterns within the memory will be deleted
M-015	Communication error	There is problem with the communication between the operation panel and the control box. Please turn off power and check it
M-016	Beyond sewing range	Make sure pattern data is within sewing range
M-017	Fail to load letter sewing file	No
M-018	Operation panel not match to machine type	Please check the model and the software version
M-019	Low memory	Please delete the unused pattern data
M-020	Wrong pattern number	Please input the right pattern number
M-021	Beyond max stitch interval	No
M-022	Wrong password	Please input password again
M-023	Hardware clock error	The hardware clock has problem, please contact manufacturer for repair.
M-024	Stitch number beyond range	Please reduce stitch number
M-025	Inputted stitch interval is too small	Please input value within valid range
M-026	Inputted stitch interval is too large	Please input value within valid range
M-027	Offset origin existed	User can only input one offset origin.
M-028	Fast move is set too much or little	Please input value within valid range
M-029	Please press “Return to Origin”	No
M-030	Copy the appointed pattern?	No
M-031	Copy all pattern data?	No
M-032	Restore to default setting?	No
M-033	USB is pulled out	U Disk Is Pulled Out !
M-034	Cannot find pattern data in U disk	No
M-035	At least input one letter	At making pattern of letter sewing, user has to input at least one letter
M-036	No alarm record	
M-037	Replace needle	Reach set value for needle replacement, please replace needle!
M-038	Replace oil	Reach set value for oil replacement, please replace oil!
M-039	Clean machine	Reach set value for cleaning machine, please clean machine!
M-040	Different data format	Please confirm the data format
M-041	Cannot create curve	Please input again according to the standards of curve input.
M-042	Cannot insert trimming at current position	Please add trimming behind sewing data
M-043	Cannot add same function code in one position	

No.	Name	Content of Sub-information
M-044	Cannot insert offset origin at current position	Please add offset origin after feeding
M-045	Cannot create arc or circle at the inputted point	Please input again
M-046	Cannot create overlapped sewing data	Please add overlapped sewing after close shape
M-047	Cannot insert trimming after down pause	No
M-048	Cannot insert down pause before trimming	No
M-049	Not find offset sewing data	Function of offset sewing data transfer is unavailable
M-050	Not find multi-sewing data	Function of multi-sewing data transfer is unavailable
M-051	Select wrong position	No
M-052	Cannot scale	No
M-053	Distance over 12.7mm	No
M-054	Wrong pattern data	No
M-055	Create arc?	No
M-056	Create circle?	No
M-057	Create curve?	No
M-058	Create polygon?	No
M-059	Presser is not down	Please step pedal
M-060	Wrong User ID	Please input again
M-061	Fail to conform password	Please input password again
M-062	Cannot change system time	The periodical password is set. Can not change system time.
M-063	Fail to save password file	No
M-064	Fail to load password file	No
M-065	Password saved successfully	No
M-066	Fail to clear all passwords	Cannot delete password file
M-067	Fail to clear password	After the password is cleared, the file input becomes abnormal
M-068	Password file is deleted without authorization	Periodical password is deleted without authorization, please turn off machine
M-069	User ID file damage	
M-70	Input pattern name	Please input pattern name no more than 8 figures
M-71	Please clear current combination data	Press “CLR” to delete current combination data
M-72	Empty input invalid	Can not input empty password
M-73	Password not match	Current password is wrong
M-74	New password is different.	New password is different from the retry password
M-75	Touching panel correction successful	Correction is successful. Please turn off power to restart.
M-76	Clear alarm records?	Yes: Enter No: X
M-77	Delete the selected file?	Yes: Enter No: X
M-78	Copy all patterns	Cover the original patterns? Yes: Enter No: X
M-79	Fail to copy file	Please check the space in memory

No.	Name	Content of Sub-information
M-80	Fail to copy file	Please check if the USB disk is pulled out!
M-81	Fail to open file	Fail to open file
M-82	Format not match	Formats don't match, current load denied
M-83	Parameter over range	Parameter is over range. After confirmation, the parameter over range will be restored according to the default parameters!
M-84	Please create catalogue and file	Please create catalogue bakParam in U disk. Name the back-up file as backup.param and copy it to bakParam catalogue!
M-85	File I/O error	File I/O error
M-86	Please select file	Select the file for input/ output
M-87	File not exist	Cannot find the corresponding file
M-88	Not input move amount	Please input move amount
M-89	Enter touching panel correction mode?	Yes: Enter No: X
M-90	Clear accumulated running time?	Yes: Enter No: X
M-91	Clear accumulated sewing pieces?	Yes: Enter No: X
M-92	Clear accumulated power-on time?	Yes: Enter No: X
M-93	Clear accumulated stitch numbers?	Yes: Enter No: X
M-94	Periodical passwords can't be same to super password	Please input password again
M-95	Cannot change up counter (NUP)	At change, please turn off setting (NUP)
M-96	Cannot change down counter (NDP)	At change, please turn off setting (NUP)
M-97	Pattern list (hotkey) is empty	If the pattern list is empty, the system will automatically input the current pattern to list
M-98	Not select update item	Please select item for updating. At least select one item
M-99	Some selected update items don't exist.	The item not existing will be cancelled after return. For updating the rest items, please confirm again
M-100	Update successful	Update is successful, please restart machine.
M-101	Format U Disk?	Press Enter to perform formatting operation. Press Esc to quit current operation. After formatting, all pattern files will be deleted.
M-102	Can not find U disk	Please insert the U disk for formatting.
M-103	Successful	Current operation is successful!
M-104	Failed	Current operation is failed!
M-105	Format pattern list (hotkey)?	Press Enter to perform formatting operation. Press Esc to quit current operation
M-106	Cover the pattern with same name in U disk?	Press Enter to cover files. Press Esc to quit current operation
M-107	Fail to correct touching panel	Please perform correction again
M-108	Letter sewing pattern saved successfully	Please enter pattern loading interface to select newly created letter sewing pattern

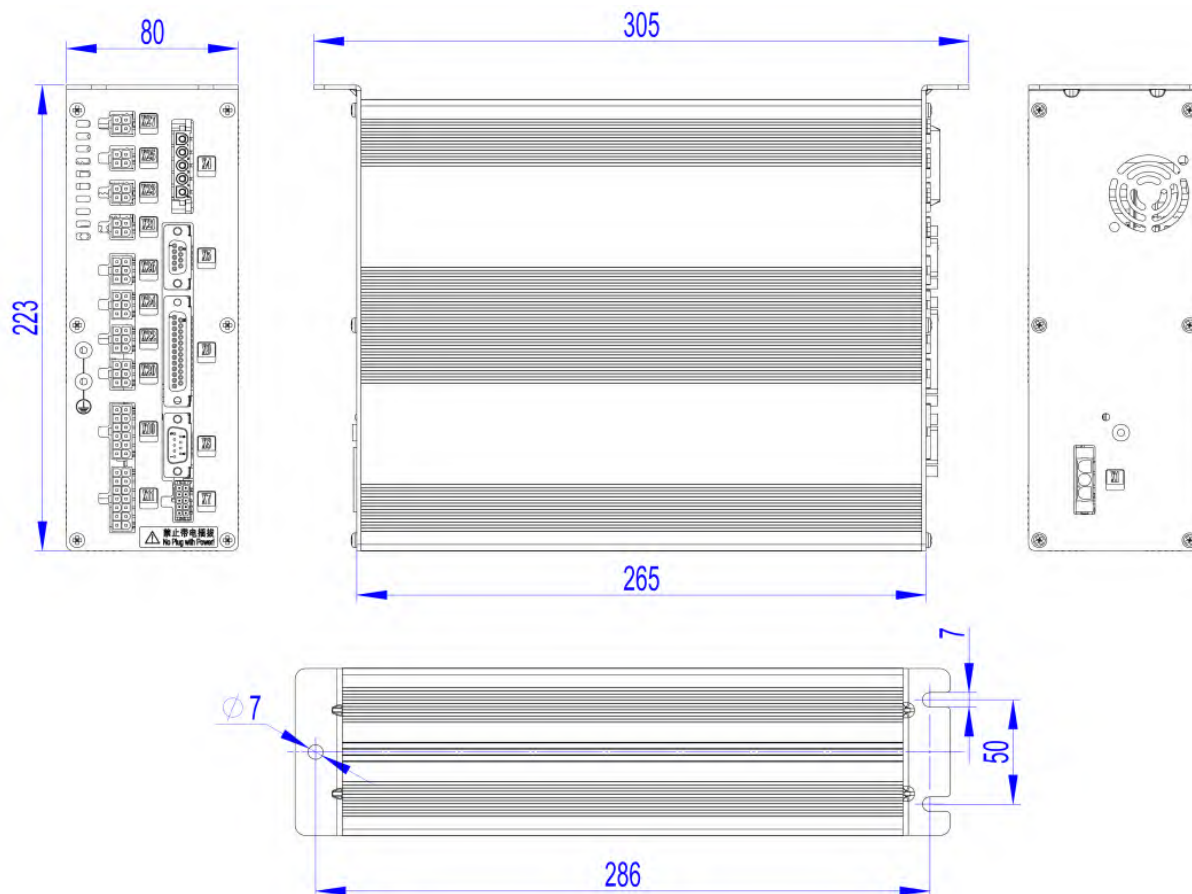
No.	Name	Content of Sub-information
M-109	The selected pattern is not normal format, please transform.	Press Enter to perform transforming operation. Press Esc to quit current operation
M-110	Cannot transform this pattern	Please confirm pattern
M-111	Restore all the settings?	Yes: Enter No: X
M-112	Restore the selected item?	Yes: Enter No: X
M-113	Not select item	Please select one or more parameters
M-114	SRAM initialization	Clear all data in SRAM. Please turn off power and restore the setting of DIP switch.
M-115	Cannot copy and cover current pattern	Current pattern number in copy group, system cannot cover it.
M-116	Need transform pattern format	After transforming, user can preview the pattern
M-117	Cannot perform operation to combined pattern	Please enter pattern connection mode, press “CLR” to cancel the combined pattern
M-118	Delete original pattern?	Delete original pattern after format transforming? Yes: Enter No: X
M-119	Intermediate presser in down position	Please lift intermediate presser
M-120	Turn off machine, Bye	No
M-121	Format of pattern with 20mm stitch interval	Not support this pattern format in this system
M-122	Wrong transformed pattern format	Please confirm pattern
M-123	Transformed pattern data is too long	Please confirm pattern
M-124	Cannot open transformed pattern	Please confirm pattern
M-125	Wrong accuracy of transformed pattern	Please confirm pattern
M-126	Parameter recovery successful	Parameter recovery is successful, please restart machine
M-127	Software version saving successfully	Software version is saved to the base catalogue of U disk successfully
M-128	Successful parameter setting	Restart the machine
M-129	USB disk not exist	Please insert USB disk containing mps files
M-130	No video file video.avi	Please save the video.avi file into the update category of the U disk and then update the video file
M-131	External presser at down position	Please lift external presser
M-132	Offset origin not exist	There is no offset origin for current pattern
M-133	Network setting failed	
M-134	Network connection failed	
M-135	Verification error when update main control program	
M-136	Threading	
M-137	Whether to restore saved self-defined parameters	Press Enter to perform or Cancel to quit the operation
M-138	Template for current pattern is locked	Please unlock the template
M-139	Load parameter unsuccessfully	Please contact the manufacturer
M-140	Not enough bobbin thread	Please replace bobbin thread and press Enter to restart

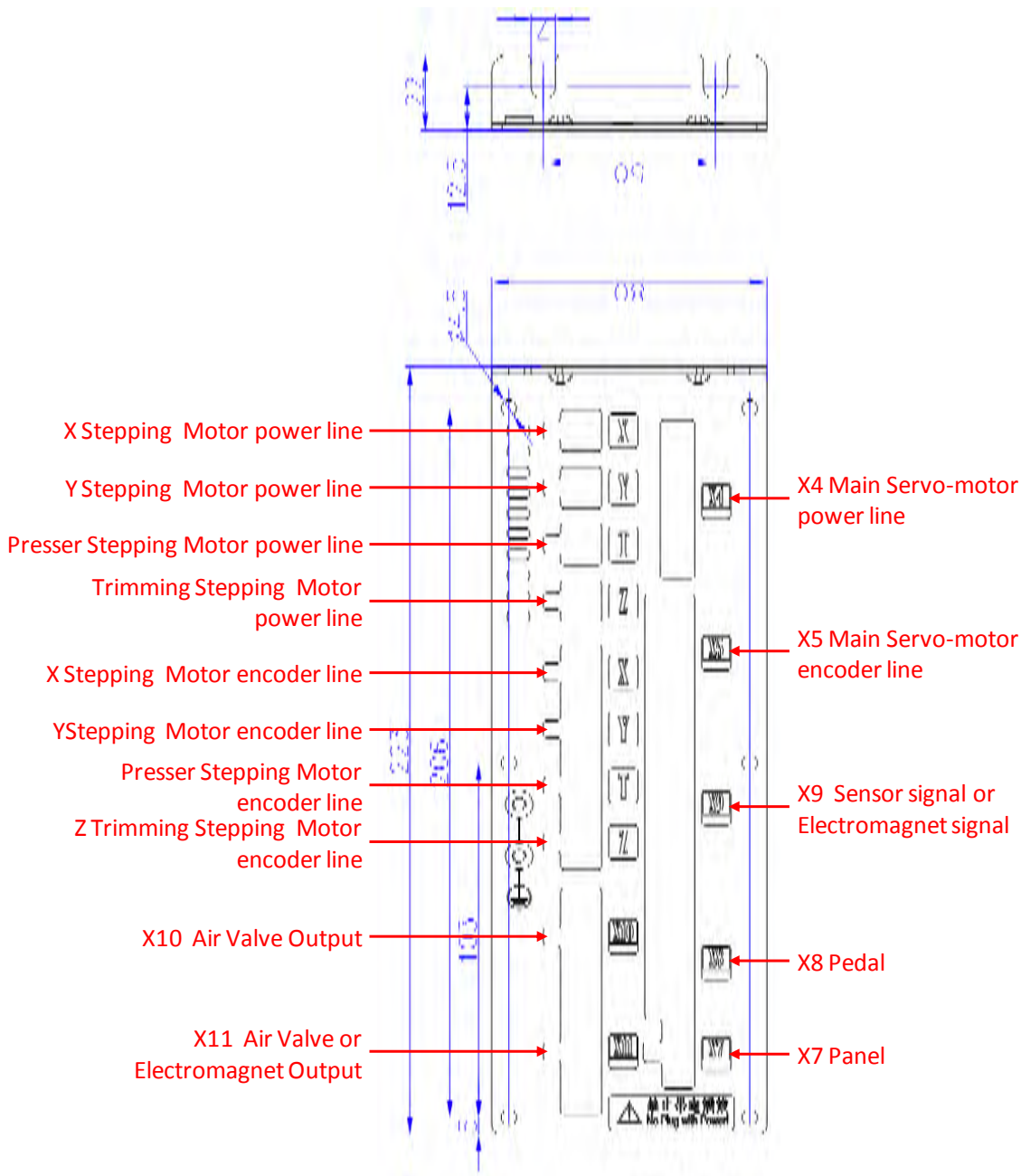
No.	Name	Content of Sub-information
		counting
M-141	Cannot generate multiple sewing data	
M-142	Complete pattern copy?	
M-143	Memory distribution error	
M-144	Data error, continue to shift into point sewing	
M-145	Operation panel and main control mismatch	There is periodical password, please contact manufacturer to unlock.
M-146	There is password for operation panel, synchronization is needed	Password for panel, but no password for main control
M-147	There is password for main control, synchronization is needed	Password for main control, but no password for panel
M-148	Replace font library, turn off power and restart machine	Voice function will be shut down for special languages
M-149	Main board ID not exist	
M-150	Recover machine parameters?	
M-151	Lack font library for language	Please update the font file
M-152	C pattern open unsuccessfully	Pattern file error, please delete
M-153	Pattern hotkey content error	
M-154	Cannot enter batch transfer function	
M-155	Number already existed	
M-156	Transfer operation completed	
M-157	Cannot generate stitch line	
M-158	Memory data error	
M-159	Arc existed	Shift oval into point sewing
M-160	Are you sure to clear production record?	Yes: Enter; No: X
M-161	Successful attendance check	
M-162	Unsuccessful attendance check	
M-163	Set contraction sewing as independent part	Press Enter to separate, or press Cancel to stay as a whole
M-164	Successful shift of contraction sewing	If contraction sewing becomes point sewing, it cannot change back to contraction sewing. Please save the original file for future use before this operation.
M-165	Current pattern for milling cutter mode	
M-166	FTP visit error	Please check connection, authority, path and file
M-167	Unsuccessful transfer of file	
M-168	Are you sure to clear all records of startup?	Yes: Enter; No: X
M-169	No record of startup	
M-170	Unsuccessful update of driver software	
M-171	Network function is activated, please turn off power and restart the machine	The network function will be loaded after system restart
M-172	Password successfully saved	

No.	Name	Content of Sub-information
M-173	Update file not exist	
M-174	Set up counter as invalid	
M-175	Set down counter as invalid	
M-176	Are you sure to make main shaft correction?	Yes: Enter; No: X
M-177	Grouping number invalid	
M-178	Current operation denied	
M-179	No parameter received	
M-180	Parameter not changed	
M-181	QR code display failed	
M-182	Due to loading new pattern, current position needs adjustment	
M-183	Contraction stitch number beyond actual stitch number	
M-184	Cannot generate contraction sewing data	
M-185	Are you sure to make upper shaft correction?	Yes: Enter; No: X
M-186	Are you sure to make down shaft correction?	Yes: Enter; No: X
M-187	Cannot input point	The same position with the last inputted point
M-188	Generate curve data?	
M-189	Software and file system mismatch	

## 5 Appendix 2

### 5.1 Installation Size of Control Box



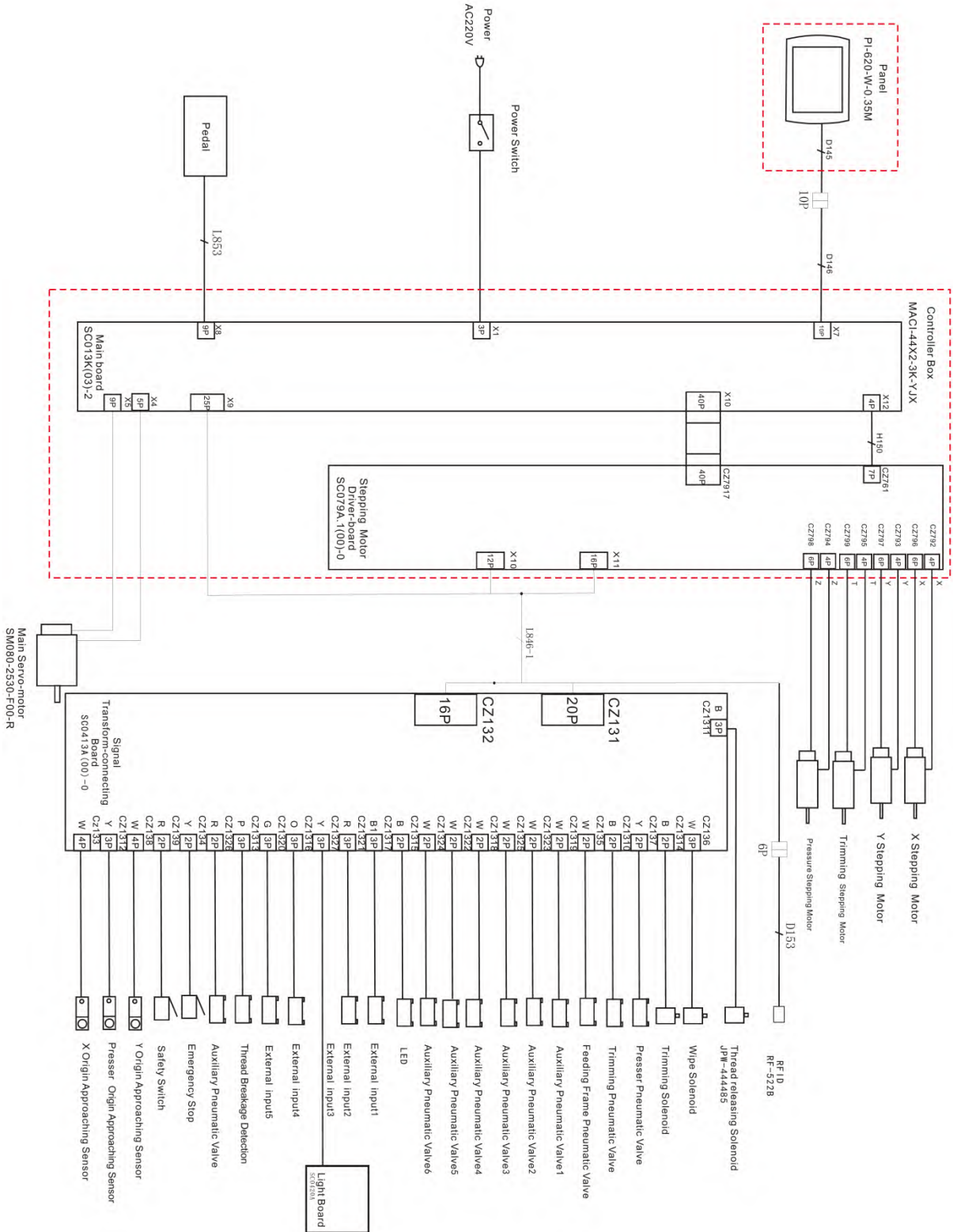


## 5.2 Control Panel



**Control Panel**

### 5.3 MASC447-2H-AF-MBJ Control System Diagram





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The specification and/or appearances of the equipment described in this instruction book & parts list are subject to change because of modification which will without previous notice.  
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