上下复合送料厚料平缝机系列

产品使用说明书

1. 主要技术规格

缝料		中厚料、厚料
最高转速		2000针/分
最大针距		8mm
最大缝厚能力		8mm
压脚交互量		3.5-5.5mm
机针		DPx17(20#~23#)
压脚提升高度	手控	7.5mm
	膝控	16mm
旋梭		自动润滑大旋梭
供油方式		全自动供油

1. MAIN SPECIFICATIONS

Material		Medium and heavy duty
Max.sewing speed		2000spm
Max.stitch length		8mm
Max.thickness		8mm
Alternate presser fool lift volume		3.5-5.5mm
Needle		DPx17(20#~23#)
Presser foo lift	by hand	7.5mm
	by knee	16mm
Hook		Auto-lubricating big rotating hook
Lubrication		Auto lubrication

2. 操作准备

(1) 试擦机器

机头装箱前为了防止机件生锈，各部分均涂有较厚的防锈油脂，同时机头装箱后，还可能在较长的贮藏和长途运输阶段造成油脂硬化和积聚在机器表面的灰尘，所以必须将表面的油脂和灰尘用汽油和洁净的软布试擦干净。

(2) 检查

机器出厂时，虽然经过周密的检查和试验，但在长途运输中也可能受到强烈的振动使机件松动或歪曲，所以应该作一次周密仔细的检查，并用手轻轻转动主动轮，看机件之间有无转动困难，碰撞现象或其它不均匀的阻力，不正常的声响，如有应做适应的调整，机器情况正常后才可正式试车。

2. PREPARATION

(1) Cleaning the machine

Before leaving the factory, the machine parts are coated with rust-preventive grease, which may be hardened and contaminated by dust during storage and shipment. This grease must be removed with gasoline.

(2) Examination

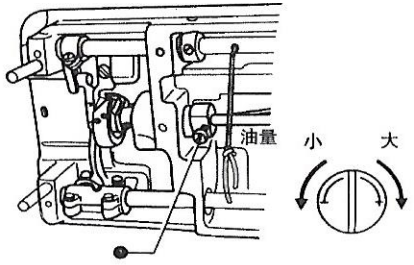
Though every machine is confirmed by strict inspection and test before leaving the factory,the machine parts may be loose or deformed after long distance transporation with jolt. A thorough examination must be performed after cleaning the machine. Turn the balance wheel to see if there is running obstruction, parts collision, uneven resistance or abnormal noise. If these exist, adjustment must be made accordingly before run-in operation.

3. 调节旋梭油量(图1) / Adjusting the amount of oil in the hook (Fig 1)

放倒机头，转动油量调节螺钉①来调节油量大小。

Put down the head and tighten or loosen oil amount adjustment screw to increase or decrease the amount of oil in the hook.

1

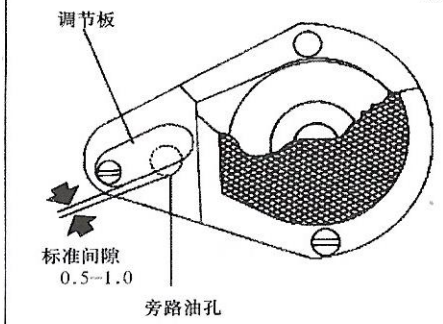


4. 油泵进油调节(图2) /OIL PUMP SUPPLY ADJUSTMENT (Fig 2)

通常情况下，不作油泵进油调节，在低速运转时，观察油窗，无喷油现象时，请合拢间隙。

Generally no adjustment is for oil pump, When the machine is running at a low speed, observe the oil screen. If no oil splashing,close the clearance.

2



5. 压脚压力调节(图3) / ADJUST THE PRESSURE OF PRESSER EOOT(Fig 3)

压脚的压力，要根据缝料的厚度加以调节。首先旋松调压螺钉锁紧螺母(A)，缝厚料时，应加大压脚压力，这时将机头顶部的调压螺钉按图a所示箭头方向转动，反之，缝纫薄料时，可按图b所示的方向转动调压螺钉，以减少压脚的压力。最后旋紧调压螺钉锁紧螺母(A)即成。

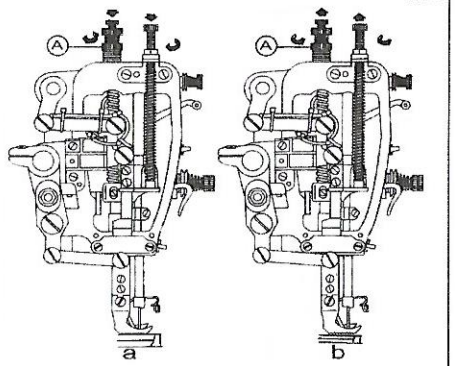
压脚的压力，应以能正常推送缝料为宜。

Pressure of presser foot is to be adjust in accordance with thickness of materials to be sewn.

First loosen Lock Nut (A). For heavy materials, turn the pressure regulating thumb screw as shown in Fig.3(a) to increase the pressure,while for light materials, turn the pressure regulating thumb screw as shown in Fig.3(b) to decrease the pressure.Then tighten Lock Nut(A) .

The pressure of presser foot is recommended to be less as long as normal feeding is ensured.

3



旋松螺钉（A）转动针距调节凸轮（B）

顺时针转：——顺缝针距变大。

倒缝针距变小。

逆时针转：——顺缝针距变小。

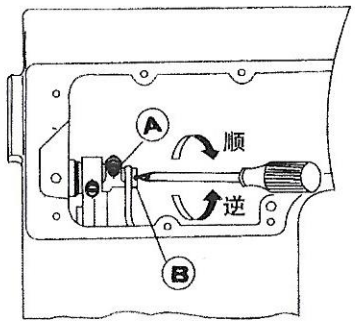
倒缝针距变大。

Loosen screw (A), and turn stitch length adjusting cam (B).

Turn clockwise: forward sewing, stitch length enlarged; reverse sewing, stitch length shorten.

Turn counter-clockwise: forward sewing stich length shorten; reverse sewing, stich length enlarged.

4

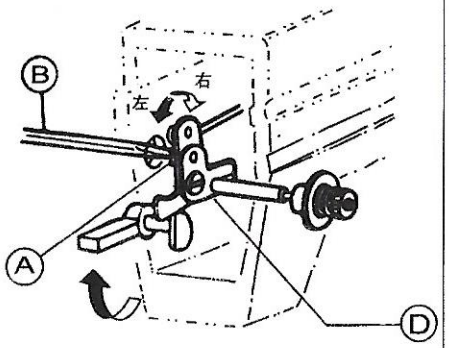


7.松线器挺线调节 (图5) / Adjust opening time of the tension discs (Fig 5)

压脚在提升范围内，夹线器上的夹线板有一个张开期，挺线的时间可进行调节。调节时，先卸下机头背面的橡皮擦，用螺丝刀(B)旋松膝控提升杠杆（左）螺钉(A)，这时松线凸轮可以左右转动，往右移挺线慢，往左移挺线快。

The tension discs should be pushed apart to open when the presser foot is lifted. But the open timing of the tension discs can be adjusted as follows: Remove face plate and the rubber plug at rear side of arm and loosen screw (A) of the knee lifting lever (left), then the tension releasing cam can be moved leftward or rightward when the cam is moved right-ward. it is later to open, otherwise it is earlier to open.

5



8.上送料机构的调节 (图6) / Adjusting the tension releasing mechanism (Fig 6)

上、下同步送料是该产品的重要性能之一。在缝纫过程中，应根据各种缝料的摩擦系数的不同和缝纫工艺的不同要求，对上送料机构的摆压脚滑块与摆压脚轴的中心距

(L)进行调节。

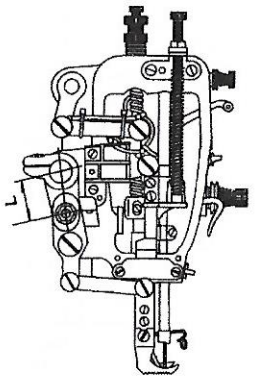
调节方法：

增大中心距L——上送料量增大。

减小中心距L——上送料量减少。

对于某些制品的特殊缝纫要求，如缝件的上层的送料量要求大于(或小于)下层的送料量，也可以根据以上原理在一定范围内调节使用。

6



During the sewing, the center gauge (L) between the walking foot sliding block and its shaft can be adjusted according to the differences of the friction coefficients of the friction coefficients of materials and the sewing process.

Method: Increase L---the upper feed amount enlarged

reduce L--- the upper feed amount shorten

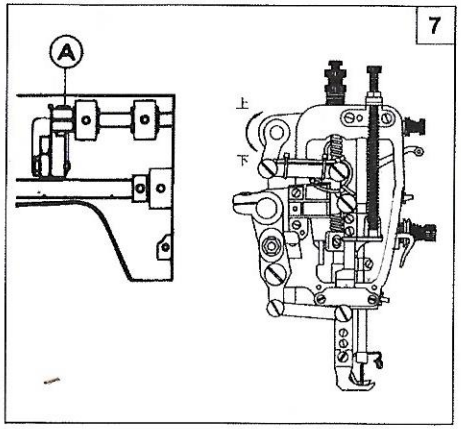
For special sewing requirements, for example, the upper layer of material needs more amount than the lower layer does, in this case, adjustment can be done in the range of above theory for operation.

9.压脚交叉提升机构的调节 (图7) / Adjusting presser foot alternate lift mechanism (Fig7)

根据缝料疏松和结实程度的不同，在缝纫中，对摆压脚、小压脚的交叉提升量，可在一定的范围内进行适当的调节。在一般的中厚料缝纫中，摆压脚提升量为5.5mm之内，小压脚提升时为3.5mm左右。当其它机构不变的情况下，两压脚提升量之和基本上是一定值。两提升量的变化近似于按反比定律变化。即：摆压脚的提升量增加，则小压脚的提升量就减少。反之也然。

调节方法：旋松偏心轮连杆调节曲柄螺钉A，按图示向上转动压脚升降前曲柄，摆压脚的提升量增大，反之，向下转动，小压脚的提升量减少。但其调节量有一定的范围限调，不宜过大。调好后，将螺钉拧紧，用手转动上轮，检查一切正常后方可使用。

7

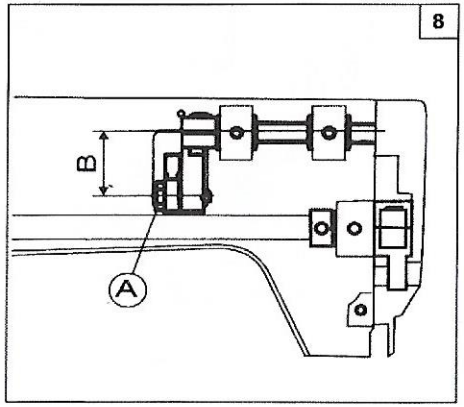


During the sewing, the alternate lift amount can be adjusted accoding to the nature of material. In general sewing, the amount of walking foot is 5.5mm, and the presser foot lift amount is 3.5mm.

Method: loosen the screw A. turn presser foot front crank up ward to increase the amount of walking foot, turn it downward to reduce the presser foot amount, the range of adjusting amount is not too

10.摆压脚、小压脚总提升量的调节 (图8) / Adjusting the lift amount of presser foot together with walking foot (Fig8)

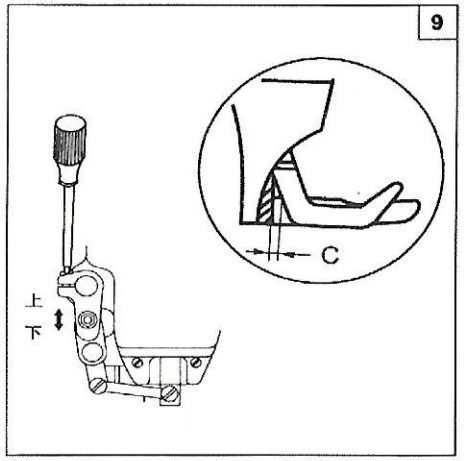
在缝纫过程中，要改变摆压脚、小压脚的提升量，其调节方法是：先将偏心轮连杆螺钉(A)旋松，然后调节该螺钉与压脚升降轴中心距B；如果使摆压脚、小压脚的提升量都增加，则使中心距B调小；反之，则可使提升量都减少。其调节量也有一定的范围，调节幅度不宜过大，调节好后，将螺钉拧紧，慢慢转动上轮，检查有无碰撞现象，一切正常后方可使用。



The lift amount of walking presser foot together with presser foot can also be adjusted slightly. When adjusting, loosen screw (A) adjust its center distance B between the screw (A) and the presser foot lift shaft. The lift amount is increased as to shorten the ceter distance B, and the lift amount is decreased as to widen the center diatance B. After adjustment, tighten the nut again.

11.摆压脚、压脚前后方向间隙的调节(图9)/ Asjusting the clearance between presser foot and walking foot(Fig9)

在缝纫过程中，有时用大针距缝纫，有时用小针距缝纫，在大针距缝纫时，摆压脚前后的行程比较大。反之，就小了。为了在缝纫过程中，使摆压脚槽的前端与小压脚后端面不碰撞，且保证有一定的间隙C(一般取1.5mm左右)。故在小针距缝纫时，需要摆压脚向针杆靠拢点，调节方法：首先旋松摆压脚前曲柄螺钉，然后向上转动压脚摆动轴，则摆压脚就向针杆靠拢，调节时，应该注意间隙C的定值要求。



In sewing operation, for preventing the walking foot from striking on presser foot a proper clearance C of approx. 1.5mm should be maintained between them. When the clearance is too small or too big, necessary to adjust, loosen rear crank screw and trun the rock shaft, then the walking foot moves near the needle bar. When adjust, be sure to note the fixed number of the clearance C.

12、工业缝纫机安全使用注意事项/Notes for safe use of industrial sewing machines

1. 必须遵守基本措施；
2. 必须经过专业培训，对缝纫机设备性能、
3. 使用前应检查所有安全装置；
4. 在安装机针、更换机针、压脚、针板、送布牙、弯针、旋梭或修理时，应立即关闭电源；
5. 离开缝纫机或工作场所时应关闭电源；
6. 使用离合马达时，要等待马达完全停止后再进行；
7. 缝纫机及附属装置使用的机油，润滑油等液体流入眼睛或沾到皮肤上应立即清洗；
8. 禁止用手触摸缝纫机通电时的零件或装置；
9. 有关工业用平缝机与包缝机的修理、改造、主要机构的调整由专门技术人员来进行；
10. 一般的维修保养由专人进行；
11. 在电气方面的修理应在电气技术员的监督和指导下进行；
12. 缝纫机使用期间应定期清扫；
13. 为了正常安全运转，应安装地线，同时应在不受高频焊接机等强噪声源影响的环境下使用；
14. 电源插头应由专人安装；
15. 工业用平缝机、包缝机在指定用途以外不能使用。

1. Basic measures must be observed.
2. Pass the specialized training and master sewing machine equipment performance.
3. All safety devices should be checked before use.
4. When installing needle, and changing needle, presser foot, plate, feed dog , bent needle, hook or repairing, the power supply should be turned off immediately.
5. Power should be turned off when leaving the sewing machine or workplace.
6. When using the clutch motor, please wait until the motor stops completely.
7. The machine oil and other liquids used in sewing machines and ancillary devices should be cleaned immediately when they are put into eyes or touch skin.
8. Do not touch the parts or devices when the machine is powered by hand.
9. The repair, renovation and adjustment of the main mechanisms of the relevant industrial sewing machines and overseers shall be carried out by specialized technicians.
10. General maintenance is carried out by specially-assigned persons.
11. Electrical repairs should be performed under the supervision and direction of the electrical technician.
12. The machine should be cleaned regularly during operation.
13. In order to operate normally and safely, ground lines should be installed, and they should be used in an environment free from strong noise sources such as high frequency welding machine.
14. Power plug should be installed by specially-assigned person.
15. Industrial lockstitch sewing machine and overlock sewing machine can not be used except the designated use.

13、环保要求/Environmental requirements

1、使用过程中产生的废油及其他废弃物请根据当地环保的要求进行合理的处置。
2、请在使用完后及时关闭电源，减少电能的消耗。
3、请在说明书要求的电压及环境下使用，已延长产品的使用寿命，减少废弃物的产生。
4、机器报废后请勿将本机器及其附件作为普通的生活垃圾处理。请遵守本设备及其附件处理的本地法令，并支持回收行动。

1、Please dispose the waste oil and other waste products properly according to local environmental protection requirements.
2、Please turn off the power after use to reduce power consumption.
3、Please use under the voltage and environment required in the manual to extend the service life of the product and reduce waste generation.
4、Do not treat the machine and its accessories as ordinary household garbage after being scrapped. Please comply with local laws governing the disposal of the equipment and its accessories and support recycling operations.

简易款厚料机系列电控使用说明书

Simple electric control box manual

安全事项

- 在使用本产品之前，请先阅读《使用说明书》及所搭配的缝纫机机械说明书。
- 本产品必须由接受过专业培训的人员来安装或操作。
- 请尽量远离电弧焊接设备，以免产生的电磁波干扰本控制器而发生误动作。
- 请不要在室温45°以上或者0°以下的场所使用。
- 请不要在湿度30%以下或者95%以上或者有露水和酸雾的场所使用。
- 安装控制箱及其他部件时，请先关闭电源并拔掉电源插头。
- 为防止干扰或漏电事故，请做好接地工程，电源线的接地线必须牢固的与大地有效连接。
- 所有维修用的零部件，须由本公司提供或认可，方可使用。
- 在进行任何保养维修动作前，必须关闭电源并拔掉电源插头。控制箱里有高压危险，必须关闭电源五分钟后方可打开控制箱。

- Safety Precautions
- Before using this product, please read the User's Guide and the manual of the machine attached with it.
- This product must be installed or operated by professionally trained personnel.
- Please keep away from the arc welding equipment to avoid the electromagnetic wave from interfering with the controller.
- Please do not use it at room temperature above 45° or below 0° 。
- Please do not use it in places with humidity below 30% or above 95% or where there is dew and acid mist.
- When installing the control box and other parts, turn off the power and unplug the power plug.
- To prevent interference or electric leakage accidents, make a good grounding work. The grounding wire of the power cord must be firmly connected to the earth.
- All parts for maintenance must be supplied or approved by the Company before they can be used.
- The power must be turned off and the plug unplugged before any maintenance action is performed.There is a high-voltage danger in the control box. You must shut down the power for 5 minutes before opening the control box.

1 产品安装 Product installation

1.1 产品规格 Product specification

电源电压 supply voltage	AC 220±20% V
电源频率 supply frequency	50Hz/60Hz
最大输出功率 Maximum power output	750W

1.2 接口插头的连接 Connection of interface plug

将脚踏板及机头的各连接插头安插到控制器后面对应的插座上，各插座名称如图 1-2-2 所示。连接好，请检查插头是否插牢。

Plug the pedals and heads into the corresponding receptacle behind the controller, as shown in figure 1-2-2.After connection, check that the plug is plugged in.

2	S	参数查看保存键 View and save the parameter number	对所选参数号内容进行查看和保存 View and save the parameter number
3	▲	参数加键（速度加） Up button	在进入参数功能参数号/值加，初始待机下速度加 Speed increase
4	▼	参数减键（速度减） down button	在进入参数功能参数号/值减，初始待机下速度减 Speed increase
5	<	左移键 Left button	参数设定中，向左选择参数范围 In the parameter setting, select the parameter range to the left
6	>	右移键 Right button	参数设定中，向右选择参数范围 In the parameter setting, select the parameter range to the left
7	Reset FU	恢复出厂设置键 Factory reset button	长按 3S 后恢复出厂设置 Long press 3S reset the factory
8	IU	停针位选择键 Stop needle selection button	上/下停针位选择键 Up/down Stop needle selection button

3 参数调节 Change user parameter

3.1 进入操作员参数模式及保存

空闲模式下，长按P键进入操作员参数号,再短按S键进入参数值。按<或>键选择数据位，相应位数值闪烁，再按▲或▼修改该位数值。在参数值界面如果参数未修改，按S键返回参数号显示界面；如果参数已经修改，按S键保存参数并显示 ok 后返回参数号显示界面。如果按P键退出参数模式。

long press P and machine will enter the user parameter adjustment mode , and short press S enter into the parameter value。press < or > Select the location of the data，The corresponding value flashes，press ▲ or ▼ change the number。On the parameter value interface if the parameter is not modified，press S Return parameter number display interface； if the parameter is modified，press S Save parameters,

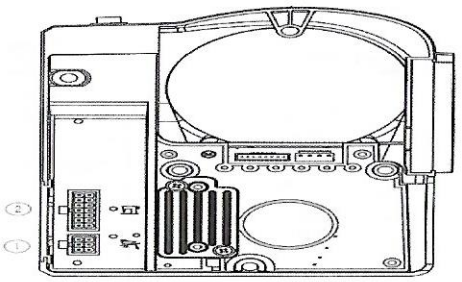


图 1-2-1 E6380B 控制器图

①脚踏板&升级插座； ②LED 灯及机头按键插座。

Figure 1-2-1 E6380B controller diagram

①Foot plate &Upgraded socket； ②LED lamp and head button socket.

3.2 进入技术员参数模式及保存

Enter into the technician parameter mode and save

长按P+S键开机进入技术员参数模式。参数调节方式同技术员参数调节方式。

Long press P+S Enter into the technician parameter mode .

3.3 速度调节 Speed adjustment

在空闲模式下，按▲或▼键增加或减小速度。每按一次调整数值 50，可以连续按。

Press ▲ or ▼ Increase or decrease speed. Each time press adjustment value 50, can press it continuously.

3.4 恢复出厂设置 reset

长按Reset FU恢复出厂设置，作为恢复出厂设置的快捷方式。

Long press Reset FU Restore factory settings. as a shortcut to restore factory settings.

3.5 进入监控模式 Enter monitoring mode

在空闲模式下按P+IU键显示监控参数号，按<或>键选择数据位，相应位数值闪烁，再按▲或▼增加或减小监控参数号显示，按S键进入监控参数项对应的参数值，再次按下S键返回监控参数号显示。（若为 24、25、26、28 项，显示参数值时短按S键返回监控参数号显示，长按S键保存当前监控值，若保存成功显示 ok，短按键P退出监控模式）

press P+ IU to display the monitoring parameter number, press < or > to select the location of the date , the number flashes, and then press ▲ or ▼ to increase or decrease the monitoring parameter number display, press S to enter into the parameter value, press S again return to monitoring parameter number display. (For 24, 25, 26, and 28, When displaying parameter values,short press button S to return to the monitoring parameter number display ,long press S to Save the current monitoring value, if the saving is successful, display ok, press the key to exit the monitoring mode)

press P+IU Display monitoring parameter number，press < or > choose the location of the data,

脚踏板&升级接口		
1	GND	5V数字地
2	-	-
3	VCC	+5V
4	RX	UART通信接收
5	TX	UART通信发送
6	Peda1	脚踏板模拟信号

机头灯&补针开关接口		
1		
2		
3		
4	GND(+5V)	机头灯输入负
5		
6	BZ	补针开关
7		
8		
9		
10		
11	+5V	机头灯输入
12		
13		
14		

Pedal&Upgraded interface		
1	GND	5V Digitally ground
2	-	-
3	VCC	+5V
4	RX	Communication reception
5	TX	UART communication transmission
6	Pedal	Pedal analog signal

Headlights&Supplementary pin switch interface		
1		
2		
3		
4	GND(+5V)	Headlight input negative
5		
6		
7	BZ	Complementary switch
8		
9		
10		
11	+5V	Headlight input
12		
13		
14		

图 1-2-2 控制器接口定义

注：使用正常力量插不进去时，请检查插头与插座是否匹配，插入方向或针的方向是否正确！

Figure 1-2-2 Controller Interface definition

Note: when you can't plug in with normal force, please check if the plug and socket match, the direction of insertion or needle is correct!

1.3 接线与接地 Wiring and grounding

必须要做好系统的接地工程，请合格的电气工程人员予以施工。产品通电及投入使用前，必须确保电源插座 AC 输入端已安全可靠的接地。系统的接地线为黄绿线，该地线请务必可靠连接至电网安全保护接地上，以保证安全使用，并可防止出现异常情况。

It is necessary to do well the grounding project of the system and employ qualified electrical engineers to carry out the construction.Before the product is energized and put into use, it is necessary to ensure the safe

and reliable grounding of the input terminal of the power outlet AC.The ground wire of the system is yellowish-green wire. The ground wire must be reliably connected to the grounding of power grid safety protection to ensure safe use and to prevent abnormal conditions.

注：所有电源线、信号线、接地线等接线时不要被其它物体压到或过度扭曲，以确保使用安全。

Note: all power lines, signal wires, ground wires, etc., are not subject to pressure or excessive distortion by other objects to ensure safe use.

2 操作面板使用说明 Operation panel usage instructions

2.1 操作面板的显示说明 Display instructions for the operations panel

根据系统工作状态，操作面板的数码管将显示当前的缝纫状态（包含停针位指示）。操作面板外观如下所示。

According to the operating state of the system, the digital tube of the operation panel will display the current sewing state (including stop-needle position indication).The action panel looks like this.

图 2-1 Display and operation menu

2.2 按键各按键功能说明 Key function description

序号 No	外观 icon	名 称 Description	功能描述 Remark
1	P	进入参数区功能键 Customer parameter settings	Customer parameter settings

注：上停针位置设置：进入监控参数项 24，将手轮调整至上停针（参数会随着手轮位置而变化），短按 S 键进入上停针位置值显示，再次长按 S 键保存参数（保存后，下针位会自动进行相应调整），按 P 键退出监控模式。

Note: The up/down needle position setting: enter the monitoring parameter 24, adjust the handwheel to the up needle position (the parameter will change with the handwheel position), short press the button S to enter the up needle position value display, and long press S again to save the parameter (after saving , The down needle position will automatically adjust), press botton P to exit the monitoring mode.

3.6 参数表 Parameters

3.6.1 操作员参数(开机后长按 P 键进入) operators parameter (press P for a long time after start)

参数项 parameter	中文说明 illustrations	初始值 Initial value	范围 Range	内容值名称说明与备注 Remarks
P00	起缝速度(r/min) Starting speed(r/min)	200	100-800	缝纫时的最低速度设定 Lowest speed during sewing
P01	最高转速(r/min) Highest speed(r/min)	2000	200-2000	车缝时的最高转速设定 Highest speed during sewing
P03	针停定位选择 Needle position	1	0/1	0：上停针 1：下停针 0: up needle position 1: down needle position
P07	慢速起缝速度(r/min) Slow start sewing speed(r/min)	400	100-2000	慢速起缝时的速度设定 Slow start sewing speed setting
P08	慢速起缝针数 Slow starting sewing stitches	2	1-9	慢速起缝时的针数设定 Slow starting sewing stitches setting
P09	慢速起缝开关 Slow starting switch	1	0-1	1：慢速启动功能开启 0：慢速启动功能关闭 1: slow starting function on 0: slow starting function off
P12	补半针延迟时间(ms) Adding stitch delaying time(ms)	150	1-180	
P13	补一针延迟时间(ms) One adding stitch delaying time(ms)	180	150-250	
P14	补针速度(r/min) Adding stitch speed(r/min)	200	100-500	补针时的速度 Adding stitch speed

参数项 parameter	中文说明 illustrations	初始值 Initial value	范围 Range	内容值名称说明与备注 Remarks
P00	起缝速度(r/min) Starting speed(r/min)	200	100-800	缝纫时的最低速度设定 Lowest speed during sewing
P15	补针方式 Adding stitch way	0	0-2	0：按时间补针 1：补半针 2：补一针 0: adding stitch by time 1: half stitch 2: one stitch
P23	脚踏板控速曲线模式 Pedal speed control mode	0	0-3	脚踏板控速曲线模式 0：直线 1：两段斜率 2：曲线(平方、开方)3：S 曲线 0: straight 1:two phase slope rate 2:curve 3:S curve
P24	脚踏板全后踏电压值 Voltage value after foot pedal is down	150	0-4095	倒缝回针脚踏电压值 Foot pedal voltage value when back stitch
P29	踏次控速曲线辅助参数 0：平方 1：开方 Curve auxiliary parameter 1	1	0-1	
P31	电机加力（保留） Adding power of motor (reserve)	20	10-100	预留项，具有剪线功能时的电机加力 Reserve item, adding power for motor when use trimmer function

3.6.2 技术员参数表（按 P 键+S 键开机进入） Technician parameters (press P+S and start)

参数项 parameter	中文说明 Illustrations	初始值 Initial value	范围 range	内容值名称说明与备注 Remarks
P56	开电后自动找上定位 Automatic up position when power on	1	0-1	0：不找 1：找 0:off 1:on
P58	上停针调整角 Adjust angle when in up needle position	285	0-359	上定位调整，数值减少时会提前停针，数值增加时会延迟停针 Stop position ahead while decrease value Stop position delay while increase value
P59	下定位调整角度 Adjust angle when in down position	158	0-359	下定位调整，数值减少时会提前停针，数值增加时会延迟停针 Stop position ahead while decrease value Stop position delay while increase value
P60	测试速度(r/min)	2000	200-3200	设置测试速度

参数项 parameter	中文说明 Illustrations	初始值 Initial value	范围 range	内容值名称说明与备注 Remarks
P61	老化运行时间(s) Aging running time(s)	3	1-255	
P62	运行模式 Running mode	0	0-3	0：正常 1：简易缝 2：初始角测试 3：自动测试模式(电机停止时按 S 键退出) 0:normal 1:simple sewing 2:initial angle test 3:automatic test mode(press S to exit when motors stop)
P63	老化停止时间(s) Aging stopping time(s)	2	1-255	
P65	恢复出厂设置 Factory setting	0	0-2	0：无操作 1:恢复参数为电控出厂参数 2:恢复参数为研发出厂参(所有参数) 0:no operation 1:recover to initial value(users parameter) 2:recover to technician value
P66	机头保护开关检测 Machine head protection test	1	0-1	0：机头倾倒时不保护 1：机头倾倒时保护 1:no protection while machine head is down 2:protection while machine head is down
P67	安全开关逻辑 Safety switch	1	0-1	
P68	最高限速(r/min) Highest speed(r/min)	2000	200-3500	机头最高运行速度限制 Highest speed limitations during operation
P72	踏板前踩运行开始位置(相对于回中位置) Original position when the pedal goes front	400	0-4095	
P73	踏板低速运行结束位置(相对于回中位置) Finishing place when the pedal is end in low operation speed	800	0-4095	
P74	踏板模拟量最大值 Maximum monitoring value for the pedal	4000	0-4095	

参数项 parameter	中文说明 Illustrations	初始值 Initial value	范围 range	内容值名称说明与备注 Remarks
P75	踏板回中位置设定 Back place setting of the pedal	1650	0-4095	
P77	电机方向 Motor's direction	0	0-1	0：正转 1：反转 0: position 1:negative
P84	安全开关报警确认时间(ms)	300	1-500	
P85	安全开关报警恢复时间(ms) Recovery time for safety switch alarm(ms)	50	1-200	
P86	两段斜率转折点速度(r/min) Conversion speed for two phase slope	1500	0-4000	
P87	两段斜率中间模拟量 Monitoring amount between two phase slope	2700	0-4095	

3.6.3 监控参数表 monitoring parameters

待机界面，长按 P 键+停针位键，进入监控模式
Standby mode, press P+stop position and then enters into monitoring mode

参数项 parameters	中文说明 Illustration	内容值名称说明与备注 Remarks
M18	控制器软件版本号 Control box version	显示控制器软件版本号 Control box version
M20	母线电压 Bus voltage	显示实时母线电压 Real-time bus voltage value display
M21	机头速度 Machine head speed	显示实时速度 Current speed
M23	初始角度 Initial angle	显示初始角度 Initial angle display
M24	机械角度 Mechanical angle	显示机械角度 Mechanical angle display
M25	踏板前踩模拟量最大值 Monitoring maximum value when press the pedal ahead	显示踏板前踩 AD 最大值 AD maximum value when pedal is ahead

5 脚踏板灵敏度调整 adjustment of pedal sensitivity

1) 脚踏板动作由初始位置①（75 号参数）开始，缓慢向前踩至②（72+75 号参数）开始低速缝纫，继续前踩至③（75+73 号参数）开始加速，再深踩至④（74 号参数）达到最高速度。 ②③段之间维持起缝速度，③④段之间为无级调速过程；

Press the pedal from initial position ①（P75）and to ②（P72+75）slowly and start to low speed sewing, and press ③（P75+73）continuously to accelerate and then to ④（P74）thus can get maximum speed. It maintains starting speed between ②③, and ③④ is for speed adjustment duration.

2) 当脚踏板由初始位置①（75 号参数）开始，缓慢后踩至⑥（24 号参数）时自动完成回到上停针动作；

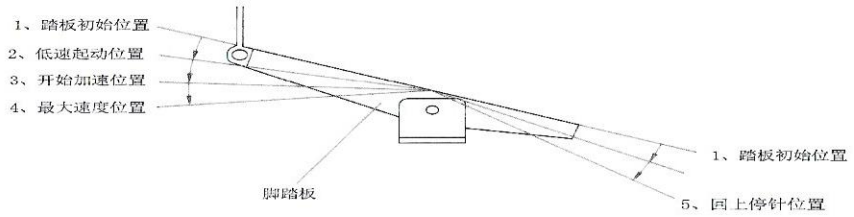
The machine will finish up position action when the pedal starts from ①（P75）to ⑥（P24）slowly

3) 各参数数值设置需保证（24 号参数）<（75 号参数）<（75+72 号参数）<（75+73 号参数）<（74 号参数）；

Make sure the value should be like this（P24）<（P75）<（P75+72）<（P75+73）<（P74）；

4) 可通过监控模式下 025、026、028 号参数实时监测踏板模拟量最大值、踏板回中电压采样值、踏板倒踩电压采样值，操作方式同上停针位置设置方式，不同位置下的踏板采样数值作为各参数的参考值。如前踩很大距离机器还没有运转，可适当减小 72 参数（72+75 号参数应大于回中位置参数 75），即可提高前踩的灵敏度；若机器过于灵敏，轻触踏板机器就开始运行，可适当加大 72 参数；若不容易补针，稍微前踩，速度就迅速提高造成前冲多针，可适当增大 73 参数或减小 72 参数（即增大脚踏板低速范围），也可以适当降低初始起缝速度（00 号参数）。

We can use P025、P026、P028 to check timely maximum monitoring value, voltage sample value when the pedal is in half back position, voltage sample value when the pedal is back under monitoring mode. Operation is the same as setting up needle position, and sample value can be a referenced value in different place. If we press the pedal for a long distance but the machine does not work, then we can decrease value of P72(P72+75＞P75) which can improve sensitivity. In contrary, we can increase P72 value. If its not easy to add stitch and when we slightly press front, then the speed up sharply, we can increase P73 or decrease P72 or lower the starting speed（P00）



待机界面，长按 P 键+停针位键，进入监控模式 Standby mode, press P+stop position and then enters into monitoring mode		
参数项 parameters	中文说明 Illustration	内容值名称说明与备注 Remarks
M26	踏板回中模拟量采样值 Monitoring sample value when the pedal is back to the middle place	显示踏板回中 AD 值 AD value when the pedal is back
M28	踏板倒踩模拟量采样值 Monitoring sample value when the pedal is back	显示踏板倒踩 AD 最小值 AD minimum value when the pedal is back
M30-37	历史故障代码 History error code	显示历史故障代码（倾倒错误 E7 不做记录，只显示最新的 7 个，无故障代码时显示 00） History error code (it will show the latest 7 error code except E7, and it will show 00 when no any history error code)

4 错误代码 ERROR CODE

4.1 故障代码表 Error code sheet

若系统出现报错或报警，请首先检查如下项：

1 先确认机器的连接线是否连接完好；2 确认电控和机头是否匹配；3 确认恢复出厂是否准确。

Please check following items if have any errors

1 check whether wires connected well or not

2 check whether control box and machine head matched or not

3 check factory reset function

故障代码 Error code	代码含义 Meaning	解决措施 Solutions
Err-01	硬件过流 Hard ware over current	关闭系统电源，30 秒后重新接通电源，控制器若仍不能正常工作，请更换控制器并通知厂方。 Turn off and restart after 30S. Please replace control box and inform the supplier if it can't work
Err-02	软件过流 Soft ware over current	
Err-03	系统欠压 System low voltage	断开控制器电源，检查输入电源电压是否偏低（低于 154V）。若电源电压偏低，请在电压恢复正常后重新启动控制器。若电压恢复正常后，启动控制器仍不能正常工作，请更换控制器并通知厂方。 Power off and check input voltage is lower than 15V or not. Please restart when voltage is normal if the input voltage is lower than normal one. Please replace control box and inform the supplier if it can't work.
Err-04	停机时过压 Over voltage when stop	断开控制器电源，检查输入电源电压是否偏高（高于 264V）。若电源电压偏高，请在电压恢复正常后重新启动控制器。若电压恢复正常后，启动控制器仍不能正常工作，请更换控制器并通知厂方。

Err-05	运行时过压 Over voltage during operation	Power off and check input voltage is higher than 264V or not. Please restart when voltage is normal if the input voltage is higher than normal one. Please replace control box and inform the supplier if it can't work.
Err-07	电流检测回路故障 Circuit problem	关闭系统电源，30 秒后重新接通电源观察是否能正常工作。重试几次，若该故障频繁出现，请更换控制器并通知厂方。 Power off and then restart after 30S. Please replace control box and inform the supplier if it can't work after restart for a few times.
Err-08	电机堵转 Motor stuck	断开控制器电源，检查电机电源输入插头是否脱落、松动、破损，是否有异物缠绕在机头上。排除后重启系统仍不能正常工作，请更换控制器并通知厂方。 Power off and check if input plug is loose, broken or winded by stuff or not.Please replace control box and inform the supplier if it can't work.
Err-09	制动回路故障 Brake circuit problem	关闭系统电源，检查电源板上白色的制动电阻接头是否松动或脱落，将其插紧后重启系统。若仍不能正常工作，请更换控制器并通知厂方。 Power off and check if the white brake resister is loose or not, then plug in. Please replace control box and inform the supplier if it can't work.
Err-12	电机初始角度检测故障 Initial angle of motor problem	请断电后再尝试 2-3 次，若仍报故障，请更换控制器并通知厂方。 Try 2-3 times after power off. Please replace control box and inform the supplier if it can't work.
Err-13	电机光编码器信号丢失故障 Encoder signal problem	关闭系统电源，检查电机传感器接头是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换控制器并通知厂方。 Power off and check motor sensor is loose or not. Restart after recover it. Please replace control box and inform the supplier if it can't work.
Err-14	主板读写 EEPROM 故障 Main board writing EEPROM problem	
Err-15	电机超速保护 Motor over-speed protection	关闭系统电源，30 秒后重启系统，若仍不能正常工作，请更换控制器并通知厂方。 Power off and restart system after 30S. Please replace control box and inform the supplier if it can't work.
Err-16	电机反转 Motor conversion	
Err-18	电机过载 Motor overload	

4.2 安全报警表 SAFETY ALARM SHEET

报警代码 Alarm code	代码含义 Meaning	解决措施 solutions
A-UP	翻抬开关报警 Machine head flop alarm	摆正机头，确保翻抬开关复原 Make sure the machine head is in right position and reset switch