Computerized special stitch pattern lockstitch sewing machine

1. Safety precautions

Before use, please read this technical data and the manual of the matching sewing machine in detail, and use it correctly

1.1 (1) Power supply voltage and working frequency: please follow the specifications marked on the nameplate of the motor and control box.

(2) Electromagnetic wave interference: Please stay away from high-frequency wave equipment or radio wave transmitters, etc., so as to avoid the generated electromagnetic waves from interfering with the drive device and thus operating in a wrong way

(3) Grounding: To prevent noise interference or leakage accidents, please do a grounding project (including sewing machine, motor, control box, positioner).

1.2 When disassembling the motor or control box, do not pull it out with power on; there is dangerous high voltage inside the control box, so after turning off the power, wait 1 minute or more to open the control box cover

1.3 In order to ensure personal safety, please turn off the power when servicing machinery or performing needle insertion work.

1.4 This mark is consistent with that when the machine is installed, if it is wrong, it may hurt the human body or the machine will be damaged.

So there is this sign on the machine where there is danger.

This sign conforms to the sign that there is high voltage electricity, etc., where there is danger in electrical aspects.

3. Key Description
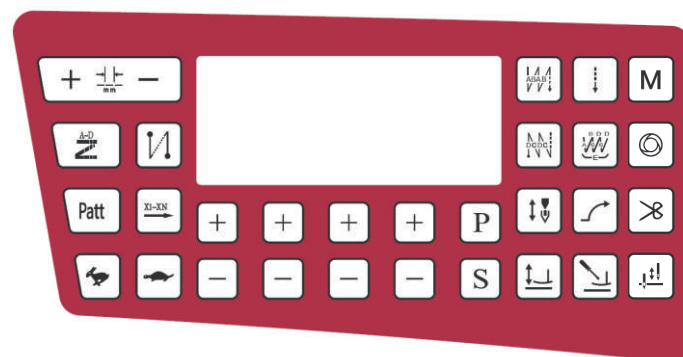
Paramet er Item	Parameter Function	Range	Default	Description
P01	Maximum sewing speed (r/S)	100–3700	3500	
P04	Start back-tacking speed (r/S)	200–3200	2000	
P05	End back-tacking speed (r/S)	200–3200	2000	
P06	Bar-tacking speed (r/S)	200–3200	2000	
P07	Soft start speed (r/S)	200–1500	400	
P08	Stitch numbers for soft start	0–99	2	
P09	Automatic constant-stitch sewing speed (r/S)	200–3700	2500	Constant-Stitch sewing speed adjustment when one shot signal us active.
P15	Stitch correction mode	0–4	2	Range (0-4) stitch correction mode: 0: Half stitch 1: One stitch 2:Continuous correct half stitch 3:Continuous correct one stitch 4:Continuous correct stitch and quickly stop machine.
P17	Automatic count mode selection	0–1	0	0: P41 parameter value increase auto-count 1: P41 parameter disable auto-count.
P28	Mode selection for bar-tacking	0–2	1	0: Manual, Pedal- control can stop and start. 1: Automatic, One shot to pedal, it can automatic execute bar-tacking action.
P32	Stitch balance for bar-tacking	0–200	167	
P35	Loose thread output	0–1	1	0: The output function of loose thread is closed 1: The output function of the loose thread is turned on
P36	Tension release/ big clamp device shift	0–1	1	0: Thread tension release function off, big clamp device function on. 1: Thread tension release function on, big clamp device function off.
P37	Wiper, clamp function selection (Pressure setting of the thread clamp device)	0–11	3	0: No Action 1: Wiper/ wiper thread action 2-11: Thread Clamp action and the pressure gradually increased)
P41	Display the sewing finished quantity	0–9999	0	
P49	Trimming speed (rpm)	100–350	250	Adjusting trimming speed
P53	Cancel foot lifting when half-heeling the pedal	ON/OFF	OFF	0: OFF 1: Pedal heeling and pedal half heeling with foot lifting function 2: Pedal heeling with foot lifting function, Pedal half heeling without foot lifting function.
P54	Trimming time (ms)	10–990	200	Action time of thread trimming sequence
P55	Thread wiping/Thread sweeping time	10–990	380	Dial/scan time sequence action time
P58	Up position adjustment	0–1439	84	Up positioning adjustment, the needle will stop in advance when the value decreases, and the needle will stop when the value increases
P59	Down position adjustment	0–1439	752	Down Position AdjustmentThe needle will advance stop when the value decreased. The needle will delay stop when the value increased.
P60	Testing speed (r/S)	100–3700	2000	Test function speed setting
P61	Testing A	OFF/ON	OFF	Test Item A, after setting, press [P60.] to set
P62	Testing B	OFF/ON	OFF	Test Item B, after setting, the cycle of start-sewing-stop-trimming will be executed at the speed set by [P60.]
P63	Testing C	OFF/ON	OFF	Test Item C, after setting, the start-sewing-stop cycle without positioning kinetic energy will be executed at the speed set by [P60.]
P64	Test B, C conduction time	1–250	20	In the B and C tests, set the conduction time
P65	Test B, C parking time	1–250	20	In B and C tests, set the parking time
P66	Machine protection switch testing	0–2	0	0: no detection; 1: detection of zero signal; 2: detection of positive signal
P68	Maximum speed limit	4000	3700	Maximum speed limit
P72	Upper needle stop position adjustment	0–1439		Adjustment up needle stop position, the value will changed according to the hand-wheel position, press S key to save current position(value) as up needle stop position.
P73	Down needle stop position adjustment	0–1439		Adjustment down needle stop position, the value will changed according to the hand-wheel position, press S key to save current position(value) as down needle stop position.
P74	Positive stitch pitch compensation	0–100	50	
P75	Back-tacking stitch length compensation	0–100	50	
P80	The angle of trimming first infeed	5–359	950	The first feed angle of the thread trimmer (calculated at the lower position of 0˚)
P82	The angle of trimming second infeed	5–359	1412	Thread trimming angle of the second infeed (calculated at the lower position of 0˚)
P92	Encoder start angle			Read the start angle of the encoder, the factory has been set, please do not change it at will
P101	Thread tension release start angel	1–359	30	
P102	Thread tension release end angel	1–359	180	
P103	Big clamp device start action current	0–300	3	
P112	The delay time before hook thread with clamp function without any thrum (ms)	0–999	100	
P113	The hook thread action time with clamp function without any thrum (%)	0–990	30	
P114	The return back delay time of hook thread with clamp function without any thrum (%)	0–990	30	
P115	Duty cycle for Hook thread with clamp function without any thrum (ms)	0–100	30	
P116	The suction time for clamp function without any thrum (ms)	0–5000	1000	
P122	Sensor by knee start AD value	0–1023	600	
P123	Needle pitch size limit			
P128	Trimming step motor function testing			Thread trimming test, press the scissors key to execute the test process (trimming will have two actions)
P129	Reverse-feed motor zero point correction	0–100	50	
P130	Trimming-feed motor zero point correction	0–100	50	
P131	Normal stitches length	0–74	52	
P132	Compactness stitches length	0–74	36	
P133	Widen stitches length	0–74	74	
P134	The second trimming distance (after action)	0–200	145	
P136	The highest of presser foot lift highness	0–150	145	
P137	The first trimming distance (before action)	0–200	110	
P141	Trimming speed 2	20–400	200	
P142	Trimming speed 1	20–400	150	
P146	Presser foot speed	20–250	200	
P149	Holding current of motor 1	1–12	6	
P150	Holding current of motor 2	1–12	8	
P151	Maximum current of motor 1	1–12	12	
P152	Maximum current of motor 1	1–12	8	
P153	Beautiful seam stitch length	0–74	25	
P154	Beautiful seam speed	100–1000	500	
P155	Function switch of needle compensation key of machine head	0–1	1	0: needle compensation function; 1: dense seam function
P159	Beautiful seam direction	0–1	0	0: positive direction 1: negative direction 0: positive direction 1: negative direction
P160	Beautiful seam stitches	0–12	0	Set to 0 beautiful sewing function off

Key Description Legend

Stitches length setting		End back-tacking sewing	
Pattern Backing-tacking Key		Needle stop position selection	
Beautiful seaming		Automatic presser foot lifting setting	
Pattern Freedom Sewing Key		Free Sewing	
Pattern Constant-Stitch Sewing Key		Consecutive reverse sewing	
Speed increase		Slow launch setting	
Speed decrease		Manual Presser Foot Lifting Setting	
Parameter increase/Parameter decrease		Multi-section Sewing	
Function parameter edit		Auto Function	
Confirm key		Thread trimming	
Start back-tacking sewing		Lift or fill up needle	

4. Monitor mode

Under normal circumstances, press the "P" key to adjust the parameter to 42, press "S" to confirm and enter the monitoring mode. Press the corresponding plus and minus keys to display related monitoring parameters. Press P to return to sewing mode.

Serial number	name	Defaults	Serial number	name	Defaults	Serial number	name	Defaults	Serial number	name	Defaults
N01	Electronic control version serial number	7	N04	Foot pedal AD value	345	N07	Bus voltage AD value	630	N10	Scissor position sensing	0
N02	Selector box version number	6803	N05	Upper positioning angle	84	N08	Error code record	154	N12	Knee-sensory AD	500
N03	Sewing speed	0	N06	Lower positioning angle	1403	N09	operation hours	7	N13	Presser foot sensor AD	0

5. Mode setting

5.1. Debug mode: After entering the sewing mode normally, press and hold the "M" key for 3 seconds to enter the debug mode. To exit from this mode to the normal mode, press the "P" to exit into the normal mode

Serial number	name	Defaults	Serial number	name	Defaults	Serial number	name	Defaults
72	Correction of needle position	84	92	Encoder starting angle	128		Scissor action test	

After entering the sewing mode normally, long press the "M" key for 3 seconds, the LCD screen displays "92", press the S key to enter the motor angle test interface, press the " " key, the motor will turn a few times, then the LCD

The screen displays the angle number, which means that the installation angle of the motor grating is the displayed number. Press the S key to save. To exit from this mode to normal mode, press "P" key to exit into normal mode

After normally entering the sewing mode, press and hold the "M" key for 3 seconds, the LCD screen displays "92", press the plus and minus keys to switch to "72", press the S key to enter the mechanical zero adjustment interface, turn the handwheel, the displayed value will be handy The wheel position changes and changes. Press the "S" key to save the current position (value) as the upper stop needle position. To return to normal mode from this mode, press the "P" key to exit into normal mode.

After entering the sewing mode normally, long press the "M" button for 3 seconds, the LCD screen displays "92", the button switches to "128", press the S button to enter the thread trimming action test interface, and then press " " , the scissors will act once according to the desired angle (Cycle), if you want to return to normal mode from this mode, press P key to exit into normal mode.

5.2. Password mode: Long press the "P" key to enter the password mode, the LCD displays 0000, and the corresponding addition and subtraction modify the value below. If the password is correct, press the "S" key to enter the advanced parameters.

5.3. Save factory parameters and restore factory parameters:Press and hold the " " key for 5 seconds to save the factory parameters. Press and hold the " " key for 5 seconds to restore the factory parameters.

5. 4. Pattern sewing edit:

After entering the sewing mode normally, long press the "Patt" key, the LCD screen displays "n-01 01", press the +-key to switch the n1-n9 pattern, select the pattern number to be set, and press the "S" key to enter the setting, the liquidThe crystal screen displays "1 1 3.0". At this time, you can set the number of stitches, the number of repetitions and the distance between stitches in the first segment. Press the corresponding key below and the " " key to set each parameter value. Press the S key to save.P key to exit, a period of setting is completed; press the " " key, the LCD screen displays n-01 02, press the "S" key to enter the setting, the LCD screen displays "1 1 3.0", at this time you can perform the secondSet the number of stitches, repeat times and stitch length of the segment, press the corresponding key and " " key to set each parameter value, press the "S" key to save, P key to exit, the second segment setting is completed; press the " " key,The LCD screen displays n-01 03, press the "S" key to enter the setting, the LCD screen displays "1 1 3.0", if the number of stitches of the current segment is set to zero at this time, the sewing of this segment will not be performed during sewing; the setting is completed Then press S to save and press P to exit. To return to normal mode from this mode, press the "P" key twice.

Long press the Patt key to enter, the interface displays		Press S to enter, the interface displays			Long press the Patt key to enter, the interface displays		Press S to enter, the interface displays		
Pattern number	N-01	01	1	1	3.0	Pattern number	N-01	02	1	1	3.0
meaning	Pattern number	No. 1 first pattern	Contacts	repeat times	Stitch size	meaning	Pattern number	No. 1 first pattern	Contacts	repeat times	Stitch size
the way	Add and subtract keys below		Plus minus keys	Plus minus keys		the way	Add and subtract keys below		Plus minus keys	Plus minus keys	

5. 5. Pattern sewing method:

Press the " Patt " key after entering the sewing mode normally, the LCD screen displays "n0", press the plus and minus keys to switch to the n1-n9 pattern, select the pattern number to be sewn and press the "S" key to confirm, then press the selected pattern Perform sewing; when exiting the pattern sewing, adjust the parameter to "n0", press the "S" key to confirm, and the P key to exit to enter the free sewing mode.

6. Error Code List

Error Code	Problem	Status / Measurement
E01	Over-voltage	Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage.)If correct, please replace the control box and inform the factory
E02	Low-voltage	Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage specified in use.)If correct, please replace the control box and inform the factory
E03	Abnormal transmission communication between the operation panel and the CPU	Turn off the system power and check whether the interface of the operation panel is loose. If the contact is good, replace the operation panel. If it is not the operation panel, the control box is damaged, please replace it.
E05	Speed control unit connection is abnormal	Turn off the system power supply, please check the speed control unit connector if loose or fall off, Will resume normal after the restart system If you still can not work normally, please replace the speed control unit and notify the manufacturer.
E07	Motor locked-rotor error b) The front head mechanism is deadlocked or the motor belt foreign body is caught and stuck. c) The workpiece is too thick and the motor torque is insufficient to penetrate. d) Module drive output is abnormal.	Turn the hand motor of the machine head to see if it is stuck. If it is stuck, first remove the machine head mechanical failure. If the rotation is normal, check whether the motor encoder connector and the motor power cable connector are loose. Please fix if loose. If the contact is good, check whether the power supply voltage is abnormal or the speed is set too high. If any, please adjust. If it is normal, please replace the control box and notify the manufacturer.
E08	Abnormal function stepper motor	Check the value of N14 in the advanced of item P42, 0: communication abnormality, 2: reverse stitch step overcurrent 4: reverse stitch step cannot be found at startup Origin 16: Thread trimming step overcurrent 32: Thread trimming step cannot find the origin. Turn off the system power and observe whether the stepper motor is stuck. If it is stuck, first remove the machine head mechanical failure. If it still does not work, please replace the control box and notify the manufacturer. If it is normal, check whether the stepper motor interface is loose or falling off, and restore it to normal, then restart the system.
E10	Solenoid overcurrent protection	Turn off the power of the system and check whether the solenoid (solenoid valve) cable or solenoid (solenoid valve) is damaged.
E09 E11	Abnormal positioning signal	Turn off the system power, check whether the motor encoder interface is loose or falling off, and restore it to normal, then restart the system. If it still does not work, please replace the control box and notify the manufacturer.
E13	Power module overheat protection	Turn off the system power and check whether the power module and heat sink are in good contact.
E14	Encoder signal is abnormal	Turn off the system power, check whether the motor encoder interface is loose or falling off, and restore it to normal, then restart the system. If it still does not work, please replace the control box and notify the manufacturer.
E15	Power module abnormal over-current protection	Turn off the system power, and then turn it on again. If it still does not work, please replace the control box and notify the manufacturer.
E16	Abnormal deviation of thread trimming motor	Turn off the system power and check whether the thread trimming mechanism returns to the correct position; check whether the thread trimming setting is wrong.
E17	The head protection switch is not in the correct position	Turn off the system power, check whether the machine head is opened, and whether the machine head switch is damaged.
E20	Motor failed to start	Turn off the system power, check whether the motor encoder interface and motor power interface are loose or fall off, restore it to normal and restart the system. If it still does not work, please replace the control box and notify the manufacturer.

花样缝电脑平缝机

1. 安全上的注意事项

使用前请详细阅读本技资料与所搭配的缝制机械说明书，配合正确使用。

1.1 （1）电源电压与工作频率：请遵照马达与控制箱铭牌所标之规格。

（2）电磁波干扰：请远离高频波机器与电波发射器等，以免所产生的电磁波干扰本驱动装置因而方式错误动作

（3）接地：为防止杂讯干扰与漏电事故，请做好接地工程（包括缝纫机、马达、控制箱、定位器）。

1.2 拆除马达或控制箱时，勿带电拔插；控制箱里面有危险高电压，所以关闭电源后等1分钟以上方可打开控制箱盖

1.3 为保证人身安全，请在维修机械或进行穿针作业时关闭电源。

1.4 这个标示符合表示机器安装时，如有错误恐会伤害到人体或机器会受到损坏。

所以机器方面有危险性的地方会有此标志。

这个标识符合表示有高压电等，电气方面有危险性的地方会有此标志。

2. 系统参数表

参数项	内　容	调整范围	初始值	内容值名称与备注
P01	最高转速（rpm）	100-3700	3500	车缝时的最高转速设定
P04	起始回缝速度（rpm）	200-3200	2000	前段回缝（起始回缝）时的速度设定
P05	终止回缝速度（rpm）	200-3200	2000	后段回缝（终止回缝）时的速度设定
P06	连续回缝速度（rpm）	200-3200	2000	连续回缝时的速度设定
P07	慢速起缝速度（rpm）	200-1500	400	慢速起缝时的速度设定
P08	慢速起缝针数（针）	0-99	2	慢速起缝时的针数设定
P09	自动定针缝速度	200-3700	2500	定针缝自动触发功能打开的速度设定
P15	补针方式	0-4	2	0：半针，1：一针，2：连续补半针，3：连续补一针，4：连续补针，快速倒车
P17	自动计件选择	0-1	0	0：P41项参数一针数递增自动计数　1：P41项参数不自动计数
P28	连续回缝运动模式选择	0-2	1	0：人工，受踏板控制，可任意停止与启动 1：自动，轻触踏板，自动执行回缝动作 2：停顿
P32	加固缝针迹补偿	0-200	167	
P35	抬压脚时线出力功能设定	0-1	1	0：抬压脚时松线出力功能关闭　1：抬压脚时松线出力功能开启
P36	松线/大夹线器切换	0-1	0	0：松线功能关闭，大夹线器功能开 1：松线功能开启，大夹线器功能关（松线力度由P103调节）
P37	夹线器力道设置	0-11	3	0：功能关闭　1：拨线功能开启 2~11：夹线功能开启，数值越大动作力度越大
P41	车逢完成件数显示	0-9999	0	
P49	剪线速度（rpm）	100-350	250	调整剪线周期时的电机速度
P53	半后踏抬压脚取消	ON/OFF	OFF	ON：半后踏时无抬压脚　　OFF：半后踏时有抬压脚
P54	剪线动作时间（ms）	10-990	200	剪线时序的动作时间
P55	拨／扫线动作时间	10-990	380	拨／扫时序的动作时间
P58	上定位调整	0-1439	84	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
P59	下定位调整	0-1439	752	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
P60	测试速度（spm）	100-3700	2000	测试功能的速度设置
P61	A项测试	OFF/ON	OFF	A项测试选项，设定后将按【P60.】所设定之
P62	B项测试	OFF/ON	OFF	B项测试选项，设定后将按【P60.】所设定之速度执行启动-车缝-停车-剪线的循环
P63	C项测试	OFF/ON	OFF	C项测试选项，设定后将按【P60.】所设定之速度执行无定位动能的启动-车缝-停车车循环
P64	测试B、C导通时间	1-250	20	B、C项测试中，设置导通时间
P65	测试B、C停车时间	1-250	20	B、C项测试中，设置停车时间
P66	机头保护开关检测	0-2	0	0：不检测；1：检测零信号；2：检测正信号
P68	车头最高速度限制	4000	3700	最高速度总限制
P72	上停针位校正	0-1439		调整上停针位，显示的数值会随手轮位置变化而变化，按"S"键存当前位置（数值）为上停针位置
P73	下停针位校正	0-1439		调整下停针位，显示的数值会随手轮位置变化而变化，按"S"键保存当前位置（数值）为下停针位置
P74	正常针距补偿	0-100	50	
P75	倒缝针距补偿	0-100	50	
P80	剪线第一次进刀角度	5-359	950	剪线第一次进刀角度（下定位为0°计算）
P82	剪线第二次进刀角度	5-359	1412	剪线第二次进刀角度（下定位为0°计算）
P92	编码器起始角度			读取编码器起始角度，出厂已设置，请勿随意更改
P101	松线开始角度	1-359	30	
P102	松线结束角度	1-359	180	
P103	大夹线器起夹电流	0-300	3	
P112	无鸟巢钩线前延时	0-999	100	
P113	无鸟巢钩线动作时间	0-990	30	
P114	无鸟巢钩线返程时间	0-990	30	
P115	无鸟巢钩线占空比	0-100	30	
P116	无鸟巢吸气时间	0-5000	1000	
P122	膝靠启动AD值	0-1023	600	
P123	针距大小限制			
P128	剪线功能测试			剪线测试，按一下剪刀剪键即可执行测试过程（剪线会有两次动作）
P129	倒缝电机零点较正	0-100	50	
P130	压脚电机零点较正	0-100	50	
P131	正常针距	0-74	52	
P132	加密针距	0-74	36	
P133	加宽针距	0-74	74	
P134	第二次剪线距离	0-200	145	
P136	最高压脚高度	0-150	145	
P137	第一次剪线距离	0-200	110	
P141	切线速度2	20-400	200	
P142	切线速度1	20-400	150	
P146	抬压脚速度	20-250	200	
P149	电机1的保持电流	1-12	6	
P150	电机2的保持电流	1-12	8	
P151	电机1的最大电流	1-12	12	
P152	电机2的最大电流	1-12	8	
P153	漂亮缝针距	0-74	25	
P154	漂亮缝速度	100-1000	500	
P155	机头补针键功能切换	0-1	1	0：补针功能；1：密缝功能
P159	漂亮缝方向			0为正方向　1为负方向0为正方向　1为负方向
P160	漂亮缝针数	0-12		设为0漂亮缝功能关闭

3. 操作盒按键说明
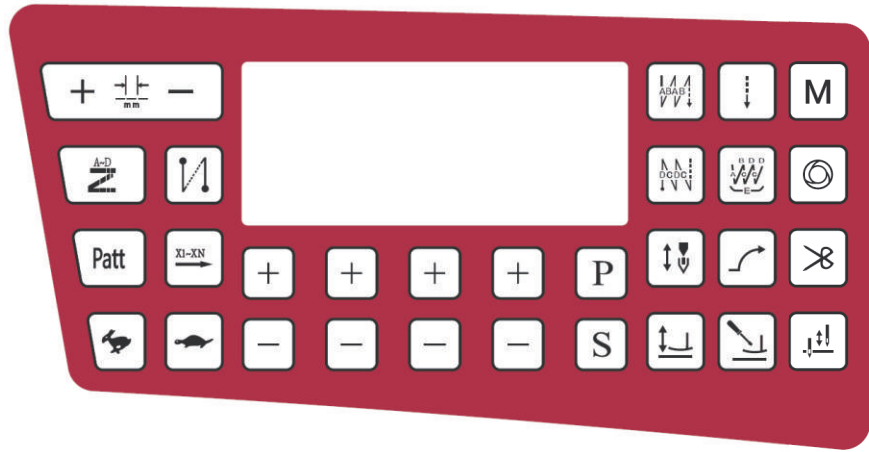
+ 址 -	针距大小调节键	后固缝按键	
	固缝花样按键	停针位选择	
	漂亮缝纫设定按键	剪线抬压脚按键	
Patt	花样编辑按键	自由缝模式按键	
	段式缝花样自编模式按键	W固缝模式按键	
	电机运行速度调节（快）	软启动按键	
	电机运行速度调节（慢）	手动抬压脚按键	
＋ ―	加减键	M 调试功能按键	
P	功能键	触发键	
S	确定键	剪线设定按键	
	前固缝按键	补针键	

4. 监控模式

正常情况下，按"P"键，将参数调整到42，按"S"确认，进入到监控模式。按下方相对应的加减键显示相关的监控参数。按P返回到缝纫模式。

显示序号	项目名称	默认值	显示序号	项目名称	默认值	显示序号	项目名称	默认值	显示序号	项目名称	默认值
N01	电控版本序列号	7	N04	脚踏板AD数值	345	N07	母线电压AD数值	630	N10	剪刀位置感应	0
N02	选针盒版本号	6803	N05	上定位角度	84	N08	错误代码记录	154	N12	膝靠感应AD	500
N03	车缝速度	0	N06	下定位角度	1403	N09	运行时间	7	N13	压脚感应AD	0

5. 模式设置

5.1. 调试模式：正常进入缝纫模式后长按"M"键3秒，进入到调试模式，若要从该模式退回到正常模式，需按键"P"退出进入正常模式

显示序号	项目名称	默认值	显示序号	项目名称	默认值	显示序号	项目名称	默认值
72	上停针位较正	84	92	编码器起始角度		128	剪刀动作测试	

正常进入缝纫模式后按"M"键3秒，液晶屏显示"92"，按S键进入电机角度测试界面，按" "键，电机会转动几下，之后液晶屏显示角度数字，代表电机光栅片的安装角度为显示的数字，按键确认。若要从该模式退回到正常模式，按"P"键退出进入正常模式

正常进入缝纫模式后长按"M"键3秒，液晶屏显示"92"，按下方加减键切换到"72"按S键进入机械零位调整界面，转动手轮，显示的数值会随手轮位置变化而变化，按"S"键保存当前位置（数值）为上停针位位置。若要从该模式退回到正常模式，按"P"键退出进入正常模式。

正常进入缝纫模式后长按"M"键3秒，液晶屏显示"92"，按下方加减键切换到"128"按S键进入剪线动作测试界面，再按" "键，剪刀会按照想对应角度动作一次（循环），若要从该模式退回到正常模式，按照剪出进入正常模式。

5.2. 密码模式：长按"P"键进入密码模式，液晶显示0000，按下方对应的加减修改值，若密码正确，按"S"键后，可查看高级参数。

5.3 保存出厂参数和恢复出厂参数：长按" "键5秒，保存出厂参数完成。长按" "键5秒，恢复出厂参数完成。

5.4. 花样编辑：正常进入缝纫模式后长按"Patt"键，液晶屏显示"n-01 01"，按+ -键切换n1-n9花样，选定要设置的花样号后按"S"键进入设置，液晶屏显示"1 1 3.0"，此时可以进行第一段的针数、重复次数和针距设置，按下方对应的键和 + - 键设置各参数值，按S键保存，P键退出，一段设置完成；按" "键，液晶屏显示n-01 02，按"S"键进入设置，液晶屏显示"1 1 3.0"，此时可以进行第二段的针数、重复次数和针距值设置，按下方对应的键和 + - 键设置各参数值，按"S"键保存，P键退出，二段设置完成；按" "键，液晶屏显示n-01 03，按"S"键进入设置，液晶屏显示"1 1 3.0"，此时若将当前段的针数设置为零，则缝纫时不进行此段的缝纫；设置完成后按S键保存，按P键退出。若要从该模式退回到正常模式，按两次"P"键即可。

长按Patt键进入，界面显示		按S键进入，界面显示			长按Patt键进入，界面显示		按S键进入，界面显示		
花样编号	N-01	01	1	1	3.0	花样编号	N-01	02	1	1	3.0
含义	花样号	1号第一段花样	针数	重复次数	针距大小	含义	花样号	1号第二段花样	针数	重复次数	针距大小
编辑方式	下方加减键		下方加减键		＋ -	编辑方式	下方加减键		下方加减键		＋ -

5.5. 花样缝纫方法：正常进入缝纫模式后按" Patt "键，液晶屏显示"n0"，按下方加减键切换n1-n9花样，选定要缝纫的花样号后按"S"键确认，此时按选定的花样进行缝纫；退出花样缝纫时，将参数调整到"n0"，按"S"确认，P键退出进入自由缝模式。

6. 错误代码表

错误码	内　容	对　策
E01	1.电源ON时，主电压检测过高 2.供应电源电压过高时	关闭系统电源，检测供应电源电压是否正确。（或是否超过使用规定的额定电压）若正确，请更换控制箱并通知厂方。
E02	1.电源ON时，主电压检测过低 2.供应电源电压过低时	关闭系统电源，检测供应电源电压是否正确。（或是否低于使用规定的额定电压）若正确，请更换控制箱并通知厂方。
E03	操作面板与CPU传输通信异常	关闭操作面板电源，检查操作面板接口是否接触不良或脱落，将其恢复正常后重启系统。如不是操作面板，则为控制箱原因，请更换。
E05	控速器接触异常	关闭系统电源，检查控速器接头是否松动或脱落，将其恢复正常后重启系统。若仍不正常，请更换控速器并通知厂方。
E07	a)马达插头配线接触不良导致不转。 b)车头机械死锁或马达皮带异物卷入卡死。 c)加工物过厚，马达扭力不足无法贯穿。 d)模块驱动出力异常。	转动机头电机手轮观察是否卡住。如卡住则先排除机头机械故障。若转动正常，检查电机电源脚接头是否松动或脱落。如接触良好，检查供应电源电压是否异常或转速设置过高。如有请调整。若仍不能正常工作，请更换控制箱并通知厂方。
E08	功能步进电机异常	查看P42项参数里N14的数值，0：通信异常，2：倒缝步进过流 4：倒缝步进开机找不到原点 16：剪线步进过流 32：剪线步进找不到原点 关闭系统电源，观察步进电机是否卡住。如卡住则先排除机头机械故障。如正常，检查步进电机接口是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换控制箱并通知厂方。
E10	电磁铁过流保护	关闭系统电源，检查电磁铁（电磁阀）连接线或电磁铁（电磁阀）是否损坏。
E09 E11	定位信号异常	关闭系统电源，检查电机编码器接口是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换电机并通知厂方。
E13	电力模块过热保护	关闭系统电源，检查电力模块与散热片是否接触良好。
E14	编码器信号异常	关闭系统电源，检查电机编码器接口是否松动或脱落，将其恢复正常后重启系统。
E15	电力模块不正常过流保护	关闭系统电源，再重新开启电源。若不能正常工作，请更换控制箱并通知厂方。
E16	剪线步进偏差异常	检查剪线机头是否回到正确位置，检查剪线的设置是否正确。
E17	机头保护开关没到达正确位置	关闭系统电源，检查机头保护开关是否按好，机头开关是否损坏。
E20	开机电机启动失败	关闭系统电源，检查电机编码器接口和电机连接接口是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换控制箱并通知厂方。