⚠安全指示

1） 在安装或使用本产品前，使用者必须详细阅读本操作手册。

2） 本产品须由受过正确训练的人员来安装或操作。安装作业时必须关闭所有电源，切记不可带电操作。

3） 所有标有⚠符号的指示，必须特别注意并按照说明书上的执行，以免造成不必要的损害。

4） 为安全起见，禁止以延长线作电源座供应二项以上的电器产品使用。

5） 在连接电源线时，必须确定工作电压低于 AC 250V，且符合本产品标识中规定的额定电压值。

※注意 ：电控箱电源规格如为 AC220V 时，请勿插接至 AC380V 的电源插座上，否则将出现异常且电机无法动作。此时请立即关闭电源开关，重新检查电源。持续供应 380V 超过五分钟以上，将可能烧损电控箱内器件，而危及人身安全。

6） 请不要在日光直接照射的场所、室外及室温 45℃以上或 0℃以下的场所操作。

7） 请不要在暖气（电热器）旁、有露水的场所及在相对湿度 10%以下或 90%以上的场所操作。

8） 请不要在灰尘多的场所、具有腐蚀性物质的场所及有挥发性气体的场所操作。

9） 请注意所有电源线、信号线、接地线等接线时不要受压或过度扭曲，以确保使用安全。

10）电源线的接地端须以适当大小的导线和接头连接到生产工厂的系统地线，此连接必须被永久固定。

11）所有可转动的部分，必须以所提供的零件加以防范露出。

12)在安装完成第一次开电后，先关闭切线功能以低速操作缝纫机并检查转动方向是否正确、运转是否稳定。

13）在进行以下操作前，请先关闭所有电源：

1.在控制箱与马达上插拔任何连接插头时。

2.穿针线时。

3.翻抬缝纫机机头时。

4.修理或做任何机械上的调整时。

5.机器闲置不用时。

14）修理或高层次的保养工作，仅能由受过训练的机电技师来执行。

所有维修用的零件，须由本公司提供认可，方可使用。

15）使用本产品请远离高频电磁波和电波发射器等，以免所产生的电磁波干扰伺服驱动装置而发生误动作。

16）请不要以不适当物体来敲击或撞击本产品及各装置。

保修期限

本产品保修期限为购买日期起一年内或出厂月份起两年内。

保修内容

本产品在正常情况使用且无人为操作失误的前提下，于保修期间无偿为客户维修使能正常操作。

但以下情况于保修期间将收取维修费用：

1. 不当使用包括误接高压电源、将产品移做其它用途、自行拆卸、维修、更改、或不依规格范围使用、进水进油及插入异物于本产品。

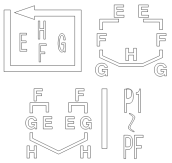
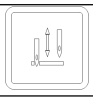
2. 火灾、地震、闪电、风灾、水灾、盐蚀、潮湿、异常电压及其它天灾或不当场所造成的损害。

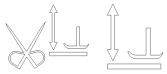
3. 客户购买后摔落本产品，或客户自行运输（或托付运输公司）造成的损害。

＊ 本产品在生产及测试上皆尽最大努力和严格控制使其达到高品质及高稳定的标准，但外部的电磁或静电干扰或不稳定的供应电源，仍可能对本产品造成影响或损害，因此操作场所的接地系统一定要确实做好，并建议用户安装故障安全防护装置（如漏电保护器）

1　按键显示及操作说明

1.1　按键说明

名称	按键	注明	图标
起始 / 终止回快捷缝键		执行起始回缝 B 段或执行起始回缝（A、B 段）1 次 执行起始回缝（A、B 段）2 次	
		执行终止回缝 C 段或执行终止回缝（C、D 段）1 次 执行终止回缝（C、D 段）2 次	
自由缝快捷键		一旦踏板往前踏下就正常车缝，当踏板回到中立时，立即停止车缝。 当踏板往后踏时，就自动完成切线 / 扫线等动作。	
连续回缝快捷键		1.一旦踏板往前踏下，就自动执行来回的连续回缝动作，来回次数由 D 段设定。∴前踏之后即自动执行此功能到完成切线为止，中途不会停止车缝，除非将踏板往后踏可解除动作。	
一段定针缝快捷键		当踏板往前踏下时，就执行 E，F 段或 G，H 段定针缝的针数。 在任何一段车缝途中，一旦踏板回到中立时，车缝立即停止，此时当踏板再次往前踏下，即开始执行 E，F 或 G，H 段未完成的针数（关闭自动触发）。该键可调四段、七段、八段、及其他多段缝的缝纫模式。 当显示 P1~PF 时按【S】键进行确认修改多段缝的模式 P1~PF 修改段是相应数、后面两位是修改该段的针数。	
多段定针缝快捷键			
进入和确定存储保存键		进入参数项及其内容值如经调整变更后，需按下【S】键予以保存确认。注：参数保存直接按【S】键即可。	
提针 / 补针键		连续回缝除外，任何一种车缝中途停止时，按一下则作提针或往前补半针。任何一种车缝终止未切线时，按一下则作提针或往前补半针。	
触发自动键		1.在自由缝的式样中：按下此键无功能。 2.在定针缝的式样中按下此键：当踏板一经往前踏下触发，则自动执行 E，F 段或 G，H 段中所设定的针数，直到段内针数完成后自动停止。再逐一触发踏板，则自动执行下一段所设定的针数直到自动完成切线、扫线等动作为止。相应图标不亮时，表示关闭相应功能。	
切线功能快捷键		1.设定使用或取消切线功能。 2.相应图标不亮时，表示关闭相应功能。	
进入参数区功能键		一般模式下按【P】键进入用户参数模式 按住【P】键开机进入技术员参数模式	
设置数值递增/参数递增键		1、A、B、C、D、E、F、G、H 的设定针数增加。 2、参数选择区内当参数递增键。 3、参数内容区内当设定数值递增键。	
设置数值递减/参数递减键		1、A、B、C、D、E、F、G、H 的设定针数减少。 2、参数选择区内当参数递减键。 3、参数内容区内当设定数值递减键。	
上下停针键		1：图标亮了表示停车时在上停针位 2：图标亮表示停车时在下停针位	

抬压脚快捷键		1、  图标亮时，切完线后压脚自动抬起。 2、  图标亮时，车缝中马达停止时压脚自动抬起。 3、2 个图标都亮时，切完线后和车缝中马达停止时压脚都自动抬起。 4、当 2 图标都不亮时，无自动抬压脚功能。	
慢速起缝快捷键		1、相应图标亮时，慢速起缝打开。 2、相应的图标不亮时，无慢速起缝功能。	
夹线功能快捷键		1、相应图标亮时，夹线功能打开。 2、相应的图标不亮时，无夹线功能。	
最高转速设置键		加速键：速度不大于技术员设置的最高转速	
		减速键：速度最小为 200 转/分钟	

1.2 液晶显示字体与实际字体对照表

数字字体部分：

实际数值	0	1	2	3	4	5	6	7	8	9
液晶显示										

英文字母	A	B	C	D	E	F	G	H	I	J
液晶显示										
英文字母	K	L	M	N	O	P	Q	R	S	T
液晶显示										
英文字母	U	V	W	X	Y	Z				
液晶显示										

1.3 手动调整定位

1.关机状态，按住 S 键开机，显示 P-72 项，按 S 键进入参数界面

2.用手将手轮转至针尖与针板齐平位置，，数值会随着手轮转动而变化

1.4 恢复出厂设置

按住左边两个【—】键开机	双击【S】键确认，关机重启

2 参数表

参数项	中文说明	范围	初始值	设定键	内容值名称说明与备注
在正常模式下按[P]					
P01	最高转速（r/S ）	100-2500	2000		车缝时的最高转速设定
P02	加速曲线调整（%）	1-100	80		控速器爬升斜率设定

参数项	中文说明	范围	初始值	设定键	内容值名称说明与备注
					斜率值愈大，速度愈陡；斜率值愈小，速度愈慢
P03	针停定位选择	UP/DN	DN		UP：上停针　DN：下停针
P04	起始回缝速度（r/S ）	200-3200	1000		前段回缝（起始回缝）时的速度设定
P05	终止回缝速度（r/S ）	200-3200	1000		后段回缝（终止回缝）时的速度设定
P06	连续回缝速度（r/S ）	200-3200	1000		连续回缝时的速度设定
P07	慢速起缝速度（r/S ）	200-1500	350		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，每一单位代表半针
P09	自动定针缝速度（r/S ）	200-4000	2000		定针缝自动触发功能打开的速度设定
P10	定针缝后自动执行终止回缝功能（不补针功能设定）	ON/OFF	ON		ON：在执行完最后一段定针缝后，将自动执行终止回缝动作。 注：即在任何缝制模式下，终止回缝前不能作补针功能。 OFF：在执行完最后一段定针缝后，将无法自动执行终止回缝功能，必须重新再作前或全后踏动作时才可执行终止回缝或进行补针功能。
P11					
P12	起始回缝运动模式选择	0-2	0		范围（0-2） 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
P13	起始回缝结束点操作模式选择	CON/STP	CON		CON：起始回缝段完成后，自动连续下一段功能 STP：起始回缝段针数完成后自动停止
P14	慢速启动	ON/OFF	ON		ON：慢速启动功能开启 OFF：慢速启动功能关闭
P15	补针方式	0-4	0		范围（0-4）补针方式，0：半针，1：一针，2：连续补半针，3：连续补一针，4：连续补针，快速停车（杰克模式）
P16		0-990	100		
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
P18	起始回缝补偿 1	0-200	150		起始回缝 A 段针迹补偿，0～200 动作逐步滞后
P19	起始回缝补偿 2		160		起始回缝 A 段针迹补偿，0～200 动作逐步滞后
P20	终止回缝运动模式选择	1-2	1		范围（1 - 2） 1：自动，轻触踏板，自动执行回缝动作 2：停顿
P21	终止回缝功能选择	30-1000	520		
P22	终止回缝功能 C 段针数之设定	30-1000	418		
P23	终止回缝功能 D 段针数之设定	30-1000	248		
P24	脚踏板反踏点电压	30-1000	110		脚踏板发踏点位置调整
P25	终止回缝补偿 3	0-200	150		起始回缝 C 段针迹补偿，0～200 动作逐步滞后

参数项	中文说明	范围	初始值	设定键	内容值名称说明与备注
P26	终止回缝补偿 4		160		起始回缝 D 段针迹补偿，0～200 动作逐步滞后
P27	薄料、厚料选择	0-1	0		0：关感应 1：剪线后感应 2：一般感应 7：感应抬压脚保护时间 8：接收感应 AD 9：传感器灵敏度
P28	连续回缝运动模式选择	0-2	1		范围（0 - 2） 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
P29	切线后刹车力度	1-50	20		数值越大力度越大
P30	厚料加力	0-100	10		数值越大力度越大
P31	剪线加力	0-100	60		剪线加力系数（电机加力），数值越大力度越大
P32	连续回缝补偿 5	0-200	150		起始回缝 A、C 段针迹补偿，0～200 动作逐步滞后
P33	连续回缝补偿 6		160		起始回缝 B、D 段针迹补偿，0～200 动作逐步滞后
P34	定针缝运动模式选择	A/M	A		A：轻触脚踏板，即自动执行定针缝动作 M：受脚踏板控制，可任意停止与启动
P35	定针缝功能设定	ON/OFF	OFF		
P36	定针缝段数选择	0-1	0		0：松线功能关闭 1：松线功能开启
P37	拨线、夹线功能设定（夹线器力道设置）	0-11	1		0：功能关闭， 1 拔线功能开启 2～11 夹线动作，数值越大动作力度越大
P38	剪线功能设定	ON/OFF	ON		ON：剪线功能开启 OFF：剪线功能关闭
P39	车缝途中停止时，压脚出力选择	UP/DN	DN		同按键面板上之快速功能 UP：车缝停止时，自动抬起压脚 DN：车缝停止时，无自动抬压脚（由踏板后踏控制）
P40	切完线停止时，压脚出力选择	UP/DN	DN		UP：剪完线后，自动抬起压脚 DN：剪完线后，无自动抬压脚（由踏板后踏控制）
P41	车缝完成件数显示		0		进入件数显示界面后生效，自动保存；长按减号键进行计数清零
P42	信息显示		N-01		按"S"键进入，P 键退出 N01 电控版本序列号 N02 选针盒版本号 N03 车缝转速 N04 脚踏板 AD 数值 N05 上定位角度 N06 下定位角度 N07 母线电压 AD 数值 N08 电磁铁功能测试 N09 错误代码记录

参数项	中文说明	范围	初始值	设定键	内容值名称说明与备注
P43	马达转动方向设定（正反转）	CCW/CW	CCW		CW：顺时针方向　CCW：　逆时针方向
按住[P]键开机					
P44	刹车力度	1-50	18		数值越大，机器停车时的力度越大
P45	回缝出力的周期信号（%）	1-90	30		倒缝动作时，以周期性省电输出，避免倒缝电磁铁发烫
P46	剪线后，反转提针角度的功能选择	ON/OFF	OFF		ON：剪完线后，自动作反转的功能。（角度由【P47.TR8】调整决定）　OFF：无作用
P47	剪线后，反转提针角度的调整	50-200	160		剪完线后，由针上算起以反向运转作提针的角度调整。
P48	低速（定位速度）（r/S ）	100-500	210		定位速度设定
P49	剪线速度（r/S ）	100-500	250		调整剪线周期时的电机速度
P50	压脚提升时间（ms）	10-990	250		压脚提升时序的动作时间
P51	压脚出力的周期信号（%）	1-90	25		压脚动作时，以周期性省电输出，避免压脚发烫
P52	压脚下放时间（ms）	10-990	120		压脚下放时序的动作时间
P53	半后踏取消抬压脚功能	ON/OFF	OFF		ON：半后踏时，无抬压脚出力 OFF：半后踏时，有抬压脚出力
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	30		拨 / 扫时序的动作时间
P56	开电后自动找上定位	ON/OFF	ON		ON：开启电源后，自动找到上定位信号后停止 OFF：无作用
P57	抬压脚保护时间（s）	1-60	10		抬压脚保持时间后强制关断，防止电磁铁长时间吸合而发烫
P58	上定位调整	0-1439	270		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	585		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（r/S ）	100-2500	2000		测试功能的速度设置
P61	A 项测试		OFF		A 项测试选项，设定后将按【P60.】所设定之速度持续运行
P62	B 项测试		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		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-停车的循环
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	1		0：不检测　1：检测零信号　2：检测正信号
P67	剪线保护开关检测	ON/OFF	OFF		OFF：不检测　ON：检测
按住[P]、[S]键同时开机					
P69	倒缝释放缓冲(ms)	0-500	5		倒缝释放时的力度调整

参数项	中文说明	范围	初始值	设定键	内容值名称说明与备注
P70	出厂机型选择	1-45	44		
P71	抬压脚释放缓冲(ms)	0-500	5		压脚下放时的力度调整
P72	上停针位校正				调整上停针位，显示的数值会随手轮位置变化而变化，按“S”键保存当前位置（数值）为上停针位位置
P73	下停针位校正				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）为下停针位位置
P76	倒缝全额出力时间(ms)	10-990	250		倒缝开始动作时，全额出力的动作时间
P77	自由缝连终止回缝停顿时间(ms)	20-200	100		
P78	夹线器起夹角度	10-150	100		
P79	夹线器结束角度	160-359	270		
P80	剪线进刀角度	5-359	10		剪线进刀角度设置（下定位为 0°计算）
P81	剪线开始加力角度	5-359	140		剪线开始加力角度设置（下定位为 0°计算）
P82	剪线退刀角度	5-359	240		剪线退刀角度设置（下定位为 0°计算）

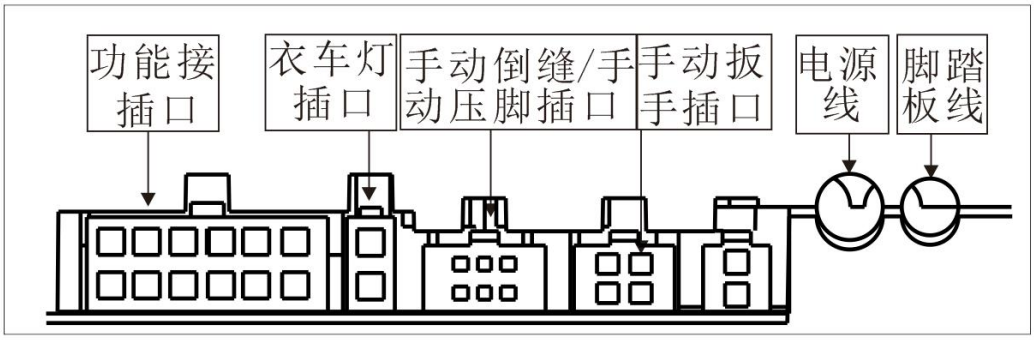
3 错误代码表

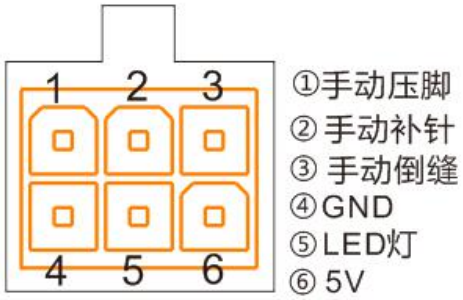
错误码	内容	对策
E01	1）电源 ON 时，主电压检测过高 2）供应电源电压过高时	关闭系统电源，检测供应电源电压是否正确。(或是否超过使用规定的额定电压)。 若正确，请更换控制箱并通知厂方。
E02	1）电源 ON 时，主电压检测过低 2）供应电源电压过低时	关闭系统电源，检测供应电源电压是否正确。(或是否低于使用规定的额定电压)。 若正确，请更换控制箱并通知厂方。
E03	控制面板于 CPU 传输通信异常	关闭系统电源，检查控制面板接头是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换控速器并通知厂方。
E05	控速器接触异常	关闭系统电源，检查控速器接头是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，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)车头机构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	将模块驱动出力与车头出力全部关闭 等待电源重新开启/复位 （请检查车头是否卡住或定位器、马达、模块驱动等信号是否异常）
E08	连续手动倒缝超过 15 秒	将模块驱动出力与车头出力全部关闭。 等待电源重新开启/复位
E09	停针位信号异常	检查上下定位信号是否正常。自动进入无定位器模式，且切线、扫线、上定位等以及所有定针缝样式缝制功能亦无效。马达不可正常操作。(请检查定位信号是否

		异常）
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。
E11	电源开启即自动找上定位，但未检测到上定位信号。	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。
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。若仍不能正常工作，请更换电机并通知厂方。
E15	电力模块不正常过流保护	关闭系统电源，再重新开启。若仍不能正常工作，请更换控制箱并通知厂方。
E17	机头保护开关没到正确位置	检查机头是否掀开，机头开关是否损坏
E20	开机电机启动失败	检查电机连接是否接触良好

4 端口示意图

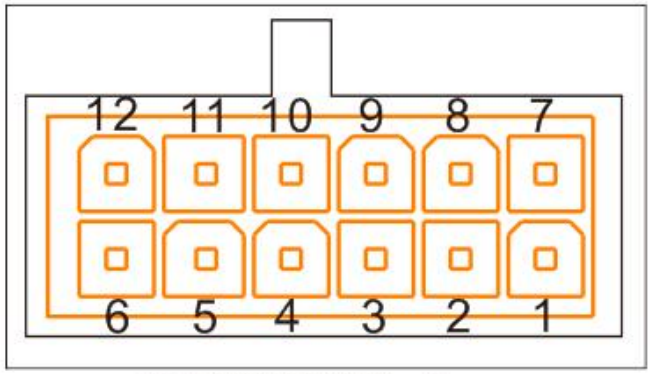
4.1 各个端口名称





手动倒缝插口名称

4.2： 12P 功能端口对应表



① 下倒缝电磁铁1、7
② 抬压脚电磁铁2、8
③ 针杆电磁铁3、9
④ 上倒缝电磁铁4、10
⑤ 松线电磁铁5、11
⑥ 剪线电磁铁6、12

⚠Safety Instruction

1. Users are required to read the operation manual completely and carefully before installation or operation.
2. All the instruction marked with sign ⚠ must be observed or executed; otherwise, bodily injuries might occur.
3. The product should be installed and pre-operated by well trained persons.
4. For perfect operation and safety, it is prohibited that using extension cable with multi-outlet for power connection.
5. When connecting power supply cords to power sources, it is necessary to make sure that the power voltage is lower than 250 VAC and matches the rated voltage indicated on the motor's name plate.

   ⚠ ※Attention: If the Control Box is AC 220V system, please don't connect the Control Box to AC 380V power outlet. Otherwise, the error will occur and motor will not work. If that happens, please turn off the power immediately and check the power voltage.
6. Don′t operate in direct sun light，outdoors area and where the room temperature is over 45°C or below 5°C.
7. Please avoid operating near the heater at dew area or at the humidity below 30% or above 95%.
8. Don′ t operate in area with heavy dust, corrosive substance or volatile gas.
9. Avoid power cord being applied by heavy objects or excessive force, or over bend.
10. The earth wire of power cord must be connected to the system ground of the production plant by proper size of conductions and terminals. This connection should be fixed permanently.
11. All the moving portions must be prevented to be exposed by the parts provided.
12. Turing on the machine in the first time, operate the sewing machine at low speed and check the correct rotation direction.
13. Turn off the power before the following operation：
    a) Connecting or disconnecting any connectors on the control box or motor.
    b) Threading needle.
    c) Raising the machine head.
    d) Repairing or doing any mechanical adjustment.
    e) Machines idling.
14. Repairs and high level maintenance work should only be carried out by electronic technicians with appropriate training.
14. All the spare parts for repair must be provided or approved by the manufacturer.
15. Don't use any objects or force to hit or ram the product.

Guarantee Time

Warranty period of this product is 1 year dated from purchasing, or within 2 years from ex-factory date.

Warranty Detail:

Any trouble found within warranty period under normal operation, it will be repaired free of charge. However, maintenance cost will be charged in the following cases even if within warranty period:

1. Inappropriate use, including: wrong connecting high voltage, wrong application, disassemble, repair, modification by incompetent personnel, or operation without the precaution, or operation out of its specification range, or inserting other objects or liquids into the product.
2. Damage by fire, Earth quake, lighting, wind, flood, salt corrosive, moisture, abnormal power voltage and any other damage cause by the natural disaster or by the inappropriate environments.
3. Dropping after purchasing or damage in transportation by customer himself or by customer's shipping agency

Note: We make our best effort to test and manufacture the product for assuring the quality. However, it is possible that this product can be damaged due to external magnetic interference and electronic static or noise or unstable power source more than expected; therefore the grounding system of operate area must guarantee the good earth and it's also

recommended to install a failsafe device. (Such as residual current breaker)

1 Button Displays and operating instructions

1.1 Key Description

Name	key	Indicate	Icons
Start /End Back-Tacking Selection		Execution starting back seam B segment or execution starting back seam (A, B segment) 1Execution starting back seam (A, B segment) 2 times	
		Execution terminates back seam C segment or execution terminates back seam (C, D segment) 1 Execution terminates back seam (C, D segment) 2 times	
Freedom sewing shortcuts		As the treadle is toed down, machine will start sewing. Once the treadle returns to neutral, machine will stop immediately. As the treadle is heeled back, machine will automatically start trimming cycle.	
Continuous back seam shortcuts		Once the treadle is toed down, all the seams of Bar-Tacking will be completed with D times, and then the thread will automatically be trimmed. Note: When the Bar-Tacking Sewing starts, will not stop until the trimming cycle finished, except for the treadle heeled back to cancel the action.	
Some fixed stitch shortcuts		As the treadle is toed down, Constant-Stitch Sewing E, F, G or H performs section by section. Once the treadle returns to neutral intermediately in any section, machine will stop immediately. When the treadle is toed down again, the balance stitches of E, F, G or H goes on. The key adjustable four, seven-segment, eight, and other multi-sew sewing patterns. When the display P1 ~ PF press [S] key to confirm the changes multistage sewing patterns P1 ~ PF is appropriate to modify the number of segment, the latter two is to modify the segment pin number。	
Multi-set stitch shortcuts			
Enter and determine \ save button		Enter parameter values such items and their contents change after adjustment, need to press the [S] key to save the confirmation. Note: The parameters are saved directly by the [S] key.	
Mention needles / fill needle key		Continuous back seam except, any kind of sewing stop, click for lifting the needle or forward fill half needle. Any kind of sewn termination is not tangent, click for lifting the needle or forward fill half needle.	
Automatically trigger button		1． In Free sewing: One touch of this key makes beep sound without any function also LED does not light up. 2．In Constant-Stitch Sewing: One shot to the pedal, stitches number of E, F, G or H will be automatically performed. Toe down the pedal again and again to finish the rest sections until it finish pattern.	
Tangent line function keys		1．Set or cancel the use of the tangent function. 2．The corresponding icon is not lit, turn off the corresponding functions.	
Function key enter parameter area		Under normal mode, press the [P] key to enter the user parameter mode Press and hold the [P] key to boot into parameter mode Technician	
Set value increment / parameter increment key		1．A、B、C、D、E、F、G、H section, increase the number of setting stitch . 2．Increase the parameter in Parameter selection. 3．Increase the setting value in Parameter value.	
Set value decrement / decrement key parameters		1．A、B、C、D、E、F、G、H decrease the number of setting stitch 2．Decrease the parameter in Parameter selection. 3．Decrease the setting value in Parameter value.	

Needle stop up and down keys		1. LED ON indicate stopping machine at the upper stop needle position. 2. LED ON indicate stopping machine at the lower stop needle position.	
Presser foot shortcuts		1. LED ON=Presser Foot automatically goes up after trimming. 2. LED ON=Presser Foot automatically goes up after motor stops. 3. Two icons are both LED ON= Presser Foot automatically goes up after trimming and motor stops. 4. Two icons are both LED OFF=Presser Foot is inactive.	
Slow play seam shortcuts		1. The corresponding icon lights, slow starting sewing open. 2. The corresponding icon is not lit, no slow-starting sewing function.	
Clamp function keys		1. The corresponding icon lights, thread nipper function is turned on. 2. The corresponding icon is not lit, no thread nipper function.	
Maximum speed setting key		Speed up key: the speed should not lower than the value set by technician	
		Slow down key: the minimum speed is 200r/m	

1. 2 Comparison Table of LCD Display Fonts and Actual Fonts

Arabic Numerals：

Actual	0	1	2	3	4	5	6	7	8	9
Display	0	1	2	3	4	5	6	7	8	9

English Alphabet

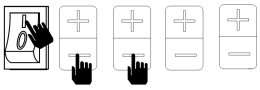
Actual	A	B	C	D	E	F	G	H	I	J
Display	A	b	C	d	E	F	G	H	I	J
Actual	K	L	M	N	O	P	Q	R	S	T
Display	K	L	M	n	o	P	q	r	S	T
Actual	U	V	W	X	Y	Z				
Display	U	V	W	X	Y	Z				

1.3 Manually adjust the positioning

Press and hold the S key to boot into the needle position P72 term correction parameters

Enter the parameter content, the hand wheel adjustment supreme needle position (parameter will change with the hand wheel position), the S key to save the parameters (after saving, under the needle position will be automatically adjusted accordingly), the key P to exit without saving the parameters.

1.4 Restore factory settings



Hold down the left two [-] key to boot

Double-click the [S] key to confirm it, shutdown restart

2 User Parameter &Technician Parameter

Parameter	Parameter Function	Range	Default	Key	Description

Parameter	Parameter Function	Range	Default	Key	Description
In the normal screen, press [P]					
P01	Maximum Sewing Speed（r/S ）	100-2500	2000		Maximum speed of machine sewing
P02	Speed Curve Adjustment（%）	1-100	80		The Lager the value, the faster to increase speed
P03	Needle UP/ DOWN	UP/DN	DN		UP: Needle Stops at Up Position DN: Needle Stops at Down Position
P04	Start Back-Tacking Speed（r/S ）	200-3200	1000		Start Back-Tacking Speed Adjustment
P05	End Back-Tacking Speed（r/S ）	200-3200	1000		End Back-Tacking Speed Adjustment
P06	Bar-Tacking Speed（r/S ）	200-3200	1000		Repeat Bar-Tacking Speed Adjustment
P07	Soft Start Speed（r/S ）	200-1500	350		Soft Start Speed Adjustment
P08	Stitch Numbers for Soft Start	0-99	2		Soft Start Stitches Setting (one unit = half stitch)
P09	Automatic Constant-Stitch Sewing Speed（r/S ）	200-4000	2000		Constant-Stitch sewing speed【034.SMP】 is set at A(or when one shot signal is active)
P10	Automatic End Back-Tacking Sewing(Can invalidate the stitch correction function)	ON/OFF	ON		The Stitch-Correction is valid in sewing stop. Note: Valid only when the【0.11.RVM】must set on B ON: Invalid (Constant-Stitch sewing, it can automatic continue action as CD function) OFF: Valid (Can't continue execute CD function)
P11	Back-Tacking Mode Selection				J：JUKI Mode (it will activate when machine is stopped or running B：BROTHER Mode (It will activate only the machine is running)
P12	Start Back-Tacking Mode Selection	0-2	0		A：One shot to pedal, it will automatic execute Start Back-Tacking. M：Pedal-controlled and motor can stop arbitrarily
P13	Mode Selection at the end of Start Back-Tacking	CON/STP	CON		CON：At the end of Start Back-Tacking, machine continues sewing if pedal pressed or START signal on (standing operation) STP：At the end of Start Back-Tacking, machine stops
P14	Soft Start	ON/OFF	ON		ON: Slow start feature is turned on. OFF: Slow start function off.
P15	Make up pin mode	0-4	0		0: Semi-pin；1: a pin
P16	Setting Stitches B of Start Back-Tacking	0-990	100		Reserve; set here invalid
P17	Setting Turns of Start Back-Tacking	0-1	0		Reserve; set here invalid
P18	Stitch Balance for Start Back-Tacking 1	0-200	150		0 → 200 Action gradually lag
P19	Stitch Balance for Start Back-Tacking 2		160		
P20	Mode Selection for End Back-Tacking	1-2	1		A：Pedal full heeling ,it will automatic execute end Back-Tacking M：Pedal-controlled and motor can stop arbitrarily

Parameter	Parameter Function	Range	Default	Key	Description
P21	End Back-Tacking Function Selection	30-1000	520		ON: termination feature is turned back seam OFF: End back seam is off Quick Setup from the front, where the setting is invalid
P22	Setting Stitches C of End Back-Tacking	30-1000	418		[End Back-Tacking] C, D segment pin count set Quick Setup from the front, where the setting is invalid
P23	Setting Stitches D of End Back-Tacking	30-1000	248		
P24	Anti-pedaling pedals points; voltage	30-1000	110		
P25	Stitch Balance for End Back-Tacking 3	0-200	150		0 → 200 Action gradually lag
P26	Stitch Balance for End Back-Tacking 4		160		
P27	Adding 1 Stitch to C Segment of End Back-Tacking	0-1	0		1:Thin materials 0 : Thick materials
P28	Mode Selection for Bar-Tacking	0-2	1		Bar-Tacking, reverse solenoid action: A：One shot to pedal, it will automatic execute Bar-Tacking. M：Pedal-controlled and motor can stop arbitrarily
P29	Tangent after braking force	1-50	20		
P30	Thick material afterburner	0-100	10		
P31	Shear line afterburner	0-100	60		
P32	Stitch Balance for Bar-Tacking 5	0-200	150		0 → 200 Action gradually lag
P33	Stitch Balance for Bar-Tacking 6		160		
P34	Mode Selection for Constant-Stitch Sewing	A/M	A		A：One shot to pedal, it will automatic execute Constant-Stitch M：Pedal-controlled and motor can stop arbitrarily
P35	Constant-Stitch Sewing Function Selection	ON/OFF	OFF		Reserve; set here invalid
P36	Setting Stitches for Section P1 of Constant-Stitch Sewing	0-1	0		Reserve; set here invalid
P37	Wiper Function Selection or Thread Clamp Pressure Setting	0-11	1		0 : No Action 1: Wiper Action 2-11: Thread Clamp action and the pressure gradually increased）
P38	Trimmer Function Selection	ON/OFF	ON		ON：Trimmer Valid OFF: Trimmer Invalid
P39	Presser Foot UP / Down at intermediate stop	UP/DN	DN		UP：Presser foot goes up automatically DN：Presser foot keeps down （Controlled by heeling pedal）
P40	Presser Foot UP / Down after Trimming	UP/DN	DN		UP：Presser foot goes up automatically DN：Presser foot keeps down（Controlled by heeling pedal）
P41	Display the sewing finished quantity		0		Counting the finished-sewing quantity

Parameter	Parameter Function	Range	Default	Key	Description
P42	Information Display		N-01		NO1 Electrically controlled version serial numbers NO2 Selected needle cassette version NO3 Speed NO4 Pedals AD, NO5 Positioning angle (0--359), NO6 Under the positioning angle NO7 Bus voltage AD
P43	Setting Direction of Motor Rotation	CCW/CW	CCW		CW：Clockwise CCW： Counter Clockwise
Press and hold the [P] key to boot					
P44	Brake force	1-50	18		Efforts to stop the machine when selecting
P45	Back-seam operation duty cycle (%)	1-90	30		Back-seam action to periodic power output
P46	Motor stops with a reverse angle after trimming	ON/OFF	OFF		ON：It will automatic as reverse function after trimming (angle adjustment according to the parameter【047.TR8】 OFF：No Function
P47	Adjustment of reverse angles after trimming	50-200	160		Adjusting at reverse direction after trimming
P48	Low (Positioning) Speed（r/S ）	100-500	210		Setting Positioning Speed
P49	Trimming Speed（r/S ）	100-500	250		Adjusting trimming speed
P50	The time of Foot lifting	10-990	250		Adjustment of foot lifting action
P51	Duty-Cycle Setting for Foot Lifter（%）	1-90	25		Adjustment for Duty-Cycle of Foot Lifter / Back-Tacking (Fine tuning can reduce the over-heating)
P52	The time of Foot down	10-990	120		Adjustment of foot down action
P53	Cancel Foot Lifting when Half-Heeling the Pedal	ON/OFF	OFF		ON：Pedal half heeling without foot lifting function. OFF：Pedal half heeling with foot lifting function
P54	Trimming Time（ms）	10-990	200		Trimming sequence time setting
P55	Setting Wiper Timing	10-990	30		Wiper sequence setting
P56	Needles Goes Up Automatically as Power turned on	ON/OFF	ON		ON：Power turned on, needle goes up position automatically OFF：No Function.
P57	Protection time for foot lifter（S）	1-60	10		It will automatic come down when foot lifter keep lift over the setting time.
P58	Up Position Adjustment	0-1439	270		Up Position Adjustment The needle will advance stop when the value decreased. The needle will delay stop when the value increased.
P59	Down Position Adjustment	0-1439	585		Down Position Adjustment The needle will advance stop when the value decreased. The needle will delay stop when the value increased.
P60	Testing Speed（r/S ）	100-2500	2000		Setting testing speed.
P61	Testing A		OFF		Option of Testing A, after setting press 【060. TV】to set the speed keep running.
P62	Testing B		OFF		Option of Testing B, after setting press 【060.

Parameter	Parameter Function	Range	Default	Key	Description
					TV】to set the speed execute the cycle of Start – Sewing –Stop - Trimming
P63	Testing C		OFF		Option of Testing C, after setting press【060. TV】to set the speed execute the cycle of Start – Sewing –Stop without positioning function
P64	Running Time of Testing B and C	1-250	20		Setting running time of testing B and C
P65	Stop Time of Testing B and C	1-250	20		Setting stop time of testing B and C
P66	Machine Protection Switch Testing	0-2	1		0：Disable， 1：Testing zero signal， 2：Testing positive signal
P67	Trimming Protection Switch Testing	ON/OFF	OFF		OFF： Disable ON： Enable
Press and hold the [P], [S] key while the boot					
P69	Backstitch release buffer (ms)	0-500	5		Slow release delay factor
P70	The factory Type Selection	1-45	44		
P71	Presser foot release buffer (ms)	0-500	5		Efforts to ease foot pressure release time
P72	The needle position correction				
P73	Under needle position correction				
P76	Backstitch output of full time (ms)	10-990	250		
P77	Freedom sew back seam even terminate pause time (ms)	20-200	100		
P78	The Thread Clamp release angle	10-150	100		The positioning angle of starting clamp
P79	Clamp start action angle	160-359	270		The positioning angle of release
P80	Shear line infeed is angle	5-359	10		Shear line infeed is angle setting (under defined as 0 °)
P81	Afterburner Shear line angle	5-359	140		Afterburner Shear line angle setting (under defined as 0 °)
P82	Retract angle Shear line	5-359	240		Retract Shear line angle setting (under defined as 0 °)

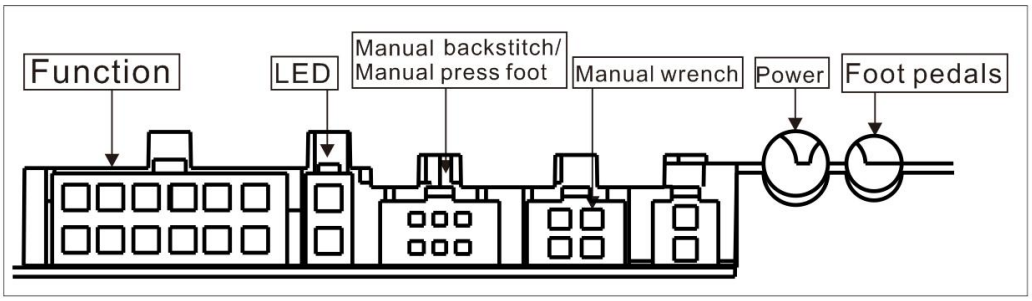
3 Error Code List

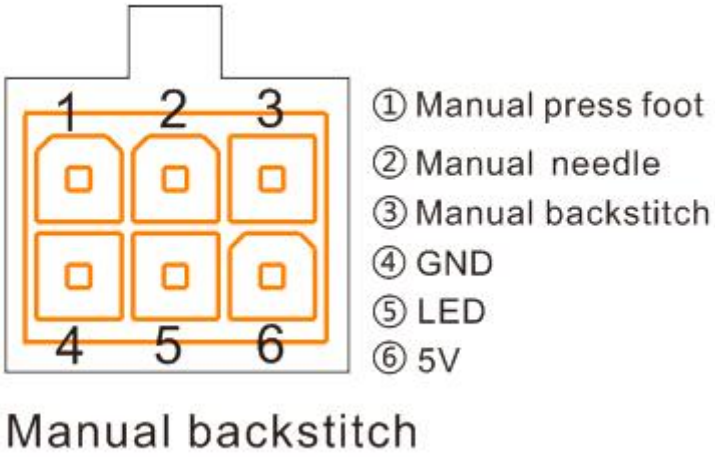
Error Code	Problem	STATUS / MEASUREMENT
E01	1) Power ON, the main voltage detection is too high 2) When the supply voltage is too high	Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage specified in use.) If correct, please replace the control box and inform the factory
E02	1) Power ON, the main voltage detection is too high 2) When the supply voltage is too high	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	Operation panel and CPU transmission communication exception	Turn off the system power, check the operation panel interface is loose If contact is good, please change the operation panel. If it is not operated, the control box is damaged, please change
E05	Control of the contact of the device	Off the system power supply, check and control the connector is loose or fall off, Will resume normal after the restart system If you still can not work normally, please replace the speed controller and notify the manufacturer.
E07	a) Motor plug wiring contact is not transferred b) Lock head or motor belt foreign body in the card die c) The machine is too thick, the motor torque is not enough. d) Module driven output exception	Rotating head motor hand wheel observation is stuckIf stuck, the first rule out mechanical failure Such as rotation normal Check the motor encoder connector and motor power cable joints are loose If there is a loose please revise Such as good contact Check the supply voltage of the power supply voltage is too high or too high If you have to adjust As normal, please replace the control box and notify the manufacturer.
E08	Continuous manual pour over 15 seconds	Backsewing electromagnet time is too long, can restart
E10	Electromagnetic overcurrent protection	Power off system Check solenoid (solenoid valve) connection line or solenoid (solenoid valve) is damaged. Check solenoid (solenoid valve) connection line or solenoid (solenoid valve) is damaged.
E11	Locating signal anomaly	Power off system Check the motor encoder interface is loose or off Will resume normal after the restart system If you still can not work normally, please inform the factory and replace the motor.
E13	Power module overheat protection	Turn off the system power, check the power module and the heat sink is in good contact.
E14	Encoder signal exception	Turn off the system powe Check the motor encoder interface is loose or off Will resume normal after the restart system If you still can not work normally, please replace the motor and notify the manufacturer.
E15	Power module is not normal overcurrent protection	Turn off the system power, and then restart If you still can not work normally, please inform the factory and replace the motor.
E17	Head protection switch is not in the correct position	Turn off the system power, check the nose is opened, the head switch is damaged.
E20	Motor starting failure	After driving the motor does not rotate, do not look for the encoder reference point

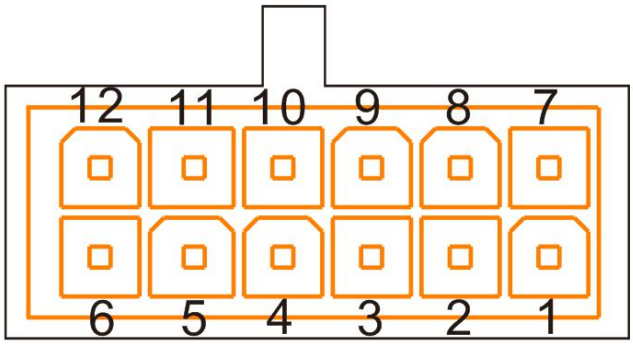
4 Port Outline Diagram

4.1 The Name of each port





4.2： 14P Function Port Table



①Under backstitch electromagnet 1、7

② Presser foot electromagnet 2、8

③Needle bar electromagnet 3、9

④Backstitch on the electromagnet 4、10

⑤lease solenoid 5、11

⑥ Trimming electromagnet 6、12