

⚠安全指示

- 1) 在安装或使用本产品时，使用者必须彻底并仔细阅读本操作手册。
- 2) 所有标上 ⚠ 符号之指示，必须特别注意或执行，否则可能会导致身体伤害。
- 3) 本产品须由受过正确训练的人员来安装或操作。
- 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) 当连接电源线到电源座时，必须确定此电压低于 AC 250V，且符合标在马达铭牌上的指定电压。
※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将无法动作。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，将可能烧损电控箱上的保险丝 F2、电解电容 (C58、C59) 及电源模块 U14，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 5℃ 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 30% 以下或 95% 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) 请注意电源线不要受压或过度扭曲。
- 10) 电源线的接地线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) 在第一次通电后，先以低速操作缝纫机并检查转动方向是否正确。
- 13) 在操作以下动作前，请先关闭电源：
 1. 在控制箱与马达上插或拔任何连接插头时。
 2. 穿针线时。
 3. 翻抬车头时。
 4. 修理或作任何机械上的调整时。
 5. 机器休息不用时。
- 14) 修理或高层次的保养工作，仅能由受过适当训练的机电技师来执行。
- 15) 所有维修用的零件，须由本公司提供认可，方可使用。
- 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

本产品在正常情况且无人为失误的操作下，于保修期间无偿的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：




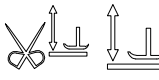






1. 不当使用包括误接高压电源、将产品移做其它用途、自行拆卸、维修、更改、或不依规格范围使用、进水进油及插入异物于本产品。
2. 火灾、地震、闪电、风灾、水灾、盐蚀、潮湿、异常电压及其它天灾或不当场所造成的损害。
3. 客户购买后摔落本产品，或客户自行运输（或托付运输公司）造成的损害。

* 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。	
多段定针缝 快捷键		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。	
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	

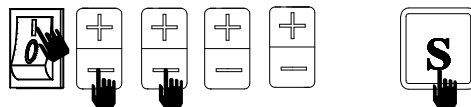
抬压脚快捷键		1、  图标亮时，切完线后压脚自动抬起。 2、  图标亮时，车缝中马达停止时压脚自动抬起。 3、2个图标都亮时，切完线后和车缝中马达停止时压脚都自动抬起。 4、当2图标都不亮时，无自动抬压脚功能。	
慢速起缝快捷键		1、相应图标亮时，慢速起缝打开。 2、相应的图标不亮时，无慢速起缝功能。	
夹线功能快捷键		1、相应图标亮时，夹线功能打开。 2、相应的图标不亮时，无夹线功能。	
最高转速设置键		加速键：速度不大于技术员设置的最高转速	
		减速键：速度最小为 200 转/分钟	

1.2 手动调整定位







按住 [S] 键开机，进入 P72项上针位校正参数	进入参数内容，将手轮调整至上针位（参数会随着手轮位置而变化），按 [S] 键可保存参数（保存后，下针位会自动进行相应调整），若不保存则按 [P] 键退出参数。
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1.3 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
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1.4 无磁钢电机找编码器基准点的方式

按  开机，屏幕显示 **【P-92】**，按  键进入参数项，再按 ，此时电机自动转找编码器的基准点，待电机停下来后，数值自动变化，按  键保存。

2 参数表

参数项	中文说明	范围	初始值	内容值名称说明与备注
P01	最高转速 (r/S)	100-3700	3700	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 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

参数项	中文说明	范围	初始值	内容值名称说明与备注
P04	起始回缝速度 (r/S)	200-3200	1800	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	1800	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	1800	连续回缝时的速度设定
P07	慢速起缝速度 (r/S)	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, 每一单位代表半针
P09	自动定针缝速度 (r/S)	200-4000	3700	定针缝【P34.SMP】设定在 A 状态的速度设定 (或选针盒 AUTO 键有按下时的速度设定)
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: 亦即在任何缝制模式下, 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可。
P11	手按回缝时功能模式选择	J/B	J	手按车头回缝开关动作时机: J: JUKI 方式 (在车缝中或中途停止时具有动作) B: BROTHER 方式 (在车缝中始有动作)
P12	起始回缝运动模式选择	0-1	1	起始回缝段, 倒退电磁线圈动作时机: 0: 受踏板控制, 可任意停止与启动; 1: 轻触踏板, 自动执行回缝动作;
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	2	0: 半针; 1: 一针; 2: 连续补半针; 3: 连续补一针; 4: 连续补针, 快速停车
P16	起始回缝功能 B 段针数之设定			预留; 这里设置无效
P17	起始回缝功能来回次数之设定			预留; 这里设置无效
P18	起始回缝补偿 1	0-200	131	0 → 200 动作逐步滞后
P19	起始回缝补偿 2		158	
P20	终止回缝运动模式选择	0-2	1	终止回缝段, 倒退电磁线圈动作时机: 0: 受踏板控制, 可任意停止与启动; 1: 轻触踏板, 自动执行回缝动作; 2: 停顿模式
P24	脚踏板反踏点电压	30-1000	110	
P25	终止回缝补偿 3	0-200	131	0 → 200 动作逐步滞后
P26	终止回缝补偿 4		158	
P28	连续回缝运动模式选择	A/M	A	连续回缝段, 倒退电磁线圈动作时机: A: 轻触踏板, 即自动执行连续回缝 M: 受踏板控制, 可任意停止
P29	切线后刹车力度	1-45	20	
P30	厚料加力	0-100	0	数值越大力度越大, 调整过大可能会引起电机异常。
P31	剪线加力	0-100	20	数值越大力度越大, 调整过大可能会引起电机异常。
P32	连续回缝补偿 5	0-200	131	0 → 200 动作逐步滞后
P33	连续回缝补偿 6		158	
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

参数项	中文说明	范围	初始值	内容值名称说明与备注
				M: 受脚踏板控制, 可任意停止与启动
P37	拨线出力功能设定 (夹线器力道设置)	0-11	8	0: 无动作; 1 为拨线动作 2~11 夹线动作, 动作力度逐步变大
P38	切线出力功能设定	ON/OFF	ON	ON: 有切线动作 OFF: 无切线动作
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	同按键面板上之快速功能键 UP: 切完线后, 自动抬起压脚 DN: 车切完线后, 无自动抬压脚 (由踏板后踏控制)
P41	车缝完成件数显示		0	车缝完成件数显示; 长按减号键可计数清零;
P42	信息显示		N-01	N01 电控版本号序列号 N02 选针盒版本号 N03 转速 N04 脚踏板 AD N05 上定位角度 N06 下定位角度 N07 母线电压 AD
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
P44	刹车力度	1-45	16	机器停车时的力度选择。
P45	回缝出力的周期信号 (%)	10-50	20	回缝动作时, 以周期性省电输出
P46	切线后, 反转提针角度的功能选择	ON/OFF	OFF	ON: 切完线后, 自动作反转的功能。(角度由【P47.TR8】调整决定) OFF: 无作用
P47	切线后, 反转提针角度的调整	50-200	160	切完线后, 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	切线速度 (r/S)	100-500	250	调整切线周期时的电机速度
P50	抬压脚提升时间 (ms)	10-990	250	压脚提升动作时调整项
P51	压脚出力的周期信号 (%)	10-50	20	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	压脚延时下放调整项
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	切线动作时间 (ms)	10-990	200	切线时序所需的动作时间
P55	拨 / 扫线动作时间/	10-990	380	拨 / 扫时序的动作时间
P56	开电后自动找上定位	0-2	1	0: 始终不找上定位 1: 始终找上定位 2: 若电机已经处于上定位时不再找上定位 (仅限于有磁钢电机)
P57	抬压脚保护时间 (s)	1-120	10	抬压脚保持时间后强制关闭

参数项	中文说明	范围	初始值	内容值名称说明与备注
P58	上定位调整	0-1439	40	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	750	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)	100-3700	2000	设置测试速度
P61	A 项测试	ON/OFF	OFF	A 项测试选项，设定后将按【P60. TV】所设定之速度持续运行
P62	B 项测试	ON/OFF	OFF	B 项测试选项，设定后将按【P60. TV】所设定之速度执行启动-车缝-停车-剪线的循环
P63	C 项测试	ON/OFF	OFF	C 项测试选项，设定后将按【P60. TV】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
P70	出厂机型选择		26	
P71	抬压脚释放缓冲(ms)	0-50	2	缓解压脚下放的力度
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”键可保存当前位置（数值）为上停针位
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”键可保存当前位置（数值）为下停针位
P76	倒缝全额出力时间(ms)	10-990	250	
P77	自由缝连终止回缝停顿时间(ms)	20-200	75	
P78	夹线器起夹角度	1-990	100	起始夹线的定位角
P79	夹线器结束角度	1-990	270	夹线器结束的定位角
P80	剪线进刀角度	0-359	18	剪线进刀角度设置（下定位为 0° 计算）
P81	剪线加力角度	1-990	120	剪线加力角度设置（下定位为 0° 计算）
P82	剪线退刀角度	1-990	172	剪线退刀角度设置（下定位为 0° 计算）
P84	厚料开始加力角度	0-330	9	
P85	厚料结束加力角度	0-330	57	
P92	编码器绝对位置校正		160	读取编码器起始角度，出厂已设置，请勿随意更改（参数值不可手动更改，随意更改会导致控制箱、电机出现异常或损坏）

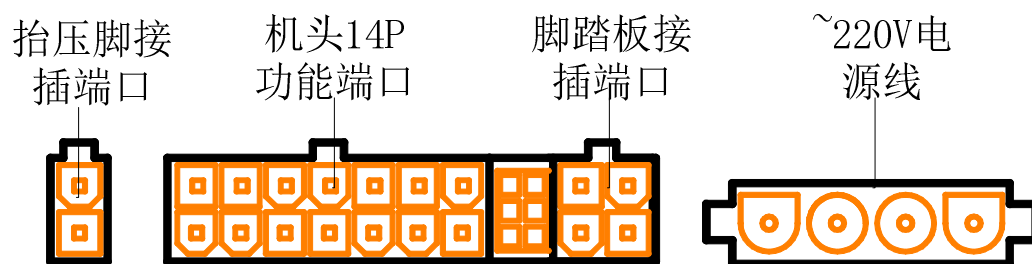
3 错误代码表

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。

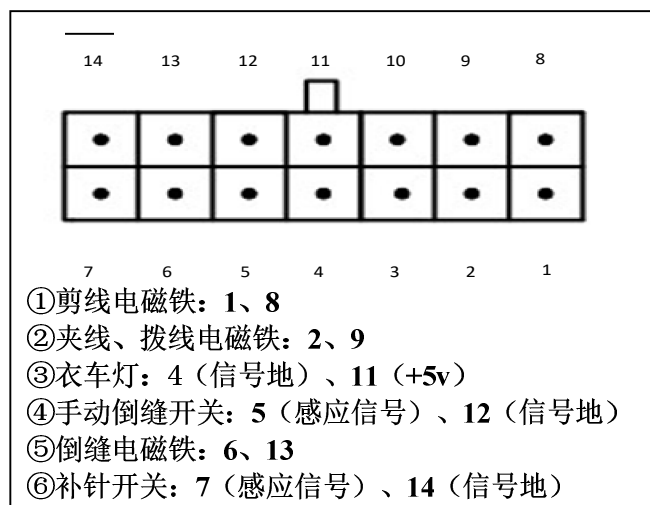
E02	1) 电源 ON 时, 主电压检测过低 2) 供应电源电压过低时	关闭系统电源, 检测供应电源电压是否正确。(或是否低于使用规定的额定电压)。 若正确, 请更换控制箱并通知厂方。
E03	控制面板于 CPU 传输通信异常	关闭系统电源, 检查控制面板接头是否松动或脱落, 将其恢复正常后重启系统。若仍不能正常工作, 请更换控制箱并通知厂方。
E05	控速器接触异常	关闭系统电源, 检查控速器接头是否松动或脱落, 将其恢复正常后重启系统。若仍不能正常工作, 请更换控速器并通知厂方。
E07	a) 马达插头配线接触不良导致不转 b) 车头机构死锁或马达皮带异物卷入卡死。 c) 加工物过厚, 马达扭力不足无法贯穿。 d 模块驱动出力异常	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。 如转动正常, 检查电机编码器接头和电机电源线接头是否松动。如有松动请修正。 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。 如正常, 请更换控制箱并通知厂方。
E08	连续手动倒缝超过 15 秒	倒缝电磁铁吸合时间过长, 重启产品即可。 若重启产品后还是报 E-08, 请检查手动倒缝开关是否损坏。
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。
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	关闭系统电源, 检查机头是否掀开, 控制箱内滚珠开关是否移位或损坏。
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电源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。

4 端口示意图

4.1 各个端口名称



4.2: 14P 功能端口对应表



⚠ 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) 1 Execution 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		<ol style="list-style-type: none"> In Free sewing: One touch of this key makes beep sound without any function also LED does not light up. 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		<ol style="list-style-type: none"> Set or cancel the use of the tangent function. 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		<ol style="list-style-type: none"> A、B、C、D、E、F、G、H section, increase the number of setting stitch . Increase the parameter in Parameter selection. Increase the setting value in Parameter value. 	
Set value decrement / decrement key parameters		<ol style="list-style-type: none"> A、B、C、D、E、F、G、H decrease the number of setting stitch Decrease the parameter in Parameter selection. Decrease the setting value in Parameter value. 	
Needle stop up and down keys		<ol style="list-style-type: none"> LED ON indicate stopping machine at the upper stop needle position. LED ON indicate stopping machine at the lower stop needle position. 	
Presser foot shortcuts		<ol style="list-style-type: none"> LED ON=Presser Foot automatically goes up after trimming. LED ON=Presser Foot automatically goes up after motor stops. 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 Manually adjust the positioning



Press and hold the 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 key to save the parameters (after saving, under the needle position will be automatically adjusted accordingly), the key to exit without saving the parameters.

1.3 Restore factory settings



Hold down the left two key to boot

Double-click the key to confirm it, shutdown restart

1.4 No magnet reference point the way for the motor encoder

Press the , Screen display【 P-92 】, Save by , According to the , At this point the motor will automatically turn a circle to find the reference point of the encoder, After the motor stops, Save by .

2 User Parameter & Technician Parameter

Parameter	Parameter Function	Range	Default	Description
P01	Maximum Sewing Speed (r/S)	100-3700	3700	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	1800	Start Back-Tacking Speed Adjustment
P05	End Back-Tacking Speed (r/S)	200-3200	1800	End Back-Tacking Speed Adjustment
P06	Bar-Tacking Speed (r/S)	200-3200	1800	Repeat Bar-Tacking Speed Adjustment
P07	Soft Start Speed (r/S)	200-1500	400	Soft Start Speed Adjustment

Parameter	Parameter Function	Range	Default	Description
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	3700	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/B	J	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	A/M	A	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	0-2	0	0: Semi-pin; 1: a pin
P18	Stitch Balance for Start Back-Tacking 1	0-200	131	0 → 200 Action gradually lag
P19	Stitch Balance for Start Back-Tacking 2	0-200	158	
P20	Mode Selection for End Back-Tacking	A/M	A	A: Pedal full heeling ,it will automatic execute end Back-Tacking M: Pedal-controlled and motor can stop arbitrarily
P24	Anti-pedaling pedals points; voltage	0-1000	110	
P25	Stitch Balance for End Back-Tacking 3	0-200	131	0 → 200 Action gradually lag
P26	Stitch Balance for End Back-Tacking 4	0-200	158	
P28	Mode Selection for Bar-Tacking	A/M	A	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	0	
P31	Shear line afterburner	0-100	20	
P32	Stitch Balance for Bar-Tacking 5	0-200	131	0 → 200 Action gradually lag
P33	Stitch Balance for Bar-Tacking 6		158	

Parameter	Parameter Function	Range	Default	Description
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
P37	Wiper Function Selection or Thread Clamp Pressure Setting	0-11	8	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
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
P44	Brake force	0-31	16	Efforts to stop the machine when selecting
P45	Back-seam operation duty cycle (%)	10-90	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 (%)	10-90	30	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	380	Wiper sequence setting
P56	Needles Goes Up Automatically as Power turned on	0-2	1	0: always not to find a position 1: : always looking for positioning 2: If the motor is positioned on the no longer find

Parameter	Parameter Function	Range	Default	Description
				location (only with magnet motor)
P57	Protection time for foot lifter(s)	1-120	10	It will automatic come down when foot lifter keep lift over the setting time.
P58	Up Position Adjustment	0-1440	40	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	0-1440	750	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)	100-3700	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. 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
P70	The factory Type Selection			
P71	Presser foot release buffer duty cycle (%)	0-50	2	Efforts to ease foot pressure release time
P72	The needle position correction	0-1439	0	Hand rotation manual to the appropriate position, press S key to save
P73	Under needle position correction	0-1439	0	Hand rotation manual to the appropriate position, press S key to save
P76	Backstitch output of full time (ms)	250-990	250	
P77	Freedom sew back seam even terminate pause time (ms)	20-200	75	
P78	The Thread Clamp release angle	1-990	100	The positioning angle of starting clamp
P79	Clamp start action angle	1-990	270	The positioning angle of release
P80	Shear line infeed is angle	0-359	18	Shear line infeed is angle setting (under defined as 0°)
P81	Afterburner Shear line angle	1-990	140	Afterburner Shear line angle setting (under defined as 0°)

Parameter	Parameter Function	Range	Default	Description
P82	Retract angle Shear line	1-990	172	Retract Shear line angle setting (under defined as 0 °)
P84	Thick start angle	0-330	9	
P85	The thick end angle	0-330	57	
P92	Encoder start angle		160	View manual 1.4 chapter

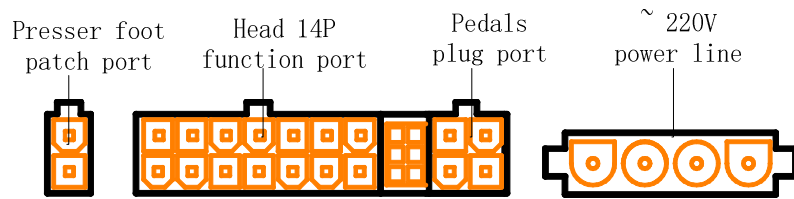
3 Error Code List

Error Code	Problem	Strategies
E1	Power Module is faulty. Abnormal over current or voltage. Resistor is damaged or F1 fuse is blown.	System will be shut down until the power resets on. Please check the power board in detail.
E2	1) When power on, detected main voltage too low 2) Connect the wrong voltage, too low.	Moto and machine will be shutting down. Please check the AC power. (Too low) Please check the main pc board.
E3	Operation Box linked to CPU interface had communication error.	Motor and machine will be shutting down. Please check the operation box.
E5	The connection of the Foot Pedal error	Motor and machine will be shutting down. Please check the connection of the Foot Pedal or the problem of it
E7	a) Bad connection at the motor connector. b) Machine locked or object stuck in the motor pulley. c) Sewing material is too thick. d) Module output is abnormal.	Head rotation motor handwheel see if stuck. As the first rule nose stuck mechanical failure. As normal rotation, check the motor and motor encoder connector power cord connector is loose. Please correct if loose. As good contact, check the power supply voltage is abnormal or speed is set too high. If yes, please adjust. As normal, replace the control box and inform the manufacturer.
E8	Manual Back-Tacking lasts for 15 sec.	Reverse stitching solenoid pull too long, you can restart the product. If the product or reported after the restart E-08, check the manual back tack switch is damaged.
E09 E11	Positioning signal error	Power off the system, check the motor encoder interface is loose or fall off, it was back to normal after restarting the system. If it still does not work, replace the motor and inform the manufacturer
E14	Encoder signal error	Power off the system, check the motor encoder interface is loose or fall off, it was back to normal after restarting the system. If it still does not work, replace the motor and inform the manufacturer.
E15	Power module abnormal over-current protection	Power off the system, then on again. If it still does not work, replace the control box and inform the manufacturer.
E17	Head protection switch is not in the correct position	Power off the system and check whether the nose open, ball switch control box whether displaced or damaged.
E20	Power motor failed to start	Power off the system, check the motor encoder interface and motor power connector is loose or fall off, it was back to normal after restarting the system. If

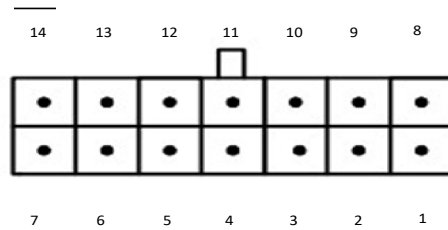
it still does not work, replace the control box and inform the manufacturer.

4 Port Outline Diagram

4.1 The Name of each port



4.2: 14P Function Port Table



- ①Trimming Solenoid: 1、8
- ②Clamp, dial line solenoid: 2、9
- ③Clothing lights: 4 (Signal ground) 、11 (+5v)
- ④Backstitch manually switch: 5 (Sensor signal) 、12 (Signal ground)
- ⑤Backstitch solenoid: 6、13
- ⑥Complement Needle switch: 7 (Sensor signal) 、14 (Signal ground)