


Safety instructions

- 1) Before installing or using this product, the user must read this operation manual in detail.
- 2) This product must be installed or operated by properly trained personnel. During installation, all power must be turned off, and it is not allowed to operate with electricity.
- 3) All indications marked with the  symbol, Special attention must be paid and carried out in accordance with the instructions so as not to cause unnecessary damage.
- 4) For the sake of safety, it is forbidden to use extension cord as power base to supply more than two electrical products.
- 5) When connecting the power line, make sure that the working voltage is lower than AC 250V and meets the rated voltage value specified in the product identification.
※Warning: If the power specification of the electric control box is AC220V, don't plug it into the AC380V power socket, otherwise it will be abnormal and the motor will not operate. Please turn off the power switch immediately and check the power supply again. Continuous supply of 380V for more than five minutes may burn components in the electric control box and endanger personal safety.
- 6) Please don't operate in the place directly exposed to sunlight, outdoor and the place with room temperature above 45 °C or below 0 °C.
- 7) Please don't operate near the heating (electric heater), in the place with dew or in the place with relative humidity less than 10% or more than 90%.
- 8) Please don't operate in dusty places, places with corrosive substances and places with volatile gases.
- 9) Please note that when wiring all power lines, signal lines, ground wires and other wiring should not be under pressure or over twisted to ensure safe use.
- 10) The ground terminal of the power cord must be connected to the system ground wire of the production plant with proper size of conductor and connector, and this connection must be permanently fixed.
- 11) All rotatable parts must be protected from exposure by the parts provided.
- 12) After the first power on after installation, first turn off the tangent function to operate the sewing machine at a low speed and check whether the rotation direction is correct and whether the operation is stable.
- 13) Turn off all power before doing the following:
 1. When plugging and unplugging any connecting plug between the control box and the motor.
 2. When threading.
 3. When lifting the sewing machine head.
 4. When repairing or making any mechanical adjustment.
 5. When the machine is idle.
- 14) Repair or high level maintenance work, It can only be performed by trained Mechatronics technicians.
All parts for maintenance shall be approved by the our company before use.
- 15) Please keep away from high-frequency electromagnetic wave and radio wave transmitter when using this product, so as to avoid the electromagnetic wave generated from interfering with servo drive device and causing wrong action.
- 16) Please do not knock or impact the product and devices with improper objects.

Warranty Period

The warranty period of this product is one year from the date of purchase or two years from the month of Ex-factory.

Warranty Content







The product under the premise of normal use and no operation error, During the warranty period, repair for customers free until normal operation.

However, the following conditions will be charged for maintenance during the warranty period:

1. Improper use includes misconnect high-voltage power, use of the product for other purposes, self disassembly, maintenance, change, or use not in accordance with the specifications, intake water and intake oil, and insertion of foreign matters into the product.
 - 2.Damage caused by fire, earthquake, lightning, wind, flood, salt erosion, humidity, abnormal voltage and other natural disasters or improper places.
 - 3.Drop this product after customer purchase or the customer's self transportation (or entrusted transportation company).
- * This product has tried its best and strictly controlled in production and test to reach the standard of high quality and high stability,but external electromagnetic or static interference or unstable power supply may still affect or damage the product, so the grounding system of the operation site must be done well, and the user is recommended to install fault safety protection device (such as leakage protector)

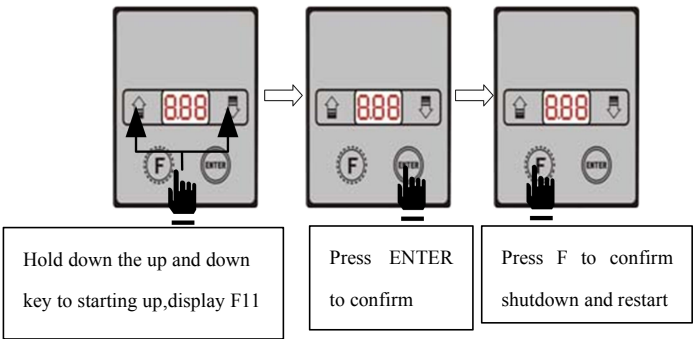
1: Operating discription

1.1: Key description

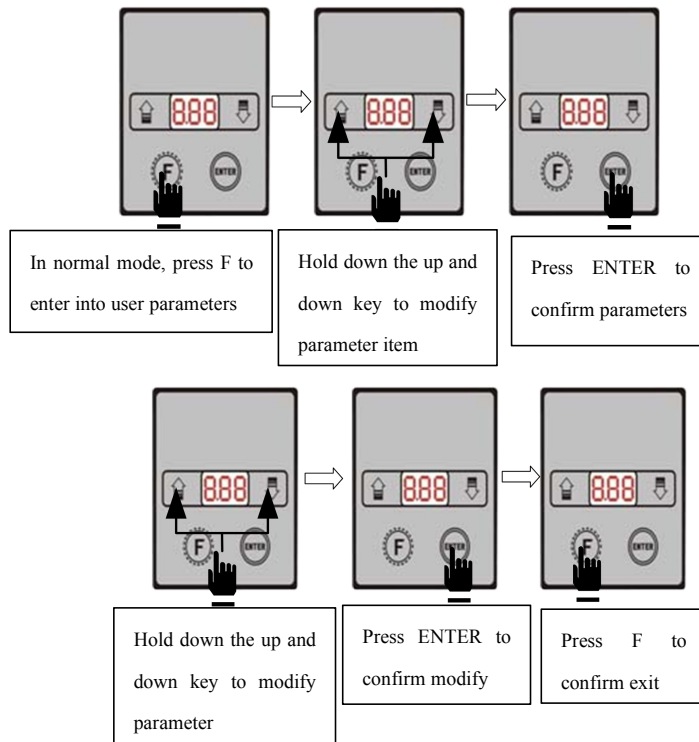
The key of view to save the parameters		View and save the content of the selected parameter number : After selecting the parameter number, press this key to view and modify the operation, after modifying the parameter value, press this key to exit and save the parameter
Enter into parameter area function key		<ol style="list-style-type: none"> 1. Press  keyto enter user parameter mode In general power on mode 2. In the shutdown state, press and hold the  key to start the machine and enter the technician parameter mode
Up regulation key		<ol style="list-style-type: none"> 1、Parameter increment key in parameter selection area. 2、Set value increment key in parameter content area.
Down regulation key		<ol style="list-style-type: none"> 1、Parameter decrement key in parameter selection area. 2、Set value decrement key in parameter content area.

1.2 Operating discription

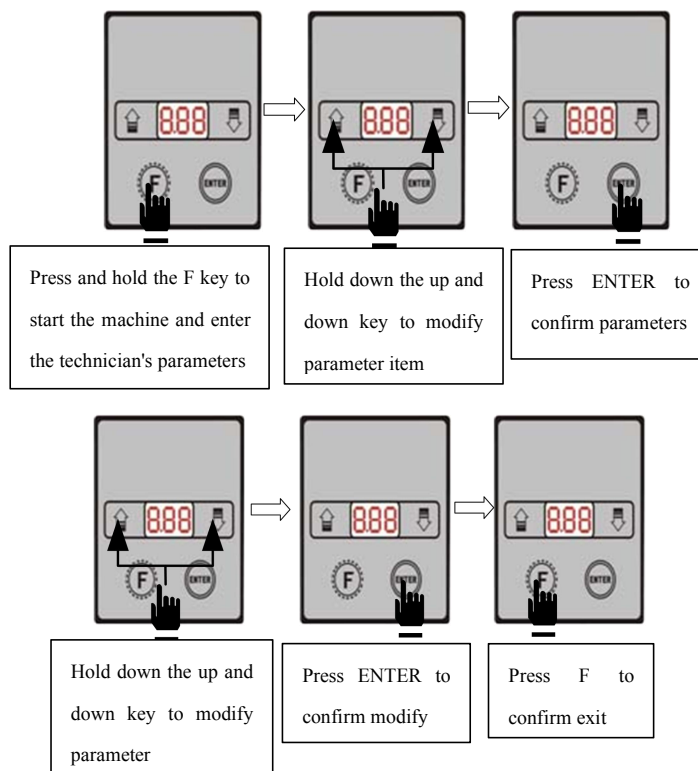
1.2.1:Restore factory settings



1.2.2: Enter the User Mode, Modify and Save



1.2.3: Enter the Technician Mode Modify and Save



1.2.4 Display font and actual font comparison table

Number Font:

Actual value	0	1	2	3	4	5	6	7	8	9
LCD	0	1	2	3	4	5	6	7	8	9

English Font

English letters	A	B	C	D	E	F	G	H	I	J
LCD	A	b	C	d	E	F	G	H	I	J
English letters	K	L	M	N	O	P	Q	R	S	T
LCD	k	L	M	N	O	P	Q	R	S	T
English letters	U	V	W	X	Y	Z				
LCD	U	v	W	X	Y	Z				

2: User Parameters & Technician Parameters

2.1 User Parameters

Parameter Item Content	Description	Range	Initial Value	Content Value Name Description And Remark
P01	Maximum speed (spm)	10~360	300	Setting the Maximum speed during sewing (actual speed = displayed number * 10)
P02	Starting sewing speed (spm)	10~360	130	Setting the speed during per-sewing (starting sewing) (actual speed = displayed number * 10)
P03	Cutting Speed	10- 100	55	The headstock speed during cutting(actual speed = displayed number * 10)
P04	Speed limit for needle1	10~360	80	(actual speed = displayed number * 10)
P05	Speed limit for needle2	10~360	80	(actual speed = displayed number * 10)
P06	Speed limit for needle3	10~360	200	(actual speed = displayed number * 10)
P07	Speed limit for needle4	10~360	250	(actual speed = displayed number * 10)
P08	Speed limit for needle5	10~360	200	(actual speed = displayed number * 10)
P10	Number of threads for cutting	0 - 010	3	The number of stitches needed for cutting, matching the speed of the cutter

2.2 Technician Parameters

Parameter Item Content	Description	Range	Initial Value	Content Value Name Description And Remark
P13	Release time of Presser foot (ms)	10 - 990	560	When you step on the presser foot,the starting time is delayed for the confirmation of presser foot release
P16	Protective number of threads	1 - 990	400	The number of threads by needle required for protection when the base has no induction
P17	Automatically finding upper positioning after startup	0 - 1	1	1 : After power-on,the machine automatically finds the upper positioning single,and than stops 0: noeffect

Parameter Item Conten	Description	Range	Initial Value	Content Value Name Description And Remark
P18	Adjustment of upper positioning	40 - 180	65	For adjustment of upper positioning,when the value decreases, the needle stops in advance; when the value increases, the needle delays stopping.
P19	Testing the working time	1 - 250	20	Set the turn-on time in test C
P20	Testing the stop time	1 - 250	20	Set the stop time in test C
P21	Test A	0 - 1	0	After the test A potion is set,the machine is tested for continuous operation at the speed of P01.
P22	Test B	0 - 1	0	After the test B potion is set,the machine is tested for non-position operation at the speed of P01.qfl
P23	Test C	0 - 1	0	After the test C potion is set,the machine is tested for full functions at the speed of P01.
P24	Headstock protection switch	0 - 1	1	0: Turn off the head protection function 1: Turn on the head protection function
P30	Reverse lift height of press foot	0-400	50	
P31	Midway reverse trample selection	0-1	0	0: Midway reverse trample will stop 1: Midway reverse trample will not stop

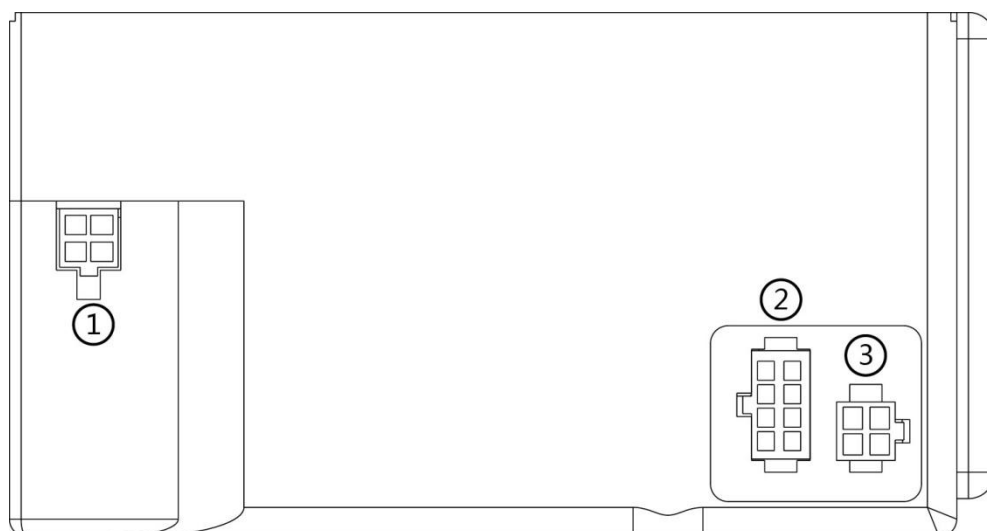
3: Table of Error Code

Error code	Contents	Countermeasure
E01	1) When the power supply is ON, the main voltage detection is too high 2) When the supply voltage is too high	Turn off the system power and check whether the supply voltage is correct.(or whether the specified rated voltage is exceeded). If it is correct, please replace the control box and inform the manufacturer.
E03	Abnormal transmission and communication between CPU of main control board and CPU of step drive board is abnormal	Turn off system power,Check whether the internal connecting line of the control box is loose or falling off, and restart the system after it returns to normal.If it still fails to work normally, please replace the control box and inform the manufacturer.
E06	The presser foot stepping motor is not in the correct position	Check whether the position of stepping motor is normal and whether the sensor is damaged

E07	<p>a)The motor does not rotate due to bad contact of plug wiring</p> <p>b)The headstock mechanism is deadlocked or the motor belt is stuck due to foreign matter entering.</p> <p>c) The motor torsion cannot penetrate the too thick processed object.</p> <p>d)The module drive output is abnormal.</p>	<p>Turn the motor hand wheel of the machine head to see if it is stuck. If it is stuck, first remove the mechanical failure of the machine head.</p> <p>If the rotation is normal, check whether the motor encoder connector and the motor power cable connector are loose.Please correct any looseness.</p> <p>If the contact is good, check whether the supply voltage is abnormal or the speed is set too high. Please adjust if necessary.</p> <p>If it is normal, please replace the control box and inform the manufacturer.</p>
E09 E11	The positioning signal is abnormal	Turn off system power,Check whether the motor encoder interface is loose or falling off, and restart the system after it returns to normal.If it still fails to work normally, please replace the motor and inform the manufacturer.
E14	The encoder signal abnormal	Turn off system power,Check whether the motor encoder interface is loose or falling off, and restart the system after it returns to normal.If it still fails to work normally, please replace the motor and inform the manufacturer.
E15	The power module overcurrent protection is abnormal	Turn off the system and turn it back on.If it still fails to work normally, please replace the motor and inform the manufacturer.
E17	The headstock protection switch is not in the correct position	Turn off system power,Check whether the headstock is opened and whether the ball switch in the control box is displaced or damaged.
E18	Mechanical lock sensor not in correct position	Check whether the mechanical lock position is normal and whether the sensor is damaged
E19	The base sensor is not in the correct position	Check whether the position of the base is normal and whether the sensor is damaged

4: Schematic Diagram of Port

4.1: Name of Each Port:



① Presser foot board port

② The base sensor port 1

③ The base sensor port 2

④ Function port

⑤ Motor encoder port

⑥ Motor power cord port

1、 Presser foot stepping motor:6、 7、 13、 14

2、 Presser foot position sensor: 5(Signal ground)、 6(signal)、 11(+5V)

3、 LED light:2(Signal ground)、 9(+5V)

