

△ Safety Instruction

- Users are required to read the operation manual completely and carefully before installation or operation.
- All the instruction marked with sign △ must be observed or executed; otherwise, bodily injuries might occur.
- The product should be installed and pre-operated by well trained persons.
- For perfect operation and safety, it is prohibited that using extension cable with multi-outlet for power connection.
- 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.
- Don't operate in direct sun light, outdoors area and where the room temperature is over 45°C or below 5°C.
- Please avoid operating near the heater at dew area or at the humidity below 30% or above 95%.
- Don't operate in area with heavy dust, corrosive substance or volatile gas.
- Avoid power cord being applied by heavy objects or excessive force, or over bend.
- The earth wire of power cord must be connected to the system ground of the production plant by proper size of conduction and terminals. This connection should be fixed permanently.
- All the moving portions must be prevented to be exposed by the parts provided.
- Turing on the machine in the first time, operate the sewing machine at low speed and check the correct rotation direction.
- Turn off the power before the following operation:
 - Connecting or disconnecting any connectors on the control box or motor.
 - Threading needle.
 - Raising the machine head.
 - Repairing or doing any mechanical adjustment.
 - Machines idling.
- Repairs and high level maintenance work should only be carried out by electronic technicians with appropriate training.
- All the spare parts for repair must be provided or approved by the manufacturer.
- Don't use any objects or force to hit or ram the product.

Guarantee Time

Warranty period of this product is 6 months from date of purchase against manufacturing defect.

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:

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

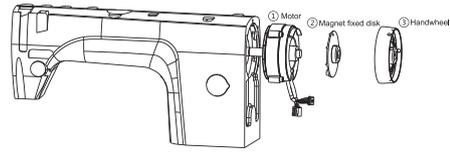
1 Installation

1.1 Power Connection

△ For countries or regions with unstable power supply, it is proposed to install a power stabilizer.

1.2 Motor Installation:

Installation of Internal Motor



1.3 Adjust The Force Required To Operate The Foot Pedal

For General Application	For Venturi Device Attached

Spring A: Downward force adjustment
Bolt B: Heeling back force adjustment
Hole C: Pedal stroke adjustment

∴ In case of connecting with an air switch on the pedal rod to activate a Venturi Device, please shift the position for A and C as shown below.

1.4 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				

1.5 Upper and lower stop debugging, Slow start joint debugging



In normal operating interface, when the button on the screen the indicating lamp was lit in the parking position, the indicator light is off the time parking for lower needle stop



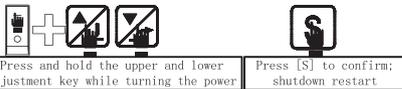
In normal operating interface, when the button on the screen the indication lamp is lit up the slow play slot open, the indicating lamp is off the slow play off the seam.

2: Keysfunction

Setting Parameter Check And Save		After setting the function code, press this key to check the preset parameter and then can edit the parameter accordingly; When the parameter is fixed, press key to save the setting and quit.
Entering the parameter mode		1. Press key P to enter into user parameter setting mode. 2. Long press key Pin the same time turn on the power switch from off to enter into system parameter setting mode.
On the adjustment key/ Select the shortcut needle position		1. Choose the region parameter items incrementing key 2. Parameter setting value incrementing key 3. Select the shortcut needle position
Under the adjustment key/ Slow play seam selection shortcuts		1. Choose the region parameter items of diminishing key 2. Is decremented key parameter settings 3. Slow play seam selection shortcuts

3 Operating instructions

3.1: Reset the system



3.2 Enter the user argument and save changes



3.3 Enter technician mode and save changes



4: User Parameter & Technician Parameter

4.1 User Parameter

Parameters	Parameter Function	Range	Default	Description
P01	Maximum speed	010-500	450	set the max sewing speed (show the actual number *10= speed)
P02	needle stop position selection	000-001	000	Set the needle stop position(0: needle up 1:needle down)
P03	soft start switch	000-001	000	soft start switch setting(0:OFF 1: ON)
P04	soft start sewing speed	010-150	040	soft start sewing speed setting(show the actual number *10= speed)
P05	stitches number of soft start	001-099	004	set the stitches number of soft start, each unit is half stitch
P06	Minimum speed	020-600	500	set the minimum speed (show the actual number *10= speed)

4.2 Technician Parameter

Parameters	Parameter Function	Range	Default	Description
P07	Up Position Adjustment	000-024	000	
P08	Down Position Adjustment	000-024	012	
P09	Needles Goes Up Automatically as Power turned on	000-001	001	0: No Function. 1: Power turned on, needle goes up position automatically
P11	Speed Curve Adjustment (%)	001-100	032	The Larger the value, the faster to increase speed
P15	Stitch Correction Mode	000-003	000	0: Half stitch 1: One stitch 2: Continuous correct half stitch Continuous correct stitch and quickly stop machine.
P21	motor rotate direction	000-001	000	motor rotate direction setting (0:clockwise 1:counter-clockwise)
P22	auto running speed	020-500	350	auto running speed setting(show the actual number *10= speed)
P23	auto running time	010-250	020	set the auto running time in testing
P24	auto running stop time	010-250	020	set the auto running stop time in testing
P25	Item A test	000-001	000	Item A test setting(continue running with constant speed)
P26	Item B test	000-001	000	Item B test setting(carry out the set loop running)
P36	Type	000-010		

5 Error Code Table:

Error Code	Problem	Strategies
E01	1) When power ON, detected main voltage 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.) If correct, please replace the control box and inform the factory
E02	1) When power ON, detected main voltage too low. 2) When the supply voltage is too low.	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
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	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.	Please check the machine head to see if objects stuck in the motor pulley. If stuck it is not the machine head machinery fault. If normal running, please check the encoder connector and motor power cord connector if loose. If loose please tight connection. If connection well, please check supply voltage whether abnormal or setting speed too high. If have please modify. If normal, please replace the control box and notify the manufacturer.
E09 E11	Synchronizer signal error.	Turn off the system power supply, please check motor encoder connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacturer.
E12	Power is turned on without the synchronizer signal.	Motor still can run, but it automatically starts the clutch mode. All constant-stitch sewing pattern and trimmer /wiper function is invalid. Please check the synchronizer. Turn off the system power supply, please check motor encoder connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacturer.
E14	Encoder signal error.	Module driver output and head output will close all. Waiting for the power to open / reset. (please carefully check power supply board each function)
E15	Power module abnormal over current protection	Module driver output and head output will close all. Waiting for the power to open / reset. (please carefully check power supply board each function)
E17	The sewing table safety switch is not in the correct position	Please check sewing table is open or not, the sewing table safety switch is damage or not, the socket is abnormal or not.

6: Schematic diagram of port

6.1.1: Each port name:

① Function Interface



② Pedals Interface

