Safety Instruction

1) Users are required to read the operation manual completely and carefully before installation or operation.

2) The product should be installed and pre-operated by well-trained persons

3) All the instruction marked with sign ，must be observed or executed; Otherwise, bodily injuries might occur.

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 250V AC 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. Continue supply 380V power over 5 minutes might damage the fuse F2, burst the electrolytic capacitors and the power module U14 of the main board and even might endanger the person safety.

6) Please don’t operate in direct sun light, outdoors area and where the room temperature is over 45℃or below 0°C.

7) Please avoid operating near the heater at dew area or at the humidity below 10% or above 95%.

8) Please 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:

1. Connecting or disconnecting any connectors on the control box or motor.

2. Threading needle.

3. Raising the machine arm.

4. Repairing or doing any mechanical adjustment.

5. Machine is out of work.

14) Repairing and high level maintenance work should only be done by electronic technicians with appropriate training.

15) All the spare parts for repairing work must be provided or approved by the manufacturer.

16) Don’t use any objects 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 all a failsafe device. (Such as residual current breaker).

**1.** **Key Description**

|  |  |  |
| --- | --- | --- |
| Name | Key | Indicate |
| Function Parameter Edit |  | Press this key to enter or exit function parameter edit mode. |
| Setting Parameter Check and Save |  | For the content of the selected parameters check and save: after select parameter press this key to check and modify operation, after modified parameter value press this key to exit and save the parameter. |
| Parameter Increase |  | 1. Choose the region parameter items of incrementing key  2. Parameter setting value incrementing key |
| Parameter Decrease |  | 1. Choose the region parameter items of diminishing key  2. Parameter setting value decrementing key |
| LED Brightness Adjustment Shortcut Key |  | If click, it can adjust LED brightness. |
| Presser Foot Key / Needle Stop Position Selection |  | 1. If click, set used or cancelled presser foot function.  2. In the boot interface, if long-press, the needle stop position after shift the sewing mode ( Up position / Down position); The corresponding decimal point light up is up position, extinguished for down position; |

**2. Operating Instructions**

**2.1 Reset the System**

1. Under the shutdown state, hold on the “up” key and “down” key to boot, then double-click the S key to confirm it, shutdown restart.

**2.2 Enter the User Argument and Save Changes**

1. Under normal mode, press key P enter to【Use Parameter Area】

# 2. Press S key enter to parameter content value; changed the value through “up” “down” key.

**2.3 Enter Technician Mode and Save Changes**

1. In the shutdown state, hold on key P to turn on machine and enter 【Technical Parameter Area】

2. Press S key enter to parameter content value, changed the value through “up” “down” key, and then press S key to save the value.

**2.4 Lock screen function**

1. After the screen lock time set by P34, the main interface will display "LOCK", enter the screen lock mode, and press the P key to unlock.

**3. User Parameter**

| No. | Parameter Function | Range | Default | Description |
| --- | --- | --- | --- | --- |
| P01 | Maximum speed | 200-5500 | 5000 | Set the max sewing speed. |
| P02 | Needle stop position selection | 0-2 | 0 | 0: Needle stops at up position  1: Needle stops at down position  2: OFF |
| P03 | Soft start switch | 0-1 | 0 | 0: OFF  1: ON |
| P04 | Soft start sewing speed | 200-1500 | 400 |  |
| P05 | Stitches number of soft start | 1-15 | 1 |  |
| P06 | Minimum speed | 200-500 | 200 | Set the minimum speed |
| P07 | Up position adjustment | 0-23 | 4 |  |
| P08 | Down position adjustment | 0-23 | 16 |  |
| P09 | Needle goes up automatically as power turned on | 0-1 | 0 | 0: No function  1: Power turned on, needle goes up position automatically |
| P11 | Speed curve adjustment (%) | 1-100 | 32 | The lager the value, the faster to increase speed |
| P12 | Foot lifter operation time to full output (ms) | 0-990 | 100 |  |
| P13 | Presser foot lifter operation duty cycle (%) | 0-100 | 20 |  |
| P14 | Delay the start of the motor to protect the lowering time of presser foot (ms) | 0-990 | 20 |  |
| P16 | Machine head lamp brightness | 0-4 | 4 | 0: OFF  1→4: The brightness grade, the more value the more brightness. |
| P17 | Presser foot protection time (s) | 0-60 | 5 |  |
| P18 | Automatic presser foot function switch | 0-1 | 1 | 0: OFF  1: ON |
| P21 | Motor rotate direction |  | 0 | 0: clockwise |
| P22 | Auto running speed | 200-5500 | 5500 | Auto running speed setting |
| P23 | Auto running time | 1-250 | 20 |  |
| P24 | Auto running stop time | 1-250 | 20 |  |
| P25 | Item A test | 0-1 | 0 | Continue running with constant speed |
| P26 | Item B test | 0-1 | 0 | Carry out the set loop running |
| P29 | Suction function selection | 0-2 | 1 | 0: OFF  1: ON  2: Half anti-pedaling pneumatic foot lift presser function |
| P34 | Lock screen time | 0-300 | 20 |  |
| P36 | Type |  | 14 |  |
| P39 | Speed ratio | 0-100 | 33 |  |
| P40 | Information display |  |  | N01 The control system version number  N02 The panel version number  N03 Speed  N04 The pedal AD |

Note: the initial value of parameters is for reference only, and the actual value of parameters is subject to the real object.

**4. Error Code List**

|  |  |  |
| --- | --- | --- |
| **Error Code** | **Problem description** | **Measure** |
| E01 | Over-voltage | Turn off the machine, check the power supply voltage. (Or whether exceed the rated voltage of use).  If there are still errors, please replace the control box and call for customer service. |
| E02 | Low-voltage | Turn off the machine, check the power supply voltage. (Or whether under the rated voltage of use).  If there are still errors, please replace the control box and call for customer service. |
| E05 | Pedal connection error | Turn off the machine, please check if the pedal in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service. |
| E07 | Motor locked-rotor error | Turn the machine handwheel, check if it is stuck. If it is stuck, you have to rule out the mechanical failure.  If turn normal, check if the encoder and motor in bad connection or is too loose. If yes, please correct.  If connection well, check if the power supply voltage is abnormal or sewing speed is too high. If yes, please adjust.  If there are still errors, please replace the control box and call for customer service. |
| E09  E11 | Positioning signal error | Turn off the machine, please check if the encoder in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service. |
| E14 | Encoder error | Turn off the machine, please check if the encoder in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service. |
| E15 | Power supply module abnormal over-current | Turn off the machine, then turn on again. If there are still errors, please replace the control box and call for customer service. |

**5. Port Diagram**

**5.1 2PPort (orange) Description**



1. LED Lamp: 1 (signal), 2 (+5V)

**5.2 2P Port (white) Description**



1. Presser Foot: 1 (signal), 2 (+32V)