MCj03463170000[1]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. All power supplies must be turned off during the installation work, remember not to operate with power on.
3. All the instruction marked with sign MCj03463170000[1] 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 the power cord, it must be determined that the operating voltage conforms to the rated voltage value specified in the product identification.
6. Don＇t operate in direct sun light，outdoors area and where the room temperature is over 45°C or below 0°C.
7. Please avoid operating near the heater at dew area or at the humidity below 10% or above 90%.
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:

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

2. Threading needle.

3. Raising the machine head.

4. Repairing or doing any mechanical adjustment.

5. Machines idling.

1. Repairs and high level maintenance work should only be carried out by electronic technicians with appropriate training.
2. All the spare parts for repair must be provided or approved by the manufacturer.
3. 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

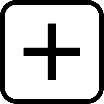
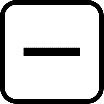
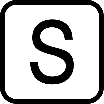
\* We make our best effort to test and manufacture the product for assuring the quality. However, it is possible that this product can be damaged due to external magnetic interference and electronic static or noise or unstable power source more than expected; therefore the grounding system of operate 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**

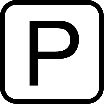
|  |  |  |
| --- | --- | --- |
| Name | key | Indicate |
| Function parameter edit |  | If click, enter or exit the user parameter setting interface. |
| Save |  | For the content of the selected parameters check and save: after select parameter press this key to check and modify operation, after modified parameter value press this key to exit and save the parameter. |
| Parameter increase |  | If click, increase the parameter.  If long-press, continuously increase the parameter. |
| Parameter decrease |  | If click, decrease the parameter.  If long-press, continuously decrease the parameter. |

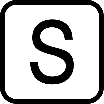
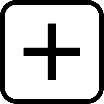
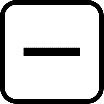
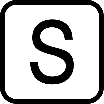
**2 Operating instructions**

**2.1 Restore factory settings**

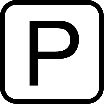
1. In the shutdown state, press and hold "" and "" at the same time to turn on the power, and then press "" to confirm to resume.

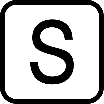
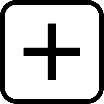
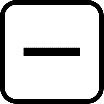
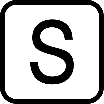
**2.2 Entering user mode and modifying and saving**

1. In normal mode, press "" to enter the [user parameter area].

2. Press "" to enter the parameter content value, change the content value by "" and "" keys, and press "" to save.

**2.3 Entering technician mode and modifying and saving**

1. In the shutdown state, press and hold "" to turn on the machine and enter the [technician parameter area].

2. Press "" to enter the parameter content value, change the content value "" and "" keys, and press "" to save.

**3 Parameter list**

| No. | Items | Range | Default | Description |
| --- | --- | --- | --- | --- |
| P01 | Maximum speed (rpm) | 100-4500 | 3700 | Maximum speed of machine sewing. |
| P02 | Needle stopping position selection | 0-2 |  | 0: Upper positioning  1: Lower positioning  2: No positioning |
| P03 | Soft start function selection | 0-1 | 0 | 0: OFF  1: ON |
| P04 | Soft start speed (rpm) | 200-1500 | 400 |  |
| P05 | Stitch numbers for soft start | 1-15 | 1 |  |
| P06 | The minimum speed (positioning speed) (rpm) | 200-500 | 200 | Adjust the minimum speed. |
| P07 | Upper positioning adjustment | 0-29 | 0 |  |
| P08 | Lower positioning adjustment | 0-29 | 12 |  |
| P09 | Automatically find the upper position when the power is turned on | 0-1 | 0 | 0: OFF  1: ON |
| P10 | Machine protection switch selection | 0-2 | 1 | 0: Disable  1: Detection of zero signal |
| P11 | Acceleration curve adjustment (%) | 1-100 | 40 |  |
| P15 | Darning stitch mode | 0-3 | 0 | 0: Half stitch  1: One stitch  2: Continuous half stitch  3: Continuous one stitch |
| P21 | Motor rotation direction setting | 0-1 | 1 |  |
| P22 | Testing speed (rpm) | 200-4000 | 3500 |  |
| P23 | Test run time | 1-250 | 20 |  |
| P24 | Test stop time | 1-250 | 20 |  |
| P25 | Testing A | 0-1 | 0 | Continuous running testing. |
| P26 | Testing B | 0-1 | 0 | Start and stop testing with all functions. |
| P27 | Upper positioning quick adjustment |  |  |  |
| P28 | Lower positioning quick adjustment |  |  |  |
| P36 | Model selection | 1-20 | 1 |  |
| P37 | Maximum speed limit | 200-5000 | 4000 |  |
| P38 | Static AC overvoltage value setting |  |  |  |
| P40-N01 | The control system version number |  |  |  |
| P42-N03 | Speed |  |  |  |
| P42-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 | Solutions |
| E01 | High voltage | 1. Whether the grid voltage is higher than AC260V.  2. If it is self-generated power supply, please reduce the generator power.  3. If it still does not work normally, please replace the control box and notify the after-sales service. |
| E02 | Low voltage | 1. Whether to connect to low voltage.  2. Reset.  3. If it still does not work normally, please replace the control box and notify the after-sales service. |
| E05 | Pedal signal abnormal | 1. Check whether the pedal connector is loose or fall off, and restart the system after returning it to normal.  2. If it still does not work normally, please replace the control box or speed controller and notify the after-sales service. |
| E07 | Main shaft motor locked-rotor | 1. Turn off the power and check whether the handwheel can be turned smoothly (turn the handwheel by hand), if it cannot be turned, please check the machine.  2. Turn off the power, check whether the motor power connector is loose, plug it in and restart it.  3. Check whether the upper needle stop position is correct, if not, please adjust the upper positioning position.  4. If it still does not work normally, please replace the control box or spindle motor and notify the after-sales service. |
| E09  E11 | The positioning signal of main shaft motor encoder is abnormal | 1. Turn off the system power, check whether main shaft motor encoder connector is loose or fall off, restore it to normal and restart the system.  2. Check whether the motor zero point correction setting is correct; Reset the motor zero point correction; Whether there is oil on the encoder code plate, please clean it if there is any.  3. If it still does not work normally, please replace the control box or main shaft motor and notify the after-sales service. |
| E14 | Main shaft motor encoder signal is abnormal | 1. Turn off the system power, check whether the main shaft motor encoder connector is loose or fall off, restore it to normal and restart the system.  2. Check whether the grating is installed correctly (whether the grating screws are tightened and whether the grating is in the center of the encoder).  3. Check whether there is oil on the encoder code plate, if there is, please clean it up, and restart the system after recovery.  4. If it still does not work normally, please replace the control box or main shaft motor and notify the after-sales service. |
| E15 | Main shaft motor drive overcurrent | 1. Please check whether the motor power cord has bad contact.  2. Please check whether the motor power cord is crushed.  3. Please replace the control box or main shaft motor and notify the after-sales service. |
| E17 | Machine overturned | 1. Turn off the system power and check if the machine is overturned.  2. Check whether the machine protection switch detection setting is correct.  3. If it still does not work normally, please replace the control box or panel and notify the after-sales service. |

**5 Port diagram**



1. Darning stitch: 1 (signal), 4 (DGND)

2. LED lights: 3 (DGND), 6 (+5V)