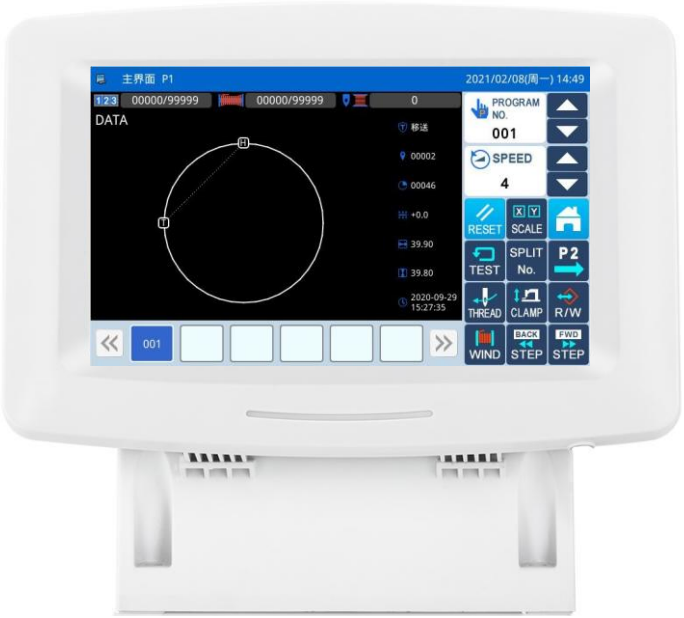
OWNER'S MANUAL

# 41X Pattern Sewing Machine




V 2022-02

# Forewords

Thank you for using our Computerized Control System for Special Sewing Machine.

It is appreciated that you do read this manual carefully in order to operate the machine correctly and effectively. If the user operates the machine contrary to regulations herein, we will not take responsibility for any loss caused thereby to the user or any third party. Besides, you should keep this manual safely for future use. For any fault or problem of machine, please ask the professionals or the technicians authorized by our company for repair service

# Safety Matters for Attention

## 1、 Signs & Definitions of Safety Marks

This User's Manual and the Safety Marks printed on the products are for you to use this product correctly so as to be away from personal injury. The signs and definitions of Marks are as follows:

| | |
|---|---|
| Danger | The incorrect operation due to negligence of this Mark will cause the serious personal injury or even death. |
| Caution | The incorrect operation due to negligence of this Mark will cause the personal injury and the damage to mechanism. |
|  | This symbol means "things to be noted". The pattern in the triangle indicates what must be paid attention to. (for example, the pattern on the left says, "beware of injuries") |
|  | This kind of marks means "Forbidden". |
|  | This kind of marks means "Must". The figure in the circle refers to the thing that has to be done. (E.g. The left figure is "Grounding!") |

## 2、 Safety Matters for Attention

| | |
|---|---|
| Danger | |
|  | For opening the control box, please turn off the power and pull out the plug from the socket first, and then wait for at least 5 minutes before opening the control box. Touching the part with high voltage will cause personal injury. |
| Caution | |
| **Using Environment** | |
|  | Try not to use this sewing machine near the sources of strong electric disturbance likehigh-frequency welding machine.<br>The source of strong electric disturbance may affect the normal operation of the sewing machine. |
|  | The voltage fluctuation shall be within ±10% of the rated voltage.<br>Large-scaled voltage fluctuation will affect the normal operation of the sewing machine, where a voltage regulator is necessary. |
|  | Working temperature: 0℃~45℃.<br>The operation of the sewing machine will be affacted in environment with temperature beyond the above range. |
|  | Relative Humidity: 35%~85% (No dew inside the machine). Otherwise, the operation of the sewing machine will be affected. |
|  | The supply of compressed gas shall be over the consumption required by the sewing machine. The insufficient supply of compressed gas will lead to the abnormal action of the sewing machine. |
|  | In case of thunder, lightning or storm, please turn off the power and pull out the plug from the socket, for the operation of sewing machine may be affected. |
| **Installation** | |
|  | Please ask the trained technicians to install the sewing machine. |
|  | Don't connect the machine to power supply until the installation is finished.<br>Otherwise the action of the sewing machine may cause personal injury once the start switch is pressed by mistake. |
|  | When you tilt or erect the head of sewing machine, please use both of your hands in that operation. And never press the sewing machine with strength.<br>If the sewing machine loses its balance, it will fall into floor thus causes the personal injury or |

| | |
|---|---|
| | mechanical damage. |
|  | Grounding is a must.<br>If the grounding cable is not fixed, it may cause the electric-shock and mis-operation of the machine. |
|  | All the cables shall be fixed at least 25mm away from the moving components. By the way, don't excessively bend or over-tightly fix the cable with nails or clamps, or it may cause the fire or electric shock. |
|  | Please add security cover on the machine head. |

| **Sewing** | |
|---|---|
|  | This sewing machine can only be used by the trained staff. |
|  | This sewing machine has no other usages but the sewing. |
|  | When operating the sewing machine, do put on the protection glasses. Otherwise, the broken needle will cause personal injury if it hurts the eyes. |
|  | Under following circumstances, please cut off the power at once so as to avoid the personal injury caused by the mis-operation of start switch:<br>1.Threading on needles; 2. Replacement of needles; 3. The sewing machine is not at work or beyond supervision. |
|  | During working, don't touch or lean anything on the moving components, which will cause personal injury or damage the sewing machine. |
|  | During working, in case of mis-operation, or abnormal noise or smell, user shall cut off the power at once, and then contact the trained technicians or the supplier of that machine for solution. |
|  | For any trouble, please contact the trained technicians or the supplier of that machine. |
| **Maintenance & Inspection** | |
|  | Only the trained technicians can perform the repair, maintenance and inspection of this sewing machine. |
|  | For the repair, maintenance and inspection of electrical components, please contact the professionals at the manufacturer of control system in time. |
|  | Under following circumstances, please cut off the power and pull out the plug at once so as to avoid personal injury caused by the mis-operation of start switch:.<br>1.Repair, adjustment and inspection ;<br>2. Replacement of components like curve needle, cutter and so on. |
|  | Before the inspection, adjustment or repair of any gas-driven devices, user shall cut off the gas supply till the pressure indicator falls to 0. |
|  | When adjusting the devices with the power supply and gas supply on, users can't be too careful at following the entire Safety Matters for Attention. |
|  | In case of damages of the sewing machine caused due to unauthorized modifications, our company will not be responsible for the repair. |

# 1 General Information

## 1.1 General Introduction

Mitsubishi series computerized control system for industrial sewing machine: 1) Adoption of the world leading AC servo control technology on main shaft motor provides large torque, high efficiency, stable speed and low noise; 2) Diversified design of control panel can meet the special requirements of users on attachment; 3) System adopts German style structure, which greatly facilitates the installation and maintenance.

## 1.2 Functions and Parameters

| NO. | Type of Controller | Computerized Control System for Pattern-sewing Machine |
|---|---|---|
| 1 | Sewing Area | X(Lateral) Direction Y(Longitudinal) Direction<br>600(mm) x 400(mm) |
| 2 | Max. Sewing Speed | 3000rpm（with stitch interval below 3mm） |
| 3 | Stitch Length | 0.1～12.7mm（Min Resolution: 0.10mm） |
| 4 | Feed Motion of Frame | Intermittent feeding (2-shaft driven by pulse motor) |
| 5 | Needle Bar Stroke | 41.2mm |
| 6 | Needles | DP×5、DP×17 |
| 7 | Lift of Frame | Standard 18mm to Max. 22mm（Pneumatic type: Max. 25mm） |
| 8 | Intermediate Presser | Stepping Driving (Range: 0～8mm) |
| 9 | Lift of Intermediate Presser | 20mm |
| 10 | Memory of Pattern Data | Memory/U Disk |
| 11 | Pause function | Stop the machine during the sewing |
| 12 | Scaling Up/Down Function | Allows a pattern to be scaled up/down on the X axis and Y axis independently when user sews a pattern. Ratio: 1% to 400% (0.1% per step) |
| 13 | Scaling Up/Down Method | Increasing / decreasing stitch length & Increasing / decreasing stitch number |
| 14 | Sewing Speed Limitation | 200～3000rpm（100rpm per step） |
| 15 | Pattern Selection Function | Pattern No. selection method |
| 16 | Up counter | No Count/Count of Pattern /Count of Cycle (0～99999) |
| 17 | Down Counter | No Count/Count of Pattern /Count of Cycle (0～99999) |
| 18 | Sewing Machine Motor | Servo Motor |
| 19 | Stop Needle at Highest Position Function | After the completion of sewing, the needle can return to its highest position. |
| 20 | Rated Power | 600W |
| 21 | Operation Temperature Range | 0℃～45℃ |
| 22 | Operation Humidity Range | 35%～85% （No Dew Condensation） |
| 23 | Line Voltage | AC 220V ± 10%；50/60Hz |

※ Effective standard for product: QCYXDK0004—2020 Computerized Control System for Industrial Sewing Machine.

## 1.3 Matters for Safe Using

- **Installation**
  - Control Box
    - Please install the control box according to the instructions
  - Attachments
    - If other attachments are needed, please turn off the power and pull out the power plug.
  - Power Cable
    - Do not press power cables forcefully or twist power cable excessively.
    - The power cables shall be fixed at least 25mm away from the rotating component.
    - Before powering the control box, user shall carefully check the voltage of power supply and the position of power input on the control box. If the power transformer is used, user should also check it before powering the machine. The power switch of the sewing machine must be set as "Off".
  - Grounding
    - In order to avoid the noise disturbance and electric shock caused by electric leakage, user should ground the grounding cable.
  - Attachments
    - If any electric attachments are needed, please connect them to proper positions.
  - Disassemble
    - When removing the control box, user must turn off the power and pull out the power plug.
    - When pulling out the power plug, user should hold the plug and remove it, instead of pulling the power cable only.
    - The control box contains the dangerous high voltage power. For opening the control box, please turn off the power and pull out the plug from socket first, and then wait for at least 5 minutes before opening the control box.
- **Maintenance, Inspection and Repair**
  - Only trained technicians can perform the repair and maintenance of this machine.
  - When replacing the needles and shuttles, user should turn off the power.
  - Please use the spare parts from the authorized manufacturers.
- **Others**
  - Do not touch the rotating or moving parts of the machine, especially the needle and belt, when the machine is working. User should also keep his/her hair away from those moving parts, so as to avoid the danger.
  - Do not drop the control device on the floor, nor insert any stuff into the slots on the control box.
  - Do not run the machine without the cover shells.
  - If this control device is damaged or unable to work normally, please ask the technicians to adjust or repair it. Do not run the machine when the problem is not solved.
  - Please do not change or modify this control device without authorization.
- **Abandonment**
  - Dispose it as common industrial trash.
- **Warning and Danger**
  - The mistake operation may cause danger. For the serious level, please refer to the figure below:

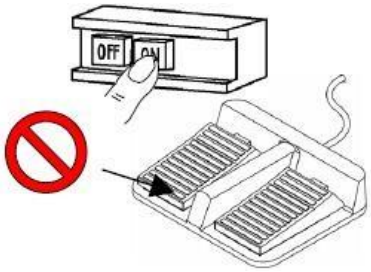
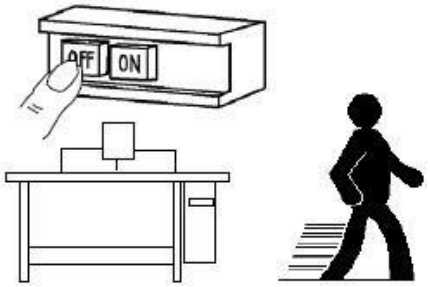
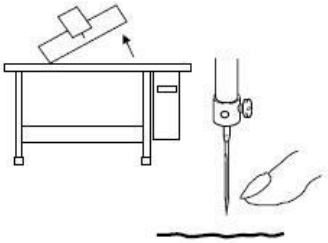
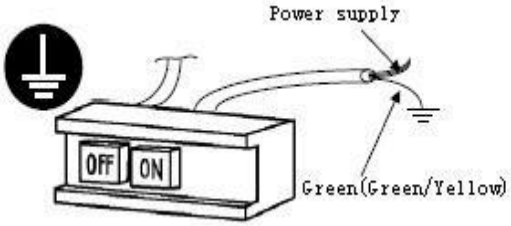
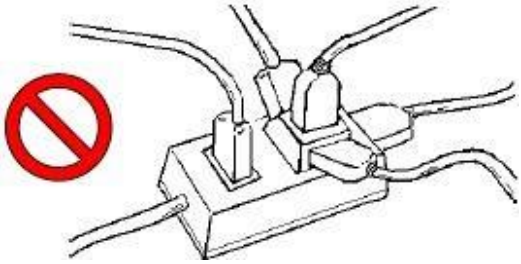
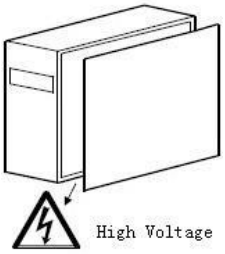
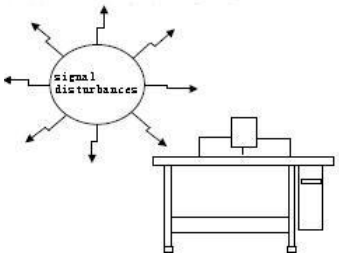
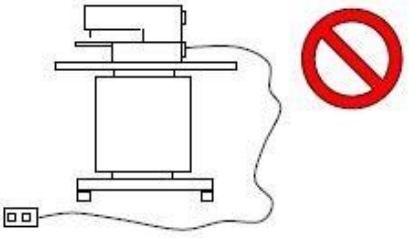
| | | | |
|---|---|---|---|
|  Warning | The wrong operation may ca use serious injury or death. |  Caution | The wrong operation may caus e personal injury or loss of pr operty. |

- The meanings of the marks are shown below:

| | | | |
|---|---|---|---|
|  | Please operate machine according to ins truction |  | Caution:High Voltage |
|  | Caution:High Temperature |  | Grounding is a must |
|  | Never do this | | |

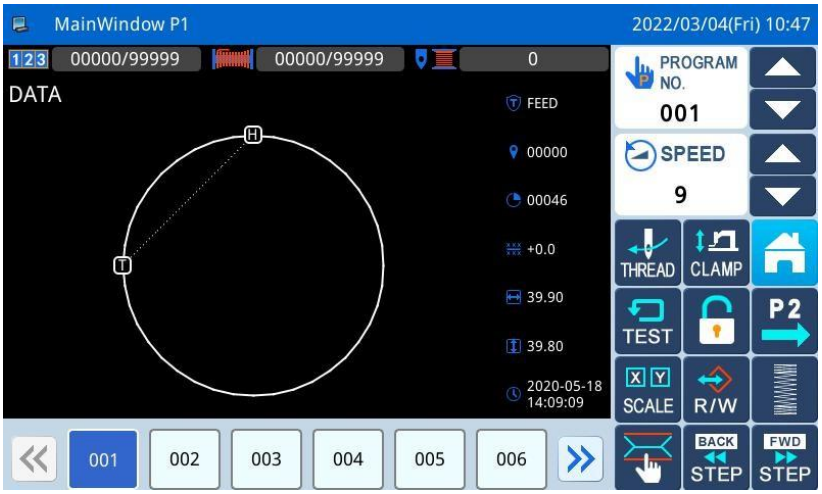
## 1.4 The Preventive Measures in Use

**Warning**

<table>
<tr><td>1. When you press the switch [ON], please do not step the pedal.<br>  </td><td>2. When you leave the machine, please turn it off.<br>  </td></tr>
<tr><td>3. If user needs to tilt the head or replace the needle or thread the upper thread, please turn off the power.<br>  </td><td>4. Ground well the grounding cable.<br>  </td></tr>
<tr><td>5. Do not use the household terminal block to let machines to share one power supply.<br>  </td><td>6 、 For opening the control box, please turn off the power and pull out the plug from socket firstly, and then wait for at least 5 minutes before opening the control box.<br>  </td></tr>
<tr><td colspan="2">7、After replacing the motor, user has to adjust the main motor installation angle according to this manual.</td></tr>
<tr><td>8、Please keep it away from the disturbance of high frequency machines.<br>  </td><td>9、If user needs the external signal socket to connect the attachments, the connecting wire shall be as short as possible. The long cable may cause mistake operations. And the connection cable shall be the shielded.<br>  </td></tr>
<tr><td colspan="2">10、If the fuse is burnt, please solve the problem before replacing a new one with same capacity.</td></tr>
</table>

## 1.5 Standardization

The function keys use figures commonly recognized within the industry. Figures, as international language, are recognizable to users in every country.




## 1.6 Operation Method

The Mitsubishi type touching panel adopts the advanced touching operation technology, whose user-friendly interface and easy control bring the revolutionary changes to the daily usage of the users. For performing relevant operations, user can use his fingers or other objects to touch the screen.

**Warning**

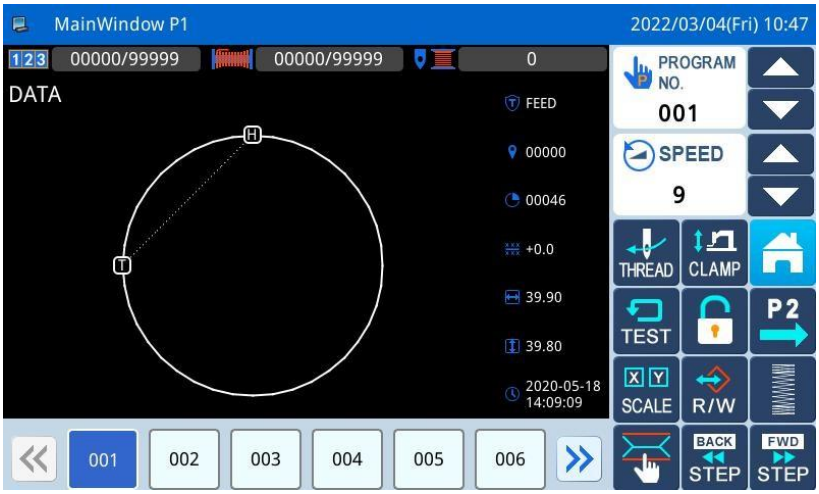
**Don’t use sharp objects to touch the screen so as to avoid causing permanent damage to the touch panel.**

# 2 Operation Instructions

## 2.1 Basic Operation

**1、Turn on Power Switch**

After user turns on the power, the main interface P1 will be displayed.




**2、Pattern for Sewing**

Display the selected pattern in the current interface. If user wants to change the pattern, he should refer to section [2.5 Load Pattern].

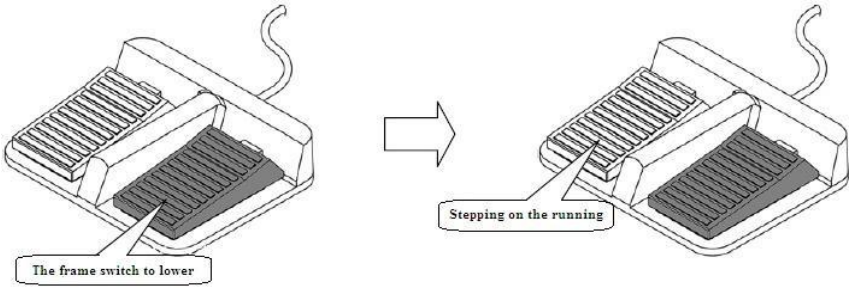
**3、Start Sewing**

① Before the actual sewing, user need confirm the settings of the sewing conditions again, especiall y the setting of the speed (Range: 0~9).

② The speed of sewing machine is determined by the speed value and stitch interval. The speed value will determine the max speed of sewing machine, while the stitch interval will limit the speed of sewing machine.

**[Note]: Do not change the speed value during the sewing, except the condition of pause, otherwise it may cause influence on the thread-withdrawing condition.**

③ Put the sewing material to the appointed position, step the frame switch (black one) to lower the frame and step the running switch (grey one) to start the actual sewing. Once the sewing starts, user will not need to continue stepping on the running switch. When the sewing machine finishes the work, the frame will go up automatically.




**4、Pause**

If user wants to stop the machine during the sewing, please press the emergency stop button on the head (Please refer to the following figure for details). After user presses that key, the sewing machine will stop at the

upper position (default setting) and enter the pause status. For releasing the pause status, please press that emergency stop button again. Then user can continue to perform the following operation:

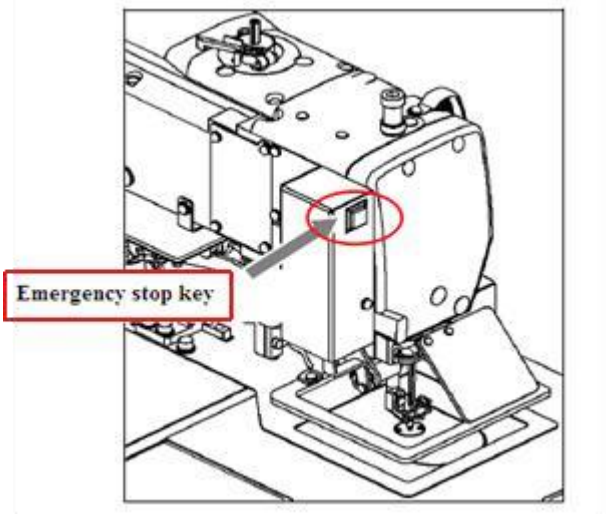
① Step on the running switch to continue the sewing;

② Press Forward Moving/ Backward Moving to change the sewing start position;

③ Step on the frame switch to lift frame;

④ Change the speed value of sewing machine; and/or

⑤ Move the intermediate presser.



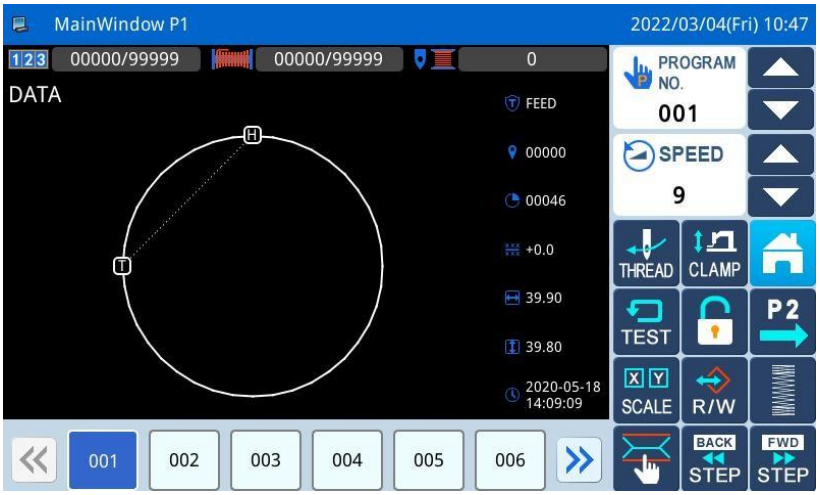

**5、Method for Mending the Sewing**

User can use the pause function to perform the mending sewing. If user presses emergency stop key in case of thread-breakage, the needle will stop at the upper position. Press backward moving key to move the frame to the position that is two or three stitches before the thread-breakage point, finish threading and step the running switch to continue the sewing.

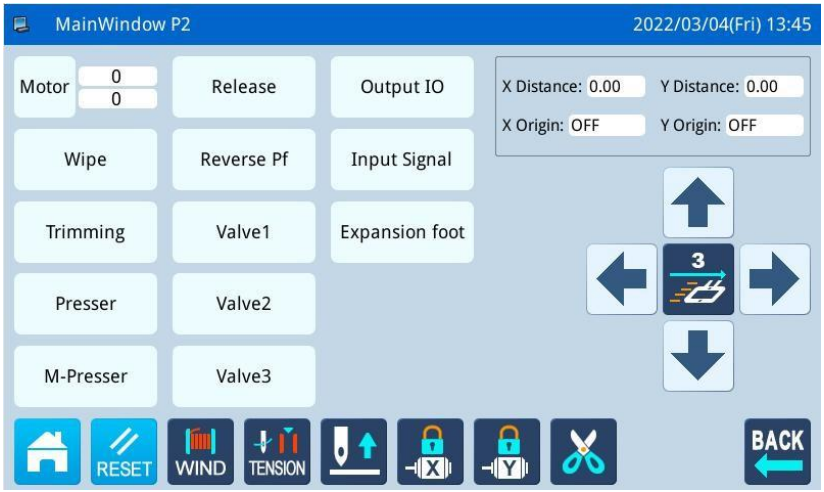
Note: never use your foot to step on the running switch when threading. It is very dangerous to run the sewing machine when threading, so be sure to remove your foot from the running switch when threading.

## 2.2 Instructions on Interface Display Status

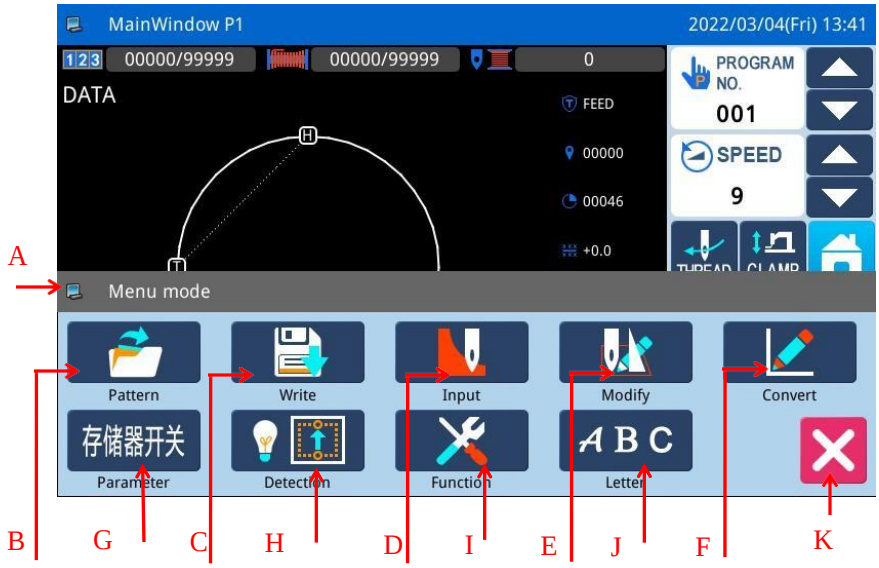
### 2.2.1 Interface 1 (Main Interface P1: Standard Display Status)




### 2.2.2 Interface 2 (Display Status after Users Press NEXT in Main Interface P1)



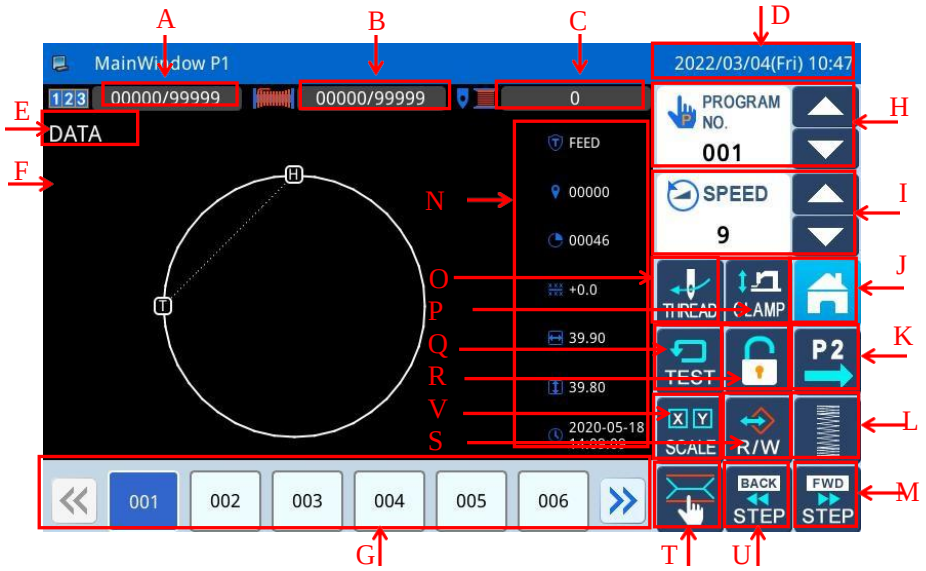
### 2.2.3 Interface 3 (Catalogue Mode in Main Interface P1)




**Functions:**

| No. | Function | Content |
|---|---|---|
| A | MENU Function Interface Title | The displayed content is the interface title of the MENU.<br>When user press the button, the displayed content in the title bar will become the functional description of the corresponding key. |
| B | Pattern management (adding, deleting, checking and saving graphic data) | After entering the interface, execute the corresponding functions to search, sort, delete, save, read and other related operations for patterns. |
| C | Save Pattern (Save Pattern Data) | Save the pattern to memory or U disk |
| D | Edit Pattern (Pattern Design Mode) | Edit the pattern |
| E | Modify Pattern (Modification Mode) | Modify the pattern |
| F | Data Transformation (File Transformation Mode) | Transform the data |
| G | Operation Setting | Set the operation parameters |
| H | Test Mode | Test the external devices, LCD screen and so on. |
| I | Function Setting | Perform the function operations |
| J | Letter Sewing Edition | Perform letter sewing edition。<br>**[Note]: User can close letter sewing edition function via Parameter "Special" -> "Enable Letter Sewing". The figure will disappear when it is deactivated.** |
| K | Quit | Quit the current interface, and return to the upper interface. |

## 2.3 Instructions on Main Interface P1

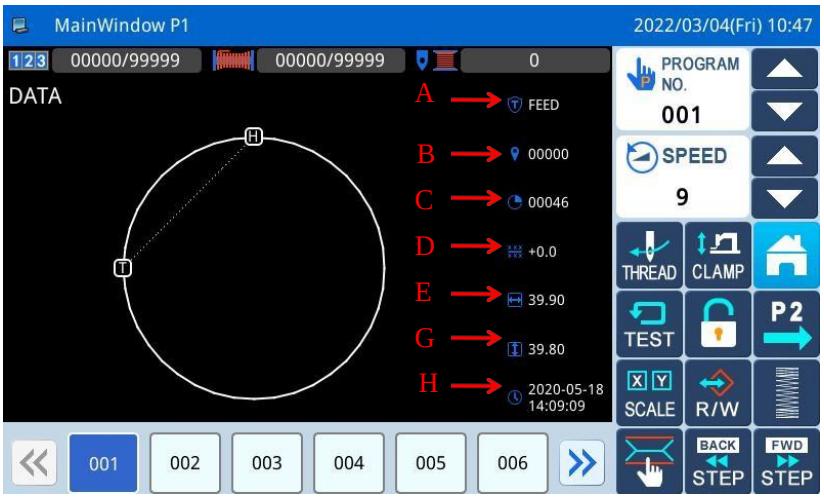



**Functions:**

| No. | Functions | Content |
|---|---|---|
| A | Up-counter | Display the current value/set value of the Up-counter . |
| B | Down- counter | Display the current value/set value of the Down- counter . |
| C | The robbin counter's alarms number of stitches | Perform data setup operations |
| D | Date/Clock | Show time |
| E | Pattern Name | Display the name of current pattern |
| F | Pattern Shape | Display the shape of the current pattern<br>**[Note]: is the position of origin.** |
| G | Pattern Number Hot Key | Display the recently used pattern numbers, at most 40 numbers can be saved.<br>Pressing the pattern number will activate that pattern for sewing.<br>**[Note]: In combined pattern sewing mode, the displayed content is the sub-pattern numbers and their number.** |
| H | Pattern Selection Function | Pattern No. selection method |
| I | Speed Adjustment Area | Adjust and display the sewing speed of the current pattern |
| J | MENU | Display the catalogue (refer to [2.2.3 Interface 2]) |
| K | Enter Main Interface P2 | Press it to enter Main Interface P2. |
| L | Herringbone sewing template pattern setting key | Press this button to enter,parameters of herringbone seam can be set |
| M | Forward key | Press this key,X-Y (frame) will move forward on the pattern |
| N | Display the data | Displays the current pattern data |
| O | Copy pattern key | Press this button to enter, you can choose the pattern you need |
| P | Threading key | Press this key to thread |
| Q | Intermittent presser foot setting | Adjust the intermittent presser foot height |
| R | Trial sewing key | Trial sewing operation |
| S | Template lock key | Lock the pattern template used |

| No. | Functions | Content |
|---|---|---|
| T | The winding key | You can set whether to winding |
| U | Forward key | Move forward moves the sewing needle forward |
| V | Convert / zoom key | Press this key to enter and select the pattern you need |

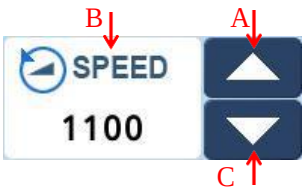
### 2.3.1 Pattern Stitch Number Display




**Functions:**

| No. | Descriptions |
|---|---|
| A | Display the current frame position and sewing data type.<br>(Sewing "SEW", Feed "FEED", Sub-origin "2HP", Upper Stop "USTP", Down Stop "DSTP", Thread-trimming "TRIM", Feed Speed "FEDS", Restart "ASRT", Board Heavy "HEVI", Fabric Thick "ATUM", Jump Sewing "BAT", Function 1 "FUN1"~Function 7 "FUN7", Reverse Presser Feet "REPF", End "END") |
| B | Display the stitch number at current position |
| C | Display the total stitch number of the current pattern (Including Feed, Thread-trimming, End, Code, etc.) |
| D | The distance that X/Y has traveled |
| E | Size of Pattern in X Direction |
| F | Size of Pattern in Y Direction |
| G | The time when the pattern was created |

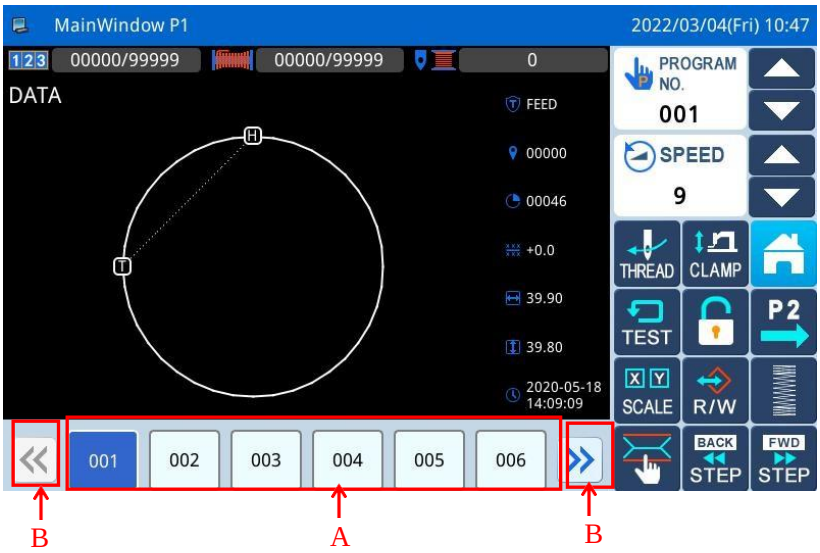
### 2.3.2 Speed Adjustment




**Functions:**

| No. | Description |
|---|---|
| A | Increase the speed |
| B | Current sewing speed（200~2700）<br>Display as speed value, if click this icon, you can jump to the standard parameter setting interface -- shortcut operation |
| C | Reduce the speed |

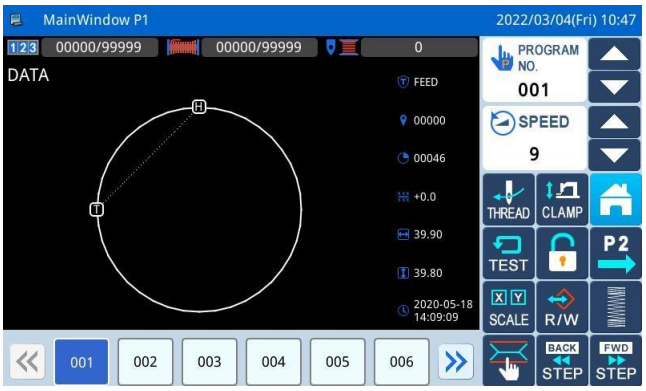
### 2.3.3 Operation of Pattern Number Hot key



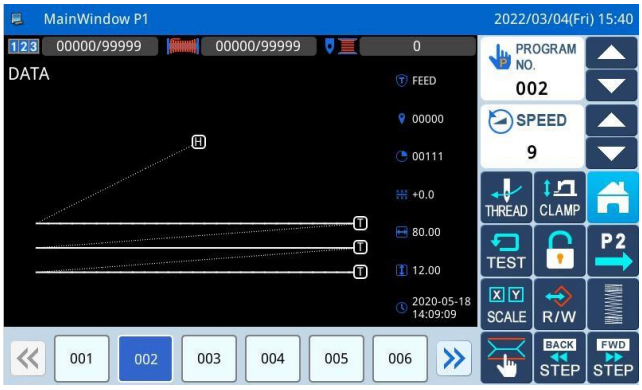

**Functions:**

| No. | Description |
|---|---|
| A | Pattern number hot key (Current pattern: Displayed in white figure on blue background), select other number to shift the pattern. |
| B | Pattern number display page turn key |

**Example:**



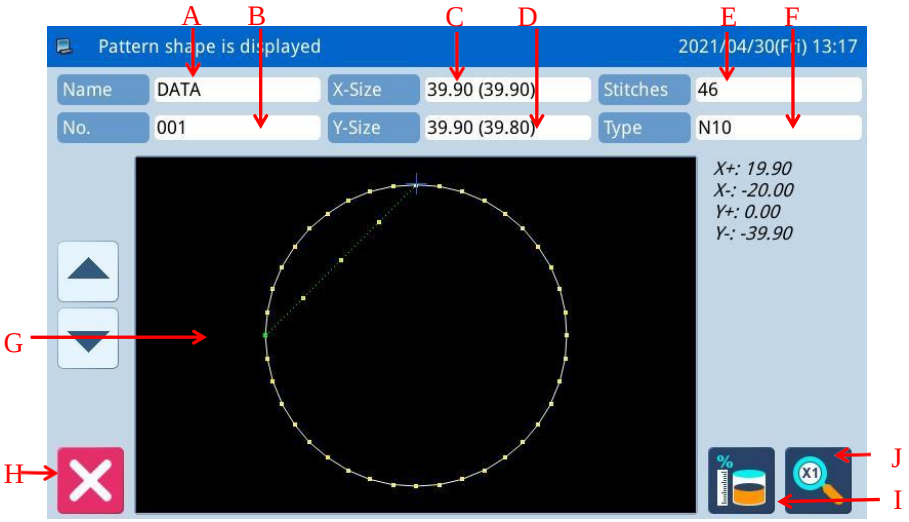

As shown in the figure, the shortcut key list in this example contains 2 pattern numbers. The current pattern number is 001. If we select pattern No. 002, the current pattern will be shifted to pattern No.002




As shown in the figure,This example selects the number 002 pattern, the current pattern will be shifted to pattern No.002

### 2.3.4 Pattern Display

In the Main interface P1, click the pattern display area to enter the pattern preview interface




**Functions：**

| No. | Description |
|---|---|
| A | Pattern Name |
| B | Pattern Number |
| C | Size of Pattern in X Direction |
| D | Size of Pattern in Y Direction |
| E | Display Total Stitch Number of Pattern (Including Feed, Trimming, End, Code and so on). |
| F | Displays the current pattern type |
| G | Pattern Display. |
| H | Quit current interface and return to the previous interface. |
| I | Free space in memory display |
| J | The pattern display interface is cyclically enlarged |

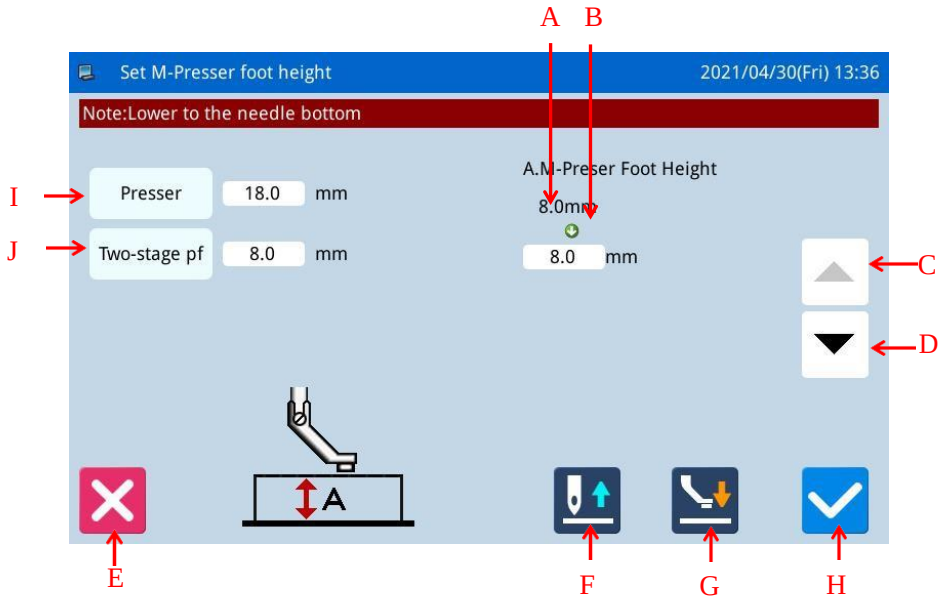
### 2.3.5 Sewing Fabric Thickness Setting

The lowest position of the intermediate presser is changeable. If the lowest position of intermediate presser in the default setting is lower than the thickness of the used fabric, user can use this function to change it.

**[Note]: If users enter this interface when the intermediate presser is at down position, the system will hint "Lift Intermediate Presser".**

**[Note]: After entering the interface for setting the fabric thickness: only when the intermediate presser goes down, can user set this parameter.**

**[Note]: The range of this parameter is 0.0~8.0mm。**




**Functions：**

| No. | Description |
|---|---|
| A | Current Height of Intermediate Presser |
| B | Target Height of Intermediate Presser |
| C | Increase Height<br>The intermediate presser goes up by 0.1mm at each pressing |
| D | Decrease Height<br>The intermediate presser goes down by 0.1mm at each pressing |
| E | Quit the current interface and return to the previous interface. |
| F | Move needle vertically.<br>: Needle down<br>: Needle up |
| G | Press it to move the intermediate presser in the arrow direction<br>: Intermediate presser up<br>: Intermediate presser down |

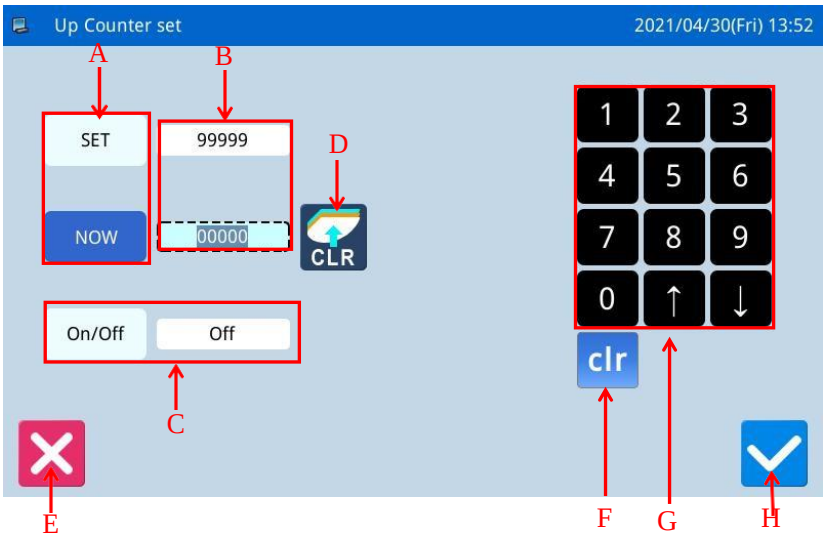
| | |
|---|---|
| H | Save and Quit |
| I | Height setting of presser foot |
| G | Two - stage presser foot setting |

### 2.3.6 Add counter setup

**Push down** 

**in P1 to enter the setting interface of adding counter.**

**[Note] Counting mode of add/subtract counter is determined by the "counter" parameter in operation setting mode (refer to parameter description in [2.8.6 parameter setting table]).**

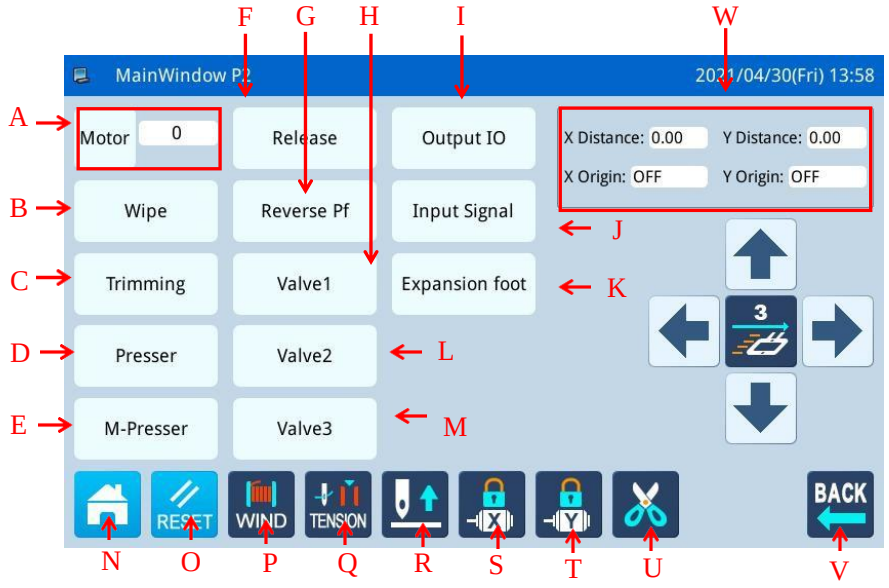



**Functions:**

| No. | **Content** |
|---|---|
| A | Shift the input between the set value and the current value (The button in shadow is the selected one). |
| B | Display the set value and current value (User can input the value in the dotted frame) |
| C | Up Counter Switch |
| D | Clear current value. |
| E | Quit counter setting mode and return to previous interface. |
| F | Clear the value inputted currently |
| G | Number keyboard, used to input set value and current value |
| H | Confirm the setting |

[Note] The subtraction counter setting operation is the same as the addition counter operation.

## 2.4 Main Interface P2




**Functions:**

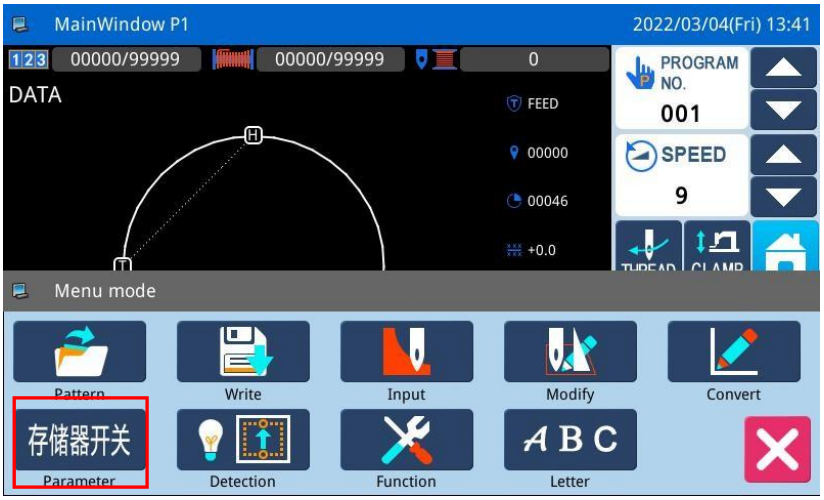
| No. | Functions | Content |
|---|---|---|
| A | Main motor Angle setting | Set the Angle of main motor. The following number represents the Angle of the current angle. |
| B | wiper | Thread wiping output detection. |
| C | Trimming | Thread Trimming output detection. |
| D | Presser | Presser foot output detection. |
| E | Middle-presser foot | M-presser foot output detection. |
| F | Release | Thread release output detection. |
| G | Reverse Presser | Reverse Presser foot output detection |
| H | Auxiliary valve 1 | Auxiliary valve 1 output detection |
| I | IO configuration | IO configuration parameters |
| J | Input signal | Input signal test |
| K | Reverse Pressers foot | Reverse presser output detection |
| L | Auxiliary valve 2 | Auxiliary valve 2 |
| M | Auxiliary valve 3 | Auxiliary valve 3 |
| N | MENU key | Display the catalogue |
| O | Reset button | The sewing needle goes back to its original point |
| P | Winding pattern | Can be set whether winding |
| Q | Thread Looser current | Set the current of Thread loosening device when threading |
| R | Needle Positin Setup | ：The needle down  ：The needle up |
| S | X lock shaft | X axis lock /release |
| T | Y lock shaft | Y axis lock /release |
| U | Trimming | Thread Trimming output detection. |

| | | |
|---|---|---|
| V | Return key | Press it to return to the main interface 1 |
| W | Coordinate values | Displays X/Y coordinate values |

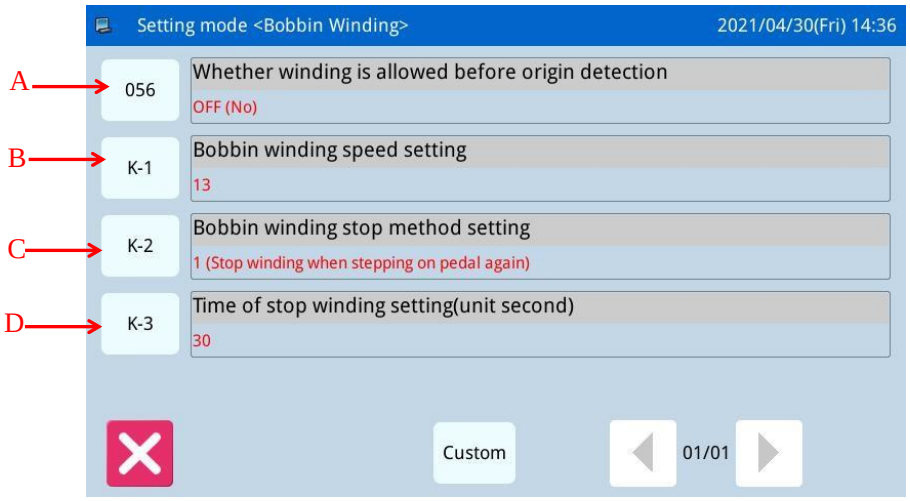
### 2.4.1 Winding Mode

For winding, user has to activate this interface . Step the frame switch to lower the frame and then step the running switch to run the sewing machine at the set speed. But the X & Y axis will not move. Step on the pedal again and the machine will stop in the up position.

**[Note]: The winding action is determined by the parameter "Winding" set in the Operation Setting Mode. (Please refer to [2.8.6 Parameter List])**



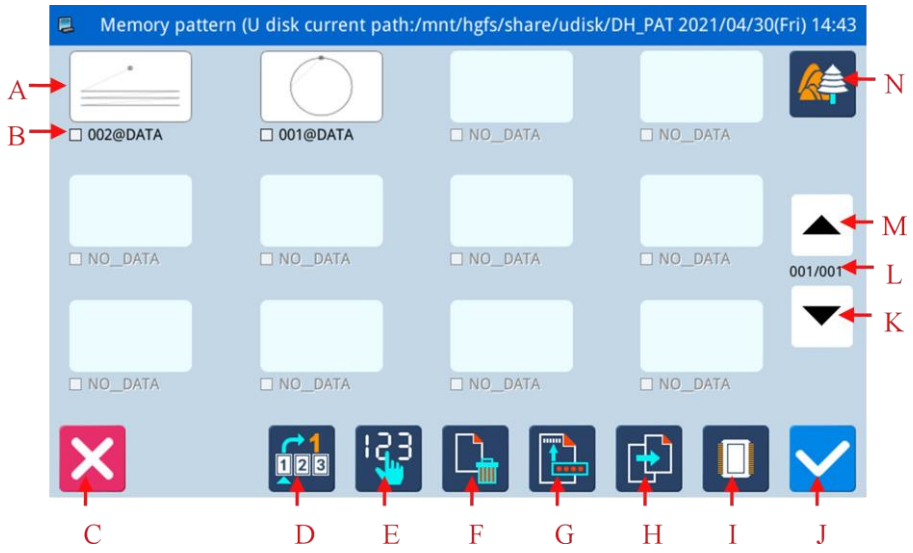




**Functions：**

| No. | Description |
|---|---|
| A | Whether winding is allowed before origin detection |
| B | Actual winding speed setting.<br>**[Note] Decided by the parameter "winding core" -> "winding speed setting".** |
| C | Winding stop mode setting.<br>**[Note] Decided by the parameter "winding core" -> "winding stop-mode setting".** |
| D | Timed stop winding time setting.<br>**[Note] Decided by the parameter "winding core" -> "timing stop winding time setting".** |

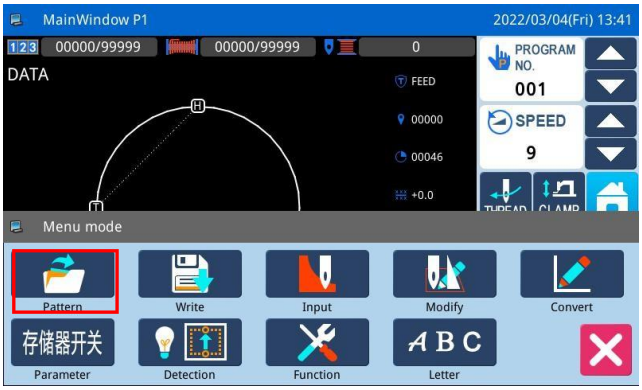
## 2.5 Load Pattern




**Functions:**

| No. | Functions | Content |
|---|---|---|
| A | Pattern preview list | Display the list of the saved pattern (Both number and name will be displayed).<br>**[Note 1]: If user selects pattern in VDT format, system will ask user to transform the pattern format.**<br>**[Note 2]: If the stitch number of the selected pattern is over range or the data is damaged, the system will hint that the pattern is unable to be selected.** |
| B | Pattern No List | Display the list of the saved pattern number. |
| C | Return to Main Interface | Return to main interface directly |
| D | Find patterns | Find patterns |
| E | Sequencing | Sequence the patterns according to their modification time or number. |
| F | Delete Pattern | Delete the selected pattern.<br>**[Note]: The currently sewing pattern cannot be deleted.** |
| G | The save button | You can save the specified pattern |
| H | Access key | Select a pattern from memory or USB drive as the current sewing pattern. |
| I | Select Memory/ U Disk | Load pattern from memory or U disk<br>Shift between U Disk and Memory |
| J | Enter | Confirm the operation. After the operation, the sewing pattern will turn to the newly selected pattern. |
| K | Page down | Page down to look up interface |
| L | Page | Display current page number/ total page number |
| M | Page up | to look up interface |
| N | Pattern Display | Can preview patterns |

## 2.5.1 Operation Instructions：

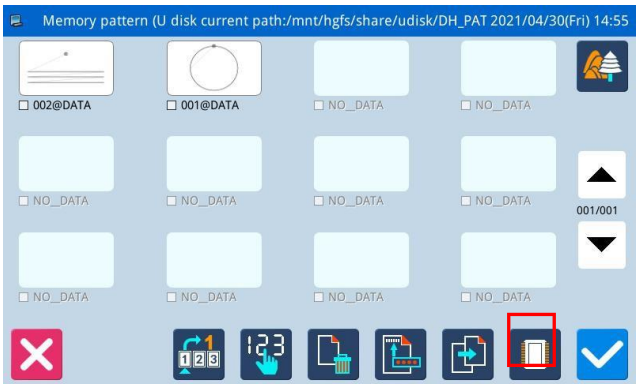



**1、Open the Interface to Load Pattern**

In main interface P1 (or P2), press  to activate the catalogue mode, and then press 

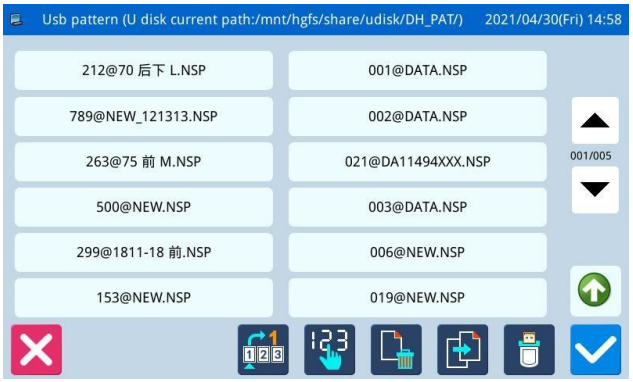
.

**[Note]: If the moving frame is not at the origin, the system will be unable to load pattern. Therefore, please perform the operation for returning to origin first.**




**2、Select the Object for Loading (Memory/ U Disk)**

The default setting in this interface is the Memory Load Mode. You can press  to shift to U Disk Load Mode, which is shown at below.



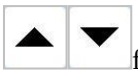

**[Note]: If user performs the above operation without inserting the U disk, the system will display "U Disk Is Pulled Out".**

**3、Select and Confirm Pattern Number**

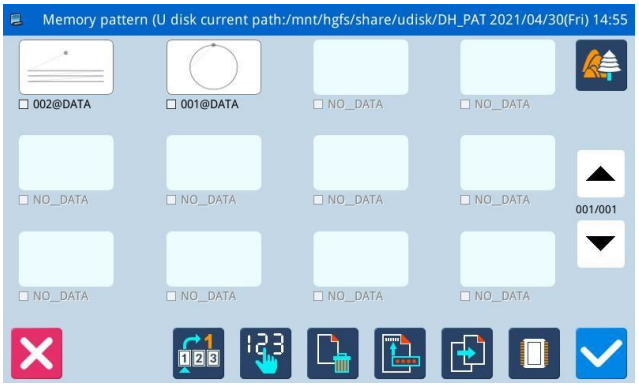
Select the pattern number for sewing and then press  . After the selection, the system will return to the main interface directly.

[Note]: If the pattern with the same number exists in the memory when user loads pattern from U disk, the system will display "Replace Pattern in Memory?". At this moment, user need follow the given instructions.

**4、Other Operations**

If there are many patterns, user can use  for page turning and press  to view the pattern list more directly. If user knows the pattern number, he can use  to load the pattern directly.

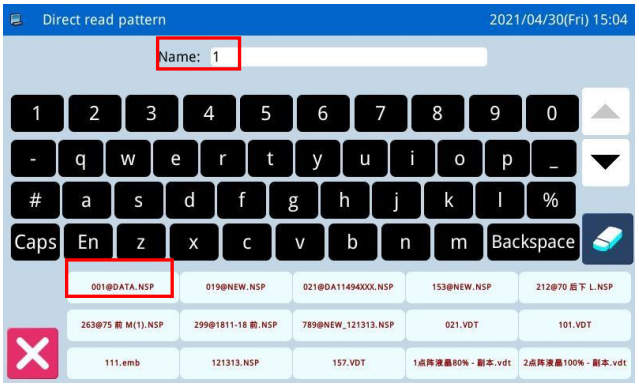
## 2.5.2 Direct Load Mode




**1、Select Direct Load Mode**

Press  in pattern loading interface to enter the Direct Load Mode.

**[Note]: To load pattern by directly inputting the pattern number is limited to the memory load mode.**




**2、Input the First Number**

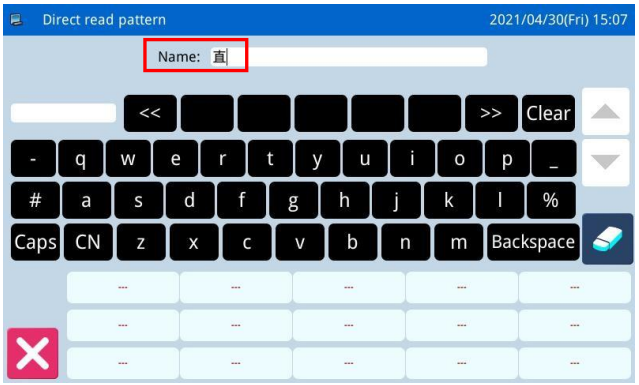
(E.g. Load pattern No.01)

① Input "1".

② The patterns saved in the memory whose first number is 1 will be displayed on the bottom keyboard as below:

③ Press  to clear the inputted number and re-input them.

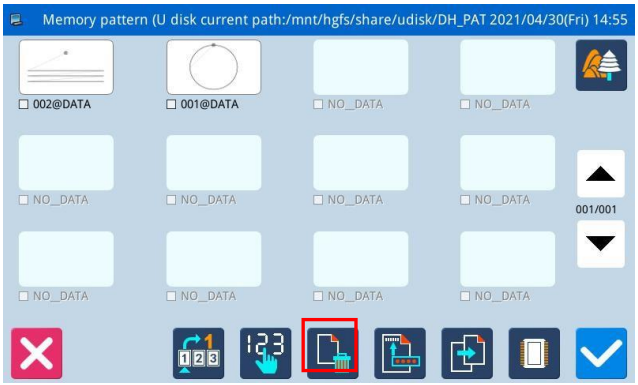
④ At this moment, press  to activate the pattern and then the system will return to the main interface and display the selected pattern.




**3、Switch English to Chinese**

⑤ pattern search, you can input Chinese, switch to the Chinese input method mode to enter the search pattern.

### 2.5.3 Delete Pattern

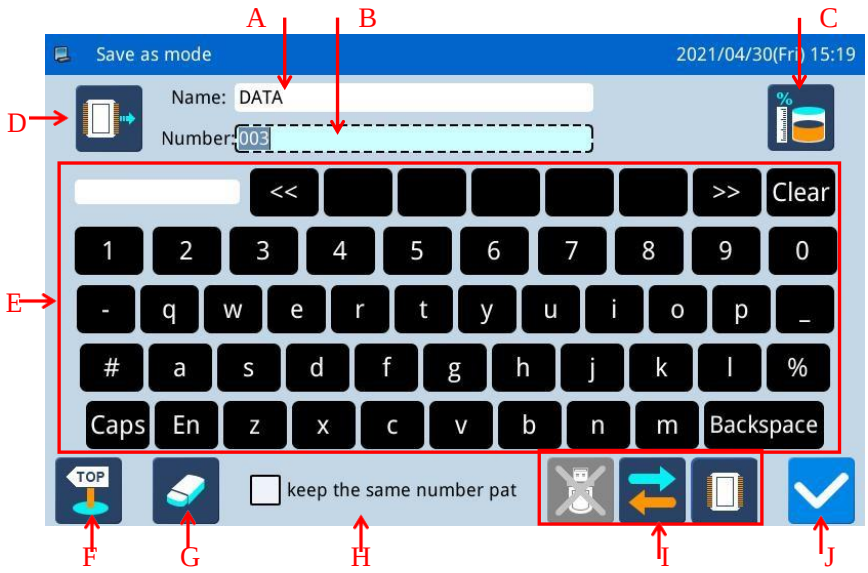



User can press  to delete a pattern. At this moment, the system will display “Delete Pattern from Memory?” (If the system is at U Disk Load Mode, the system will display “Delete the Selected File?”.). User need follow the given instructions, but the pattern being sewn cannot be deleted.

### 2.5.4 Supported Data Format

At present, the supported formats by the system are: NSP format, B format, BA format, VDT format, EMB format, DST format, DSB format, DSZ format,SEW format.

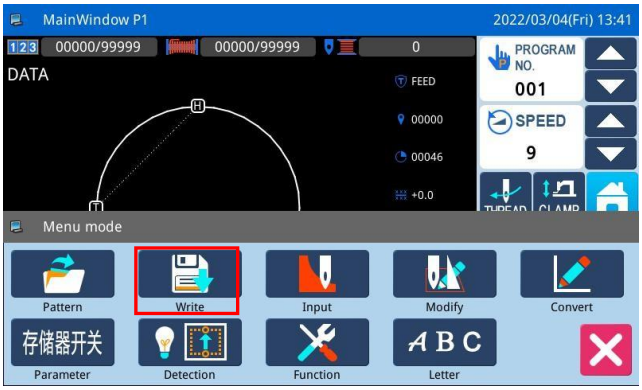
## 2.6 Save Pattern

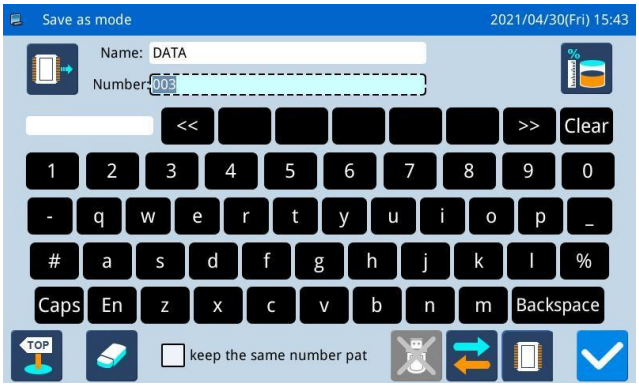


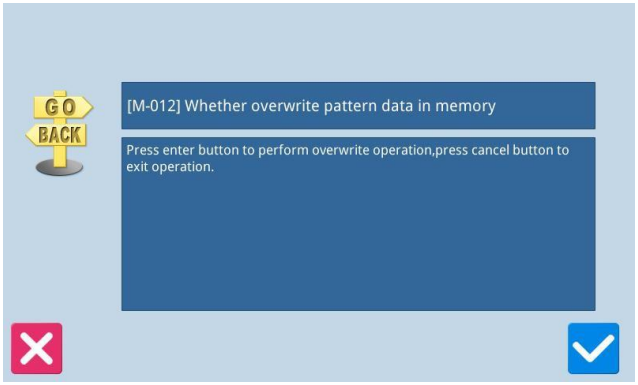

**Function:**

| No. | Functions | Content |
|---|---|---|
| A | Input Pattern Name | Display the pattern name |
| B | Input Pattern Number | Display the pattern number |
| C | Memory surplus function | Look at the amount of memory left |
| D | Display storage location | : The storage location is memory<br>: The storage location is a usb flash drive |
| E | Keyboard | Input name or number |
| F | Return key | Return to the previous screen |
| G | Clear All Characters | Press it to clear all the inputted characters |
| H | Keep Pattern with Same Number | keep the same number pat:Choose to keep the same number pattern, save the same pattern, pattern number is different<br>keep the same number pat: not to keep the pattern with the same number |
| I | Select Memory/ U Disk | Select read memory or U disk pattern, toggle to select U disk or memory |
| J | Identify key | Save the current Settings and exit to the previous screen |

**Operation Instructions:**




**1、Enter the pattern save interface**

In main interface P1 (or P2), press  to activate the catalogue mode, and then press 

.

**[Note]: If the moving frame is not at the origin, the system will be unable to save pattern. Therefore, please perform the operation for returning to origin first.**

**2、Set Name and Number**

The default setting in this interface is the Memory Save Mode (you can see  at the upper left of the screen). You can press  to shift to U Disk Save Mode.

Press 

or 

to input the name or number.

Pressing 

is to delete the first character at the left of the cursor, while pressing  is to clear all the characters.

If user need shift between capital and small letters, please press 

.

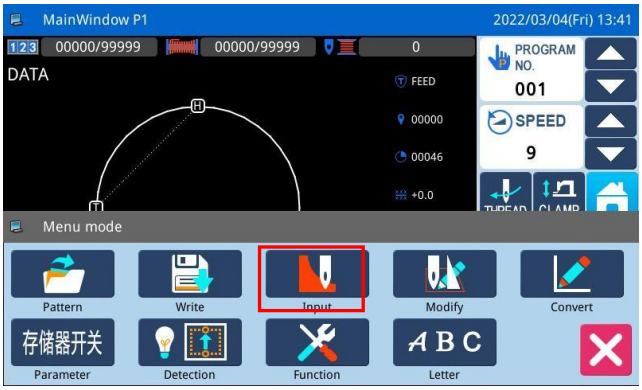
**[Note]: User can decide the number for a pattern before saving; the filename of a pattern consists of "Pattern Name" + "@Pattern Number" + "Format Type.nsp".**

**3、Save Pattern**

After the input, press  to return to the main interface directly

**[Note]: If the memory contains the pattern with the number same to that of the inputted one, the system will display "Replace Pattern in Memory?" Press  to cancel the replacement; press  to perform the replacement.**

## 2.7 Figure play version




Under the main interface P1 interface, click the menu key → pattern typesetting key Input to enter the pattern typesetting interface.

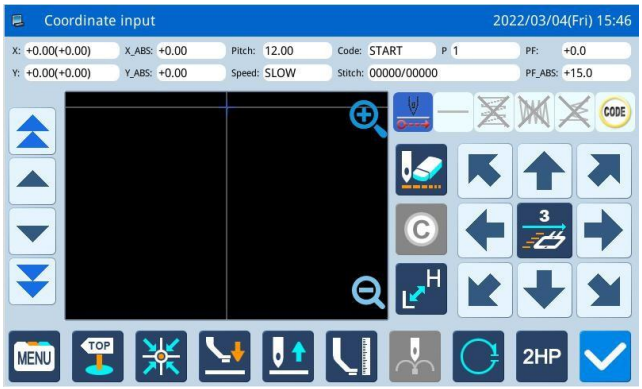

（1） **Whether to re-enter**

If you want to replace the entered data with a new one, press CLR (clear the last copy, reprint).

If you want to continue with the data you have entered, press CLR (continue with the last version).

（2） **Set Speed**

Click four speed buttons in the interface to select different speeds： HIGH MD1 MD2 SLOW




（3） **Set the pitch**

Through the 0 ~ 9 digital key and ↑ ~ ↓ key, you can enter the pitch, ranging from 0.1 mm to 12.7 mm.

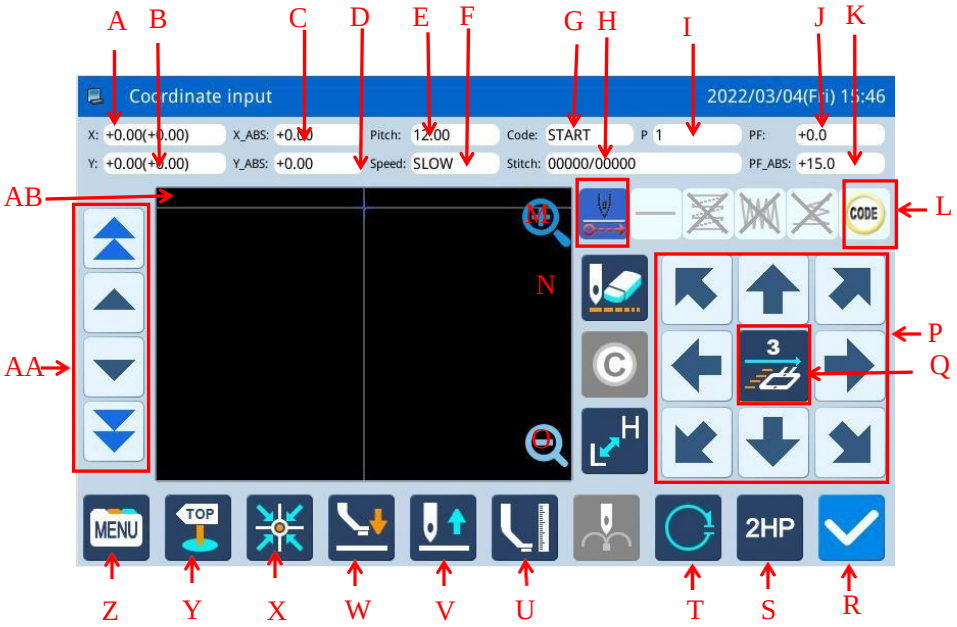
（4） **Graphical parameter modification**

There are parameter keys in the interface for printing, modifying, and converting, and the related parameters are concentrated to facilitate user settings.

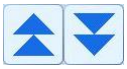
（5） **Determine input**

After the above data setting is completed, press the key to enter the cursor input interface.

**Supplementary Instructions**



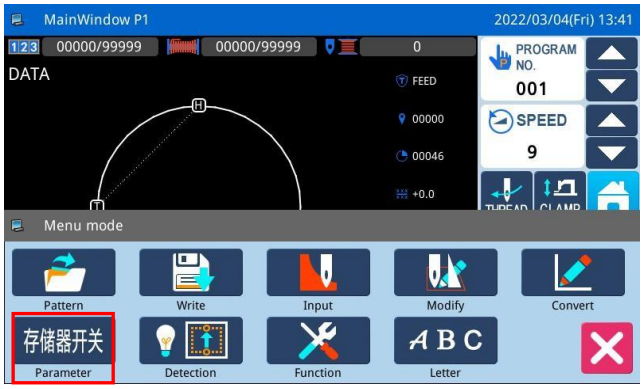

| No. | function | content |
|---|---|---|
| A | X relative coordinates | Displays the relative coordinate X value of the current move. （In parentheses is the difference between the position of the cross cursor and the pattern） |
| B | Y relative coordinates | Displays the relative coordinate Y value of the current move. （In parentheses is the difference between the position of the cross cursor and the pattern） |
| C | X absolute coordinates | Displays the X value of the current coordinates. |
| D | Y absolute coordinates | Displays the Y value of the current coordinates. |
| E | Stitch length | Displays the set stitching distance.<br>**[Note] Air feeding needle distance is 12.0mm** |
| F | Speed | Displays the current needle speed. |
| G | Code | Displays the current input code. |
| H | Needle count | Display the number of pins/total number of pins in the current machine needle position. |
| I | Number of shape points | The number of shapes entered during the current editing process. |
| J | Relative value of intermediate presser height | Displays the current intermediate presser height relative value |
| K | Absolute value of intermediate presser height | Displays the current intermediate presser height absolute value |
| L | Typesetting | Various typing functions. |
| M | Amplification | The pattern can be enlarged |
| N | Cancel last input | Press this key to cancel the last determined input point and return to the previous input point. |
| O | Change sewing machine speed | Press this button to switch sewing machine speed successively: low |

| No. | function | content |
|---|---|---|
| | | speed, high speed, medium high speed, medium low speed. |
| P | Direction key | Move the frame in all directions. |
| Q | Table move speed set | The range is 1~3 |
| R | Enter | Confirm the current edit shape. |
| S | Second origin | After the transfer, a second origin can be inserted at the current position. |
| T | Close | Closing function. |
| U | Needle position setting key | Raise or lower the needle position |
| V | Machine needle position setting key | Make the needle position rise or fall |
| W | Intermediate presser up | Adjust the intermediate presser to rise |
| X | Return to origin | Press and then execute the return to origin command. |
| Y | Quit | Return to the previous screen. |
| Z | Menu | Go into directory mode. |
| AA | Inching Movement(Click Move button) |  : make inching movement forward/backward on generated pattern.  : make fast inching movement forward/backward on generated pattern. |
| AB | Pattern screen display | Display the current printing pattern |

## 2.8 Operation Setting

It is to set each parameter. For the description of each parameter, please refer to [2.8.6 Parameter List].

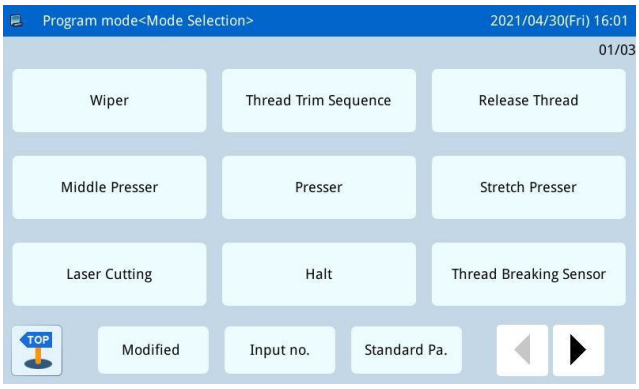
### 2.8.1 Setting Method




**1、Enter Operation Setting:**

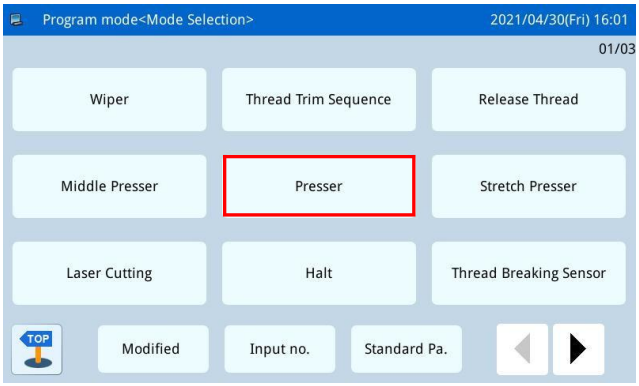
In main interface P1 (or P2), press  to activate the catalogue mode, and then press 

.




**2、Interfaces at Setting Mode**

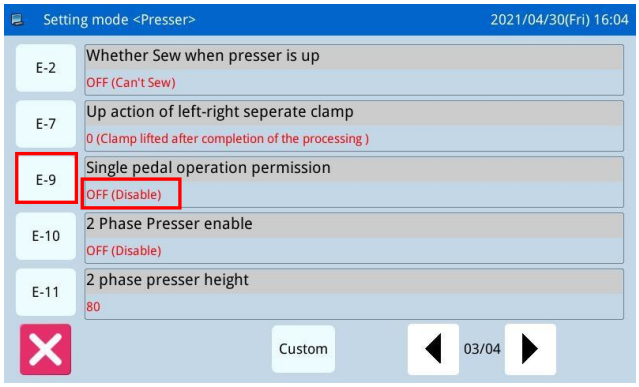
After entering the operation setting interface,There are many parameters can be chose , user can use  to turn the pages for selecting parameters.




**3、Example ：**

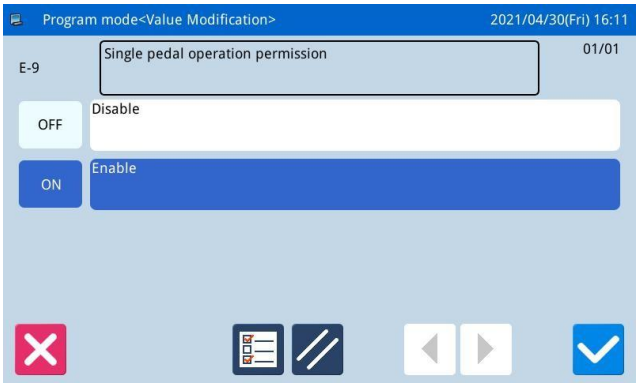
**① Mode Selection**

Select the parameter for setting to activate the “Internal Parameter Setting Interface”. Here, we press “Presser foot”




② **Internal Parameter Setting Interface**

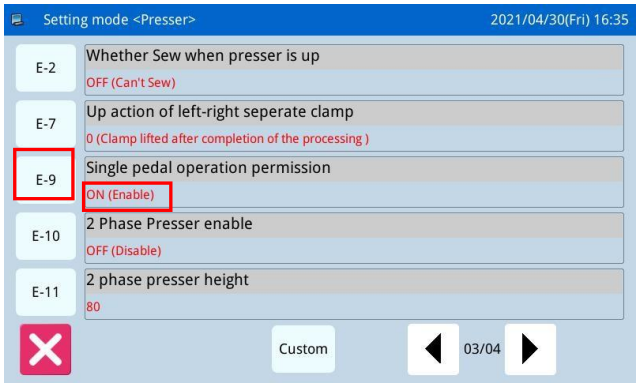
Select the parameter for setting to activate the "interface for changing the set value". (We press "E-9" here.)




③ **Change Set Value of Parameter**

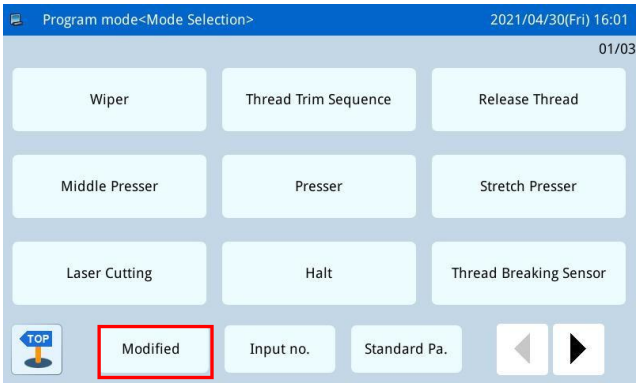
Press parameter to change the set value (here, we press "ON"). Then, press  to confirm it.

**[Note]: Pressing  is to display the descriptions of that parameter and its value.**




④ **Check the Changed Parameter Set Value**

Return to the "Internal Parameter Setting Interface", where user can check the set value after change. Press  to quit.




⑤ **Return to Mode Selection Interface**

Return to "Mode Selection" interface. Because the set value is changed, the button "Modified" is displayed.

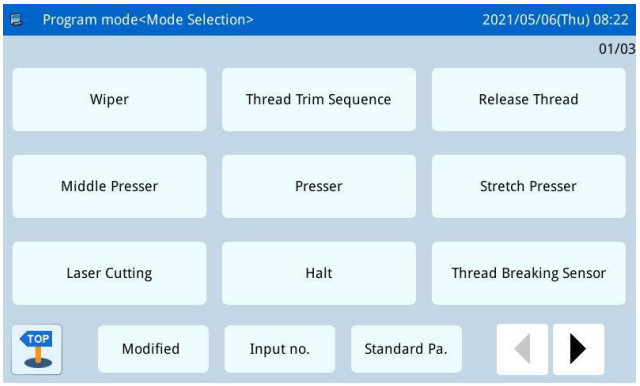
For returning to main interface P1 (or P2), please press  .

For checking the modified content, please press the "Modified" key.


**⑥View the modified parameters**

**a)Enter password input mode**

In the "Mode Selection" screen, press the "Modified Settings" button.,After the password is entered correctly, the modified parameter setting mode will be entered.(See [2.8.3 Parameter Mode Encryption Instructions] for more information on password setting.)




**b) Enter Modified Parameter Setting Mode**

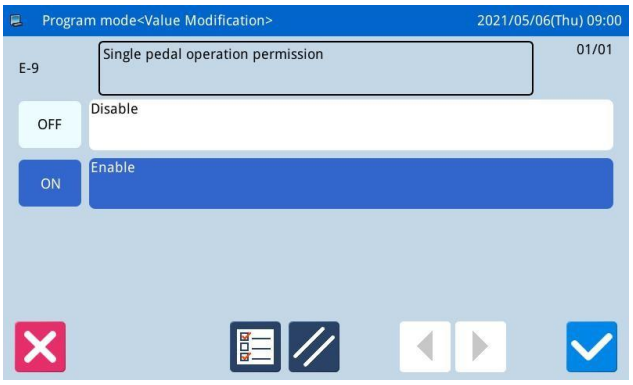
In this interface, the modified content of the parameter will be displayed. User can modify it again in this interface (Here, press “E-9”).

If user wants to restore the modified parameters, he should press the button with the name of that parameter (Here, he can press “Pedal Operation Method”) and then click “Restore”. After that user only needs to follow the instruction of the system.

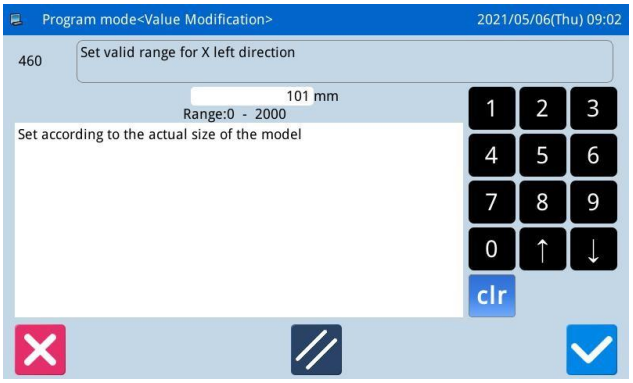
If user wants to restore the entire setting to their default values, he can press “Restore All”. After that user only needs to follow the instruction of the system.

## 2.8.2 Types of Parameter Setting

There are two ways for setting parameter: selection type and input type, as shown below:



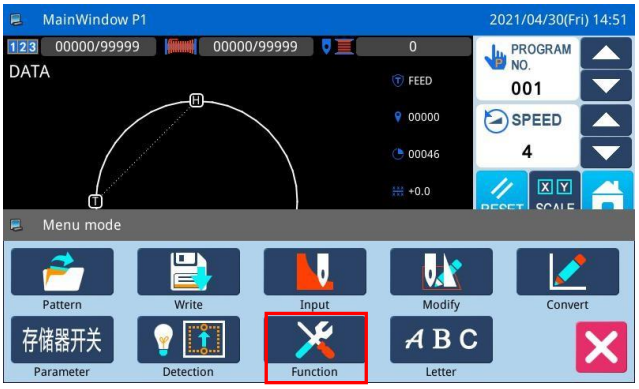

Selection Type

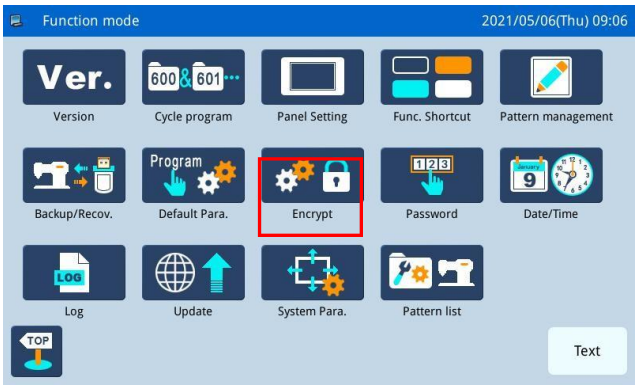



Input Type

## 2.8.3 Parameter Encryption

In the parameter mode, each operation entrance can be attached a password, so as to avoid the mistake operation.



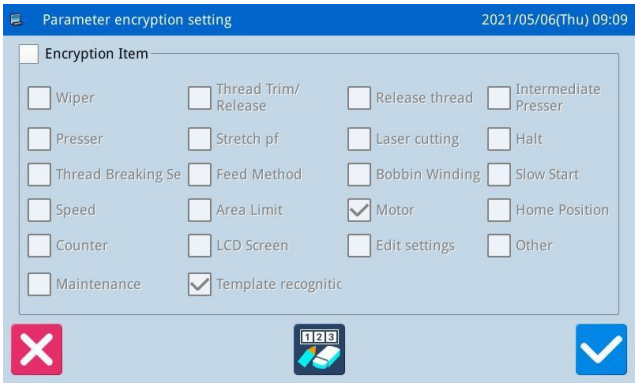

**1、Enter Parameter Encryption Interface:**

In main interface P1 (or P2), press  to activate the catalogue mode, and then press 

to Enter the interface for setting functions.

In the function setting interface, press 

.



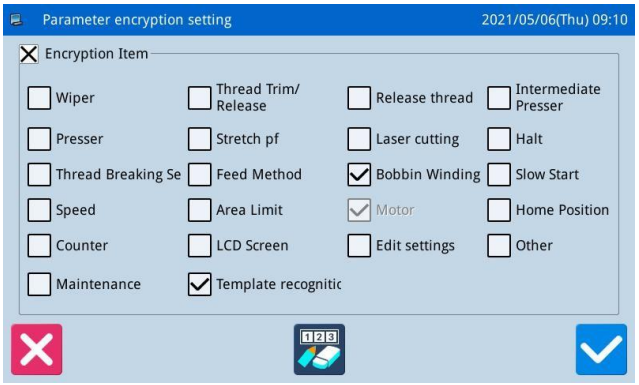

**2、Select Parameter for Encryption:**

As shown in the picture, user can select one or many parameters for encryption. (Here, we select “Bobbin Winding”.)

: Selected

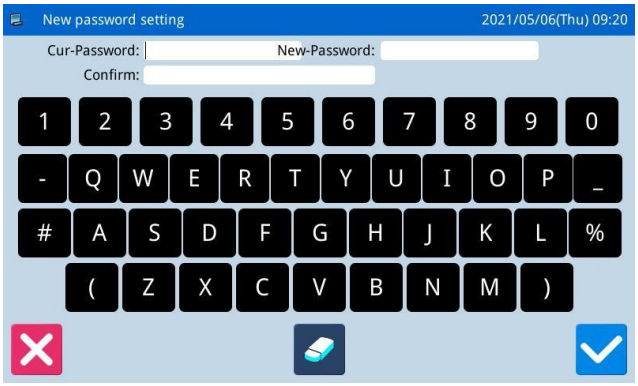
: Unselected

After selecting the parameter for encryption, user can press 
.




From then on, user has to input password when setting the parameter that was encrypted.

For changing password, please press 
.



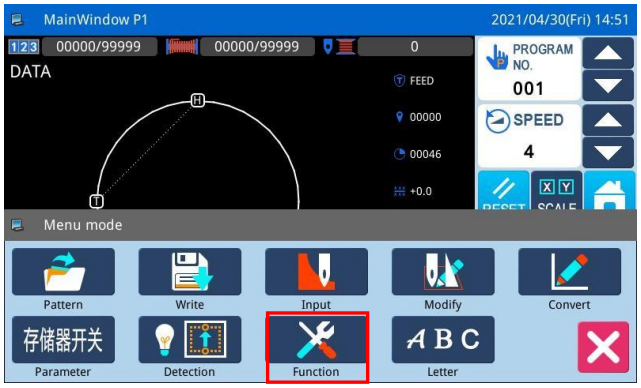

### 3、Change Password

In the interface of setting new password, press Cur-Password: New-Password: & Confirm: in order and input the current password, new password, new password confirmation respectively. At last press .

**[Note]: The original password is the manufacturer ID. After setting the password, the current password is the password set last time.**

## 2.8.4 Recovery and Back-up of Parameters

User can save the changed parameter into U disk for the recovery operation in future.

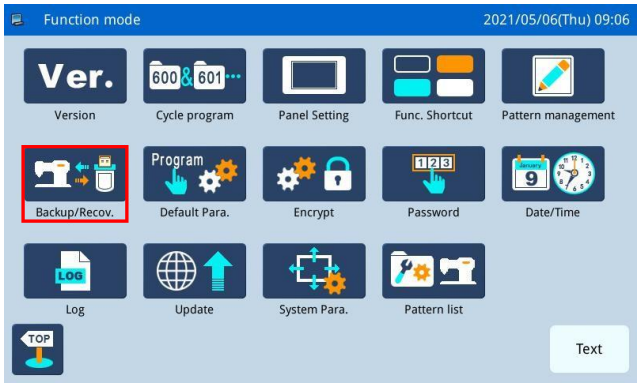


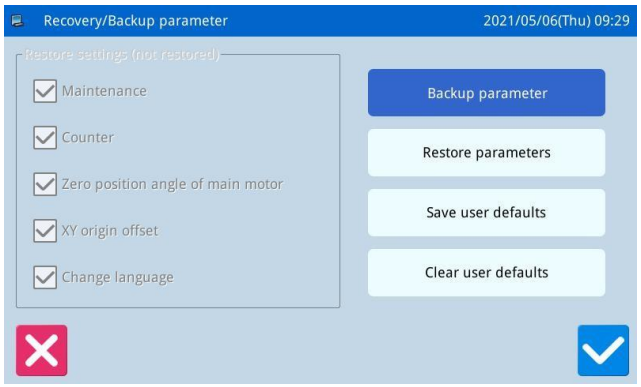

**1 、 Enter Interface of Parameter Recovery and Back-up:**

In main interface P1 (or P2), press  to activate the catalogue mode, and then press 

to Enter the interface for setting functions.

In the function setting interface, press 

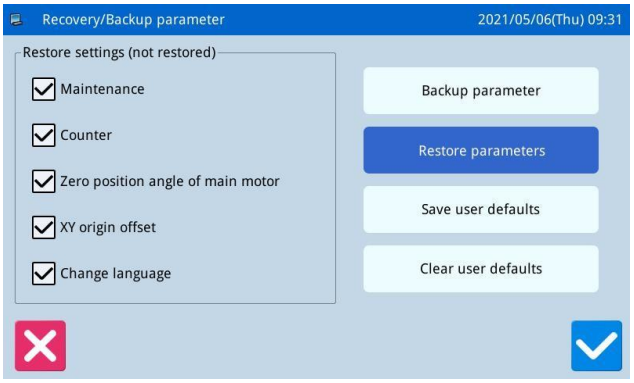




**2、Back up Parameters**

Enter the restore backup parameters interface. By default, backup user parameters.

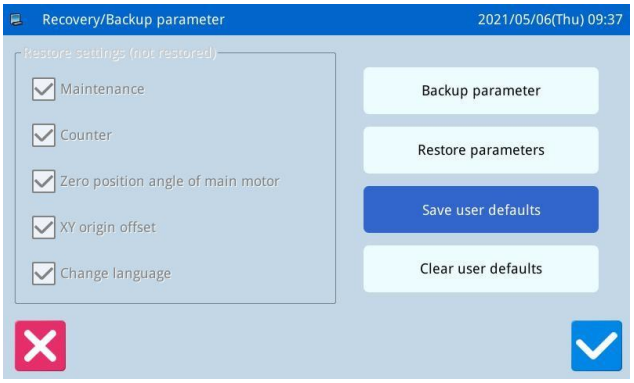
After inserting the usb flash drive, press  . Once the operation is successful, a "bakParam" directory will be automatically created on the usb flash drive. The "backup.param" file in this directory is the parameter backup file.

**[Note] if there is a file with the same name, it will be stamped with new data and the original data will disappear.**



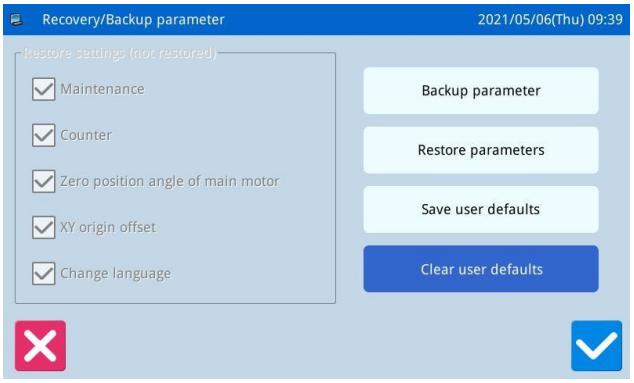

### 3、Restore parameters

Click the "restore mode" key to select the parameters that are not restored on the left side of the interface, and then press the "ok" key to perform the parameter restore operation, and return to the previous screen after the operation is successful.




### 4、Save user defaults

Select the "write user default value" key, press the "ok" key , the system will prompt for the input of permission 2 password, after the successful input will directly perform this operation.

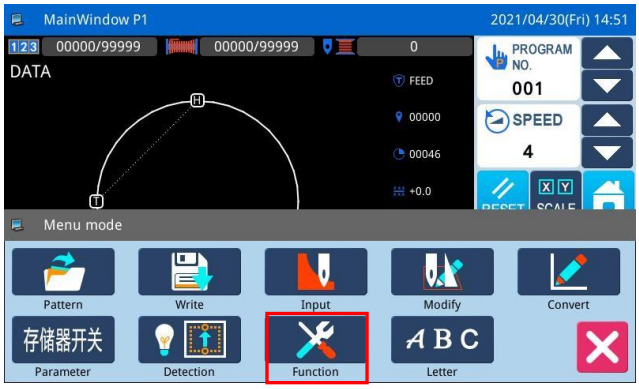



### 5、Clear user defaults

After successfully writing the user default value, the "clear user default value" key is optional, and the user default value can be cleared by pressing .

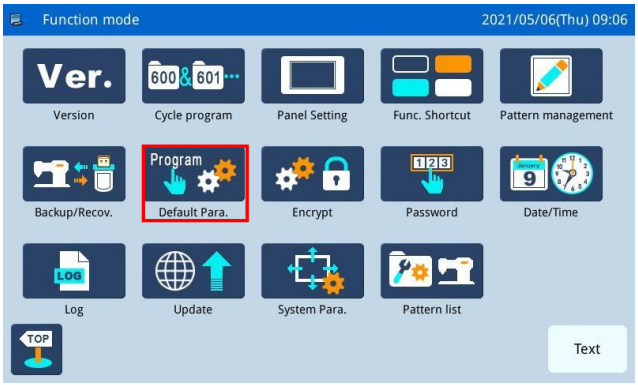
## 2.8.5 Default Parameter Recovery

User can restore the parameters to their default values. Additionally, user can also save the set parameters for the usage in future.




### 1、Enter Default Parameter Recovery:

In main interface P1 (or P2), press to activate the catalogue mode, and then press Function to enter the interface for setting functions.




In Function Setting Interface, press 

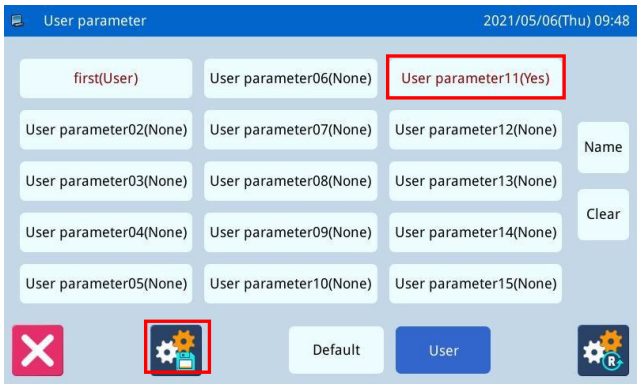
and then input the password (the original password is the manufacturer ID). With the correct password, user can enter Default Parameter Mode


## 2、Use the Default Parameter

Click the corresponding default parameter and then press “System Default” to reload that value

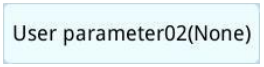
After the reloading, the system will return to the upper interface automatically.

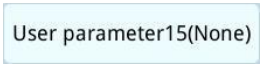
**[Note] Some important parameter, like “Spindle Motor Stop Angle” cannot be restored in this operation.**




## 3、Save Customized Parameter

Press “Custom” to enter the interface of Customized parameter setting interface, where user can save the parameter set value.

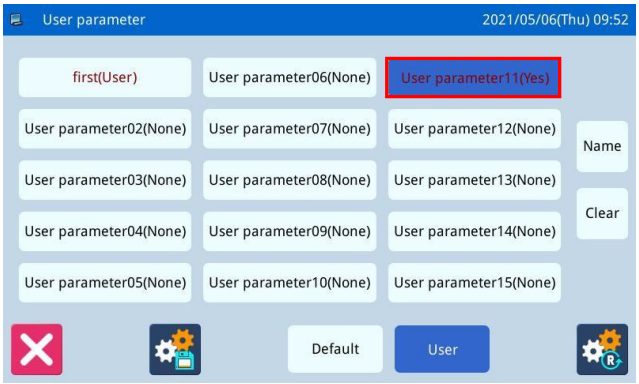
Click 

~ 

to confirm the position for saving, and then click  to save it.

After the saving, the system will return to the upper interface automatically

**[Note] After saving, it will exit automatically and return to the previous screen.**




## 4、Load Parameter Saved by User

The method to enter the interface is the same as above,Check the content on button “Customized Parameter xx (Y/N)”. If it is Y in the bracket, it means there is saved customized parameter.

Click that key and press  to reload the corresponding parameter. After the operation, the system will return to the upper interface automatically.

### 2.8.6 Parameter List

## 1、Wiper

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 566 | Trapper | Switch of needle lifter | | | OFF:The wiper is off<br>ON:The wiper is on | 0 | Choose |
| 557 | Line dialer type selection | Line dialer type selection | | | 0:Default<br>1: Use electromagnet wire sweeping device<br>2: Use pneumatic line sweeping device | 0 | Choose |
| A-1 | Dial switch | Line puller (W) output switch | | | OFF:The wiper is off<br>ON:The wiper is on | ON | Choose |
| A-2 | Puller start time | The starting time of the line puller (W) can be set according to the time of line cutting, usually don ‘t need to change. | ms | 2 | 0~998 | 30 | Input |
| A-3 | Line puller hold time | The holding time of the line puller (W) can be set, which can be set according to the time of line cutting.The time can be extended if necessary | ms | 2 | 0~998 | 30 | Input |
| A-4 | The delayer ends the delay | After the line puller action, delay waiting for the reset mechanism | ms | 1 | 0~255 | 0 | Input |
| A-6 | The wire clip holds the current | The wire clip holds the current | | 1 | 0~16 | 8 | Input |
| A-7 | Dial the timing | Dial the timing | | | 0:UP:mid-pressor top<br>1:MID:mid-pressor top(Down position)<br>2:DOWN:mid-pressor bottorn | 0 | Choose |

## 2、Thread Trim Sequence

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 150 | The inverted needle goes up | Position Angle of needle after cutting thread | | | 0: the needle<br>1: top dead center | 0 | Choose |
| 164 | Shear line switch | Shear line switch | | | 0:OFF:OFF<br>1:ON:ON | 1 | Choose |
| B-2 | Trimming mode | Trimming mode | | | 0:MAG: Solenoid<br>1:AIR: Air valve<br>2:MOTOR: Motor | 0 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| B-3 | Shear velocity | Shear velocity | x10RPM | 1 | 10~40 | 40 | Input |
| B-5 | Thread cutting delay | Thread cutting delay | x0.01s | 1 | 0~255 | 12 | Input |
| B-6 | Cutting output startup Angle | Cutting output startup Angle | Degree | 2 | 0~359 | 210 | Input |
| B-7 | Automatically add cutting line when printing | Automatically add cutting line when printing | | | 0:OFF:OFF<br>1:ON:ON | 1 | Choose |
| B-8 | Whether to cut the thread before sewing time and space | Whether to cut the thread before sewing time and space | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |
| B-9 | Whether to cut the thread at the end of sewing | Whether to cut the thread at the end of sewing | | | OFF:OFF<br>ON:ON | 1 | Choose |
| B-10 | Correction of parking Angle in upper position after line cutting | Correction of parking Angle in upper position after line cutting | Degree | 1 | 0~100 | 0 | Input |

## 3、Release Thread

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 551 | The loose thread setting at the beginning of sewing | Set the number of stitches that the looser will open at the beginning of sewing | stitches | 1 | 0~3 | 0 | Input |
| 552 | Loose line synchronization during tangent | Start Angle of loose wire | Degree | 2 | 0~359 | 300 | Input |
| 564 | Looser turns on mode | 0: Low, open, unlimited<br>1: in, off, 5 minutes<br>2: High, off, 1 minute<br>3: Medium, open, unlimited<br>4: High, off, 5 minutes<br>5: Action according to the given value of threading time and threading current | | 1 | 0~5 | 0 | Input |
| 567 | Whether to open the thread looser after wire cutting by air | Whether to open the thread looser after wire cutting by air | | | 0:OFF:close<br>1:ON:open | 0 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C-1 | Type of wire clamper | Type Choose | | | 0:MCN:Mechanical thread nipper<br>1:ELC:Electrical thread nipper | 0 | Choose |
| C-2 | Loose wire delay | Loose wire delay | | | 0~255 | 30 | Input |
| C-4 | Thread looser opens delay when threading | Thread looser opens delay when threading | | | 0~255 | 0 | Input |
| C-5 | The wire looser turns on the current when threading | The wire looser turns on the current when threading | | | 0~255 | 25 | Input |
| C-6 | Whether to open loose thread after sewing | Whether to open loose thread after sewing | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |

## 4、Middle Presser

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 053 | Delay time after intermediate presser up | Delay time to prevent colling with mold in movement | ms | | 0~255 | 0 | Input |
| 054 | Intermittent presser foot lowering time | Intermittent presser foot lowering synchronization | | | 0: Before the sewing machine head starts<br>1: Synchronize with the final presser foot | 0 | Choose |
| D-1 | Intermittent presser foot type | Selection of intermittent presser foot gas valve, stepping and electromagnet | | | 0:AIR:Air Valve<br>1:STP:Step motor<br>2:MAG:Solenoid | 1 | Choose |
| D-3 | Intermittent presser foot current | Intermittent presser foot current | | | 2~8 | 4 | Input |
| D-5 | Intermittent presser foot stroke setting | Setting of upper and lower values of intermittent presser foot | x0.1mm | 2 | 0~220 | 150 | Input |
| D-6 | Intermittent presser foot lowering delay | Intermittent presser foot lowering delay | | | 0~255 | 0 | Input |
| D-7 | Intermittent presser foot action speed | Intermittent presser foot action speed | | | 8~17 | 13 | Input |
| D-9 | Does the intermittent presser foot follow | Does the intermittent presser foot follow | | | 0:OFF:OFF<br>1:ON:ON | 1 | Choose |
| D-16 | Number of stitches reduced by intermittent presser foot | Number of stitches reduced by intermittent presser foot | | | 0~3 | 0 | Input |
| D-17 | Height of intermittent presser foot lowering | Height of intermittent presser foot lowering | x0.1mm | | 0~30 | 0 | Input |

## 5、Clamp

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 001 | Presser foot rising mode after sewing | Presser foot status after sewing | | | 0:After returning to the starting point, the presser foot rises again<br>1:The presser feet rise immediately after sewing<br>2:Return to the starting seam first, and then press the foot up after stepping on the pedal | 0 | choose |
| 002 | Left and right separation presser foot descending action (pneumatic) | Separate the presser foot from the left to the right | | | 0: Lower the left and right presser feet simultaneously<br>1: The presser foot drops left and then right<br>2: Presser foot first right and then left drop | 0 | choose |
| 003 | Pressure frame drop action (motor) | Motor pressure frame simulates pedal control mode | | | 0: Simulated descent: Decide the descent amount according to the step amount of the pedal, and finally start<br>1:1 stage drop: the pressure foot drops in the first gear, and starts in the second gear<br>2 Stage 2 descent: stop in the middle of gear 1, start after gear 2 descent | 2 | choose |
| 050 | Presser foot working mode | 0: Standard double pedal, pressing foot pedal controls the big pressing foot, starting pedal starts the sewing<br>1: Standard double pedal, pressure foot pedal interval control large pressure foot and auxiliary pressure foot lifting, start the pedal to start the sewing<br>2: Standard double pedal, press foot pedal spacing left and right press foot, start the pedal to start sewing<br>3: Standard three | | | 0~10 | 0 | input |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | pedals, pressing foot pedal to control the big pressing foot, the middle pedal to control the auxiliary pressing foot, the starting pedal to start the sewing<br>4: Left and right presser feet -> intermittent presser feet of 2 sections. Single pedal gear 1 is left and right presser foot, gear 2 is intermittent presser foot, gear 3 controls start. The middle pedal controls the lifting of intermittent presser foot<br>5: 2 sections of presser foot alternately left and right. The pressing foot pedal controls the left and right order of the two pressing feet to be exchanged each time sewing<br>6: Forward/Back Pedal. The press foot pedal controls the left and right press feet to lift up in turn, and the starting pedal controls the left and right press feet to fall down in order, and then presses on to start sewing after all falls down<br>7: Step twice on the 2 stage presser foot. Single pedal control motor presser foot in the middle position, down, start three | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | position switch, when the presser foot back up. Double pedal pneumatic presser action is the same as mode 2<br>8: Standard three pedal, press foot pedal control motor press foot to the height of the second stage, the middle pedal control motor press foot to drop to the position, start the pedal to start the seam<br>9: Three pedals with origin detection. Special origin detection for the middle pedal, pressing foot pedal to control the lifting of the left and right pressing foot, starting pedal can only start sewing<br>10: Special three pedals with origin detection. Special origin detection of the middle pedal, press foot pedal to control the left and right press foot rise and fall, press the starting pedal automatically down the right press foot and then start | | | | | |
| 051 | Pressing plate action before origin detection | Check whether the pressure plate before the origin is allowed to move | | | 0: Before the origin detection, the up and down movement of the presser foot cannot be carried out<br>1: Before the origin detection, the up and down movement of the presser foot can be carried out | 0 | choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 052 | Presser foot action during seam breaking procedure | Pressing plate state when stop midway | | | 0: Press down the plate<br>1: the pressure plate is lifted | 0 | choose |
| 055 | Pneumatic pressure frame output polarity reversal | Pneumatic pressure frame output polarity reversal | | | 0: invalid<br>1: Pneumatic specifications for valve output reversal<br>2: Because the two positioning valves correspond to each other, the output reverses the valve output at the same time | 0 | choose |
| 058 | The foot pressing movement at the end of sewing | After the completion of automatic processing, the press plate is lifted | | | 0: The press plate will automatically lift after sewing<br>1: The press plate does not lift after sewing | 0 | choose |
| 059 | Pressing frame weight selection | Pressing frame weight selection | | | -1:light<br>1:Standard<br>0: heavy | -1 | choose |
| E-1 | Press type selection | Press type selection | | | 0:AIR:pneumatic<br>1:MAG:electromagnet<br>2:MOTOR:motor | 0 | choose |
| E-2 | Can we sew when the press is up | Can we sew when the press is up | | | 0:OFF:Can't sew<br>1:ON:Can sew | 0 | choose |
| E-7 | Left and right separation pressure plate lifting action | Left and right separation pressure plate lifting action | | | 0:LRT:The press plate is lifted after processing<br>1:LTD:After finishing the machining, the left press plate is pressed down continuously<br>2:RTD:After finishing the machining, the right press plate is continuously pressed down | 0 | choose |
| E-9 | Single foot pedal operation is allowed | Single foot pedal operation is allowed | | | 0:OFF:Prohibit<br>1:ON:Permit | 0 | choose |
| E-10 | Two stage press enabler | Two stage press enabler | | | 0:OFF:Prohibit<br>1:ON:Permit | 0 | choose |
| E-11 | Height of two stage press plate | Height of two stage press plate | | | 0~255 | 80 | Input |
| E-12 | Press plate stroke setting | Press plate stroke setting | | | 0~200 | 180 | Input |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| E-13 | Pressure plate current setting | Pressure plate current setting | | | 0~15 | 2 | Input |
| E-14 | Delay start setting after pedaling | Delay start setting after pedaling | | | 0:OFF:Prohibit<br>1:ON:Permit | 0 | choose |
| E-15 | Start delay after pedaling | Start delay after pedaling | | | 0~200 | 20 | Input |
| E-16 | Whether the external pressure frame is raised at the secondary origin | Whether the external pressure frame is raised at the secondary origin | | | 0:DOWN:Don't lift pressure box<br>1:UP:Lift pressure box | 0 | choose |

## 6、Stretch Presser

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 556 | Turnover device | Support for turning and stretching the foot<br>0 - no<br>1- flip foot (F1 foot)<br>2- telescopic pressure foot (parking)<br>3 - F2 presser foot<br>4 - K presser foot<br>5- telescopic foot (no stopping) | | | 0~255 | 0 | Input |
| F-2 | Telescopic foot action when returning to the origin | Telescopic foot action when returning to the origin | | | 0:OFF:No action<br>1:MRH:Move out first and return to the origin<br>2:HRM:Return to the origin first and then move out | 1 | Choose |
| F-3 | Extension delay of telescopic press foot | Extension delay of telescopic press foot | x0.01s | 1 | 0~255 | 30 | Input |
| F-4 | Expansion foot rise delay | Expansion foot rise delay | x0.01s | 1 | 0~255 | 45 | Input |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F-5 | Telescopic foot drop delay | Telescopic foot drop delay | x0.01s | 1 | 0~255 | 30 | Input |

## 7、Laser Cutting

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| G-1 | Laser cutting switch | Laser cutting switch | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |
| G-2 | Laser cut X offset | Laser cut X offset | x0.1mm | | -5000~5000 | 0 | Input |
| G-3 | Laser cut Y offset | Laser cut Y offset | x0.1mm | | -2000~2000 | 0 | Input |
| G-4 | Laser cutting speed | Laser cutting speed | | | 1~9 | 1 | Input |
| G-5 | Laser suction switch | Laser suction switch | | | 0:OFF:OFF<br>1:ON:ON | OFF | Choose |
| G-6 | Laser suction opens the delay | Laser suction opens the delay | | | 0~65535 | 100 | Input |
| G-7 | Laser suction closes the delay | Laser suction closes the delay | | | 0~65535 | 100 | Input |
| G-8 | Delay before laser start | Delay before laser start | | | 0~65535 | 100 | Input |
| G-9 | Delay after the laser head drops | Delay after the laser head drops | | | 0~65535 | 100 | Input |
| G-10 | Delay after lifting the laser head | Delay after lifting the laser head | | | 0~65535 | 0 | Input |
| G-11 | Inflection point deceleration mode | Inflection point deceleration mode | | | 0: OFF: don't start<br>1:L-ON: laser phase only<br>2: S-ON starts only at the seam section<br>3: All laser section and seam section are activated | 0 | Choose |

## 8、Halt

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 651 | According to the stop switch to determine the sewing stop position | Pause timing pin position | | | 0: Positioning of the down needle<br>1: Positioning of the up needle | 1 | Choose |
| 652 | The tangential action of a | Automatic trimming during | | | 0: Automatic thread | 1 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | pause | pause | | | cutting<br>1: Don't cut line | | |
| 656 | Reset mode during pause | Reset mode during pause | | | 0: Moving to start point of sewing after reset<br>1: Do not return to the origin, and move backward on the sewing track to the starting point of sewing | 0 | Choose |
| H-2 | Press action during pause | Press action during pause | | | 0: DWN:Clamp down<br>1: UP:Clamp up | 0 | Choose |
| H-3 | Pause switch type | Pause switch type | | | 0: often shut<br>1: often open | 0 | Choose |
| H-5 | Safety switch type | Safety switch type | | | 0: often shut<br>1: often open | 0 | Choose |

## 9、Thread Breaking Sensor

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 554 | Break line detection | Break line detection | | | 0: OFF:Thread Breaking detection off<br>1:ON:Thread Breaking detection on | 0 | Choose |
| 555 | Detection sensitivity of broken wire detection device | The number of invalid stitches at the beginning of stitching during thread break testing | | | 0~15 | 8 | Input |
| I-3 | The number of invalid stitches during sewing during the detection of broken thread | The number of invalid stitches during sewing during the detection of broken thread | stitches | | 0~15 | 3 | Input |
| I-4 | Whether to cut the wire when testing broken wire | Whether to cut the wire when testing broken wire | | | 0:ON:Perform thread trimming when thread breaking<br>1: OFF:Don't perform thread trimming when thread breaking | 0 | Choose |
| I-5 | Sensitivity of wire break sensor | Sensitivity of wire break sensor | | | 1~10 | 4 | Input |

## 10、Feed Method

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 200 | 1 needle test feed cloth | 1 needle to detect the feeding mode | | | 0: Push down the foot switch to automatically run to the last stitch | 0 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | 1: Step down the foot switch and move forward needle by needle. After feeding the cloth, feed the cloth needle by needle by turning the hand wheel | | |
| 252 | High speed test feeding cloth | High speed test feeding cloth | | | 0: Usually slow step foot switch gear 1 for high speed cloth feeding<br>1: Test the speed of cloth feeding and sewing | 0 | Choose |
| 260 | Change all feeding synchronizations | 0:-10：in advance 1:0:norm 2:10：delay<br>Each digit corresponds to 8 degrees | | | -10~10 | -3 | Input |
| 261 | Change sewing to start the first stitch feeding synchronize | 0:-10：in advance 1:0:norm 2:10：delay<br>Each digit corresponds to 8 degrees | | | -10~10 | -3 | Input |
| 262 | Change sewing to start the 2nd stitch feeding synchronize | 0:-10：in advance 1:0:norm 2:10：delay<br>Each digit corresponds to 8 degrees | | | -10~10 | -3 | Input |
| 263 | Change sewing to start the 3rd stitch feeding synchronize | 0:-10：in advance 1:0:norm 2:10：delay<br>Each digit corresponds to 8 degrees | | | -10~10 | 0 | Input |
| 264 | Change the feeding synchronization of 3 stitches before the end of sewing | 0:-10：in advance 1:0:norm 2:10：delay<br>Each digit corresponds to 8 degrees | | | -10~10 | -1 | Input |
| 265 | Change the feeding synchronization of 2 stitches before the end of sewing | 0:-10：in advance 1:0:norm 2:10：delay<br>Each digit corresponds to 8 degrees | | | -10~10 | 1 | Input |
| 266 | Change the feeding synchronization of 1 stitch before sewing | 0:-10：in advance 1:0:norm 2:10：delay<br>Each digit corresponds to | | | -10~10 | 0 | Input |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | 8 degrees | | | | | |
| 267 | The number of effective stitches in synchronous feeding | When the total feed synchronization changes from the initial value (set to No.260), specify the number of effective stitches:<br>0: Unlimited<br>1~99: If more than the number of stitches specified at the beginning of sewing, return to the standard feeding synchronization | | | 0~99 | 0 | Input |
| 268 | Change the base of feeding synchronization | Change the base of feeding synchronization | | | 0: starting datum of cloth feeding<br>1: needle benchmark<br>2: the end of cloth feeding benchmark<br>3: speed linkage | 0 | Choose |
| J-1 | Sewing type Choose | Sewing type Choose | | | 0:Tin<br>1:Middle<br>2:Thick | 0 | Choose |
| J-2 | Thin material thickness | Thin material thickness | | | 0~255 | 0 | Input |
| J-3 | Medium material thickness | Medium material thickness | | | 0~255 | 15 | Input |
| J-4 | Thick material thickness | Thick material thickness | | | 0~255 | 30 | Input |
| J-5 | Fitting way | Fitting way | | | 0:Stop the lift<br>1:Pick up and continue to move | 0 | Choose |
| J-10 | Fast moving mode (type) | The mode of moving two points in printing and graphics modification | | | 0：LINE:Linear movement<br>1:PAT:Follow the needle | 1 | Choose |
| J-15 | Moving frame gain curve | Moving frame gain curve | | | 1~3 | 1 | Input |
| J-16 | X axis rigidity fine tuning | X axis rigidity fine tuning | | | -15~ 15 | 0 | Input |
| J-17 | X axis speed adjustment | X axis speed adjustment | | | -50~ 50 | 0 | Input |
| J-18 | Y axis rigidity fine tuning | Y axis rigidity fine tuning | | | -15~ 15 | 0 | Input |
| J-19 | Y axis speed adjustment | Y axis speed adjustment | | | -50~ 50 | 0 | Input |

## 11、Bobbin Winding

| No. | Brief description | Detailed instructions | Unit | Step | Range | Factory | Type |
|---|---|---|---|---|---|---|---|

| | | | | length | | value | |
|---|---|---|---|---|---|---|---|
| 056 | Whether winding is allowed before origin detection | Whether winding is allowed before origin detection | | | 0:OFF:Can't winding<br>1:ON:Can be winding | 0 | Choose |
| K-1 | Winding speed setting | Winding speed setting | x100RPM | | 2~27 | 13 | Input |
| K-2 | Setting the stop mode of winder | Setting the stop mode of winder | | | 0:Stop winding when pedal up<br>1:Stop winding when stepping on pedal again<br>2:Time to stop winding | 1 | Choose |
| K-3 | Fixed stop winding time setting (unit second) | Fixed stop winding time setting (unit second) | s | 2 | 2~498 | 30 | Input |

## 12、Slow Start

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 100 | Sewing start speed | Whether to slow up the needle | | | 0:low speed<br>1: high speed | 0 | Choose |
| 151 | Fast first stitch start speed | Fast first stitch start speed | x100RPM | | 2~30 | 10 | Input |
| 152 | Fast second stitch start speed | Fast second stitch start speed | x100RPM | | 2~30 | 15 | Input |
| 153 | Fast third stitch start speed | Fast third stitch start speed | x100RPM | | 2~30 | 22 | Input |
| 154 | Fast fourth stitch start speed | Fast fourth stitch start speed | x100RPM | | 2~30 | 30 | Input |
| 155 | Fast fifth stitch start speed | Fast fifth stitch start speed | x100RPM | | 2~30 | 30 | Input |
| 156 | Speed of 5 stitches before sewing | Speed of 5 stitches before sewing | x100RPM | | 4~27 | 25 | Input |
| 157 | Speed of 4 stitches before sewing | Speed of 5 stitches before sewing | x100RPM | | 4~27 | 26 | Input |
| 158 | Speed of 3 stitches before sewing | Speed of 3 stitches before sewing | x100RPM | | 4~27 | 12 | Input |
| 159 | Speed of 2 stitches before sewing | Speed of 2 stitches before sewing | x100RPM | | 4~27 | 12 | Input |
| L-1 | First start speed | First start speed | x100RPM | 1 | 2~30 | 3 | Input |
| L-2 | Second start speed | Second start speed | x100RPM | 1 | 2~30 | 7 | Input |
| L-3 | Third starting speed | Third starting speed | x100RPM | 1 | 2~30 | 10 | Input |
| L-4 | Fourth starting speed | Fourth starting speed | x100RPM | 1 | 2~30 | 15 | Input |
| L-5 | Fifth start speed | Fifth start speed | x100RPM | 1 | 2~30 | 20 | Input |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| L-6 | The method of seam reinforcement | The method of seam reinforcement | | | 0:None<br>1:Condensed sewing at the first stitch<br>2:Backtack at begining several stitches | 0 | Choose |
| L-7 | Number of reinforcement stitches | Number of reinforcement stitches | | 1 | -4~4 | 0 | Input |
| L-8 | End reinforcement method | End reinforcement method | | | 0:None<br>1:Condensed sewing at the first stitch<br>2:Backtack at begining several stitches | 0 | Choose |
| L-9 | End reinforcement needle count | End reinforcement needle count | | | 0~4 | 0 | Input |

## 13、Speed

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 251 | Feed speed | The higher the value, the faster the airspeed | file | | 0~9 | 7 | Input |
| M-1 | High speed setting | High speed setting | x100RPM | | 2~30 | 23 | Input |
| M-2 | Low speed setting | Low speed setting | x100RPM | | 2~30 | 2 | Input |
| M-3 | Medium high speed setting | Medium high speed setting | x100RPM | | 2~30 | 15 | Input |
| M-4 | Medium-low speed setting | Medium-low speed setting | x100RPM | | 2~30 | 10 | Input |
| M-5 | Transfer delay setting | Transfer delay setting | | | 0~255 | 0 | Input |
| M-6 | Version delay setting | Version delay setting | | | 0~9 | 4 | Input |
| M-11 | Back stitch speed setting | Back stitch speed setting | | | 0~9 | 7 | Input |
| M-12 | Find the interval at the origin | Find the origin time interval (the larger the value, the longer the time) | | | 5~10 | 7 | Input |
| M-13 | Single step speed setting | Single step speed setting | | | 0~40 | 30 | Input |
| M-14 | Sewing speed ratio | Sewing speed ratio | % | 5 | 70~100 | 100 | Input |

## 14、Area Limit

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 460 | Set the effective range to the left of X | Set the effective range to the left of X | mm | | 0~2000 | 500 | Input |
| 460-R | Set the effective range to the right of X | Set the effective range to the right of X | mm | | 0~2000 | 500 | Input |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 461 | Set the effective range in the Y up direction | Set the effective range in the Y up direction | mm | | 0~2000 | 3 | Input |
| 461-D | Set the effective range in the direction below Y | Set the effective range in the direction below Y | mm | | 0~2000 | 200 | Input |
| N-1 | Cancel range protection | Cancel range protection | | | 0:OFF:Range protection off<br>1:ON:Range protection on | 1 | Choose |
| N-6 | It's forbidden to move in the X direction | It's forbidden to move in the X direction | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |

## 15、Motor

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 161 | Penetrating force enhancement action | Penetrating force enhancement action | | | 0:OFF:Invalid<br>1:ON:When the motor of the sewing machine is locked, the penetration enhancement action is carried out | 0 | Choose |
| 165 | Reverse the Angle at which the needle rises | Angle setting of upper dead center | Degree | | 0~50 | 3 | Input |
| P-1 | X motor steering | X motor steering | | | 0:Positive<br>1:Negative | 1 | Choose |
| P-2 | Y motor steering | Y motor steering | | | 0:Positive<br>1:Negative | 1 | Choose |
| P-3 | Z motor steering | Z motor steering | | | 0:Positive<br>1:Negative | 0 | Choose |
| P-4 | The X sensor is on the left or right side of the nose | The X sensor is on the left or right side of the nose | | | 0:L:Left side<br>1:R:Right side | 0 | Choose |
| P-5 | Is the Y sensor on the front or rear of the nose | Is the Y sensor on the front or rear of the nose | | | 0:F:Front<br>1:B:Back | 1 | Choose |
| P-6 | Spindle type Choose | Support for 550W and 750W types | | | 0:550:550W<br>1:D00:750W-D00/F11<br>2:F00:750W-F00 | 1 | Choose |
| P-7 | Spindle motor stop Angle | Spindle motor stop Angle | Degree | | 30~63 | 59 | Input |
| P-8 | Upper dead point Angle setting | Set the Angle of parking to the top dead center | Degree | | 0~50 | 3 | Input |
| P-9 | P2 frame shift direction | P2 frame shift direction | | | 0:Same | 0 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | setting | setting | | | 1:Reverse | | |

## 16、Home Position

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 057 | The presser foot action when the starting point of sewing moves after the origin detection | Origin foot action | | | 0: Press down the presser foot after returning to the origin<br>1: After returning to the origin, the presser foot is lifted | 1 | Choose |
| 250 | Mechanical origin reset at the end of sewing | Whether to retrieve the origin after sewing | | | 0: No origin search, stop in situ<br>1: Origin (sub-origin) retrieval<br>2: Back up seam point<br>3: Go straight back to the origin | 1 | Choose |
| 254 | The route of movement towards the origin position and the starting point of sewing | Normal origin retrieval/origin reset circuit selection | | | 0: standard<br>1: reverse<br>2:Y axis to X axis<br>3:X axis to Y axis<br>4: x, y axis synchronous | 0 | Choose |
| 270 | Origin action when pattern switching | Origin action when pattern switching | | | 0: No origin retrieval action<br>1: The origin retrieval action is not carried out, but it passes through the regional center<br>2: Perform the origin retrieval action | 0 | Choose |
| 450 | The starting point movement mode when the pattern is switched | The origin action when switching patterns | | | 0: Step on the pedal to start, and then move to the new pattern starting point<br>1: While switching patterns, move to the starting point of the new pattern | 0 | Choose |
| Q-1 | It goes back to the origin | It goes back to the origin | | | 0:OFF:Don't return to home position<br>1:ON:Return to home position | 0 | Choose |
| Q-2 | Lifting back to the origin is prohibited | Lifting back to the origin is prohibited | | | 0:OFF:Permit returning to home position<br>1:ON:Forbid returning to home position | 0 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Q-4 | Set the reset path of the starting point | Set the reset path of the starting point | | | 0: the line returns to the starting seam<br>1: return the starting point by pattern<br>2: search at the origin and then at the seam | 0 | Choose |
| Q-5 | Whether to Choose the dead point when the origin is retrieved | Whether to Choose the dead point when the origin is retrieved | | | 0:OFF:do not Choose the dead point when retrieving the origin<br>1:ON: Choose upper dead point when retrieving the origin | 0 | Choose |
| Q-8 | Reverse origin retrieval/origin reset line Choose | Reverse origin retrieval/origin reset line Choose | | | 0:Standard<br>1:Reverse<br>2:Y-Axis to X-Axis<br>3:X-Axis to Y-Axis<br>4:Synchronize X and Y axis | 0 | Choose |

## 17、Counter

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| R-1 | Counter mode | Counter mode | | | 0:Up counter is not executed<br>1:Up counter increases every 1 sewing pattern is executed<br>2:Up counter increases every 1 combined data cycle is executed | 1 | Choose |
| R-2 | Decrement counter mode | Decrement counter mode | | | 0:Up counter is not executed<br>1:Up counter increases every 1 sewing pattern is executed<br>2:Up counter increases every 1 combined data cycle is executed | 1 | Choose |
| R-3 | Whether the increment counter value is retained when importing the pattern | Whether the increment counter value is retained when importing the pattern | | | 0:Clear<br>1:Reserve | 1 | Choose |
| R-4 | Whether the decrement counter value is retained when importing the pattern | Whether the decrement counter value is retained when importing the pattern | | | 0:Clear<br>1:Reserve | 1 | Choose |
| R-5 | Remove calculator when power is restarted | Remove calculator when power is restarted | | | 0:Clear<br>1:Reserve | 1 | Choose |
| R-6 | The UP is not allowed to be modified | The UP is not allowed to be modified | | | 0:OFF:The current value of the UP counter can be modified<br>1:ON:The current value of the UP counter can't be modified | 0 | Choose |
| R-7 | The subtracter (DN) is | The subtracter (DN) is | | | 0:OFF:The current value of the | 0 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | not allowed to be modified | not allowed to be modified | | | UP counter can be modified 1:TON:he current value of the UP counter can't be modified | | |
| R-8 | Operation of the sewing machine when the UP set point is reached | Operation of the sewing machine when the UP set point is reached | | | 0: OFF:Stop sewing 1: ON:Sewing operation can be continued | 0 | Choose |
| R-9 | Operation of the sewing machine when the subtracter (DN) setting value is reached | Operation of the sewing machine when the subtracter (DN) setting value is reached | | | 0: OFF:Stop sewing 1: ON:Sewing operation can be continued | 0 | Choose |
| R-11 | Counter shuttle change | Counter shuttle change | | | 0: OFF:OFF 1: ON:ON | 0 | Choose |

## 18、LCD Screen

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 401 | Loop program setup | After opening, the "Program" button on the main interface P1 is changed to the function of cyclic PROGRAM editing | | | 0: OFF:OFF 1: ON:ON | 0 | Choose |
| S-1 | Buzzer sound setting | Buzzer sound setting | | | 0: 0:Mute 1:1: Panel voice 2:2:Panel voice+alarm | 2 | Choose |
| S-3 | Backlight auto off switch | Backlight auto OFF switch, OFF: not auto OFF, ON: auto OFF | | | 0: OFF:Disable auto off 1: ON:Enable auto off | 0 | Choose |
| S-4 | Backlight automatically turns off wait time | Backlight automatically turns off wait time | Minute | | 1~9 | 3 | Input |
| S-5 | Main interface pattern display Settings | Set main screen pattern to display background color 0: black 1: cyan 2: red 3: green 4: blue 5: purple 6: yellow | | | 0~6 | 0 | Input |
| S-7 | Main interface button display style | Set the key display style under the main interface | | | 0: ICN:Icon: 1: TXT:Text | 0 | Choose |
| S-8 | Key display style | Set the display style of the key in detection mode and function mode | | | 0: ICN:Icon: 1: TXT:Text | 0 | Choose |
| S-9 | Modify and change the key display style | Modify and change the key display style | | | 0: ICN:Icon: 1: TXT:Text | 1 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| S-11 | Large needle count pattern support | Large needle count pattern support | | | 0：OFF:OFF<br>1：ON:ON | 0 | Choose |
| S-12 | Vector graphics conversion stitch Settings | Vector graphics conversion stitch Settings | x0.1mm | | 10~127 | 30 | Input |
| S-13 | Description of sewing progress | Description of sewing progress | | | 0：OFF:OFF<br>1：ON:ON | 1 | Choose |
| S-14 | Switch lock display Settings | Work with template recognition | | | 0：OFF:OFF<br>1：ON:ON | 1 | Choose |
| S-16 | Main interface P1 display style | Main interface P1 display style | | | 0:S1:style1<br>1:S2:style2 | 1 | Choose |
| S-18 | Pattern number shortcut key selection method | Pattern number shortcut key selection method | | | 0: The position remains the same<br>1: It will automatically become the first one after selection<br>2: Arrange by size | 0 | Choose |
| S-19 | Pattern number shortcut key display mode | Pattern number shortcut key display mode | | | 0:Recent use of patterns | 0 | Choose |
| S-20 | Pattern number shortcut key display mode | Pattern number shortcut key display mode | | | 0~7 | 0 | Input |
| S-21 | Pattern number shortcut key display mode | Pattern number shortcut key display mode | | | 0~2 | 0 | Input |
| S-22 | Main interface P1 function area location | Main interface P1 function area location | | | 0:L:Left side<br>1:R:Right side | 1 | Choose |
| S-23 | P1 addition and subtraction setting key on the main interface | P1 addition and subtraction setting key on the main interface | | | 0: All:Both pattern number and speed key support setting<br>1:SPD：Speed setting<br>2:PAT:Pattern number setting | 0 | Choose |
| S-24 | Key style of main interface | Key style of main interface | | | 0:Dark<br>1:Light | 0 | Choose |

## 19、Editting Settings

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| T-1 | Operating style | Operating style | | | 0：S1:Style 1<br>1：S2:Style 2 | 1 | Choose |
| T-2 | Multiple seam down algorithm | Multiple seam down algorithm | | | 0:0:According to segment<br>1:1:Only start and end | 1 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| T-3 | Whether the first null is automatically added after the secondary origin | Whether the first null is automatically added after the secondary origin | | | 0:OFF:OFF<br>1:ON-S:ON(Switch sewing)<br>2:ON-F:ON(Continue feed) | 0 | Choose |
| T-4 | Curve corner shortcut | Curve corner shortcut | | | 0:OFF:OFF<br>1:ON:ON | 1 | Choose |
| T-5 | Make a version of the air after the return of the sewing style | Set up a version of the return to sewing style after empty send | | | 0:0:Keep shape<br>1:1:Line | 0 | Choose |
| T-6 | Stitch reduction after printing | Stitch reduction after printing | | | 0：OFF:No<br>1：ON:Yes | 0 | Choose |
| T-8 | Amplification method | Pattern printing version amplification method | | | 0:0:Square<br>1:1:Length and width | 1 | Choose |
| T-9 | Whether to show drop point | Whether to show drop point | | | 0:0:No<br>1:1:Yes | 1 | Choose |
| T-10 | Choose method of pattern transformation | Multiple seam, offset seam, inverted seam, zigzag seam, fore-and-aft exchange, etc | | | 0:0:Stitch<br>1:1:Element | 0 | Choose |
| T-11 | The zoom unit | The zoom unit | | | 0:0:Percent<br>1:1:Size | 0 | Choose |
| T-12 | Multiple seam scaling | Multiple seam scaling | | | 0:0:Variable<br>1:1:Fixed | 1 | Choose |
| T-13 | Size calculation under the zoom function | Size calculation under the zoom function | | | 0:0:From home<br>1:1:From start sew point | 0 | Choose |
| T-14 | Return mode after modification | Return mode after modification (dot and function code) | | | 0:0:Function selection<br>1:1:Continue to modify | 0 | Choose |
| T-15 | Multiple seam, offset seam, segment insertion modification | Multiple seam, offset seam, segment insertion modification (conversion affects the position of the following elements) | | | 0:0:Relative<br>1:1:Absolute | 0 | Choose |
| T-16 | The center of the graph is set to retain the initial null feed | Center Settings for pattern scaling and rotation | | | 0:0:Reserve<br>1:1:Remove | 1 | Choose |
| T-17 | Rotation function next time whether the origin rotation | Rotation function next time whether the origin rotation | | | 0:0:No<br>1:1:Yes | 0 | Choose |
| T-18 | Parallel curve algorithm | Parallel curve algorithm | | | 0:A1:Algorithm-1<br>1:A2:Algorithm-2<br>2:A3:Algorithm-3 | 2 | Choose |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| T-19 | Form the standard of Angle | Angle standard: no Angle, 180: full Angle | Degree | | 0~180 | 90 | Input |
| T-20 | Empty feed spacing setting | Empty feed spacing setting | x0.1mm | | 10~120 | 120 | Input |
| T-21 | Whether to increase the inflection point deceleration after the version | Whether to increase the inflection point deceleration after the version | | | 0:OFF:No<br>1:ON:Yes | 0 | Choose |
| T-22 | Displays the range of shape points | Displays the range of shape points | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |
| T-23 | Make a version of the shape outline display | Make a version of the shape outline display | | | 0:OFF:OFF<br>1:ON:ON | 1 | Choose |
| T-24 | Version following action Settings | Version following action Settings | | | 0:OFF:Disable<br>1:ON:Enable | 0 | Choose |
| T-25 | Small stitching shape fusion | For straight lines only, shape points within 1mm will fuse the previous element | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |
| T-26 | Automatically enlarge according to the size of the pattern outline | Automatically enlarge according to the size of the pattern outline | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |
| T-27 | Pause code to expand valve function | Pause code to expand valve function | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |
| T-28 | Medium presser foot height modification method | Medium presser foot height modification method | | | 0:0: Choose a shot<br>1:1: Select a paragraph | 0 | Choose |
| T-29 | Segment movement mode | Segment movement mode | | | 0:0:Simple<br>1:1: complex | 0 | Choose |
| T-30 | Point move selection mode | Point move selection mode | | | 0:0: Radio (absolute and relative mode modifications)<br>1:1: alternative | 0 | Choose |
| T-31 | Point movement and segment movement change trajectories | Point movement and segment movement change trajectories | | | 0:0: close<br>1:1:open | 1 | Choose |
| T-32 | Empty delivery and consolidation after point movement | Empty delivery and consolidation after point movement | | | 0:NO<br>1:YES | 0 | Choose |

## 20、Other

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 550 | Machine needle cooling device | Needle cooling with or without | | | 0:OFF:without<br>1:ON:have | 0 | Choose |
| U-1 | Language selection | Language selection | | | 0:CH:中文<br>1:EN:English<br>2:Bur:Burmese<br>3:KR:한국어<br>4:TK:Turkish<br>5:JP:日本語<br>6:VI:Vietnamese<br>7:ITA:Italiano<br>8:PT:Portuguese<br>9:ES:Español | 0 | Choose |
| U-2 | Voice setting | Voice function setting | | | 0:OFF<br>1:ON | 1 | Choose |
| U-3 | Key voice volume | Key voice volume | | | 0~31 | 25 | Input |
| U-7 | The brightness of LED lights | The brightness of LED lights | | | 0~100 | 50 | Input |
| U-8 | Used for automatic feeding machine | Used for automatic feeding machine | | | 0~10 | 0 | Input |
| U-9 | Whether to automatically close the jump interface | After confirming the number of jump pins, whether to automatically close the jump interface | | | 0:OFF:No<br>1:ON:Yes | 0 | Choose |
| U-10 | Boot whether to enter the language selection | Boot whether to enter the language selection | | | 0:OFF:No<br>1:ON:Yes | 0 | Choose |
| U-12 | DXF file conversion method | DXF file conversion method | | | 0:0:Simple<br>1:1: complex | 0 | Choose |
| U-13 | Exporting other formats | Exporting other formats | | | 0:0: close<br>1:1:open | 0 | Choose |

## 21、Maintenance

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| V-1 | Change the needle residual value | Change the needle residual value | x1000Sth | | 0~9999 | 0 | Input |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| V-2 | Change needle setting value | Change needle setting value | x1000Sth | | 0~9999 | 0 | Input |
| V-3 | Cleaning time residual value | Cleaning time residual value | Hour | | 0~9999 | 0 | Input |
| V-4 | Set cleaning time value | Set cleaning time value | Hour | | 0~9999 | 0 | Input |
| V-5 | Oil replacement residual value | Oil replacement residual value | Hour | | 0~9999 | 0 | Input |
| V-6 | Oil change Settings | Oil change Settings | Hour | | 0~9999 | 0 | Input |
| V-9 | Bottom line counter number of stitches left | Bottom line counter number of stitches left | | | 0~60000 | 0 | Input |
| V-10 | The baseline counter alarms the number of stitches | The baseline counter alarms the number of stitches | | | 0~60000 | 0 | Input |
| V-11 | Bottom line counting method | Segment calculation: alarm at the beginning of seam section<br>Stitch count calculation: alarm during sewing | | | 0:0: By segment<br>1:1: Count of stitches<br>1: ON: open | 1 | Choose |
| V-17 | Baseline detection device residual length setting | Baseline detection device residual length setting | x0.1M | | 0~5000 | 0 | Input |
| V-18 | The thickness of the fabric | The thickness of the fabric | mm | | 0~20 | 0 | Input |
| V-19 | Length of the line | Length of the line | mm | | 0~50 | 0 | Input |

## 22、Template Recognition

| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| W-1 | Template identification Settings | Template identification Settings | | | 0:OFF:OFF<br>1:ON:ON | 0 | Choose |
| W-2 | Template identification equipment | Template identification equipment | | | 0:0:Useless<br>1:1:Bar code scanner<br>2:2:RFID read-write device | 0 | Choose |
| W-3 | The marker is offset in the X direction | The marker is offset in the X direction | x0.1mm | | -5000~5000 | 0 | Input |
| W-4 | The marker is offset Y | The marker is offset Y | x0.1mm | | -2000~2000 | 0 | Input |
| W-5 | The speed of the marker | The speed of the marker | | | 1~9 | 1 | Input |
| W-7 | Read the USB flash disk pattern when the pattern number does not exist | Read the USB flash disk pattern when the pattern number does not exist | | | 0:OFF<br>1:ON | 0 | Choose |

## 23、Automatic shuttle change

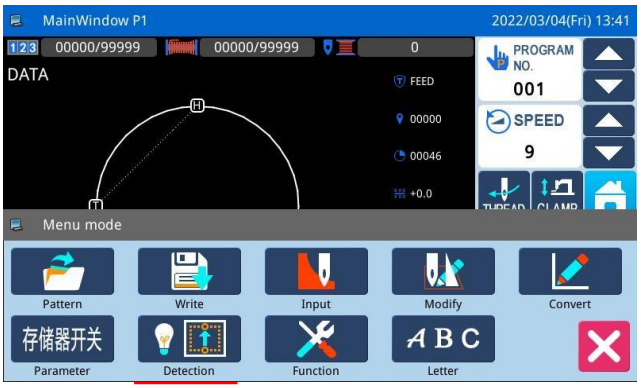
| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| X-1 | Automatic shuttle switch | Automatic shuttle switch | | | 0:OFF: Close<br>1:ON: open | 0 | Choose |
| X-2 | Shuttle change | Shuttle change | | | 0:0:Manual shuttle change after the bottom thread alarm<br>1:1:Automatically change the shuttle when the bottom thread alarms | 1 | Choose |
| X-3 | Start mode after shuttle change | Start mode after shuttle change | | | 0:0:Manual start<br>1:1:Automatic start | 1 | Choose |
| X-4 | Empty bobbin processing method | Empty bobbin processing method | | | 0:0:Put back the shuttle<br>1:1:Put the storage box | 1 | Choose |
| X-5 | Shuttle arm parking position | Shuttle arm parking position | | | 0:0:Bobbin side<br>1:1:Nose side | 1 | Choose |
| X-6 | Fine adjustment of shuttle arm to nose position | Fine adjustment of shuttle arm to nose position | | | -100~100 | 0 | Input |
| X-7 | Fine adjustment of shuttle arm to shuttle plate position | Fine adjustment of shuttle arm to shuttle plate position | | | -100~100 | 0 | Input |
| X-8 | Origin offset of shuttle motor | Origin offset of shuttle motor | | | -100~100 | 0 | Input |

## 24、Automatic shuttle change

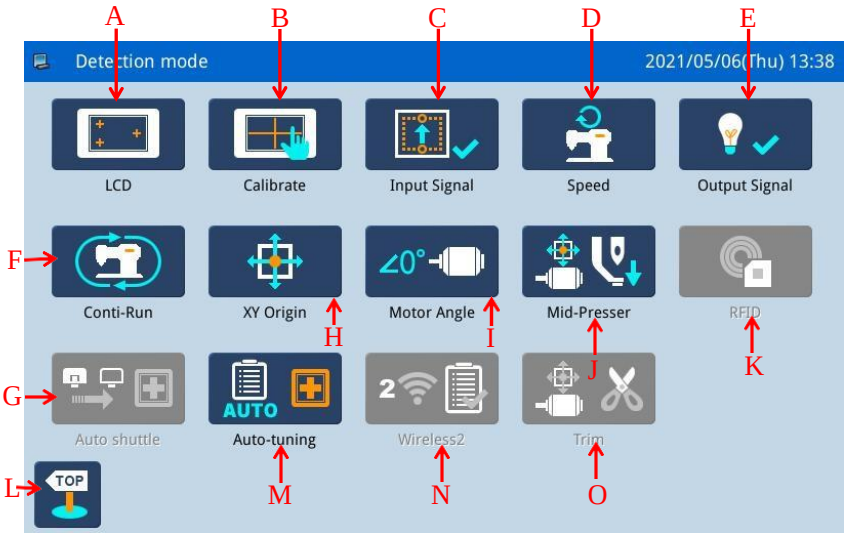
| No. | Brief description | Detailed instructions | Unit | Step length | Range | Factory value | Type |
|---|---|---|---|---|---|---|---|
| 163 | Maximum sewing speed | Maximum sewing speed | x100RPM | | 2~30 | 23 | Input |
| Y-2 | Letter embroidery function enable | Letter embroidery function enable | | | 0:OFF:Letter sew function off<br>1:ON:Letter sew function on | 1 | Choose |
| Y-3 | Needle length deceleration curve | Internal needle length drop curve Choose | | | 0~8 | 5 | Input |
| Y-4 | The maximum length of needle without lowering the speed | Maintain maximum needle length at maximum speed | x0.1mm | | 1~127 | 30 | Input |
| Y-5 | Communication rate increase | Communication rate increase | | | 0~1 | 0 | Input |

## 2.9 Test Mode




In main interface P1 (or P2), press  to activate the catalo`gue mode, and then press 

to enter the test mode.




**Functions:**

| No. | Functions | Content |
|---|---|---|
| A | LCD Test | Test LCD displayer |
| B | Touching Screen Correction | Correct the touching screen |
| C | Input Signal Test | Test the input signal of switches and sensors |
| D | Speed Test | Test the speed of main shaft motor |
| E | Output Signal Test | Test the output signal of pressers and thread-trimming devices |
| F | Continuous Running | Set continuous running parameter and enter aging status |
| G | Automatic shuttle changing | Automatic shuttle changing |
| H | XY Motor Origin Test | Test the motor origins of X /Y motors |
| I | Main Motor Installation Angle Adjustment | Display and set the installation angle of main shaft motor |
| J | Medium pressure Function Test | Used to test intermediate presser |
| K | RFID | For setting RFID |
| L | Quit | Quit test mode and return to main interface |
| M | Self-adjusting | For self-adjusting |

| | | |
|---|---|---|
| N | Wireless module 2 | For wireless module 2 detection |
| O | Shear line detection | For shear line detection |

### 2.9.1 LCD Test

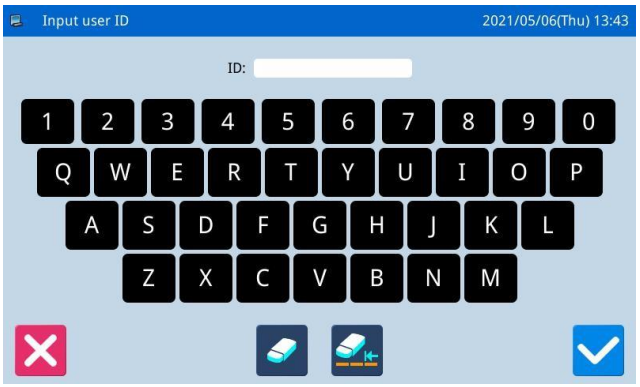
**Function:**

In the test mode, press 

to activate LCD test function. Click the area other than  to have LCD screen display white, black, red, green and blue so that user can judge whether the LCD screen has problem.

Press  to return to the upper level interface.

### 2.9.2 Touching Screen Correction




**Functions:**

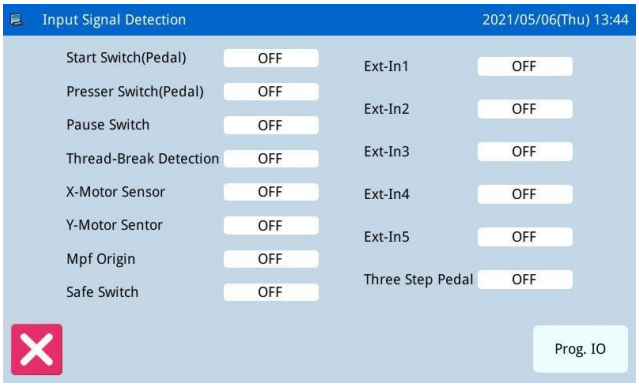
Under test mode, press 

to display the interface for ID input, as shown on the right. Then input the ID and press  to enter touch screen correction function.


User has to correct 5 spots. The touching pen is recommended to be used at touching the cross icon on the interface. After the correction, the system will display the result of this operation

**[Note]: During the correction, please perform the operation strictly according to the position of the cross icon, otherwise the touching screen may be unable to be used normally after the correction.**

## 2.9.3 Input Signal Test




**Function：**

In the test mode, press 

to activate the Input Signal Test Function.

ON：Activation OFF

：Deactivation Types

of Input Signal：

① Start switch (Pedal)

② Presser switch (Pedal)

③ Pause Switch

④ Thread-breakage Detection

⑤ X Motor Sensor

⑥ Y Motor Sensor

⑦ Intermediate presser origin

⑧ Security switch

⑨ External input 1 (PORG)

⑩ External input 2 (PSENS)

⑪ External input 3 (CORG)

⑫ External input 4 (CSENS)

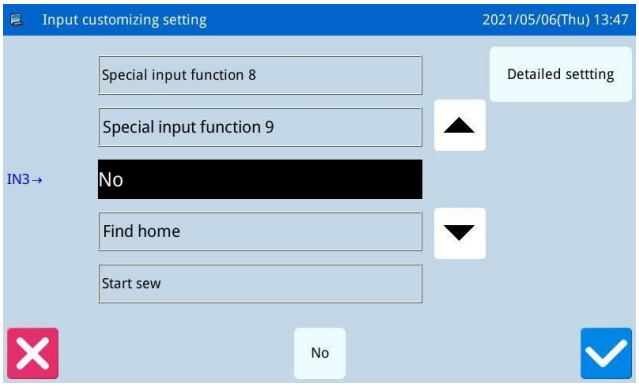
⑬ External input 5 (AORG)

⑭ Three-in-one Pedal

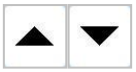
Press  to return to the upper level interface.


Click the programmable IO key 

to enter the interface of input signal configuration.




**Examples:**

Click the input 3(N3) key to enter the interface of customized input signal. You can click  to select the input signal, as follows:

1） No

2） Auxiliary press frame

3）Start sew

4）Sewing speed plus 5）

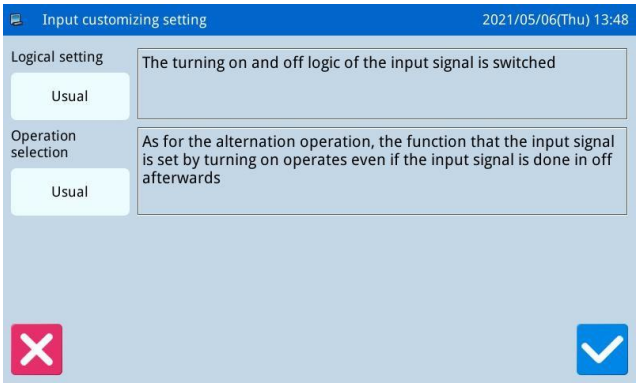
Sewing speed reduction 6）

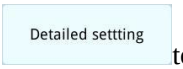
Air pressure detection 7）

Disconnection detection 8）

Special input function 1~9

Click the ok key  to confirm and return to the input signal configuration interface, and click the cancel key  to cancel the operation and return to the input signal configuration interface.




Click the detailed setting key  to enter the interface of self-determined input signal. The following parameters can be set:

1） The turning on and off logic of the input signal is switched：

Usual/Reverse

The default value：Usual

2） As for the alternation operation,the function that the input signal is set by turning on operates even if the input signal is done in off afterwards：

Usual/Alternation

The default value：Usual

## 2.9.4 Main Shaft Speed Test


**Functions:**

In the test mode, press 

to enter the main shaft speed test function.

Use 

and 

to set the aim speed of main shaft motor.Through  and  , the spindle motor can be set to turn forward or backward. After user presses 

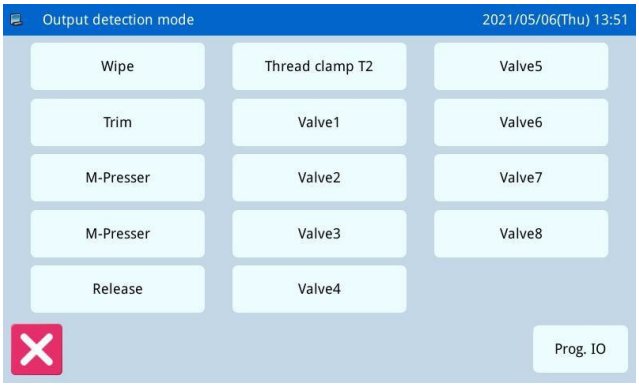
, the main shaft motor will rotate at the set speed. At this moment, the actual speed will be displayed in the input column of actual speed.

Press 

to stop running

Press  to return to the upper level interface.

## 2.9.5 Output Signal Test




**Functions:**

In the test mode, press 

to activate the output signal test function.

In this interface, user can press output signal button to test the status of output signals of solenoids

Types of Output signals:

① Thread-wiping

② Thread-trimming

③ Presser

④ Intermediate presser

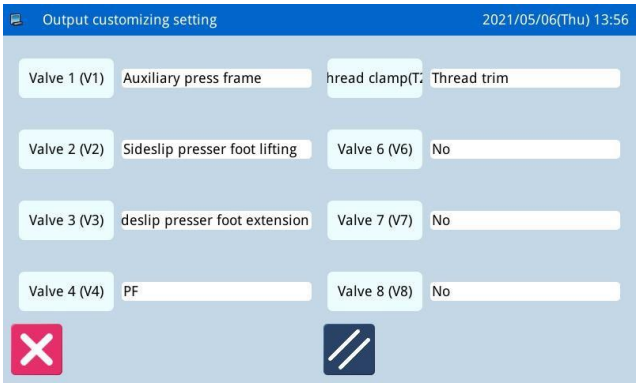
⑤ Thread-loosing

⑥ Clamp T2

⑦ Auxiliary air valve 1~8

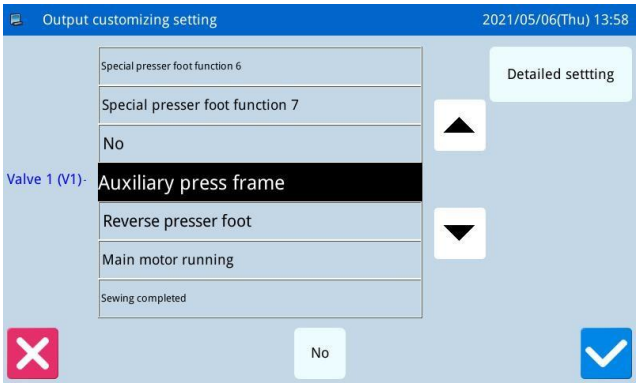
Press  to return to the upper level interface.

**[Note]: The sewing machine will have the actual movement.**




**Output customizing setting：**

Click [programmable IO] key to enter the interface of self-determined output signal

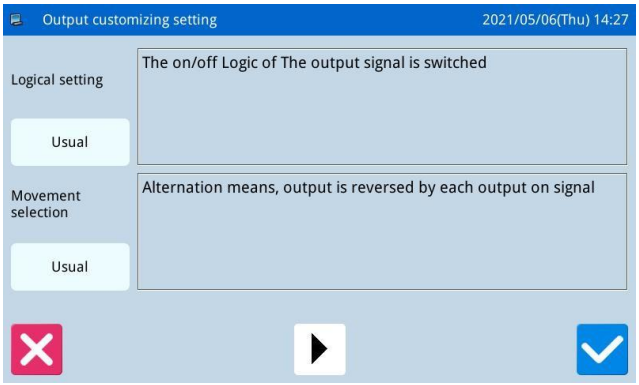


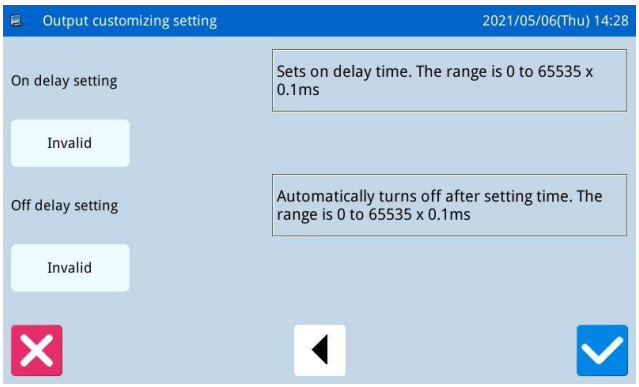

For example：

Click the "valve 1(V1)" key to enter the interface of customized output signal. You can select the output signal by clicking the button , as follows:

1) no
2) auxiliary pressure frame
3) turn over the foot
4) spindle operation
5) finish sewing
6) error status
7) find the origin
8) secondary origin
9) stop in the middle
10) lateral slip press foot expansion
11) sideslip pressure foot lifting
12) line
13) functions 1~9
14) function A/B/C
15)The pressure box falls back to the origin
16) back to the origin pressure box fell
17) laser
18) laser suction
19) laser lifting
Cut line 20)
Loose line 21)
22) line
23) medium pressure foot
24) external pressure frame
25) knife before sewing
26) blow after sewing
27) needle cooling
28) disconnected output
29) emergency stop output
30)Marker pen
31) Laser Positioning Light-Left
32) Laser positioning light-right
33) Auxiliary fixture 1~9
34) Start automatic shuttle change
35) Working indicator
36) Standby indicator
37)Special presser foot function 1~7

Click ok to determine and return to the output signal configuration interface, click cancel to cancel the operation and return to the output signal configuration interface.




Click the detailed setting key Detailed settting to enter the interface of self-determined output signal. The following parameters can be set:

1) state setting of signal switch:

Usual/Reverse

Default:Usual

2) output inversion:

Usual/Alternation

Default:Usual

3) start delay setting (start delay range 0-65535/10 microseconds)

Invalid/Valid

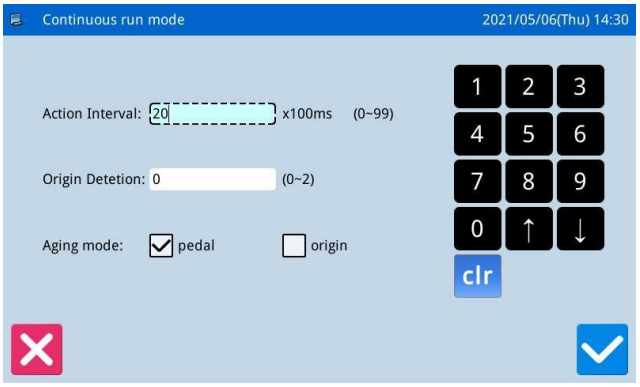
Default: invalid

4) close delay setting (close delay range 0-65535/10 microseconds)

Invalid/Valid

Default: invalid

## 2.9.6 Continuous Running




**Function：**

In the test mode, press 

to enter the continuous running function

Click Action Interval bar or Origin Detection of Needle-withdrawing bar and use number keys to input the figures. Press  to return to the upper level interface.

There are two ways to activate the aging status: pedal or origin; after setting this parameter, return to main interface P1 (or P2). Step pedal or press the Return to Origin key to run the machine, and enter continuous running mode.

## 2.9.7 XY Motor Origin Test


**Functions:**

In the test mode, press 

to activate the XY Motor Origin Detection Function.

In this interface, use direction keys to move XY motor. During this process, the system will display the ON/OFF status of the sensors.

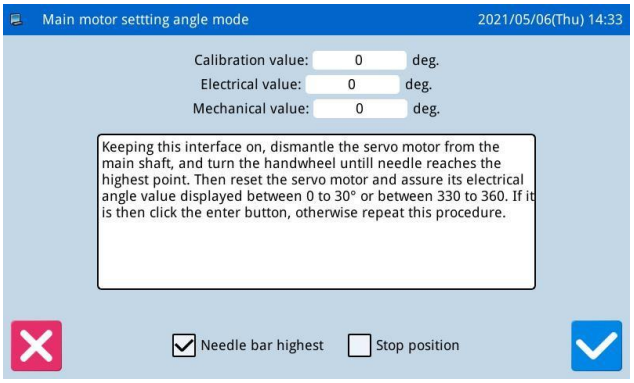
ON：Sensor Detected

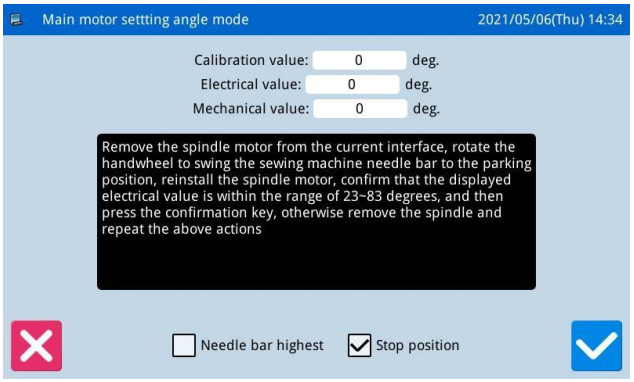
OFF：Sensor Undetected

Press  to return to the upper level interface.

**[Note]: The sewing machine will have the actual movement.**

## 2.9.8 Main Motor Installation Angle Adjustment




**Functions:**

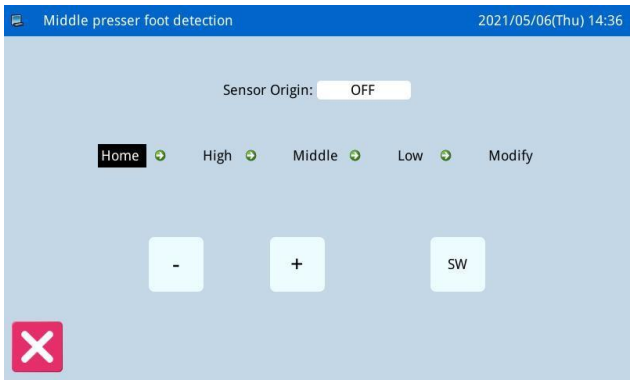
In the test mode, press 

to enter the main motor installation angle adjustment.

1) Keeping this interface on, dismantle the servo motor from the main shaft, and turn the hand wheel untill needle reaches the highest point. Then reset the servo motor and assure its electrical angle value displayed between 0 to 30 or between 330 to 360. If it is then click the enter button, otherwise repeat this procedure.

2) Remove the spindle motor from the current interface, rotate the hand wheel to swing the sewing machine needle bar to the parking position, reinstall the spindle motor, confirm that the displayed electrical value is within the range of 23~83 degrees, and then press the confirmation key ,otherwise remove the spindle and repeat the above actions

## 2.9.9 Intermediate Presser Test




**Functions:**

In the test mode, press 

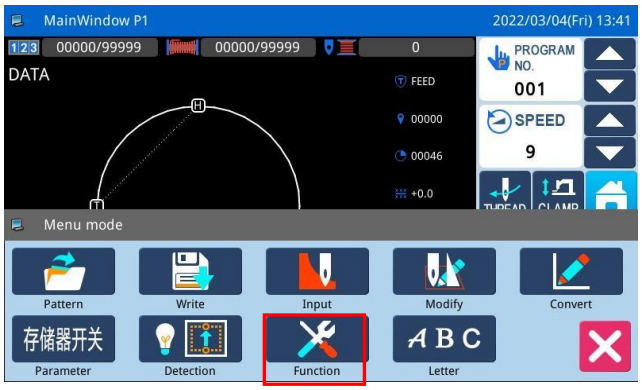
to enter intermediate presser test.

:Intermediate Presser Down

:Intermediate Presser Up

:Shift Intermediate Presser Position

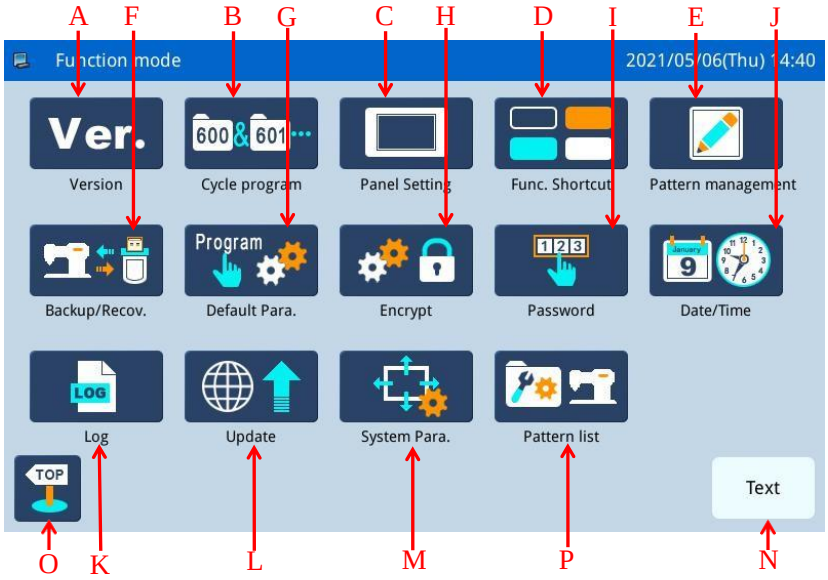
## 2.10 Function Setting




In main interface P1 (or P2), press  to activate the catalogue mode, and then press 

to enter the Function Setting Mode.

**Function setting interface:**

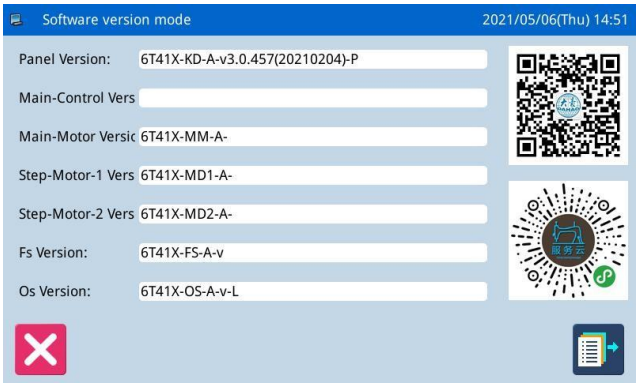



**Functions:**

| No. | Functions | Content |
|---|---|---|
| A | Version Inquiry | Inquire the version of system software |
| B | Pattern Connection | Edit combined pattern |
| C | Display Setting | Set background light, keyboard lock, lightness and so on |
| D | Function shortcut key | Users can edit this shortcut key according to their common functions and display it on the main page for convenient operation. |
| E | Pattern management | Data Transfer:Transfer pattern file between memory and U disk<br>Formatting:Initialize the U disk, memory and pattern number hotkeys.<br>Pattern Transformation in Batch:Change the patterns of non-standard formats into standard formats. **Note: standard format means nsp format.** |
| F | Back-up Parameter Recovery | Save parameter values into U disk for the parameter recovery in future |
| G | Default Parameters | Recovery and self-defined read-write function of the default |

| No. | Functions | Content |
|---|---|---|
| | | parameter values |
| H | Parameter Encryption | Set passwords for each operation entrance in parameter mode. |
| I | Password Mode | Provide periodical password function |
| J | Time Setting | Set the date and time |
| K | Log | Alarm Record:Check the alarm statistic information<br>Running Record:Check running information of machine |
| L | Software Update | Enter software update mode |
| M | System parameters | System parameters and TD system parameters can be set |
| N | Shift between Icon and Description | Shift between the icon and description of the hotkeys |
| O | Quit | Return to main interface |
| P | Pattern number list | Pattern number shortcut key editing operation. |

## 2.10.1 Version Inquiry Mode



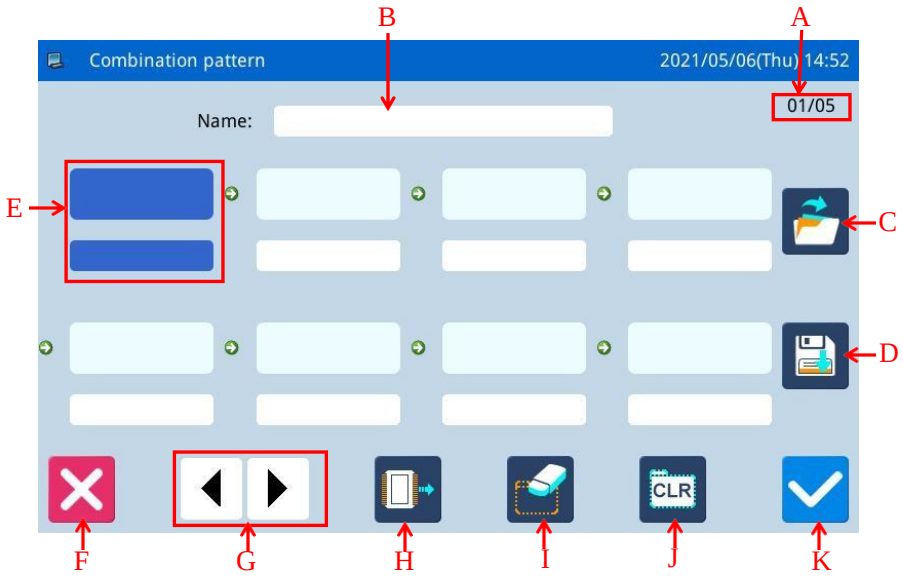

In function setting interface, press 

to enter version inquiry mode.

Press  to output the software version to the base catalogue of the U disk with name “version.png”.

## 2.10.2 Pattern Connection Mode

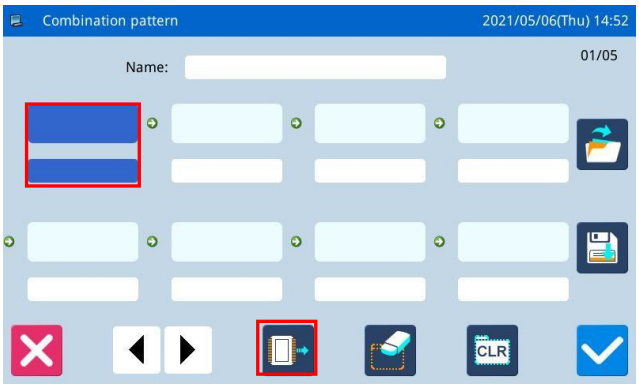
In function setting interface, press  to enter Pattern Connection Mode. The pattern connection mode is mainly used to create and edit the combined pattern, which is to perform the combination edition on the basis of the existing patterns. The pattern used in combined pattern is called as sub-pattern.




**Function:**

| No. | Description |
|---|---|
| A | Page |
| B | Name of Combined Pattern |
| C | Load Combined Pattern |
| D | Save Combined Pattern |
| E | Display Sub-pattern |
| F | Quit & Return to Previous Interface |
| G | Page Key |
| H | Add Pattern from Memory to Combined Pattern |
| I | Delete Sub-pattern |
| J | Cancel Combined Pattern |
| K | Enter |

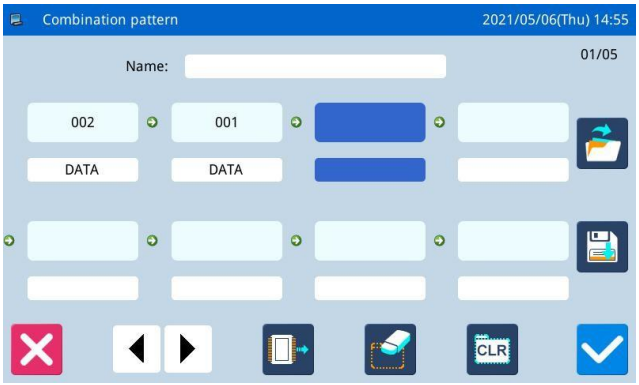
**Operation：**




### 1、 Select a Sub-pattern

Press  to enter Load Mode and select the pattern to add (select pattern No.612 as an example). Press  to confirm it.

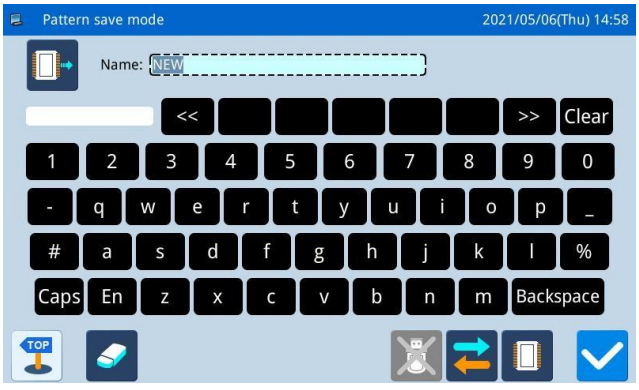
**[Note]: Patterns should be added to the combined pattern in order.**


### 2、 Continue Adding

Repeat the above operation to add more sub-patterns (Add patterns No.002)

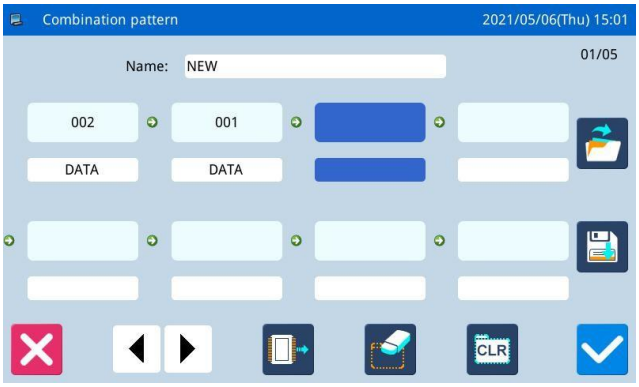
If user wants to delete one of them, please select the number of the sub-pattern and then press  .

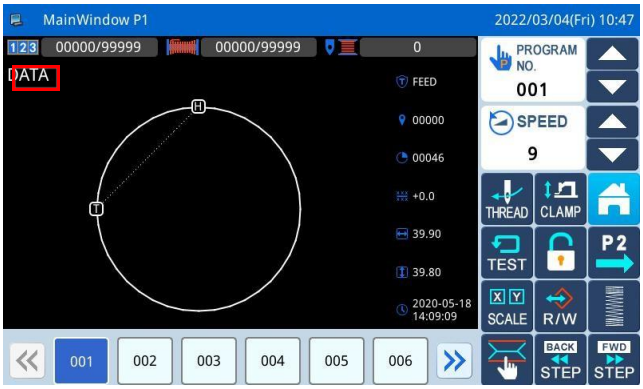



### 3、 Save the Combined Pattern

Press  to enter the mode for saving combined pattern.

Name the combined pattern and press  to confirm it. For other operations within this interface, please refer to [2.6 Save Pattern].




## 4、 Return to Main Interface

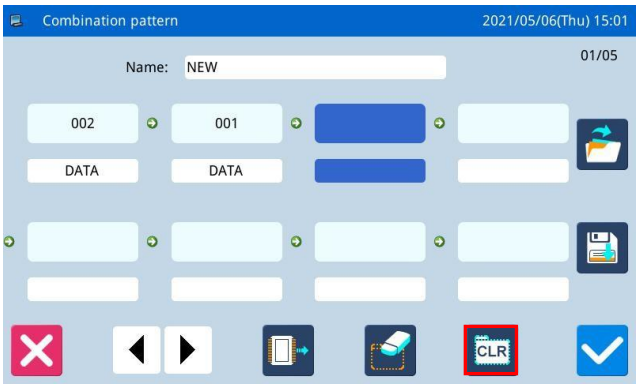
After finishing edition of the combined pattern, press  to return to main interface.

As shown in right figure, there are some differences between the combined pattern sewing interface and the normal pattern sewing interface.

① The name of combined pattern is displayed behind the number and the name of the current sub-pattern will be displayed at the name area.

**[Note]: If the combined pattern has no name, nothing will be displayed.**

② The original pattern number hotkeys will display the sub-patterns in this combined pattern. Click the sub-pattern to start the sewing from that sub-pattern.




## 5、 Cancel the Combined Pattern

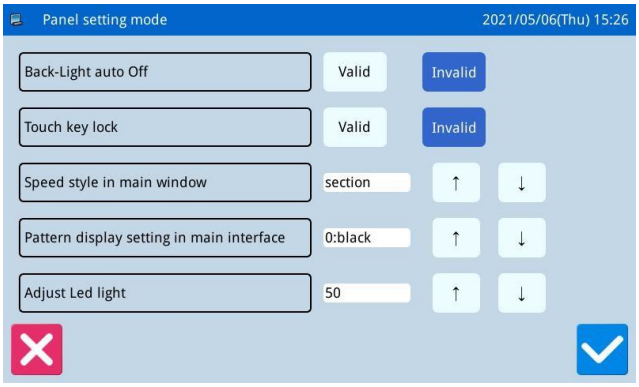
In order to cancel the combined pattern, user has to enter the pattern connection mode again, presses  and clicks  .


## 6、 Load Combined Pattern

In pattern connection mode, if user presses  when the combined pattern exists, the system will display “Clear Current Combined Pattern”. Clicking  will clear the current combined pattern.

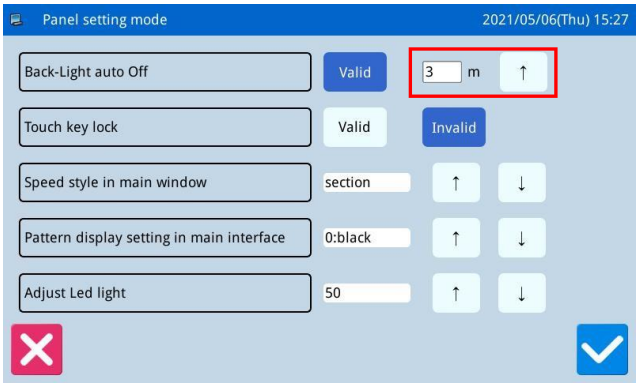
Press  again to enter the interface for loading the combined pattern, where users can select the combined pattern for sewing or editing.

## 2.10.3 Version Inquiry Mode




In function setting interface, press 

to enter display setting mode, where user can perform the settings about the display, operation and so on.



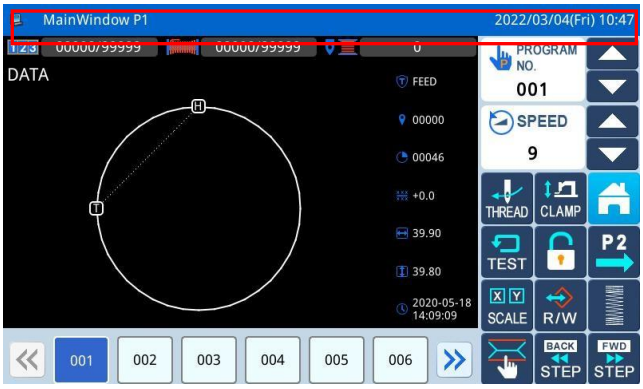

**1、Backlight Auto Turn-off**

By the set time, the screen backlight will be turned off automatically.

Range：1～9 min

Default Value: Invalid

Releasing Method: if the backlight is off, user can touch any position of the screen to turn it on.




**2、 Keyboard Lock**

When it is set as “Valid”, all the buttons will turn to grey in display and become useless. Pressing  will directly return to main interface P1.

Default Value: Invalid

Releasing Method: Hold the title bar at main interface P1 for over 5 seconds, until user hear“Bee--m”. After that the lock is released. (After the releasing, this function will be set as Invalid.)

**3、 Speed style in main window**

[Section] and [speed]

Default Value: [Section]

**4、 Pattern display setting in main interface**

Range ： 0~6 (0:Black, 1: Dark Blue, 2: Red, 3: Green, 4: Blue, 5: Purple, 6: Yellow)

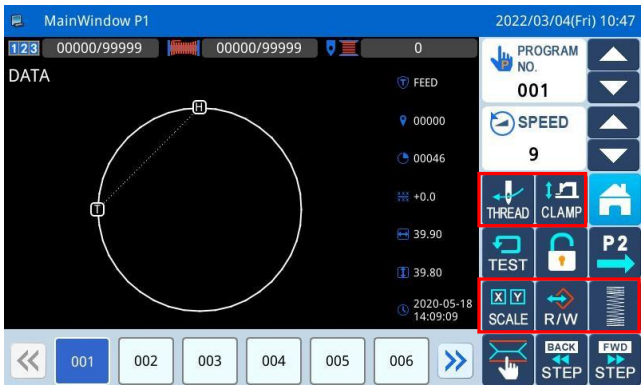
Default Value：0

**5、 Adjust Led light**

The adjustment range is 0~100.

Default Value：50

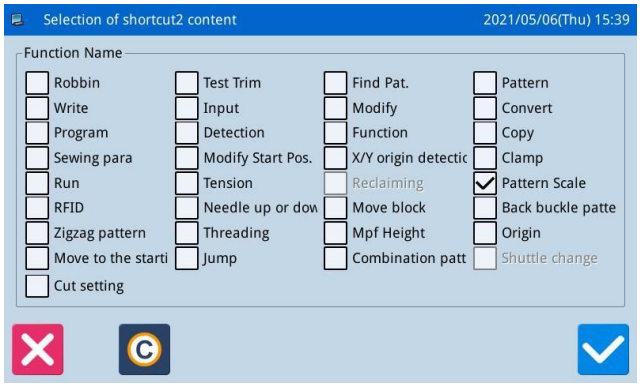
## 2.10.4 Hotkey Setting




Hotkey function is used to set the four function keys at the lower right corner according to the user's habits.


Press 

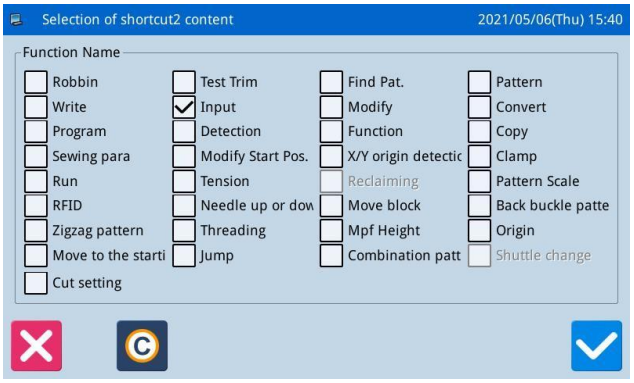
to enter hotkey function setting interface. Setting the common functions of origin, graphic zoom, threading, middle presser foot height, graphic copy, and winding.



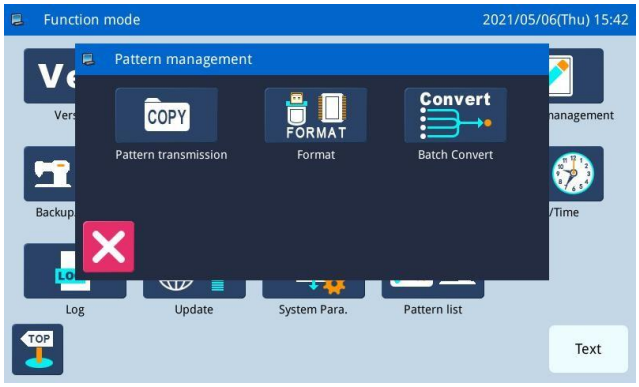

Input setting:

Press the shortcut key that needs to be changed to Input, enter the shortcut key setting, select the function and display 

, press the confirm key  , save and exit.



## 2.10.5 Data Transfer Mode




In the function setting interface, press 

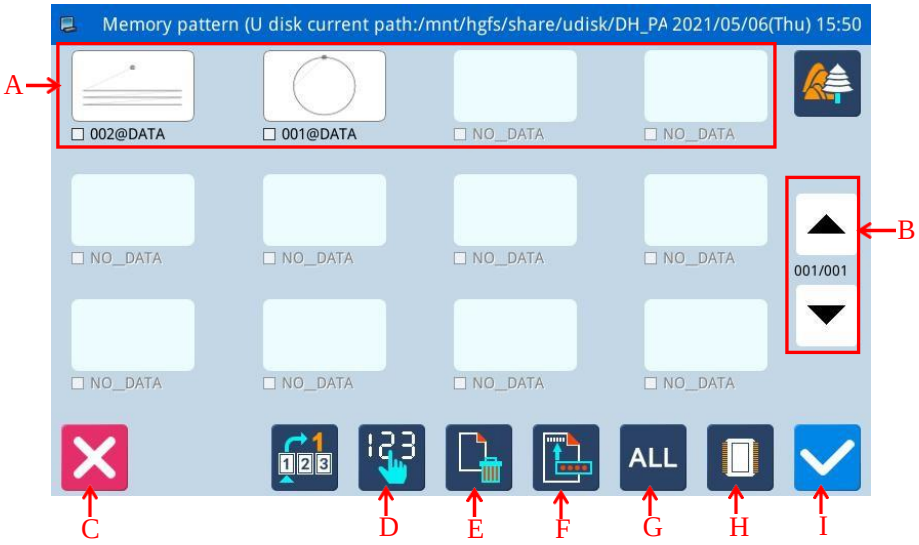
to open the graph management group. The following functions can be set:

1) Pattern transmission
2) Format
3) Batch Convert

### 2.10.5.1 Data Transfer Mode

In function setting interface, press 

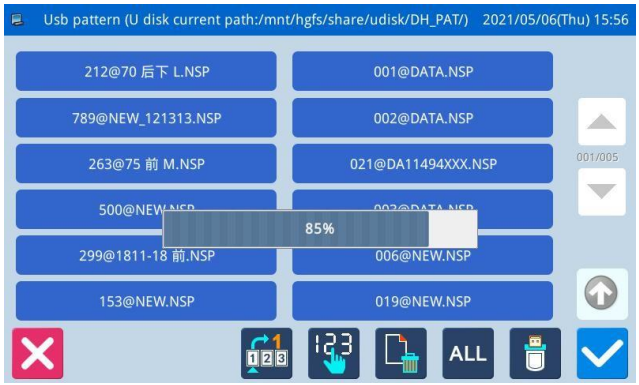
to enter data transfer mode, where two ways are provided: “Memory to U Disk” and “U Disk to Memory”




**Functions:**

| No. | Description |
|---|---|
| A | Pattern List |
| B | Turn page query |
| C | Quit and Return to Upper Interface |
| D | Arrange the patterns according to the pattern number |
| E | Delete Pattern |
| F | Save pattern as |
| G | Select All Patterns |
| H | Load pattern from memory or U disk<br>  : Activate the U Disk Load Mode: At this moment, user can not load pattern from memory.<br>  : Activate the Memory Load Mode: At this moment, user cannot load pattern from U disk. |
| I | Enter |

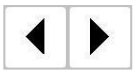
**Operation:**




**1、Copy Mode Selection**

The default setting is to copy pattern from memory to U disk, user can press  to change the copy mode.

**2、File Selection**

Select the pattern for copy from the pattern list (here, we select No.001 and No.002). If the patterns are so many, please use  to turn the page.

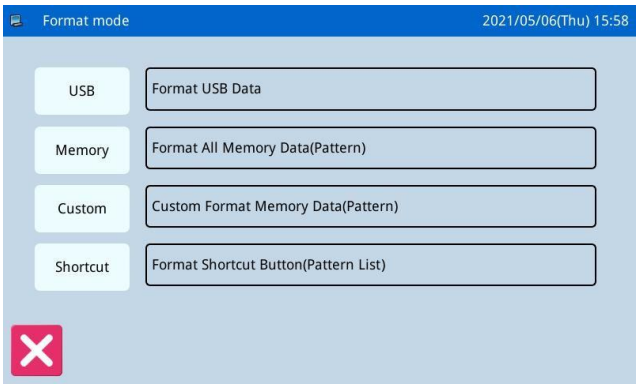
For copying all the patterns, please press  and please press  to delete patterns.

**3、Confirm the Copy**

After selection, please press  and then the system will display “Copy the Selected Pattern”, where user can press  to perform the operation. If the pattern is copied from memory to U disk, the system will automatically create a catalogue naming “dh_pat” at the base catalogue of U disk and save the pattern under that catalogue.

**[Note]: During the copy process, if the memory contains the pattern with the number same to that of the pattern in the U disk, the new pattern will replace the old one.**

## 2.10.5.2 Formatting Mode




In function setting interface, press 

to activate formatting mode

There are four formatting methods in this interface: USB formatting, Memory formatting, Self-defined formatting and Pattern number hotkey formatting

**1、USB Formatting:**

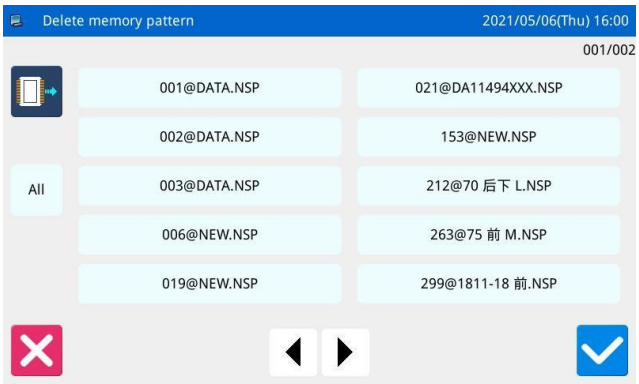
Press "USB" to delete all the patterns in the U disk. So user need back up the data if necessary.

**2、Memory Formatting:**

Press "Memory" to delete all the patterns in the memory.

**[Note]: After the memory formatting, pressing  will have system display "Pattern Not Found in Memory". Pressing  will automatically load the default patterns.**

**3、Self-defined Formatting:**




Press "Self-defined" to enter the interface for Self-defined formatting

In that interface, user can delete all patterns or selected patterns.

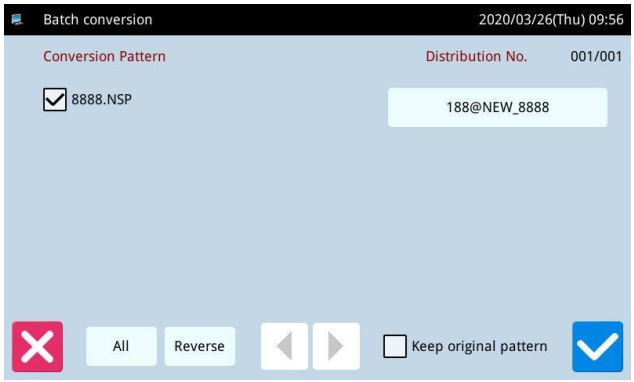
**[Note]: The pattern being sewn can not be deleted.**

**4、Hotkey Formatting:**

Pressing "Hotkey" to delete the content of the hotkeys of pattern number.

**[Note]: After the hotkey formatting, pressing  will have system display "Pattern List (Hotkey) Is Empty". Pressing  will automatically load the current pattern number to the hotkey.**

### 2.10.5.3 Pattern Transformation in Batch



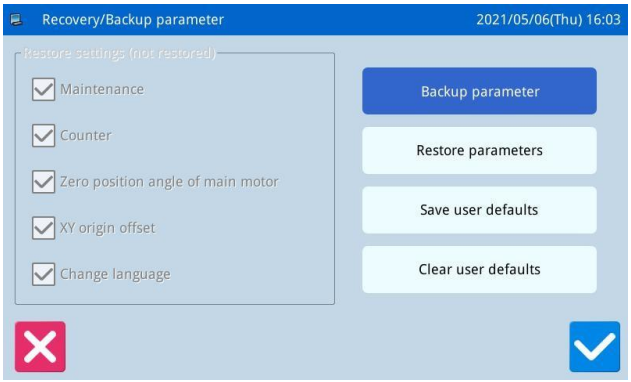

This batch transformation function can enable the continual availability of the patterns after software update.

The default pattern number after transformation can be allocated manually.

The default setting is to select all patterns, and pattern names marked with x are selected.

The original patterns will be deleted. If you want to keep them, please select Keep Original Patterns at the bottom.

### 2.10.6 Back-up Recovery Mode




In function setting interface, press 

to enter back-up recovery mode.

User can save the value of changed parameter into the U disk for the parameter recovery in future.

For details, please refer to [2.8.4 Recovery and Back-up of Parameter]

### 2.10.7 Default Parameter Mode

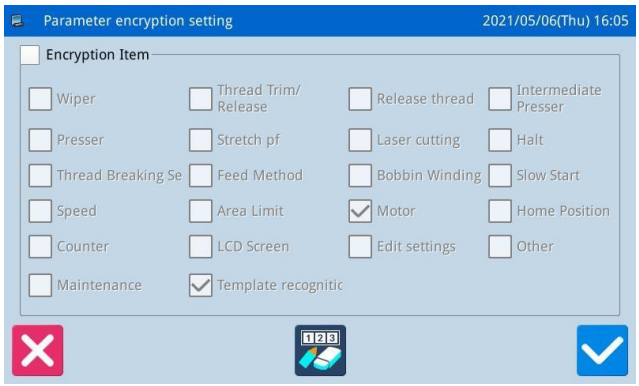

In function setting interface, press 

to input the password (the original password is the manufacturer ID). After the input of password, the system will enter Default Parameter Mode.

It is used to recover the default parameters and to save the parameter values for future.

Please refer to [2.8.5 Default Parameter Recovery] for details

## 2.10.8 Encrypt

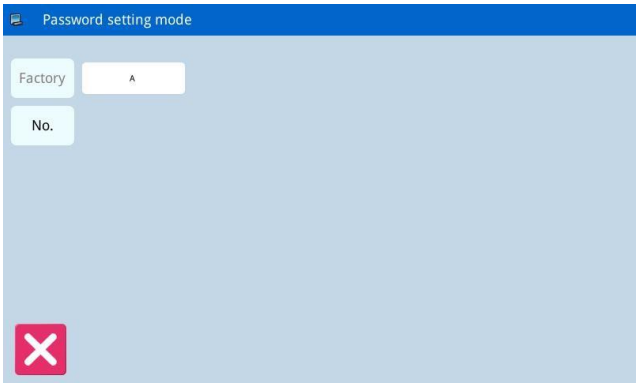



Press the parameter encryption key 

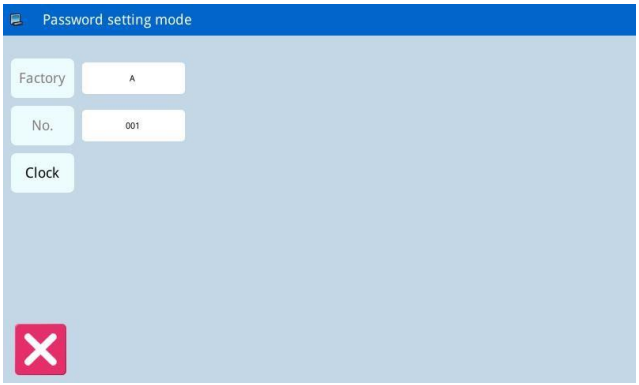
in the function setting interface to enter the parameter encryption mode, which is mainly used to encrypt and manage the specified parameters.

Please refer to [2.8.3 Parameter Encryption] for details.

## 2.10.9 Password Mode








In function setting interface, press 

to activate the interface for inputting the user ID. Input the correct manufacturer ID to enter the password management mode, where user can set and manage the periodical password.

② At most 10 different password action times can be set.

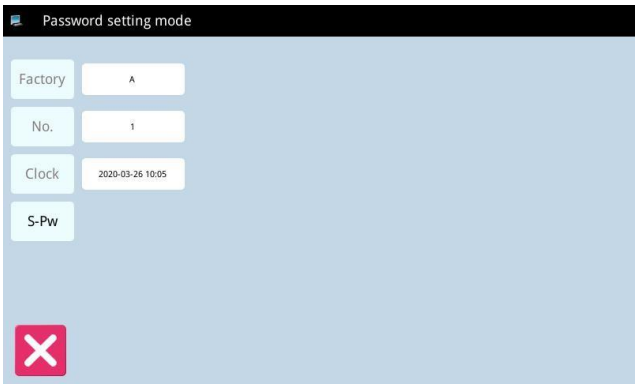
② System can display the password information of the manufacturer.

**1、 Input Board Number**

Press "Board Number" to enter the interface for inputting the board number. The board is formed by four figures, the range is from 000000000000000 to 999999999999999. This can be used for the management of the password by the manufacturer. After inputting the board number, user can press  to finish the operation and return to the previous interface. (Here, we input 0001 as the board number).

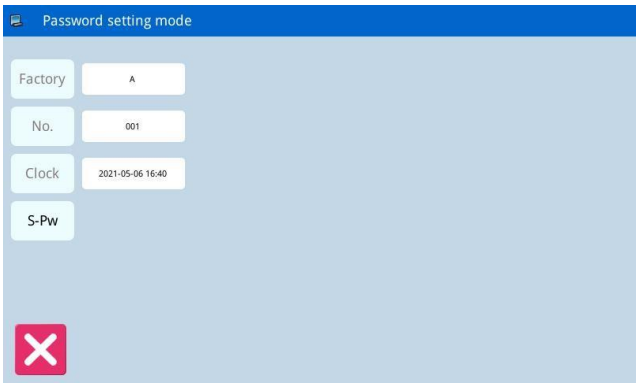
**2、 Confirm the System Clock**

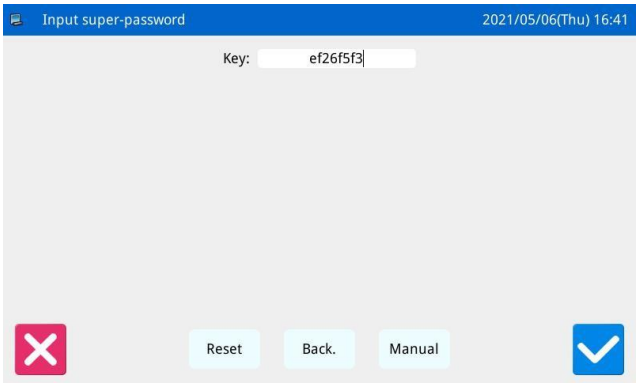
Press "Clock" to enter the interface for setting system time and date. For changing the system clock, user need press  after the modification (Refer to [2.10.14 Date and Time Setting Mode], or press  to quit.




**3、 Input the Super Password**

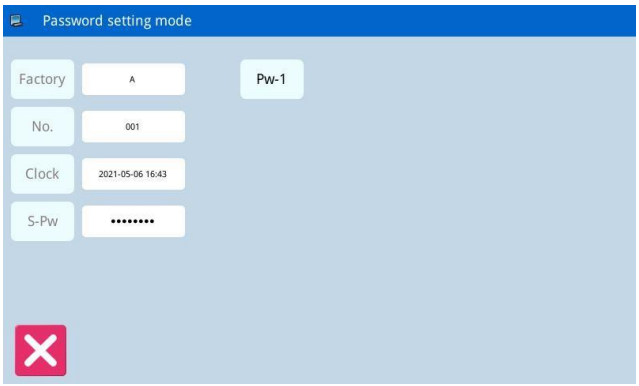
Press “Super Password” to enter the interface for inputting the super password.




At most 15 figures can be inputted, which are displayed as “ • ”. After user presses , the system will ask user to input that password again for confirmation.

If the inputted passwords in these two times are different, the system will ask user to input the super password again. After these two inputted passwords agree, user can press to save it and quit.

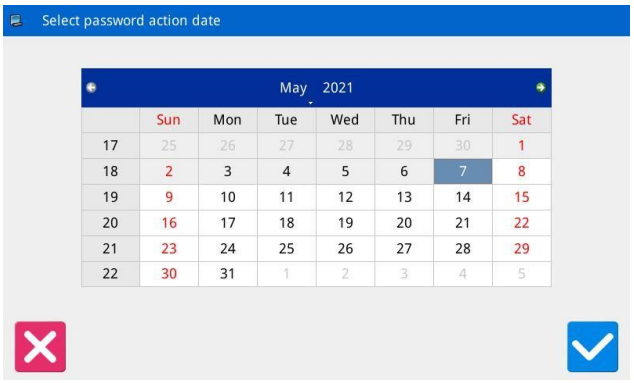


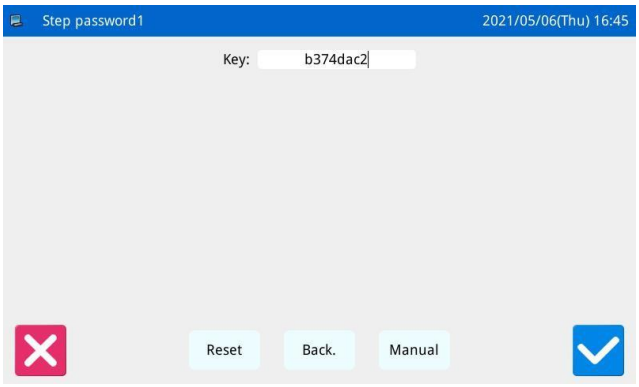

**4、 Input Activation Time and Periodical Password**

Press “pw-1” to input the first activation date.

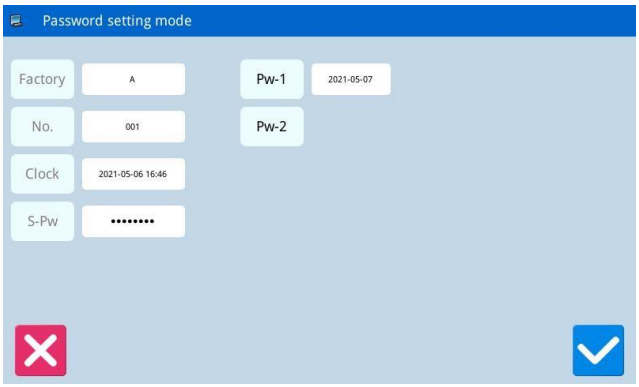
The activation date is the first time when the password is activated. This date shall be later than the system date.

Select the proper date and press to finish the operation. At this moment, the system will turn to password input interface



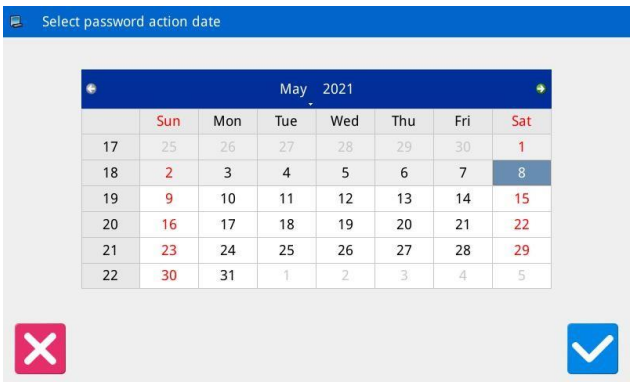

The input method of the periodical password is the same as that of the super password. After the confirmation, press  to quit.

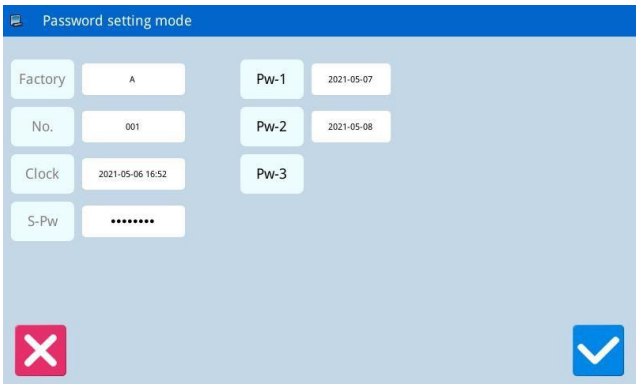



**5、 Continue Inputting Periodical Password**

If user need input the next activation date and password, he should repeat the above operation. At most, ten dates and passwords can be inputted.

**[Note]: The next date shall be later than the previous one.**






## 6、 Save Password

Input the needed password, and then press  to save the entire information. The system will display "Password Saved Successfully".

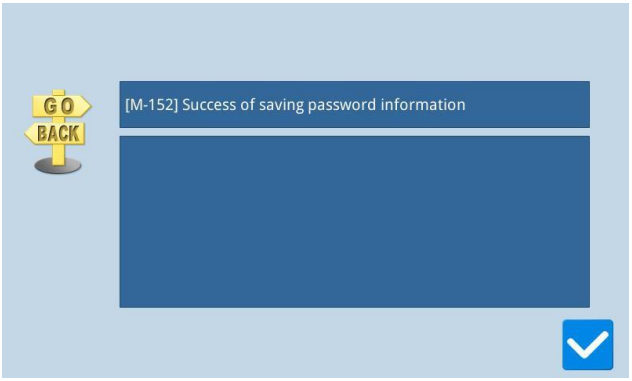
After confirmation, the system will return to the previous interface.

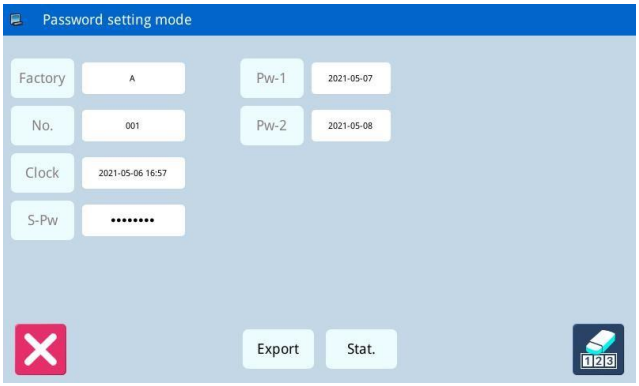
**[Note]: Only when user set at least one periodical password, can  be displayed.**

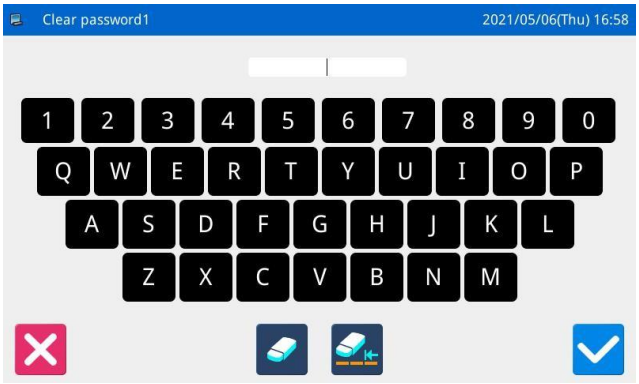


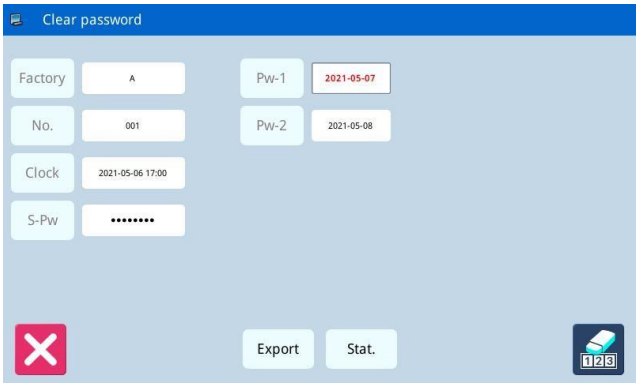
## 7、 Save Password Information

Enter the password statistics interface to display the panel number and password, staged password and date. After inserting the USB disk, press the output key  , enter a new name, and press the return key  to save. After the password is saved successfully, the password information will be displayed to save the successful prompt information.




## 8、 Clear Password before Activation

Clearing password is to delete the password before it activates.

The method for entering the password display interface is the same as that of password setting

After user input the right manufacturer ID, the system will display the current time and activation dates of periodical passwords, as shown in right figure

Press  to input the current password. The password is cleared in order of from front to behind.

At this moment, user can input two passwords. If the inputted password is the current password, the current password will be deleted. If the super password is inputted, the entire password will be deleted. If the current password is deleted and the current password is the last password, the system will have no password any more. Press  to finish the operation.

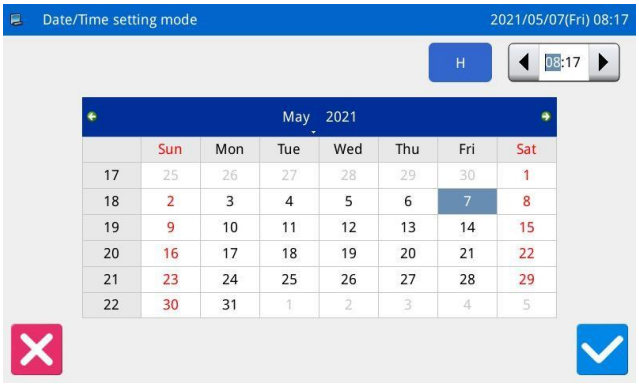
The deleted password will display in red color as shown in the right picture. If the entire password is deleted, the system will return to the upper level interface.


**9、 Clear Password at Activation**

If the system has the password and that password is not canceled, the password will activate at the set date. At this moment, user has to input the effective password to have the machine continue to work normally.

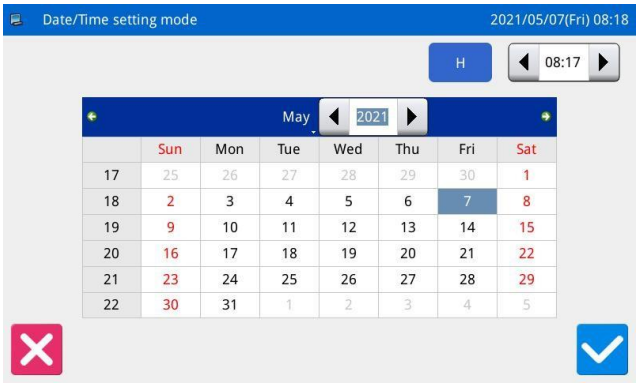
The effective passwords include the current password and the super password. If the inputted password is the current password, the current password will be deleted. If the super password is inputted, the entire password will be deleted. If the password is current password and the current password is the last password, the system will have no password any more. If the machine still have other password other than the current password, the next password will activate according to the set date

## 2.10.10 Date and Time Setting




In function setting interface, press 

to enter the date and time setting mode.




**11、Method for Setting Date**

Click “Year” (Here, it is 2011) to display two arrows to adjust it

Click “Month” (Here, it is June) to display the list of months. User can select the proper month.

After the setting, the display of year and month will be refreshed to the right ones.

User can also use  &  to check the content in calendar.

Click the day to complete the setting.

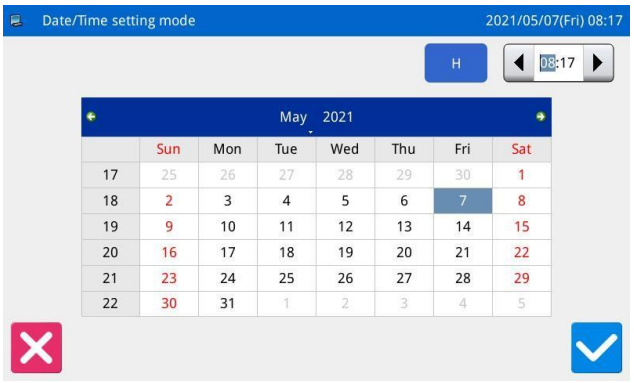
**[Note]: User has to set year, month and date to finish the setting. Only setting the year and month will not complete this operation.**


## 12、 Method for Setting Time

In default, user has to set hour first. Press “hour” to shift the setting to minute (Pressing “hour” is to change it to “minute”) and then press the arrows to change the time.

User can also click the display area to shift between hour and minute.

After the setting of date and time, please press  to save it.

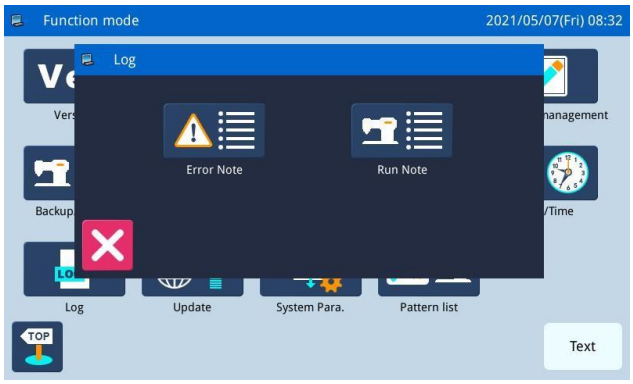




## 13、 Forbid to Change System Time

Once the machine is set with the periodical passwords, the system will deny the change on the system time. After all the passwords are cleared, the system will unlock the setting of the system time.

## 2.10.11 Alarm Record Mode



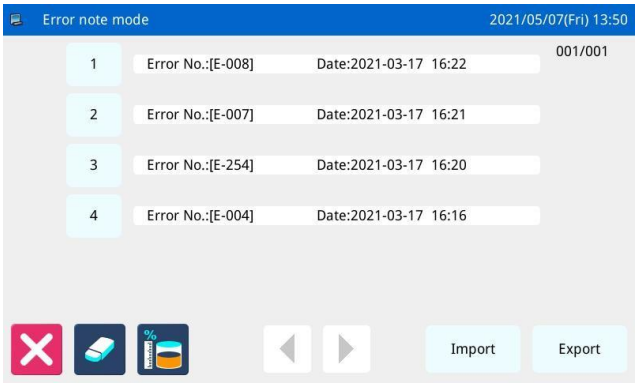

In the function setting interface, press the record key 

to open the record group. The following records can be viewed:

1) Error Note

2)Run Note

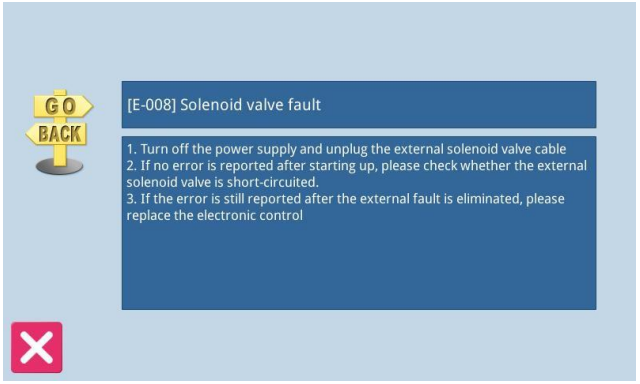
## 2.10.11.1 Error Note



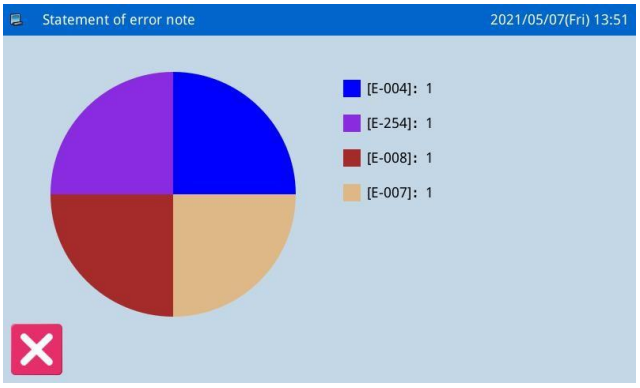

In function setting interface, press 

, then system will ask for the manufacturer ID. After user gives the right ID, the system will enter the alarm record mode

In this mode, the current alarm will be recorded. The smaller number means the later alarm.




Click each number, and the information of and solution for the error will be displayed.




Press the "data statistics view" key 
to enter the alarm record statistics interface.

## 2.10.11.2 Run Note


In function setting interface, press 

, then system will ask for the manufacturer ID. After user gives the right ID, the system will Enter the running record mode.

① Accumulated Running Time: Record total sewing time of machine.

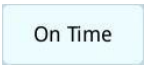
② Accumulated Sewing Pieces: Record the total number of the sewn patterns.

③ Accumulated Power-on Time: Record the total time of power-on

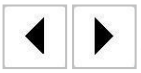
④ Accumulated Stitch Number: Record the total stitch number of the machine.

Additionally, click "Clear" to clear the counting value.

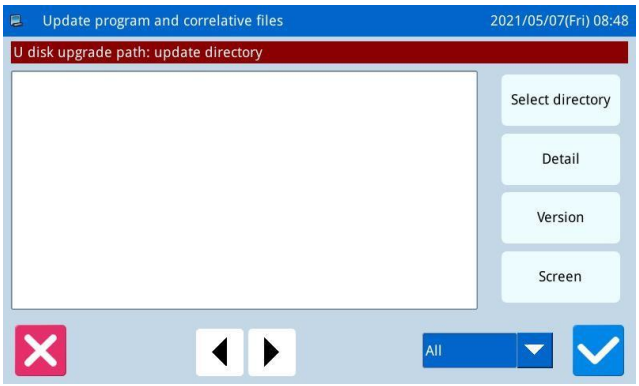
**[Note]: If the Accumulated Sewing Pieces is cleared, the system will also clear the Accumulated Counter in the assistant information bar at main interface.**


Press [on time] 

on the operation record mode interface to view the power on/off time notes..

Use the page turning key  to turn the page, click the clear key  to delete the boot record.

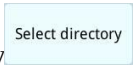
## 2.10.12 Update Mode



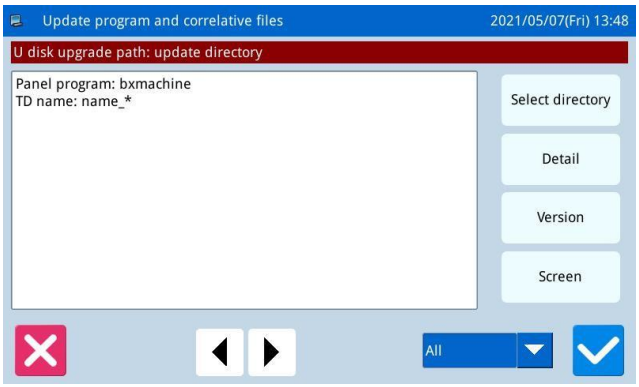

In function setting interface, press 

. The system will ask for the manufacturer ID. Input the correct ID to enter the software update mode.

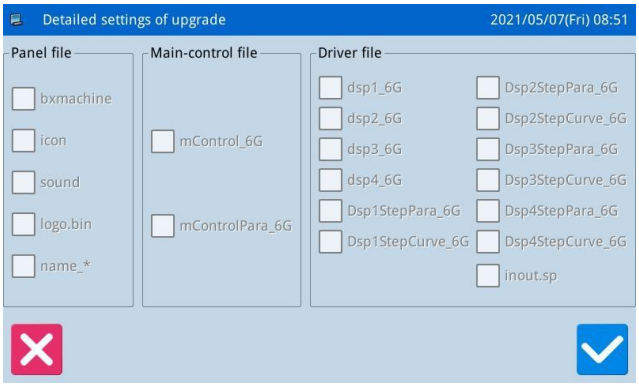
The updating software shall be located in the catalogue “Update” in the U disk.


First click the [select directory] key 

to select the directory where you want to upgrade the software.




Then select and click the ok key 
to return to the software upgrade interface and display all the upgradable software information in the directory.



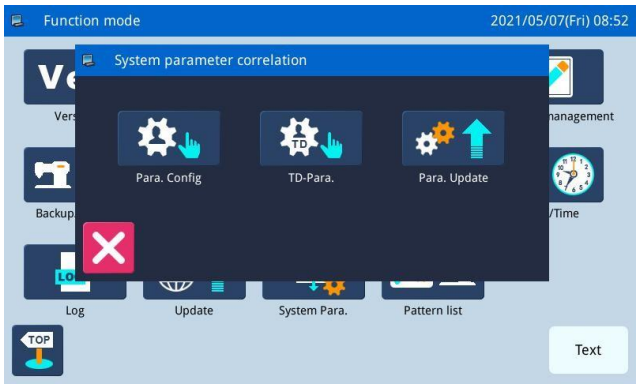

Click the details key 

to select the details of the software to be upgraded.

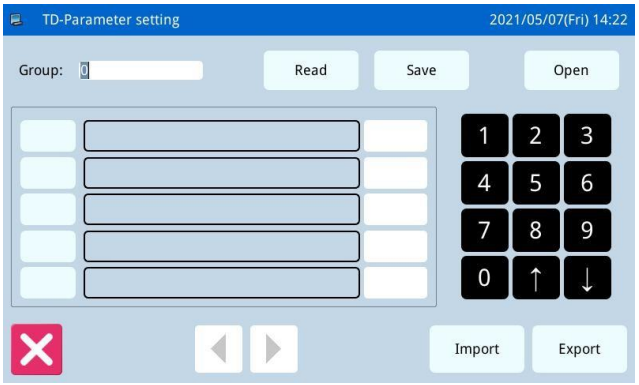
Click the "confirm" key 
to return to the software upgrade interface. Press the "confirm" key 
again to upgrade the corresponding software.


Click the [version] key Version to query the current software version of the panel.

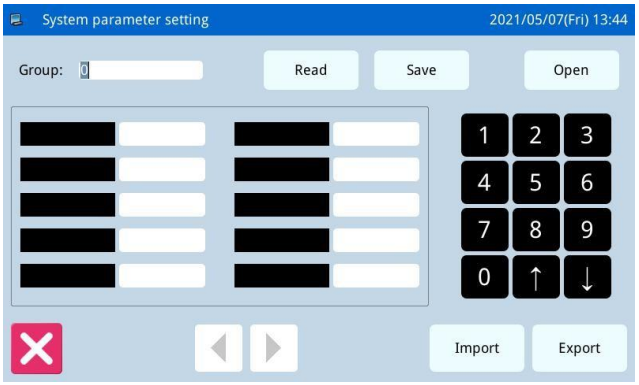
## 2.10.13 System Para




Press the system parameter key System Para. in the function setting interface to enter the system parameter setting mode.




In the system parameter setting interface, click the [parameter setting] key Para. Config to enter the system parameter setting interface and perform related operations.

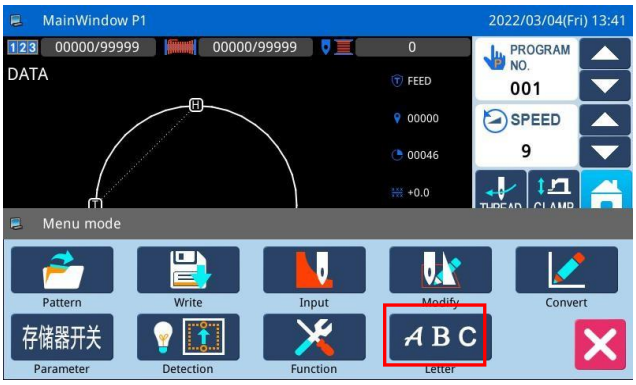



In the system parameter setting interface, click the [TD parameter] key TD-Para. to enter the TD parameter setting interface and perform relevant operations.


In the system parameter setting interface, click the [TD parameter] key 

to enter the parameter update setting interface and perform relevant operations.

## 2.11 Letter Sewing Edition

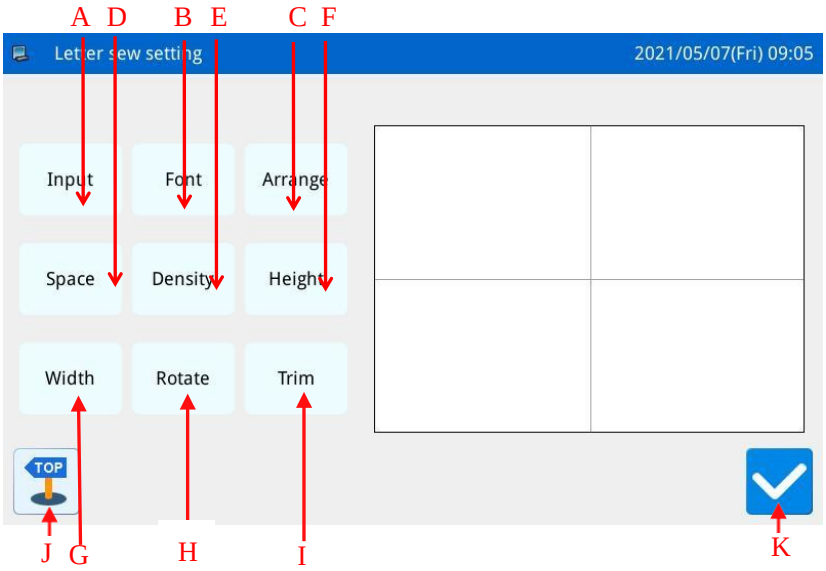



In main interface P1 (or P2), press  to activate the catalogue mode, and then press 

to enter letter sewing edition mode.

**[Note]: Parameter [Special] -> [Letter Sewing Function Enable] can be used to close the function of letter sewing edition. After that, this icon will not be displayed**

### 2.11.1 Parameters of Letter Sewing



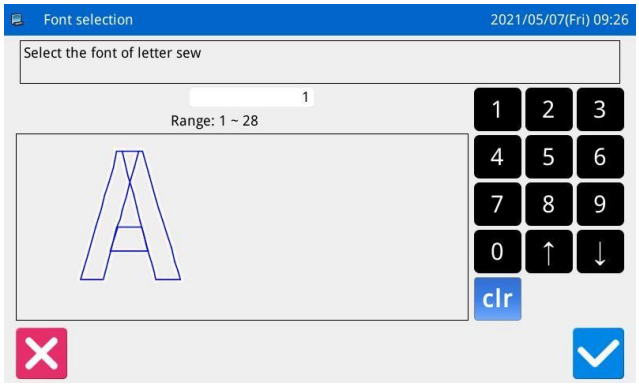

**Functions：**

| No. | Functions | Content |
|---|---|---|
| A | Figure Input | Input figures. At most, 20 figures can be inputted |
| B | Font Selection | 28 fonts are available。 |
| C | Array Method | User can select “Horizontal”, “Vertical”, “Upper Arc” “Down Arc” |
| D | Letter Pitch | Set the interval between letters |
| E | Density of Satin | Set the satin density. The larger value means the denser satin stitches |
| F | Scaling in Height | Scale the height of letter, range: 50~200. |
| G | Scaling in Width | Scale the width of letter, range: 50~200. |
| H | Rotation/Follow (Not Follow) | When the array method is linear (vertical or horizontal), the content on the button will be displayed as “Rotation”, which is to set the rotation angle of letter；<br>When the array method is arc (Upper Arc or Down Arc), this button will display “Follow” or “Not Follow”, which is to set whether the letter rotates with the arc. |
| I | Trim/Not Trim | Set whether to automatically insert thread-trimming code |
| J | Return | Quit and return to main interface |
| K | Enter | Confirm operations. And then enter pattern adjustment interface. |

**Instructions for**


**1、Figure input**

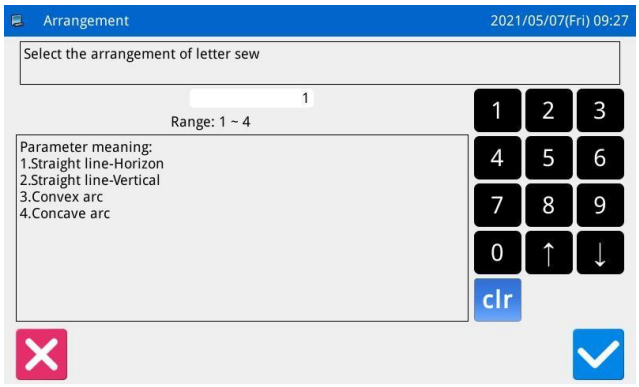
Press “Input” to enter figure input interface, where user have to input at least one figure. 20 figures can be inputted at most. Press to save the input and quit.




**2、Font Selection**

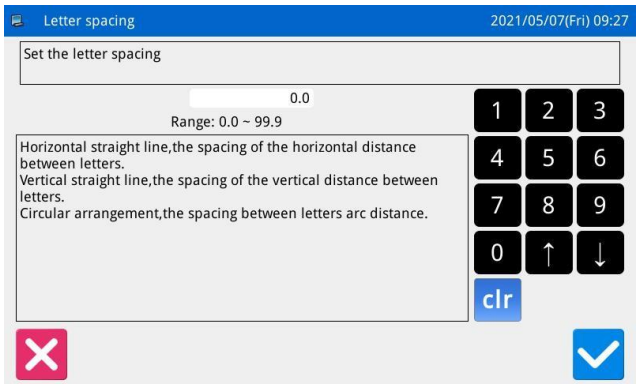
Press “Font” to enter font selection interface, where 28 types of fonts are provided. Input the numbers from 1 to 28 to select the font. Press to save it and quit.

In this interface, the font will be displayed to users.




**3、Array Method**

Press “Arrange” to enter the interface for setting array method, where user can select horizontal linear, vertical linear, upper arc and down arc. Press to save it and quit.




**4、 Figure Pitch**

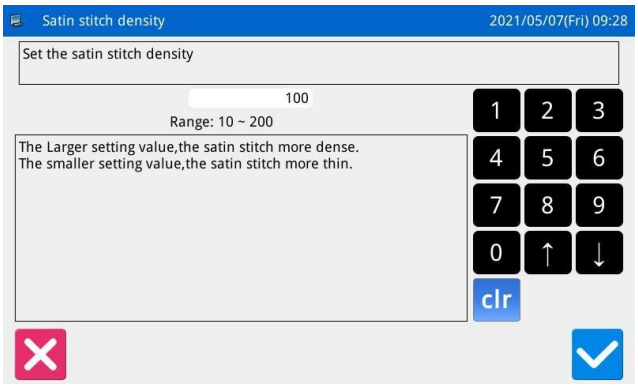
Press “Pitch” to enter the letter pitch setting interface.

In horizontal array, it is to set the horizontal pitch between letters.

In vertical array, it is to set the vertical pitch between letters.

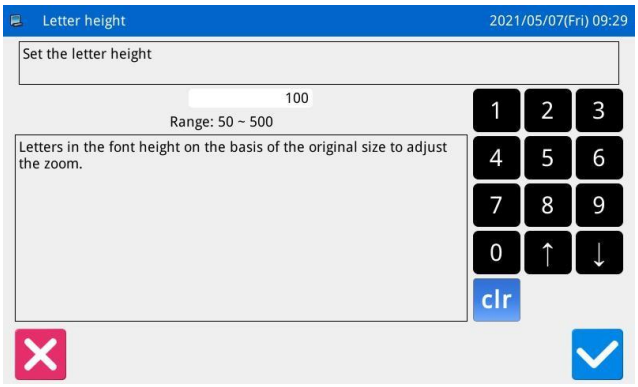
In arc array, it is to set the distance between the letters on arc.

Range: 0~99.9mm。



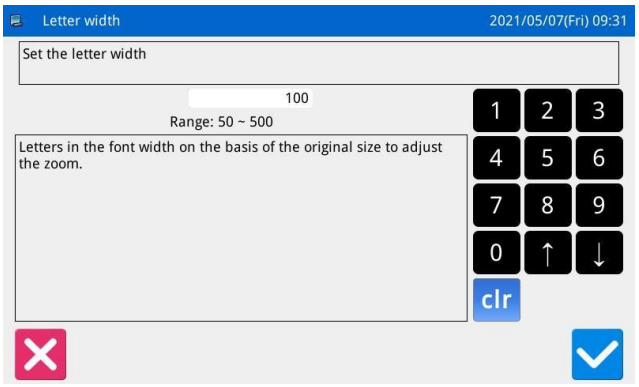

**5、 Density of Satin**

Press “Density” to enter the interface for setting satin density. The range is among 50~200.



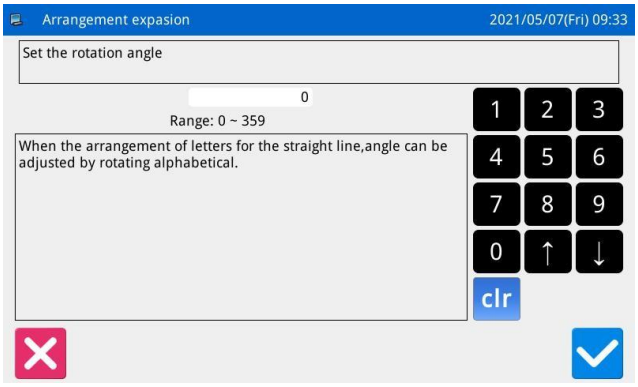

**6、 Scaling in Height**

Press “Height” to enter the interface for setting letter height， where user can scale the height of letter. Range: 50~200.




**7、 Scaling in Width**

Press “Width” to enter the interface for setting letter width， where user can scale the width of letter. Range: 50~200.




**8、 Rotation Angle Setting**

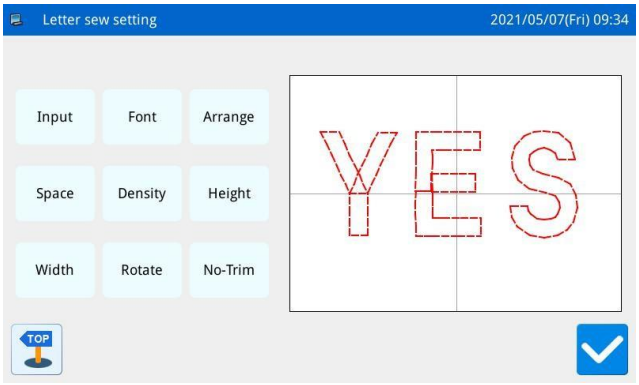
When the array method is set at “Horizontal” or “Vertical”, user can set the rotation angle of the letter. Press the “Rotation” to enter the interface for setting rotation angle.

The rotating direction is counter-clockwise. Range: 0°~359°.

**[Note]: When the array method is arc (Upper Arc or Down Arc), this button is to set whether the letter rotates with the arc.**

When the array method is arc (Upper Arc or Down Arc), user can set whether the letter rotates with the arc. Press “Follow” to shift it to “Not Follow”, vice versa.

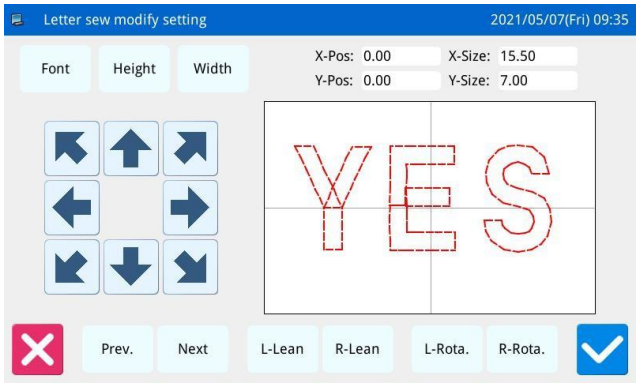
**[Note]: when the array method is “Horizontal” or “Vertical”, this button is to set the rotating angle.**




**9、 Trim/No Trim**

In default setting, the system will add auto-trimming, which is to add trimming code at the end of sewing, joint of empty feeding (or sewing).

Press “Trim” to change the content on button and cancel the function for automatically adding trimming functions.

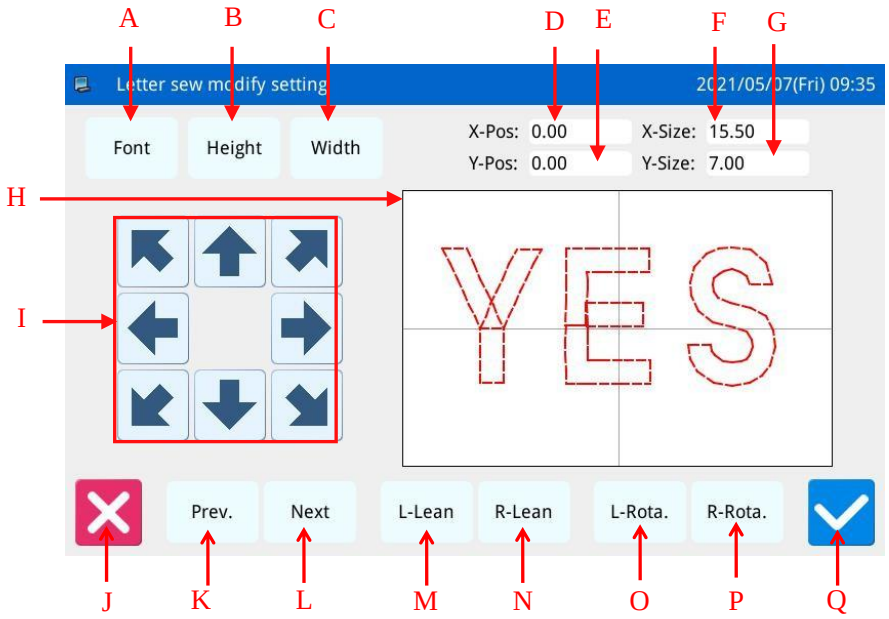



**10、 Confirm the Pattern**

Set the letter sewing pattern for generation. Press  to enter the interface for adjusting the letter sewing pattern.

### 2.11.2 Adjustment of Letter Sewing Pattern

In the interface for setting parameters of the letter sewing, user can press  to enter the interface for adjusting the letter sewing pattern. In this interface, user can have the further adjustment on the pattern.




**Functions:**

| No. | Functions | Content |
|---|---|---|
| A | Font Selection | Change the font of selected letter. The setting method is the same as that in Parameter Setting. |
| B | Scale in Height | Scale the height of the selected letter. The setting method is the same as that in Parameter Setting. |
| C | Scale in Width | Scale the width of the selected letter. The setting method is the same as that in Parameter Setting. |
| D | X Position | Display the X coordinate of center point of the selected letter |
| E | Y Position | Display the Y coordinate of center point of the selected letter |
| F | X Size | Display the width of the selected letter |
| G | Y Size | Display the height of the selected letter |
| H | Pattern Display | Display the current pattern for letter sewing. The selected letters are displayed in red; the unselected letter is displayed in green. |
| I | Direction Key | Adjust the position of the selected letter. |
| J | Esc | Return to the previous interface |
| K | Previous Letter (from right to left) | Select the letter for adjustment from right to left. The selected figure is displayed in red. When the icon still goes to left at selecting the last letter, the entire letters will be selected. |
| L | Next Letter (from | Select the letter for adjustment from left to right. The selected figure is displayed in |

| No. | Functions | Content |
|---|---|---|
| | left to right) | red. When the icon still goes to right at selecting the last letter, the entire letters will be selected. |
| M | Left Tilt/Radian Down | When the array method is horizontal array or the vertical array, this button will display “Left Tilt”. Pressing this button will rotate the entire pattern counterclockwise in the center of origin<br>When the array method is arc, this button will display “Radian Down”. Pressing this button will reduce the radian of entire pattern.<br>[Note] This operation is for the entire pattern. |
| N | Right Tilt/Radian Up | When the array method is horizontal array or the vertical array, this button will display “Right Tilt”. Pressing this button will rotate the entire pattern clockwise in the center of origin<br>When the array method is arc, this button will display “Radian Up”. Pressing this button will increase the radian of entire pattern.<br>[Note] This operation is for the entire pattern. |
| O | Left Rotation | Adjust the rotating angle of the selected letter counterclockwise. The rotation center is the center of the letter |
| P | Right Rotation | Adjust the rotating angle of the selected letter clockwise. The rotation center is the center of the letter |
| Q | Enter | Press it to Enter the pattern save interface |

**Example:**

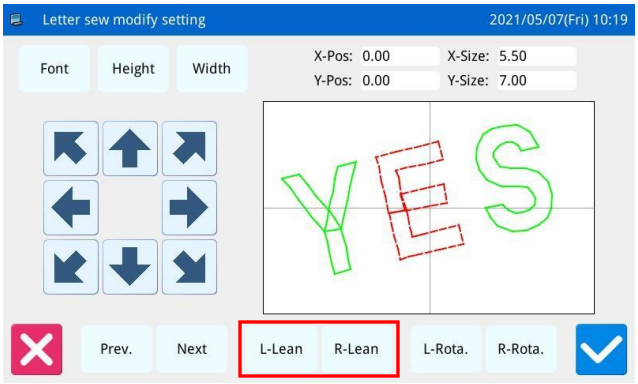

**1、 Select Single Letter for Adjustment**

Press “Previous Letter” or “Next Letter” to select the single letter for adjustment. The selected letter is displayed in red, while the unselected are displayed in green


**2、 Letter Position Adjustment**

Press direction keys to adjust the position of the selected letter. User can see the coordinates from “X Position” and “Y Position”

With the same operations, user can adjust the position of other letters.



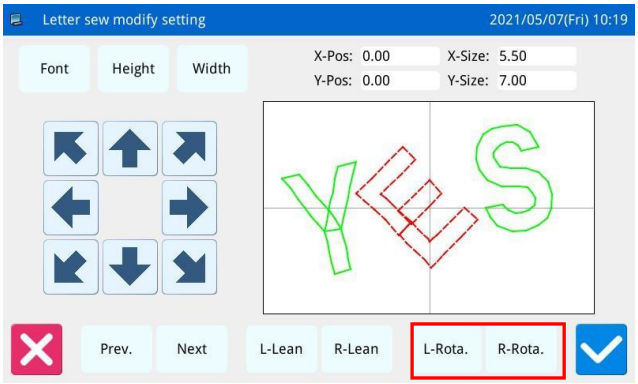

### 3、 Adjust the Rotating Angle of Entire Pattern

Press “Left Tilt” or “Right Tilt” to adjust the rotating angle of the entire pattern

“Left Tilt”: Counter-clockwise Rotation

“Right Tilt”: Clockwise Rotation

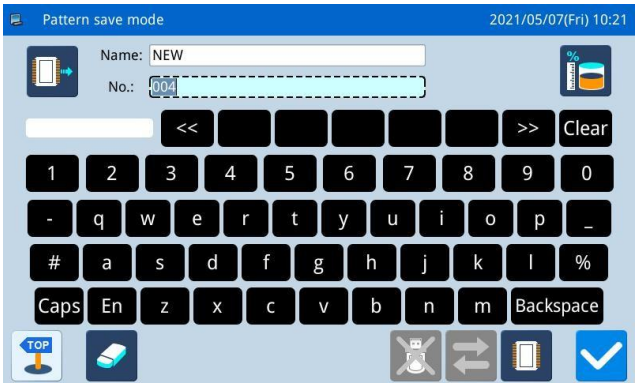
**[Note]: When the array method is arc, these buttons will turn to “Radian Up”/ “Radian Down”, which are to adjust the radian of the entire pattern**




### 4、 Rotation of Single Letter

Select a letter and then press “Left Rotation” or “Right Rotation” to adjust the rotating angle of the selected letter

**[Note] When adjusting the rotating angle, user had better adjust the rotating angle of the entire pattern at first. If user adjust the rotating angle of the single letter at first, the adjustment will be canceled when user rotates the entire pattern.**




### 5、 Save Pattern

After the adjustment, press  to enter interface for saving patterns.

Input name and number, and then press  . The system will display “Letter Sewing Pattern Saved Successfully”. (For other operations, please refer to [2.6 Save Pattern].)

**[Note] After the successful saving, the letter sewing pattern will not turn to current pattern automatically. User has to enter the pattern loading interface to select it.**

# 3 Appendix 1

## 3.1 Warning Information List

| Number | Name of Malfunction | Solution |
|---|---|---|
| E-001 | Pedal not at centre position | Please adjust pedal position |
| E-002 | Machine is in emergency stop | Check the condition of emergency switch.Turn and release the emergency button. If the screen keep displaying this hint, please check in the following way:<br>1、Check whether the emergency stop switch is pressed<br>2、Check whether the emergency stop switch cable is in good contact;<br>3、If there is no problem with the switch cable, please replace the electric control; |
| E-003 | The nose tip over | 1Turn off the power and check whether the nose is overturned<br>2Check whether the switch position of the machine head is normal and whether the cable is in good contact;<br>3Turn off the nose tip switch parameters or replace the electric control |
| E-004 | Input voltage is too low | Please turn off power and check system hardware<br>1、Check if the AC power supply has abnormal fluctuation; Make sure there is no high-power device that is turned on/off frequently; equip the voltage regulator.<br>2、If the AC power supply is normal, the problem may be at the hardware. Please return the main control board for repair. |
| E-005 | AC mains are too high | 1、Check if the AC power supply has abnormal fluctuation; Make sure there is no high-power device that is turned on/off frequently; equip the voltage regulator.<br>2、If the AC power supply is normal, the problem may be at the hardware. Please return the main control board for repair. |
| E-007 | IPM is over-voltage or over-current | Please turn off power and check system hardware<br>1、Make sure no short circuit at main motor; check if the value of each winding is equal and not 0；<br>2、Check whether the output at U\V\W is shorted out to earth or the 300V power supply, so as to judge the condition of IPM. |
| E-008 | Solenoid valve failure | 1.Power off and unplug the external solenoid valve cable.<br>2.If no more error is reported, please check whether the external solenoid valve is short circuit.<br>3.Error still reported after troubleshooting the external fault, please replace the electric control. |
| E-009 | Auxiliary power is too low | Please turn off power and check system hardware。<br>1、Check if the peripheral solenoids and valves are damaged；<br>2、Check whether there is a short circuit in the inner core of the plug at both ends of the connecting wire between the electric control box and the nose |

| | | |
|---|---|---|
| | | board;<br>3、Check whether the nose transfer plate is short circuit with the nose during installation. |
| E-010 | Fan or electromagnet failure | 1. Turn off the power and unplug the external electromagnet.<br>2. If no more errors are reported, please check whether the external electromagnet is damaged.<br>3. Error still reported after troubleshooting the external fault, please replace the electric control. |
| E-011 | Stepper motor over speed | If closed loop motor, please check:<br>1、Check whether the motor encoder is damaged;<br>2、Check whether the encoder cable is damaged. |
| E-012 | Stepper motor out of tolerance | If closed loop motor, please check:<br>1、Check whether the motor encoder is damaged;<br>2、Check whether the encoder cable is damaged. |
| E-013 | Spindle encoder is malfunctioning or not connected | Turn off the power and check whether the spindle encoder is connected properly. |
| E-014 | Spindle motor runs abnormally | 1. Turn off the power to check whether the machine is stuck, to ensure that the machine can run smoothly without dead spots.<br>2. Replace spindle motor.<br>3. Replace the electric control box. |
| E-015 | Exceeds sewing area | Check if the pattern is out of the range of the panel Settings |
| E-016 | Please turn the code plate position of spindle motor | Turn the hand wheel to lift the needle bar to the upper position of the upper dead point, and then step the pedal. |
| E-017 | Disconnection detection anomaly | 1.Check whether the position of broken wire detection equipment is correct;<br>2.Check whether the cable is normally connected;<br>3. Appropriately increase the number of broken wire detection needles;<br>4. If still not solved, you can choose to turn off the broken line detection function or replace the electric control; |
| E-018 | Trimmer position abnormal | Please turn off power. |
| E-019 | Emergency switch is not at the right position | 1. Check whether the emergency stop switch is pressed;<br>2. Check whether the emergency stop switch cable is in good contact;<br>3.If there is no problem with the switch cable, please replace the electric control.<br>Note: If the emergency stop switch is pressed and returns to normal, please change the type of emergency stop switch. |
| E-020 | Error reading E2PROM | |
| E-021 | Error writing E2PROM | |
| E-023 | Abnormal position of grabber line | Please turn off the power. |
| E-024 | Wrong connection between operation head and sewing | Please turn off power. |

| | | |
|---|---|---|
| | machine | |
| E-025 | X origin detection abnormal | 1.Turn off the power. First of all, make sure that the machine can move normally without sticking points, X sensor and baffle can work normally, and the cable connection between X motor and sensor is intact.<br>2.Switch on the machine and enter the signal detection interface to detect X Sensor. If the signal does not jump, replace the sensor and electric control in turn for testing.<br>3.If the signal can jump normally, enter the XY detection interface to detect the action of X motor;<br>4If X motor can work normally but the steering direction is opposite, please change the steering parameters of X motor;<br>5If the X motor cannot work normally, replace the X motor and electric control box in turn for testing. |
| E-026 | Y origin detection abnormal | 1.Turn off the power. First of all, make sure that the machine can move normally without sticking points, Y inductor and baffle can work normally, and Y motor and inductor cable are well connected;<br>2.Switch on the machine and enter the signal detection interface to detect Y sensor. If the signal does not jump, replace the sensor and electric control in turn for testing.<br>3.If the signal can jump normally, enter the XY detection interface to detect the action of Y motor;<br>4.If the Y motor can work normally but the steering direction is opposite, please change the steering parameters of Y motor;<br>5.If Y motor cannot work normally, replace Y motor and electric control box in turn for testing; |
| E-027 | Presser origin detection abnormal | Please turn off power. |
| E-028 | Thread-catching origin detection abnormal | Please turn off power. |
| E-029 | Intermediate presser origin detection abnormal | 1.First of all, make sure that the machine can move normally without sticking points, the sensor and the baffle of the middle pressor foot can work normally, and the motor of the middle pressor foot and the sensor cable are intact.<br>2.Start the machine and enter the signal detection interface to detect the sensor of medium pressure foot. If the signal does not jump, replace the sensor and electric control in turn for testing;<br>3.If the signal can jump normally, enter the middle presser foot detection interface to detect the motor action of the middle presser foot;<br>4.If the motor of the middle presser foot can work normally but the steering direction is opposite, please change the steering parameters of the motor of the middle presser foot;<br>5. If the motor of medium pressor foot cannot work normally, replace the motor of medium pressor foot and electric control box in turn for testing; |
| E-030 | Master and step communication | 1.Please check whether the program version is correct; |

| | | |
|---|---|---|
| | error | 2. Re-upgrade the master control and step procedure to check whether it is normal;<br>3. Replace the electric control; |
| E-031 | Stepping motor over-current | Please turn off power<br>The stepping motor is broken; user needs to replace the stepping motor<br>2、The stepping drive board is broken; user needs to replace the stepping drive board |
| E-032 | Stepping driver power abnormal | Please turn off power. |
| E-034 | Spindle drive short circuit | 1. Turn off the power and check whether the spindle motor is damaged;<br>2. If the motor is not damaged, replace the electric control box; |
| E-035 | Spindle drive over current 1 | 1. Turn off the power, check whether the machine is stuck, to ensure that the machine can run smoothly without dead point.<br>2. Replace the spindle motor;<br>3. Replace the electric control box. |
| E-036 | Spindle drive over current 2 | 1. Turn off the power, check whether the machine is stuck, to ensure that the machine can run smoothly without dead point;<br>2. Replace the spindle motor;<br>3. Replace the electric control box; |
| E-037 | Motor is blocked 1 | Please turn off power.<br>1、 Due to the wrong location of the main shaft angle, the trimmer is jammed on the needle when cutting the thread, thus causes the main shaft to be blocked. Solution: Relocate the main shaft angle<br>2、 The needle rod is jammed on the intermediate presser at moving, which causes the blockage of the main shaft. Solution: check the action of the intermediate presser and the connection between the air valve and the solenoid valve.<br>3、The trimmer can’t cut the thread due to lacking of strength, which causes the blockage of the main shaft. Solution: adjust the main shaft parameter and increase the strength of trimming.<br>4、The mechanism has dead point, so the main shaft is blocked. Solution: adjust the mechanism;<br>5、The encoder at the main shaft motor has problem, which responses the wrong signal, thus causes the blockage of the motor. Solution: replace the main shaft motor |
| E-038 | Motor is blocked 2 | Please turn off power.<br>1、The used fabric is too thick to be penetrated by the needle. Solution: adjust the main shaft parameters or change to a motor with larger power capacity;<br>2、The needle rod is jammed on the intermediate presser at moving, which causes the blockage of the main shaft. Solution: check the action of the intermediate presser and the connection between the air valve and the solenoid valve<br>3、The mechanism has dead point, so the main shaft is blocked. Solution: adjust the mechanism<br>4、The encoder at the main shaft motor has problem, which responses the wrong signal, thus causes the blockage of the motor. Solution: replace the main shaft motor |

| | | |
|---|---|---|
| E-039 | Motor over speed | Please turn off power.<br>Spindle motor encoder has a problem, the signal feedback is wrong. |
| E-040 | Over current in stop status | Please turn off power.<br>Spindle motor encoder has a problem, the signal feedback is wrong. |
| E-041 | Motor overload | Please turn off power. |
| E-042 | Bus voltage abnormal | Please turn off power. |
| E-043 | X stepping motor position error | Please turn off power. |
| E-044 | Y stepping motor position error | Please turn off power. |
| E-045 | Presser not down | Step the pedal |
| E-046 | Not at origin cannot operate | Press key to return to origin |
| E-047 | Spindle motor runs abnormally | 1.Turn off the power, check whether the machine is stuck, to ensure that the machine can run smoothly without dead point.<br>2.Replace the spindle motor;<br>3.Replace the electric control box； |
| E-048 | Abnormal origin position of middle presser foot | Please turn off power. |
| E-050 | X motor over current | 1.Turn off the power and check whether the connector of X motor is firmly connected and whether the cable is intact and without damage;<br>2.Replace X motor;<br>3.Replace the electric control. |
| E-051 | Y motor over current | 1.Turn off the power and check whether the connector of Y motor is firmly connected and whether the cable is intact and without damage;<br>2.Replace Y motor;<br>3.Replace the electric control. |
| E-052 | X Large current of motor | X Large current of motor |
| E-053 | Y Large current of motor | Y Large current of motor |
| E-054 | X Motor is running abnormally | 1.Turn off the power and make sure that no sticking point can be moved normally in the X direction of the machine.<br>2.Ensure that the cable connection of X motor is correct and firm without damage;<br>3Replace X motor;<br>4.Replace the electric control. |
| E-055 | Y Motor is running abnormally | 1.Turn off the power and make sure that no sticking point can be moved normally in the Y direction of the machine.<br>2.Ensure that the cable connection of Y motor is correct and firm without damage;<br>3Replace Y motor;<br>4.Replace the electric control. |
| E-056 | X Motor stall | X Motor stall |
| E-057 | Y Motor stall | Y Motor stall |
| E-058 | Curve calculation error | Curve calculation error |
| E-059 | Master and step communication | 1.Verify that the software version is correct |

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| | error 1 | 2. Re-import system parameters<br>3. Replace the electric control. |
| E-060 | Master and step communication error 2 | 1. Initialization parameter<br>2. Replace the electric control. |
| E-061 | Servo communication error 3 | Servo communication error 3 |
| E-062 | X Motor is locked | X Motor is locked |
| E-063 | Y Motor is locked | Y Motor is locked |
| E-064 | X Motor instruction coverage | Please turn off power. |
| E-065 | Y Motor instruction coverage | Please turn off power. |
| E-066 | Coverage of X motor fast walking instruction | Please turn off power. |
| E-067 | Coverage of Y motor fast walking instruction | Please turn off power. |
| E-068 | Abnormal calculation of servo moving frame curve | Please turn off power. |
| E-069 | Supply voltage is too high | Please turn off power. |
| E-070 | Front and rear motion sensor failure | Please turn off power. |
| E-071 | Left sensor failure | Please turn off power. |
| E-072 | Right sensor failure | Please turn off power. |
| E-073 | Left and right sensor failure | Please turn off power. |
| E-074 | X Motor over speed | Please turn off power. |
| E-075 | Y motor over speed | Please turn off power. |
| E-076 | X motor current reference value is abnormal | Please turn off power. |
| E-077 | Y motor current reference value is abnormal | Please turn off power. |
| E-078 | The XY motor current reference value is abnormal | Please turn off power. |
| E-079 | Communication of servo motor is abnormal | Please turn off power. |
| E-080 | Bottom line cylinder action is not in place | Please try again. |
| E-081 | The bottom line is insufficient | Press the confirm button to restore after replacing the bottom line |
| E-082 | Oil shortage | |
| E-083 | Variant data error 1 | |
| E-084 | Variant data error 2 | |
| E-085 | The origin of the wire cutting motor was not found | |
| E-086 | Write drive program failed | Please restart the system and upgrade again. |
| E-087 | Mechanical limit | |
| E-088 | Abnormal detection of bobbin bobbin | 1.Please check whether the shuttle tray is empty. If so, press confirm after replacing the shuttle tray. |

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| | | 2.If there is a bobbin on the bobbin, please turn it off and restart it and check whether the bobbin sensor is normal. |
| E-089 | The automatic shuttle changer is abnormal | |
| E-090 | Automatic shuttle change in progress | |
| E-091 | Unrecognized template | Please replace the template |
| E-092 | Parameter mismatch of master stepping curve | Please update the curve parameters |
| E-093 | Medium presser foot motor over current | 1、Turn off the power and check whether the motor connector of the middle presser foot is firmly connected and whether the cable is intact and without damage<br>2、Replace motor of medium presser foot<br>3、Replace the electric control |
| E-094 | Over current of wire cutting motor | Please turn off the power. |
| E-095 | Abnormal operation of medium presser foot motor | 1.Turn off the power and confirm that the mechanical parts of the middle presser foot can move smoothly without sticking points;<br>2.Ensure that the motor cable of the middle presser foot is connected correctly and firmly without damage;<br>3.Replace motor of medium presser foot<br>4.Replace the electric control |
| E-096 | Abnormal wire cutting motor | Please turn off power. |
| E-097 | The card reader module is abnormal | Please power off and check whether the card reader module is damaged or not connected |
| E-098 | Main power protection | Please turn off power. |
| E-099 | Control box does not match operation head type | Please replace the panel. |
| E-100 | Solenoid valve failure | Please turn off power. |
| E-101 | The air valve action timed out | Please check the air valve |
| E-102 | Air pressure is insufficient | Please check the air valve |
| E-103 | Abnormal communication between master and DSP1 | |
| E-104 | Abnormal communication between master and DSP2 | |
| E-105 | Abnormal communication between master and DSP3 | |
| E-106 | Abnormal communication between master and DSP4 | |
| E-107 | Over current or blocking of the upper spindle motor | |

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| E-108 | The motor of the lower spindle is over current or blocked | |
| E-109 | Low oil rate alarm | The oil quantity of the mechanical oil storage pot is too low, please replenish the oil! |
| E-110 | Warning against danger | Rotating head rotating area is close to someone or its object, please stay away! |
| E-111 | The bottom line is insufficient | Press the OK button to cancel the alarm. |
| E-112 | Loss of needle or out of position during sewing | 1. Please shut down and check whether the signal connection plug of the spindle encoder is correct and reliable, and whether the connecting wire is damaged.<br>2. Please check whether the moving frame Angle fine-tuning and moving frame time fine-tuning are the default values in transfer mode.<br>4. Please check whether there is any unrecognized function code information and whether there is continuous repetition in the pattern<br>Function code. |
| E-113 | The upper rotation axis looks for the origin anomaly (beyond the limited number of steps) | 1. Please turn it off and check whether the connecting plug of the sensor at the origin of the upper rotation shaft is correct and firm, and whether the connecting wire is damaged.<br>2. Please check whether the origin sensor of the upper rotation axis is damaged.<br>3. Please check whether the related machinery of the upper rotation shaft is loose, whether the rotation is smooth, and whether there is rotation blocking. |
| E-114 | The lower rotation axis looks for the origin anomaly (beyond the limited number of steps) | 1. Please turn it off and check whether the connecting plug of the sensor at the origin of the rotation axis is correct and firm, and whether the connecting wire is damaged.<br>2. Please check whether the origin sensor of the rotation axis is damaged.<br>3. Please check whether the related machinery of the rotating shaft is loose, whether the rotation is smooth, and whether there is blocking rotation. |
| E-115 | Upper spindle servo drive failure | 1. Please check the alarm code displayed on the spindle servo driver and check the warning code instructions in the driver manual.<br>2. Please shut down and check whether the connecting plug of the control line of the spindle servo drive is correct and reliable, and whether the connecting wire is damaged.<br>3. Please check whether the mechanical structure of the upper spindle is loose, whether the rotation is smooth, and whether there is rotation blocking.<br>4. Please restart the machine and check whether the needle and spindle are positioned correctly. |
| E-116 | Lower spindle servo drive failure | 1. Please check the alarm code displayed on the spindle servo driver and check the warning code instructions in the driver manual.<br>2. Please shut down and check whether the connecting plug of the control line of the spindle servo drive is correct and reliable, and whether the connecting wire is damaged.<br>3. Please check whether the mechanical structure of the spindle is loose, whether the rotation is smooth, and whether there is blocking rotation.<br>4. Please restart the machine and check whether the needle and spindle are |

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| | | positioned correctly. |
| E-117 | Over current of upper rotating shaft motor | 1. Please turn off the machine and check whether the related machinery of the upper rotation shaft is loose, whether the rotation is smooth and whether there is blocking.<br>2. Please check whether the connecting plug of the encoder of the upper rotating shaft motor is correct and firm, and whether the connecting wire is damaged.<br>3. Please check whether the connecting plug of the power cord of the upper rotating shaft motor is correct and firm, and whether the connecting wire is damaged.<br>4. Please check whether the motor parameters of the upper rotating shaft are configured correctly. |
| E-118 | Lower rotating shaft motor over current | 1. Please turn off the machine and check whether the related machinery of the rotating shaft is loose, whether the rotation is smooth, and whether there is blocking rotation.<br>2. Please check whether the connecting plug of the encoder of the rotary shaft motor is correct and reliable, and whether the connecting wire is damaged.<br>3. Please check whether the connecting plug of the power cord of the rotating shaft motor is correct and firm, and whether the connecting wire is damaged.<br>4. Please check whether the configuration of rotary shaft motor parameters is correct. |
| E-119 | The motor of the upper rotating shaft is out of tolerance | 1. Please turn off the machine and check whether the related machinery of the upper rotation shaft is loose, whether the rotation is smooth, and whether there is blocking rotation.<br>2. Please check whether the connecting plug of the encoder of the upper rotating shaft motor is correct and reliable, and whether the connecting wire is damaged.<br>3. Please check whether the connecting plug of the power cord of the upper rotating shaft motor is correct and firm, and whether the connecting wire is damaged.<br>4. Please check whether the motor parameters of upper rotating shaft are configured correctly. |
| E-120 | The motor of the lower rotating shaft is out of tolerance | 1. Please turn off the machine and check whether the related machinery of the rotating shaft is loose, whether the rotation is smooth, and whether there is blocked rotation<br>Situation.<br>2. Please check whether the connecting plug of the encoder of the rotary shaft motor is correct and reliable, and whether the connecting wire is damaged.<br>3. Please check whether the connecting plug of the power cord of the rotating shaft motor is correct and firm, and whether the connecting wire is damaged.<br>4. Please check whether the configuration of rotary shaft motor parameters is correct. |
| E-121 | DSP3 first line motor over current | Power off, unplug the power cable, confirm the motor or plate fault, contact professional maintenance personnel |

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| E-122 | DSP4 first line motor over current | Power off, unplug the power cable, confirm the motor or plate fault, contact professional maintenance personnel |
| E-123 | DSP3 second circuit motor over current | Power off, unplug the power cable, confirm the motor or plate fault, contact professional maintenance personnel |
| E-124 | DSP4 second circuit motor over current | Power off, unplug the power cable, confirm the motor or plate fault, contact professional maintenance personnel |
| E-125 | DSP3 first circuit motor out of tolerance | Turn off the machine and check whether the encoder plug is loose or whether there is a foreign body that prevents the motor from running |
| E-126 | DSP4 first circuit motor out of tolerance | Turn off the machine and check whether the encoder plug is loose or whether there is a foreign body that prevents the motor from running |
| E-127 | DSP3 second circuit motor out of tolerance | Turn off the machine and check whether the encoder plug is loose or whether there is a foreign body that prevents the motor from running |
| E-128 | DSP4 second circuit motor out of tolerance | Turn off the machine and check whether the encoder plug is loose or whether there is a foreign body that prevents the motor from running |
| E-129 | The upper rotation axis and the lower rotation axis are out of sync | 1. Please turn off the machine and check whether the related machinery of the rotating shaft is loose and smooth.<br>2. Please check whether the encoder wire and power cord of the rotary shaft motor are normal and damaged.<br>3. Please check whether the configuration of rotary shaft motor parameters is correct. |
| E-130 | The motor of the upper spindle is out of tolerance | 1. Please turn off the machine and check whether the related machinery of the upper spindle is loose, whether the rotation is smooth and whether there is blocking.<br>2. Please check whether the connecting plug of the encoder of the upper spindle motor is correct and reliable, and whether the connecting wire is correct<br>Have been broken.<br>3. Please check whether the connecting plug of the power cord of the upper spindle motor is correct and reliable, and whether the connecting wire is correct<br>Have been broken.<br>4. Please check whether the motor parameters of the upper spindle are configured correctly. |
| E-131 | The motor of the lower spindle is out of tolerance | 1. Please turn off the machine and check whether the related machinery of the lower spindle is loose, whether the rotation is smooth and whether there is blocking.<br>2. Please check whether the connecting plug of the encoder of the lower spindle motor is correct and reliable, and whether the connecting wire is correct<br>3. Please check whether the connecting plug of the power cord of the lower spindle motor is correct and reliable, and whether the connecting wire is correct<br>Have been broken.<br>4. Please check whether the motor parameters of the lower spindle are |

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| | | configured correctly.。 |
| E-132 | Abnormal synchronization between upper spindle and lower spindle | 1.Please turn off the spindle and check whether the related machinery is loose and rotation is smooth<br>2.Please check whether the encoder wire and power cord of the spindle motor are normal and damaged<br>3.Please check whether the spindle motor parameters are configured correctly. |
| E-133 | Spindle parking overtime or parking position out of tolerance | 1.Please turn off the spindle and check whether the related machinery is loose and rotation is smooth<br>2.Please check whether the encoder wire and power cord of the spindle motor are normal and damaged<br>3.Please check whether the spindle motor parameters are configured correctly. |
| E-134 | Spindle lock time out not completed | 1.Please turn off the spindle and check whether the related machinery is loose and rotation is smooth<br>2.Please check whether the encoder wire and power cord of the spindle motor are normal and damaged<br>3.Please check whether the spindle motor parameters are configured correctly. |
| E-135 | Troubleshooting... | After troubleshooting, confirm key for automatic shuttle change, cancel key for manual shuttle change |
| E-136 | The head lifting action is abnormal! | Please check whether the head lifting mechanism is normal and whether the electrical wiring is intact |
| E-137 | The automatic shuttle changeover module failed to connect | 1.Please check whether the power supply of the automatic shuttle changing module is normal.<br>2.Please shut down and check whether the related lines are correct and reliable, and whether the connecting lines are damaged.<br>3.Please check whether the program version of the automatic shuttle changing module is normal. |
| E-138 | Bobbin motor malfunction | 1.Please turn off the shuttle-board and check whether the shuttle-board mechanism is smooth or not.<br>2.Please check whether the plug of the shuttle motor is correct and firm, and whether the connecting wire is damaged.<br>3.Please check whether the shuttle motor is damaged. |
| E-139 | Abnormal detection of spindle motor origin | 1.Please turn off the shuttle-board and check whether the shuttle-board mechanism is smooth or not.<br>2.Please check whether the plug of the shuttle motor is correct and firm, and whether the connecting wire is damaged.<br>3.Please check whether the origin signal of shuttle motor is normal. |
| E-140 | The bobbin arm rotation is abnormal | 1.Please shut down and check whether the bobbin arm rotation mechanism is smooth and whether there is a jam.<br>2.Please check whether the switch plug is correct and reliable, and whether the connecting wire is damaged.<br>3.Please check whether the relevant sensor is normal. |
| E-141 | Abnormal expansion of shuttle | 1.Please shut down and check whether the shuttle boom expansion mechanism |

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| | changer arm | is smooth and whether there is a jam.<br>2. Please check whether the telescopic plug of the shuttle changer arm is correct and reliable, and whether the connecting wire is damaged.<br>3. Please check whether the relevant sensor is normal. |
| E-142 | The bobbin core is abnormal when changing bobbin arm | 1. Please power off and check whether the bobbin arm and bobbin butt position are consistent.<br>2. Please check whether the bobbin clamping mechanism is normal.<br>3. Please check whether the bobbin sensor is normal. |
| E-143 | Abnormal starting Angle of spindle synchronous action | 1. Restore the recently modified parameters, making sure that the parameters have changed within the appropriate range.<br>2. Please contact relevant after-sales service personnel for problem solving. |
| E-144 | Abnormal position of spindle synchronous rotation axis | 1. During sewing, the rotating shaft failed to rotate normally, resulting in the deviation of needle Angle.<br>2. Restore the recently modified parameters, making sure that the parameters have changed within the appropriate range.<br>3. Please contact relevant after-sales service personnel for problem solving. |
| E-145 | Abnormal position of spindle synchronous middle presser foot | 1. The middle presser foot (follow up) fails to lift or fall properly, resulting in height deviation.<br>2. Restore the recently modified parameters, making sure that the parameters have changed within the appropriate range.<br>3. Please contact relevant after-sales service personnel for problem solving. |
| E-146 | Spindle synchronous X- axis position abnormal | 1. During sewing, the X axis failed to complete the action according to the pattern, resulting in the deviation of the X axis direction frame.<br>2. Restore the recently modified parameters, making sure that the parameters have changed within the appropriate range.<br>3. Please contact relevant after-sales service personnel for problem solving. |
| E-147 | Spindle synchronous Y- axis position abnormal | 1. During sewing, the Y axis failed to complete the action according to the pattern, resulting in the deviation of the Y axis frame.<br>2. Restore the recently modified parameters, making sure that the parameters have changed within the appropriate range.<br>3. Please contact relevant after-sales service personnel for problem solving. |
| E-148 | Spindle synchronous frame position abnormal | 1. During sewing, XY axis failed to complete the action according to the pattern, resulting in the deviation of the frame.<br>2. Restore the recently modified parameters, making sure that the parameters have changed within the appropriate range.<br>3. Please contact relevant after-sales service personnel for problem solving. |
| E-149 | The pattern is beyond the scope of sewing | Please press OK to remove the fault.<br>1、Please modify the starting point;<br>2、Check that the sewing range set by the operator head does not match the selected pattern. |
| E-150 | The calibration Angle value of | Please enter the spindle motor calibration interface to reset the spindle |

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| | spindle motor is abnormal | installation Angle |
| E-151 | Laser offset out of stitching range | Adjust the laser or brush offset parameters |
| E-152 | The extension module is not connected | Shut down the system and check the connection and power supply between the extension module and the system |
| E-153 | Extended module over current error | Close the system, check whether there is an external valve short circuit, pull out the valve one by one to eliminate |
| E-254 | Undefined error | An undefined error occurred in communication |

## 3.2 Hint Information List

| No. | Name | Content of Sub-information |
|---|---|---|
| M-001 | Up counter reaches set value | Press Enter |
| M-002 | Down counter reaches set value | Press Enter |
| M-003 | Not at origin, cannot operate | Return to origin firstly |
| M-004 | Pattern data not exist | Please reload or input again |
| M-005 | Set value is too large | Please input value within valid range |
| M-006 | Set value is too small | Please input value within valid range |
| M-007 | Please press “Return to Origin” | |
| M-008 | Save parameter abnormal | Press Enter to restore the default values |
| M-009 | Cannot find pattern in memory | Press Enter to load the default patterns |
| M-010 | Memory full | Please delete the idle sewing data |
| M-011 | Delete pattern data from memory? | Press OK to delete the operation and cancel to exit the current operation. |
| M-012 | Replace pattern data in memory? | Press OK to delete the operation and cancel to exit the current operation. |
| M-013 | Can not delete pattern data. | The selected sewing data is being used |
| M-014 | Format memory? | Press OK to delete the operation and cancel to exit the current operation.<br>All memory pattern data will be deleted after formatting! |
| M-015 | Communication error | Abnormal event occurs in the communication between the operation head and the control box. |
| M-016 | Beyond sewing range | Make sure pattern data is in sewing range |
| M-017 | Fail to load letter sewing file | |
| M-018 | Operation head does not match the type of control box | Please check the model and the software version |
| M-019 | Wrong pattern number | Please input the right pattern number |
| M-020 | Beyond max stitch interval | |
| M-021 | Wrong password | Please input password again |
| M-022 | Hardware clock error | The hardware clock has problem, please contact manufacturer for repair. |
| M-023 | Stitch number beyond range | Please enter [Operation Settings]->[LCD Screen], select 'Large Sticker Count Pattern Support' parameter set to ON |
| M-024 | Inputted stitch interval is too low | Please input value within valid range |
| M-025 | Inputted stitch interval is too low | Please input value within valid range |
| M-026 | Offset origin existed | User can only input one offset origin. |
| M-027 | Please press Return to Origin | |
| M-028 | Copy the pointed pattern? | Do you want to overwrite the original graph? |

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| | | Yes: Enter, no: X |
| M-029 | Restore to default setting? | Press OK to delete the operation and cancel to exit the current operation. |
| M-030 | USB is pulled out | U Disk Is Pulled Out！ |
| M-031 | Cannot find pattern data in U disk | |
| M-032 | At least input one letter | At making pattern of letter sewing, user has to input at least one letter |
| M-033 | No alarm record | |
| M-034 | Replace needle | Reach set value for needle replacement, please replace needle! |
| M-035 | Replace oil | Reach set value for oil replacement, please replace oil! |
| M-036 | Clean machine | Reach set value for cleaning machine, please clean machine! |
| M-037 | Different data format | Please confirm the data format |
| M-038 | Cannot create curve | Please input again according to the standards of curve input. |
| M-039 | Cannot insert trimming at current position | Please add trimming behind sewing data |
| M-040 | Cannot add same function code in one position | |
| M-041 | Cannot insert offset origin at current position | Please add offset origin after feeding |
| M-042 | Cannot create arc or circle at the inputted point | Please input again |
| M-043 | Cannot create overlapped sewing data | Please add overlapped sewing after close shape |
| M-044 | Cannot insert trimming after down pause | |
| M-045 | Cannot insert down pause before trimming | |
| M-046 | Select wrong position | |
| M-047 | Cannot scale | |
| M-048 | Wrong pattern data | |
| M-049 | Create arc? | |
| M-050 | Create circle? | |
| M-051 | Create curve? | |
| M-052 | Create polygon? | |
| M-053 | Presser is not down | Please step pedal |
| M-054 | Wrong User ID | Please input again |
| M-055 | Cannot change system time | The periodical password is set. Can not change system time. |
| M-056 | Fail to save password file | |
| M-057 | Fail to load password file | |
| M-058 | Password saved successfully | |
| M-059 | Fail to clear all passwords | Cannot delete password file |
| M-060 | Fail to clear password | After the password is cleared, the file input becomes abnormal |

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| M-061 | Password file is deleted without authorization | Periodical password is deleted without authorization, please turn off machine |
| M-062 | User ID file damage | |
| M-063 | Input pattern name | |
| M-064 | Please clear current combination data | Press “CLR” to delete current combination data |
| M-065 | Empty input invalid | Please enter your password. |
| M-066 | Password not match | Please re-enter the current password |
| M-067 | New password is different. | Please re-enter a new password and reconfirm |
| M-068 | Touching panel correction successful | Correction is successful. Please turn off power to restart. |
| M-069 | Clear alarm records? | Yes: Enter No: X |
| M-070 | Delete the selected file? | Yes: Enter No: X |
| M-071 | Copy all patterns | Cover the original patterns?<br>Yes: Enter No: X |
| M-072 | Fail to copy file | Please check the space in memory |
| M-073 | Fail to copy file | Please check if the USB disk is pulled out! |
| M-074 | Fail to open file | Fail to open file |
| M-075 | Format not match | Formats don’t match, current load denied |
| M-076 | Please create catalogue and file | Please create catalogue bakParam in U disk. Name the back-up file as backup.param and copy it to bakParam catalogue ! |
| M-077 | File I/O error | File I/O error |
| M-078 | Please select file | Select the file for input/ output |
| M-079 | File not exist | Cannot find the corresponding file |
| M-080 | Not input move amount | Please input move amount |
| M-081 | Determine to perform the current action? | Are you sure? Yes: Enter, no: X |
| M-082 | Clear accumulated running time? | Are you sure? Yes: Enter, no: X |
| M-083 | Clear accumulated sewing pieces? | Are you sure? Yes: Enter, no: X |
| M-084 | Clear accumulated power-on time? | Are you sure? Yes: Enter, no: X |
| M-085 | Clear accumulated stitch numbers? | Are you sure? Yes: Enter, no: X |
| M-086 | Periodical passwords can’t be same to super password | Please input password again |
| M-087 | Cannot change up counter (NUP) | At change, please turn off setting (NUP) |
| M-088 | Cannot change down counter (NDP) | At change, please turn off setting (NUP) |
| M-089 | Pattern list (hotkey) is empty | If the pattern list is empty, the system will automatically input the current pattern to list |

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| M-090 | Not select update item | Please select item for updating. At least select one item |
| M-091 | Some selected update items don’t exist. | The item not existing will be cancelled after return. For updating the rest items, please confirm again |
| M-092 | Update successful | Update is successful, please restart machine. |
| M-093 | Format U Disk? | Press Enter to perform formatting operation. Press Esc to quit current operation. After formatting, all pattern files will be deleted. |
| | Update successful | Update is successful, please restart machine. |
| M-094 | Successful | Current operation is successful! |
| M-095 | Failed | Current operation is failed! |
| M-096 | Format pattern list (hotkey)? | Press Enter to perform formatting operation. Press Esc to quit current operation |
| M-097 | Cover the pattern with same name in U disk? | Press Enter to cover files. Press Esc to quit current operation |
| M-098 | Fail to correct touching panel | Please perform correction again |
| M-099 | The selected pattern is not normal format, please transform. | Press Enter to perform transforming operation. Press Esc to quit current operation |
| M-100 | Cannot transform this pattern | Please confirm pattern |
| M-101 | Restore all the settings? | Are you sure? Yes: Enter, no: X |
| M-102 | Restore the selected item? | Are you sure? Yes: Enter, no: X |
| M-103 | Not select item | Please select one or more parameters |
| M-104 | Parameters initialization | Clear all data in . Please turn off power and restore the setting of DIP switch. |
| M-105 | Cannot copy and cover current pattern | Current pattern number in copy group, system cannot cover it. |
| M-106 | Need transform pattern format | Select pattern is not a standard file format, please convert it to use |
| M-107 | Cannot perform operation to combined pattern | Please enter pattern connection mode, press “CLR” to cancel the combined pattern |
| M-108 | Delete original pattern? | Delete original pattern after format transforming?<br>Yes: Enter No: X |
| M-109 | Intermediate presser in down position | Please lift intermediate presser |
| M-110 | Turn off machine, Bye | |
| M-111 | Large stitching pattern file format | Not support this pattern format in this system |
| M-112 | Wrong transformed pattern format | Please confirm pattern |
| M-113 | Transformed pattern data is too long | Please enter [Operation Settings]->[LCD Screen], select 'Large Sticker Count Pattern Support' parameter set to ON |
| M-114 | Cannot open transformed pattern | Please confirm pattern |
| M-115 | Wrong accuracy of transformed pattern | Set the resolution in the platemaking software to 0.1mm(Tools -> Options Settings - BBB> |

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| | | Resolution) |
| M-116 | Parameter recovery successful | Parameter recovery is successful, please restart machine |
| M-117 | Software version saving successfully | Software version is saved to the base catalogue of U disk successfully |
| M-118 | Successfully set | The machine needs to be restarted |
| M-119 | USB drive does not exist | Please insert the USB drive containing the MP3 files |
| M-120 | There is no second origin | There is no second origin for the current pattern. |
| M-121 | Validation failed while upgrading master program | |
| M-122 | Threading a thread... | |
| M-123 | Whether to restore the saved custom parameters | Determine the key to perform the operation, cancel the key to exit the operation |
| M-124 | The current pattern is locked by the template | Please unlock the template! |
| M-125 | Parameter loading failed | Please contact the manufacturer for maintenance! |
| M-126 | The bottom line is insufficient | Please change the bottom line, press the OK key and re-count |
| M-127 | Cannot generate multiple slit data | |
| M-128 | Complete the graph copy? | |
| M-129 | Memory allocation error | |
| M-130 | Continued use will convert to dot seam | |
| M-131 | The panel does not match the main control | The current system has a staging password, you need to contact the manufacturer to unlock! |
| M-132 | The current panel has a password and needs to be synchronized | There is a password in the panel, but no password in the master control! |
| M-133 | Current master exists password, need synchronization | There is a password in the master control, but there is no password in the panel! |
| M-134 | You need to replace the font, please turn off the power and restart | Special languages turn off speech |
| M-135 | Motherboard ID does not exist | |
| M-136 | Language font is missing | Please update the required font file |
| M-137 | C pattern Failed to open | Error in pattern file, will be deleted! |
| M-138 | Incorrect content of pattern shortcut key | |
| M-139 | The batch conversion function cannot be accessed | |
| M-140 | The number has been taken | |
| M-141 | A trace could not be generated | |
| M-142 | Internal data exception | |

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| M-143 | There arc | The ellipse will be converted to point slits |
| M-144 | Determine clearance of production records? | Are you sure? Yes: Enter, no: X |
| M-145 | Clock in success | |
| M-146 | Clock in failure | |
| M-147 | Shrinkage seam conversion is successful | Shrinkage seam part has become a point seam, can not be converted to shrink seam again, it is suggested to keep the original pattern, for the next modification |
| M-148 | Determine clear switch machine record? | Are you sure? Yes: Enter, no: X |
| M-149 | No switching machine record | |
| M-150 | Failed to upgrade the drive program | |
| M-151 | The request failed | |
| M-152 | Password information saved successfully | |
| M-153 | The upgrade file does not exist | The directory does not exist or there are no files in the directory |
| M-154 | Please set the add counter invalid | |
| M-155 | Please set the subtraction counter invalid | |
| M-156 | Are you sure to correct the spindle? | Are you sure? Yes: Enter, no: X |
| M-157 | Invalid block number | |
| M-158 | Reject the current operation | |
| M-159 | The receive parameter is null | |
| M-160 | The parameters have not changed | |
| M-161 | QR code display failed | |
| M-162 | The current position needs to be corrected due to reading new patterns | Please press the OK button |
| M-163 | Shrinkage stitch number exceeds actual stitch number | |
| M-164 | Cannot generate slot data | |
| M-165 | Are you sure to correct the upper shaft? | Are you sure? Yes: Enter, no: X |
| M-166 | Are you sure to correct the lower shaft? | Are you sure? Yes: Enter, no: X |
| M-167 | No input point | Coincident with the previous input point position |

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|---|---|---|
| M-168 | Generate curve data? | |
| M-169 | The software does not match the file system | |
| M-170 | Password date change failed | The date entered should be before the date of the next password attack |
| M-171 | Whether to confirm winding | Are you sure? Yes: Enter, no: X |
| M-172 | Start pin contains function code, please confirm whether to modify | The "OK" key means to modify the function code, and the "Cancel" key means to exit and reselect.<br>If you want to keep the function code, please refer to the code information on the right side of the interface to continue moving and make the starting pin the function code. |
| M-173 | The panel is not encrypted, the master control is encrypted | Please confirm whether a new panel has been replaced |
| M-174 | The panel is encrypted, the main control is not encrypted | Determines key synchronization encryption status |
| M-175 | Remote staging Settings already exist on the system | Determine the key to continue operation, cancel the key to exit operation |
| M-176 | Wireless module 1 connection failed | System speed reduced to the minimum, please contact the manufacturer |
| M-177 | Do you want to update the pattern thumbnails immediately? | The thumbnail image will also be generated after the pattern is used |
| M-178 | The system has been set to not network mode | After the networking function is turned on, it can be detected |
| M-179 | A join failure | |
| M-180 | Unable to convert | |
| M-181 | This machine has a password, please note! | |
| M-182 | Whether to delete the selected shape point | |
| M-183 | Whether to modify shape point properties | |
| M-184 | Trick does not exist, whether to download from the server | Are you sure? Yes: Enter, no: X |
| M-185 | The request pattern is not in standard NSP format | |
| M-186 | There is no request pattern on the server | |
| M-187 | Server update software, whether to upgrade operation | Do you want to upgrade immediately? Yes: Enter, no: X |
| M-188 | Machine not registered | |
| M-189 | The action did not complete and timed out | |

| | | |
|---|---|---|
| M-190 | Location query timeout | |
| M-191 | Stretch will affect the shrinkage data | There is a shrinkage seam in the sewing data, and the shrinkage seam will be automatically added by expansion, which will destroy the previous shrinkage seam data. Please pay attention to save another pattern |
| M-192 | Upgrade of boot screen is abnormal | |
| M-193 | Please scan the code and start processing | |
| M-194 | Herringbone seam width is too large, need to insert transverse stitch number | |
| M-195 | The panel is not connected to the main control | Dial switch 5 is turned on |
| M-196 | The pattern accuracy is higher than the system accuracy | There will be a loss of precision in the pattern data |
| M-197 | Whether to overwrite other format patterns of the same name on a USB disk | Press OK to overwrite the file, and press Cancel to exit the current operation. |
| M-198 | Generate pattern, continue editing? | Enter, continue to set parameters or function code; No: X, exit save pattern. |
| M-199 | Do you restore rigidity of all stitches to their original values? | Are you sure? Yes: Enter, no: X |
| M-200 | Do you want to save laser offset values? | Are you sure? Yes: Enter, no: X |
| M-201 | Do you want to save the origin offset value? | Are you sure? Yes: Enter, no: X |

# 4.Appendix 2

## 4.1 Operating box mounting dimensions

## 4.2 Control box mounting dimensions

### 4.3 Diagram and Cable Connection

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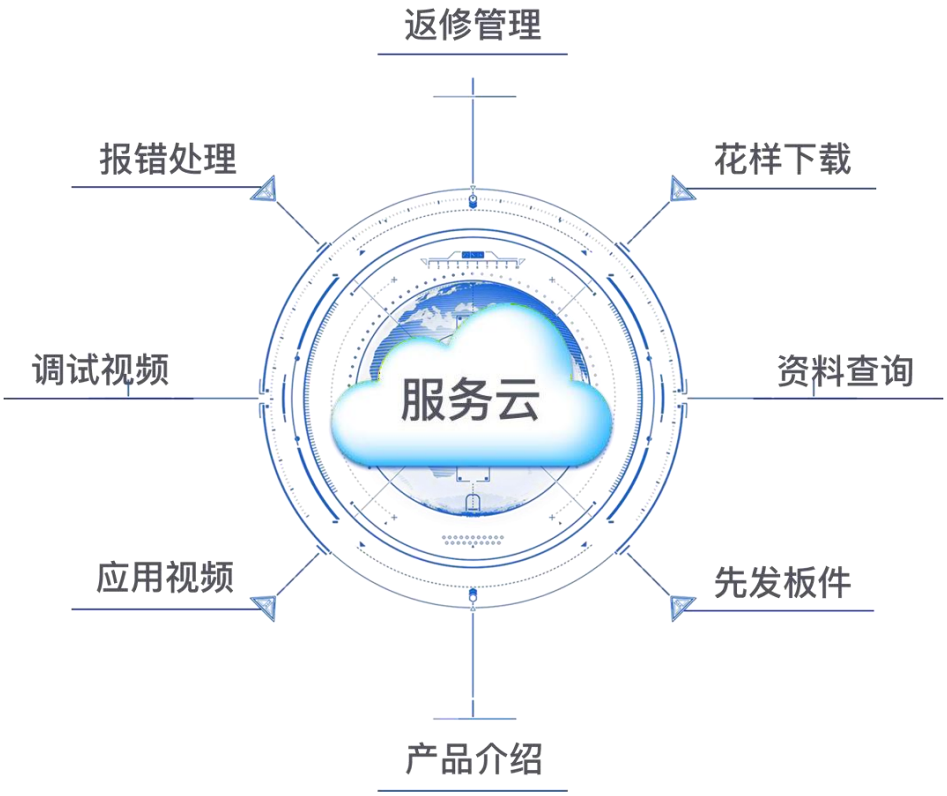


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