

6P Automatic Pattern Machine



Foreword

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, thus cause loss to user or third party, we will not take responsibility. Besides, you should keep this manual for future use. For any fault or problem of machine, please ask the professionals or the technicians authorized by us for repair service.

Safety Matters for Attention

1. Signs & Definitions of Safety Marks

This Operation Manual and the Safety Marks printed on the products are to enable you to use this product correctly so as to be away from personal injury. The signs and definitions of Marks are shown in below:

 Danger	The incorrect operation due to negligence will cause the serious personal injury or even death.
 Caution	The incorrect operation due to negligence will cause the personal injury and the damage of mechanism.
	This kind of mark is "Matters for Attention", and the figure inside the triangle is the content for attention. (Exp. The left figure is "Watch Your Hand!")
	This kind of mark is "Forbidden".
	This kind of mark means "Must". The figure in the circle is the contents that have to be done. (Exp. The left figure is "Ground!")

2. Safety Matters for Attention

 Danger	
	For opening the control box, please turn off the power and take away the plug from socket firstly, and then wait for at least 5 minutes before opening the control box. Touching the part with high voltage will cause the person injury.
 Caution	
Usage Environment	
	Try not to use this sewing machine near the sources of strong disturbance like high-frequency welding machine. The source of strong disturbance will affect the normal operation of the sewing machine.
	The voltage fluctuation shall be within 10% of the rated voltage. The large fluctuation of voltage will affect the normal operations of sewing machine, Therefore a voltage regulator is needed in that situation.
	Working temperature: 0°C~45°C. The operation of the sewing machine will be affected by environment with temperature beyond the above range.
	Relative Humidity: 35%~85%(No dew inside the machine), or the operation of 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 sewing machine.
	In case of thunder, lightning or storm, please turn off the power and pull plug out the socket. Because these will have influence on the operation of sewing machine.
Installation	
	Please ask the trained technicians to install the sewing machine.
	Don't connect machine to power supply until the installation is finished. Otherwise the action of sewing machine may cause personal injury once the start switch is pressed at that situation by mistake.

	When you tilt or erect the head of sewing machine, please use both of your hand in that operation. And never press the sewing machine with strength. If the sewing machine loses its balance, it will fall into floor thus causes the personal injury or mechanical damage.
	Grounding is a must. If the grounding cable is not fixed, it may cause the electric-shock and mis-operation of machine
	The entire cables shall be fixed with a distance at 25mm away from the moving component at least. By the way, don't excessively bend or tightly fixed 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, please remember to put on the glasses. Otherwise, the broken needle will cause the personal injury in case the needle is broken.
	At following circumstances, please cut off the power at once so as to avoid the personal injury caused by the mis-operation of start switch: 1.Threading on needles; 2. Replacement of needles; 3. The sewing machine is left unused or beyond supervision
	At working, don't touch or lean anything on the moving components, because both of the above behaviors will cause the personal injury or the damage of the sewing machine.
	During working, if the mis-operation happens or the abnormal noise or smell is found at the sewing machine, 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 can the trained technicians perform the repair, maintenance and inspection of this sewing machine.
	For the repair, maintenance and inspection of the electrical component, please contact the professionals at the manufacturer of control system in time.
	At following circumstances, please cut off the power and pull off the plug at once so as to avoid the personal injury caused by the mis-operation of start switch:. 1.Repair, adjustment and inspection ; 2.Replacement of the component like curve needle, knife 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 needing the power supply and gas supply, users can't be too careful to follow the entire Safety Matters for Attention.
	If the sewing machine damages due to the unauthorized modification, our company will not be responsible for it.

CONTENTS

1. General.....	1
1.1. Overview.....	1
1.2. Features and Parameters.....	1
1.3. Precautions for safe use.....	2
1.4. Precautions for Usage.....	4
2. Main Interface Introduction.....	6
2.1 Main Interface P1 Function Introduction.....	6
2.1.1 Datum.....	8
2.1.2 RFID.....	10
2.1.3 Pattern Preview.....	12
2.1.4 Jump.....	13
2.1.5 Whole Image Modification.....	13
2.2 Main Interface P2 Function Introduction.....	15
2.2.1 Installation Angle Setting of Main Motor.....	18
2.2.2 Winding.....	18
2.2.3 Input Signal.....	18
3. Menu Function Operation Instructions.....	20
3.1. Pattern Access.....	20
3.1.1 Pattern Sorting.....	21
3.1.2 Pattern Deletion.....	21
3.1.3 Pattern Save.....	21
3.1.4 Pattern Transmission.....	22
3.1.5 Copy U disk pattern.....	22
3.1.6 Copy Confirmation.....	24
3.2 Pattern Editing.....	25
3.3 Pattern Modification.....	27
3.3.1 Sewing Data.....	27
3.3.2 Function Code.....	28
3.3.3 Shape.....	29
3.4 Pattern Conversion.....	29
3.5 System Settings.....	31
3.5.1 Software Version.....	32
3.5.2 Software Upgrade.....	32
3.5.3 Format.....	33
3.5.4 Combination Pattern.....	34
3.5.5 Function shortcut buttons.....	37
3.5.6 Recovery Backup.....	38
3.5.7 Default Parameters.....	38
3.5.8 Parameter Encryption.....	39
3.5.9 Panel Settings.....	39
3.5.10 Alarm Record.....	40
3.5.11 Work Statistics.....	40
3.5.12 Date and Clock Settings.....	41

3.5.13 Installment Password.....	41
3.5.14 Work Statistics Function Settings.....	46
3.6. User Parameter (U Parameter).....	47
3.6.1 Enter the Function Parameter Setting Interface.....	47
3.6.2 Parameter Change Method.....	47
3.6.3 Parameters Modified.....	48
3.6.4 Parameter Customization Method.....	49
3.6.5 User Parameter Table.....	49
3.7. Mechanical Parameters (K Parameters).....	59
3.7.1. Mechanical Parameter Setting.....	59
3.7.2 Mechanical Parameter Table.....	60
3.8 Debug Detection.....	72
3.8.1 Enter Debug Detection Mode.....	72
3.8.2 LCD Detection.....	73
3.8.3 Touch Screen Calibration.....	73
3.8.4 Input Signal Detection.....	73
3.8.5 Speed Detection.....	74
3.8.6 Output Signal Detection.....	74
3.8.7 Continuous Operation.....	75
3.8.8 XY Origin.....	76
3.8.9 Spindle calibration.....	77
3.8.10 Middle presser foot detection.....	77
3.8.11 Trim motor detection.....	77
4. Attachment 1.....	77
4.1 List of Alarm Information.....	77
4.2 List of Prompt Information.....	89
5 Attachment 2.....	96
5.1 Operating box installation dimensions.....	96
5.2 Electronic control box installation size.....	97
5.3 System Diagram.....	99

1.General

1.1. Overview

In this series of industrial sewing machine computer control system, Main Motor is driven by AC servo control technology of advanced level in the world, which has the characteristics of large torque, high efficiency, stable speed and low noise. The diversified design of the operation panel can meet the supporting requirements of different customers; the system adopts German structural design, and the installation and maintenance are convenient and fast.

1.2. Features and Parameters

Controller model	Template machine
Sewing range	X Y 1300(mm) x 900(mm) 1500(mm) x 900(mm)
Maximum sewing speed	3200rpm (when the pitch is less than 3mm)
Stitch length	0.1~12.7mm, (minimum resolution 0.1mm)
Presser foot	Intermittent feeding (pulse motor two-axis drive method)
Outer presser foot lift	Standard 18mm Max 22mm (Pneumatic Max 25mm)
Middle presser foot	Motor intelligent follow-up Middle presser foot
Middle presser foot rise	80mm
Pattern data storage	Memory/U Disk
Pause function	The sewing machine can be stopped during sewing
Zoom in and zoom out	When the stitch sewing pattern can be selected, the X and Y axes can be enlarged and reduced independently. 10.0%~400.0% (0.1% Unit)
Zoom in and zoom out	Increase/decrease stitch length/increase/decrease pattern stitches
Sewing speed limit	200~3500rpm
Pattern selection	Template identification and pattern number selection
Sewing machine motor	Servo motor
Needle bar top dead center stop function	After sewing, the needle bar can be returned to the top dead center position
Rated power	600W
Operating temperature range	0°C~45°C
Use humidity range	35%~85% (no condensation)
Voltage	AC 220V $\pm$ 10%; 50/60Hz

※ Product implementation standard: QCYXDK0004-2022 *Computer Control System for Industrial Sewing Machines*.

1.3. Precautions for safe use

● Installation

- Control box
 - ◆ Please follow the instructions to install properly
- Accessories
 - ◆ Please turn off the power and unplug the power plug before installing other accessories.
- Power cord
 - ◆ Please do not use gravity to hold down the power cord or excessively distort the power cord.
 - ◆ Please do not put the power cord near the rotating part, at least leave the 25mm above.
 - ◆ Before the control box is connected to the power supply, please check again whether the voltage of the power supply to be connected is the same as that marked on the control box and determine the position before the power supply can be supplied. If there is a power transformer device, the same should be checked before the power supply. At this time, the button power switch on the sewing machine must be placed in [OFF].
- Ground
 - ◆ In order to prevent electric shock from noise interference and leakage, the grounding wire on the power cord must be properly grounded.
- Attachment
 - ◆ To connect electrical accessories, please connect them according to the indicated locations.
- Disassembly
 - ◆ Before removing the control box, the power must be turned off and the power plug unplugged.
 - ◆ When pulling out the power plug, it is forbidden to only pull the power cord, and pull out the power plug by hand.
 - ◆ There is dangerous high voltage in the control box, so if you want to open the cover of the control box, you need to turn off the power first and wait for more than 5 minutes before opening the cover of the control box.

● Maintenance, inspection and repair

- Repair and maintenance work should be performed by trained technicians.
- When replacing the needle and shuttle, be sure to turn off the power.
- Please use genuine parts.

● Other security measures

- During the operation of the sewing machine, please do not touch the parts that will rotate and move (especially needles and belt accessories), and pay attention to the hair away from them, so as to avoid danger.
- The control device should not fall to the ground, nor should other objects be stuffed into the gap.
- Please do not operate without removing each cover.
- If the control device is damaged or can not operate properly, it is necessary to ask experienced technicians to adjust or check and repair it, and please do not run it before the fault is eliminated.

- Customers are kindly requested not to modify or change this control device by themselves.
- **Disposal**
 - Please dispose of them as general industrial waste.
- **Warning and danger signs**
 - Misbehavior may cause danger. The degree of this is explained by the marking distinction described later.

 警告	Wrong action may result in serious injury or death	 注意	Wrongdoing may result in injury or damage to home or property
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- The indications of the symbols are as follows.

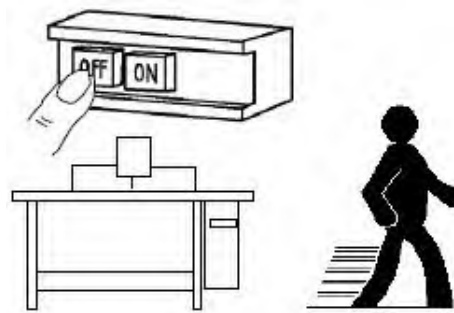
	Please follow the instructions		Be aware of the danger of high voltage (electric shock)
	Watch out for high temperatures		Be sure to connect the ground wire
	Never		

1.4. Precautions for Usage

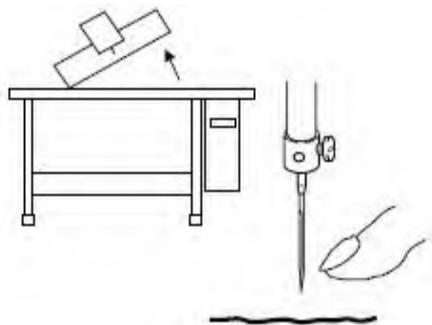
1. When pressing the switch [ON], the foot must leave the pedal.



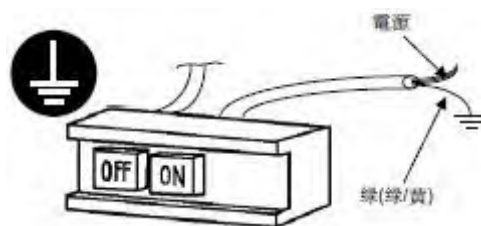
2. Be sure to turn off the power before leaving the workplace.



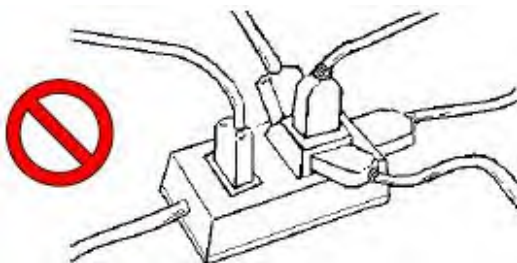
3. Be sure to turn off the power when turning the head sideways or changing the needle or threading the upper thread.



4. The grounding wire should be well grounded.



5. Do not use multi-jack extension cords for household use.

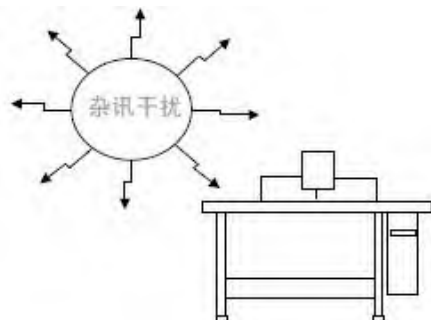


6. There is dangerous high voltage inside the control box, so wait 5 minutes after turning off the power before opening the cover of the control box.

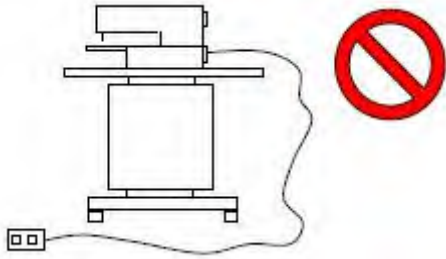


7. After replacing the motor, be sure to set the installation angle of the Main Motor as shown in this document.

8. Please stay away from machines that will produce high frequency noise interference.

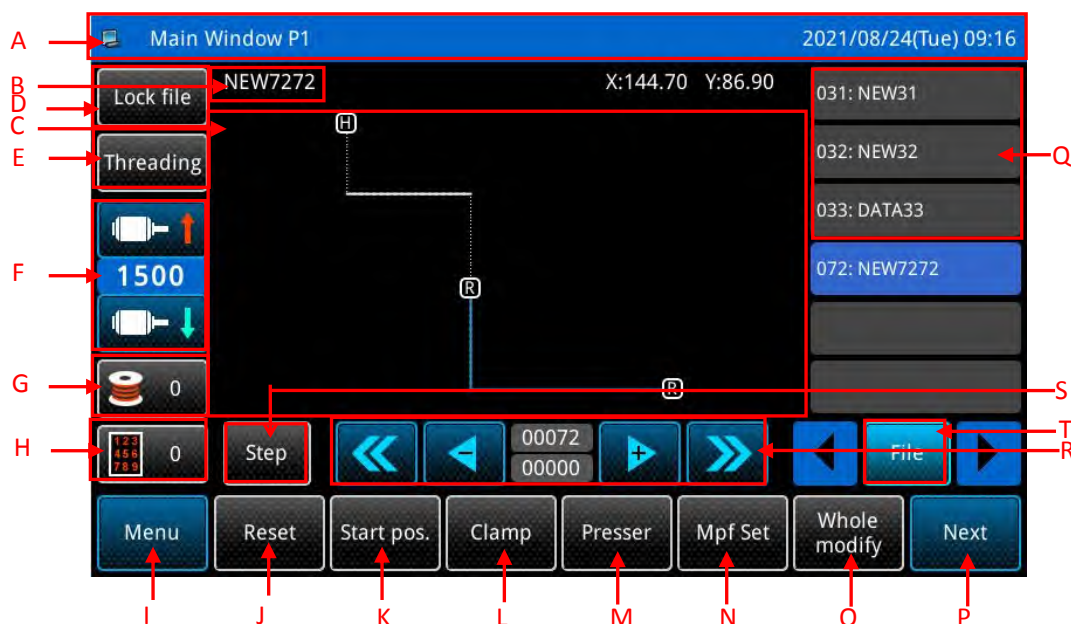


9. When using the external signal socket to connect the application accessories, the length of the connecting line should be as short as possible, the long line may cause malfunction, please use the isolated cable for the connecting line.

	 A line drawing of a medical device, possibly a patient warming unit, with a control panel on top and a large rectangular screen on the front. A power cord is connected to the bottom left. To the right of the device is a red circle with a diagonal slash, indicating a prohibition or warning.
10. Users should avoid touching the screen with sharp objects during use, so as not to cause permanent damage to the touch screen.	

2. Main Interface Introduction

2.1 Main Interface P1 Function Introduction



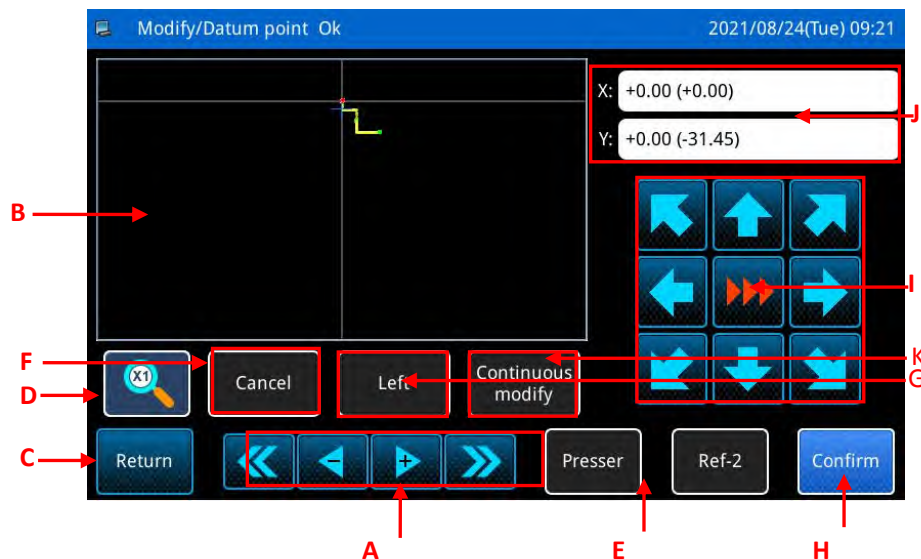
No.	Function	Description
A	Display bar	Display interface name, time; Long press to trigger language selection.
B	Pattern name/number display	Display the current pattern name and pattern number.
C	Pattern display	Display the current pattern; Click to display the data related to the current pattern.
D	Lock file	Enable/disable template recognition: Lock file : Enable the template recognition function, and disable manual pattern switching at this time; Lock file : Disable the template recognition function, and allow manual pattern switching at this time.
E	Thread	Enter the threading interface and perform threading.
F	Main Motor speed	Display the current Main Motor speed, click  , the speed of the Main Motor increases, and click  , the speed of the Main Motor decreases.
G	Bottom line count setting	Remaining bobbin thread count: Display the remaining bobbin thread (the number of stitches), or clear the display content to zero by pressing the clear button  , and then start counting again. Bottom thread device detection: set remaining length, fabric thickness,

No.	Function	Description
		thread trimming length
H	Job Statistics	View piece count settings, startup time, detailed statistics
I	Menu	Open multi-category function button
J	Reset button	Perform back-to-origin operation
K	Datum button	Modify the starting point (function shortcut button, can be reset)
L	Frame button	Start the frame pressing action (function shortcut button, which can be reset)
M	Presser foot button	Set the Middle presser foot to rise (function shortcut buttons, can be reset)
N	Presser foot	Set presser foot follow-up height and thread tension (need to install electronic thread clamp, function shortcut buttons, can be reset)
O	Whole image modification	Set increase and decrease, zoom, stitch length modification, reverse sewing conversion (function shortcut buttons, can be reset)
P	Next page	After pressing the button, enter the main interface P2
Q	Shortcut selection of pattern number	Display the list of pattern numbers Selecting a pattern number and pressing the button will change the current sewing data.
R	Single-step trial sewing/segment trial sewing button	 are single-step trial sewing;  are segment trial sewing;
S	Trial sewing button	Execute trial sewing function
T	File read button	Read patterns in memory or U disk

2.1.1 Datum

(1) Enter the modification/Datum position interface

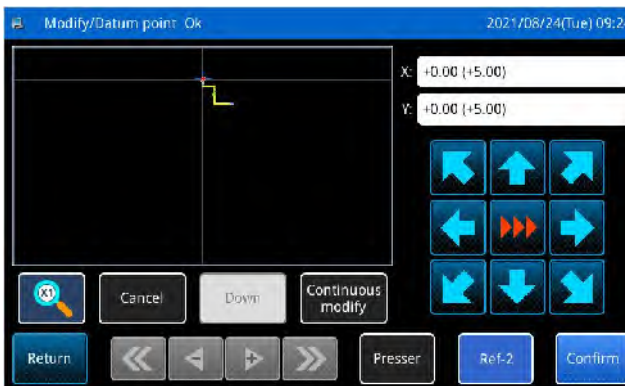
Press the datum button  on the main interface P1 to open the reference operation interface, as shown in the figure below.



No.	Functions
A	Single-step trial sewing mode: Control the cross cursor to move forward or backward along the pattern stitch by long pressing or single clicking the “  ” icon. Section jump mode: Control the cross cursor to jump according to the sewing section by long pressing or clicking the “  ” icon.
B	Design graphics display interface: View the design graphics and the position of the cross cursor.
C	If continuous modification is not performed, click this button to return to the previous interface; If the modified pattern needs to be saved, click Continuous Modification after modifying the pattern. After clicking return, the interface will pop up a prompt of "overwrite, save as a new file, exit without saving".
D	Design graphics zoom: The current design graphics display can be enlarged. Click the function button one by one to zoom in up to 6 times. After more than 6 times, click again, and the graphics display will return to the initial state.
E	The middle presser foot and bowl pressing mechanism can be controlled to rise or fall, and the single-step trial sewing can be performed when the mechanism rises or falls. The mechanism will automatically lift when it reaches the empty delivery position, and the mechanism will also remain lifted when performing segment jumping.
F	Undo function: This function is only for 8-direction movement operations. After 8-direction movement, click this function button to restore to the position before the movement.
G	Jump to the four extreme positions of the pattern: Click this function button, the icon can be switched to “  ,  ,  and  ”, which represent jumping to the four extreme positions of the current pattern respectively. After reaching the position, use the 8-direction movement buttons to move the position of the current edge of the pattern.

	Note: It is mainly used to verify whether the border of the pattern is aligned with the mold after the benchmark is completed.
H	Click "Confirm" to save all performed operations and return to the main interface.
I	8-direction moving speed switch button, click this button one by one to switch the moving speed gear, there are three gears in total.
J	Values outside the brackets: represent the moving distance before clicking to confirm after moving in 8 directions;
K	The value in brackets: represents the distance between the current cursor position and the origin, after clicking, you can manually input the distance between the cursor position and the reference point;

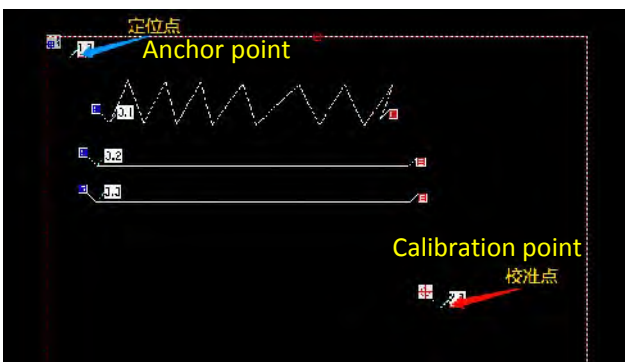
(2) Datum classification



Double datum can be divided into Datum 1 and Datum 2.

Datum 1 is mainly the positioning function of the template, which can translate the pattern of the template; (commonly used).

Datum 2 can be manually calibrated when the template is not standard, and the template pattern can be rotated or scaled.



(3) Method of making double reference pattern by PDS

Automatic: when making DXF patterns, if there is a red circle with a radius less than or equal to 1mm, pds will automatically convert it to a calibration point (Datum II). If there is a blue circle with a radius less than or equal to 1mm, pds will automatically recognize it as an anchor point when it converts the pattern (Datum 1).

Manual: PDS draws a circle on the pattern, right-click on the center of the circle to confirm whether the center is a calibration point or an anchor point according to the pop-up menu item.

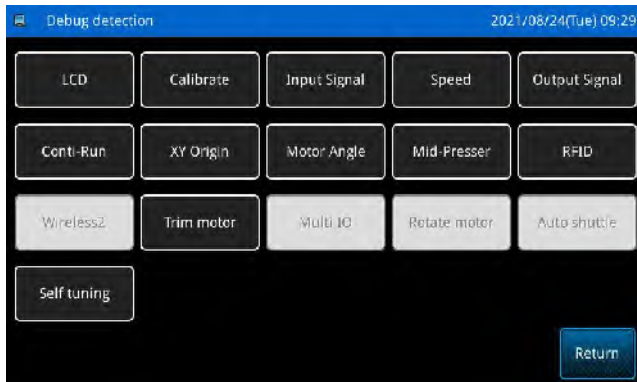
After the pattern is imported into the operation head, enter the modified starting point interface directly in the main interface. If there is no datum 2 (calibration point), it will normally move to the starting point process. If there is a datum 2 (calibration point), the datum 2 (calibration point) will be marked in red. The lower right corner of the interface of the operation head can choose to jump directly to the position of datum 2 (calibration point), and then fine-tune through the arrow buttons.

Datum 1 (anchor point), that is, the point where we need to proofread the datum; after the pattern import operation head, directly enter the modified starting point interface in the main interface. If there is a datum 1 (anchor point), it will move to the position of datum 1 (anchor point) and fine-tune it through the direction button.

If there is no such base point (anchor point), move to the starting point process normally and fine-tune through the direction button.

Remarks: If the pattern imported into the operation head has Datum 1 (positioning point), but it will automatically move to the starting point for modification, it is necessary to change the menu=operation setting=other=(RFM) starting point to modify the reference setting=(2H) secondary origin

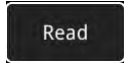
2.1.2 RFID

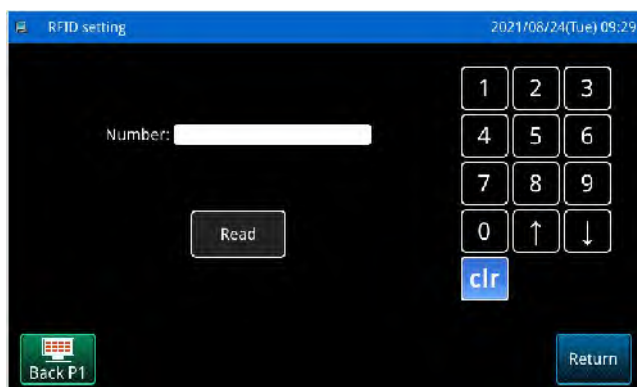


(1) RFID settings

During debugging and testing, click the RFID button  to enter the RFID setting interface.

Number range: 0~999

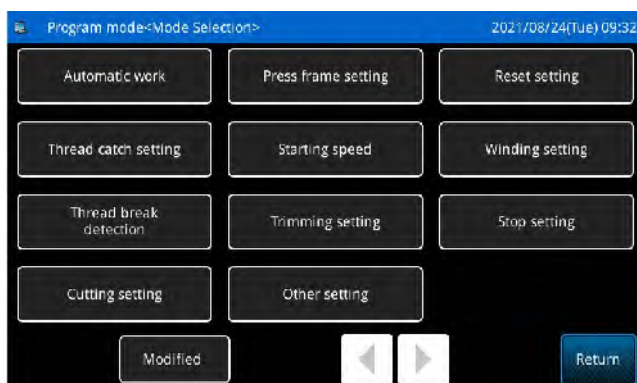
 : Read pattern number from RFID



RFID is a unique function of the template machine, which is convenient for users to identify the pattern template. The following is the use method of the template machine RFID.

Write the pattern into the inductive identification card through its own pattern number, and then read the stored information in the identification card through the RFID reader, thereby realizing pattern template identification and quickly recalling the pattern for use.

Note: The RFID button is only displayed when Template Recognition is turned on and the Template Recognition Device is RFID.

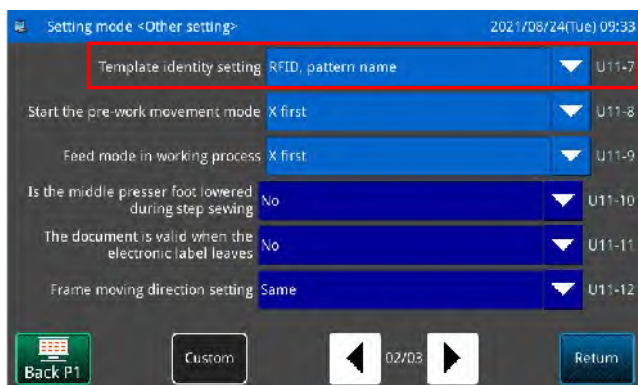


(2) RFID usage method (identify pattern number)

Operate the catalog button  on the main interface P1, that is, open the multi-category catalog mode, and then press the user parameter button

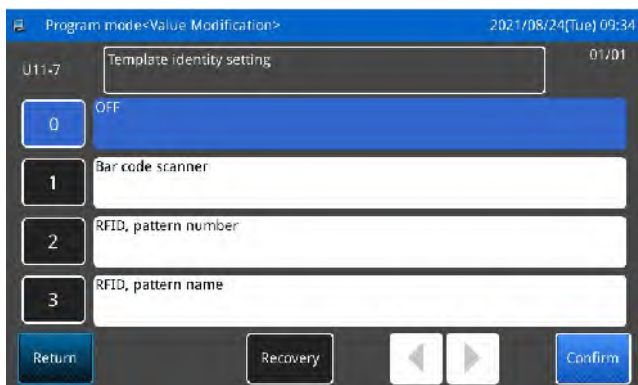


Select other parameter settings, press the other setting button  to enter the other parameter internal setting interface.



Turn on template recognition:

Find the U11-7 [template identification setting] parameter in the other parameter internal setting interface.

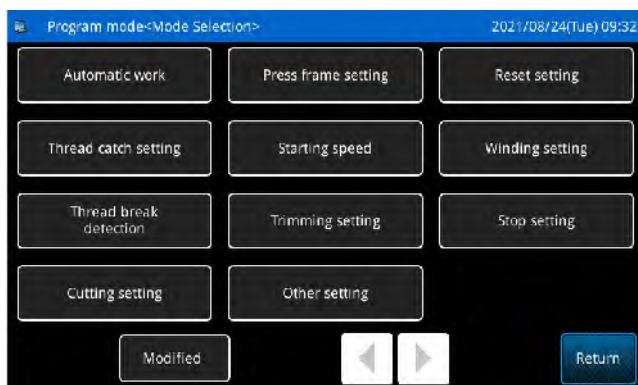


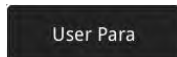
Press the drop-down button  to select whether the template recognition device is enabled and the template recognition method:

- 0: Off
- 1: Barcode Scanning Device
- 2: RFID, pattern number
- 3: RFI, pattern name

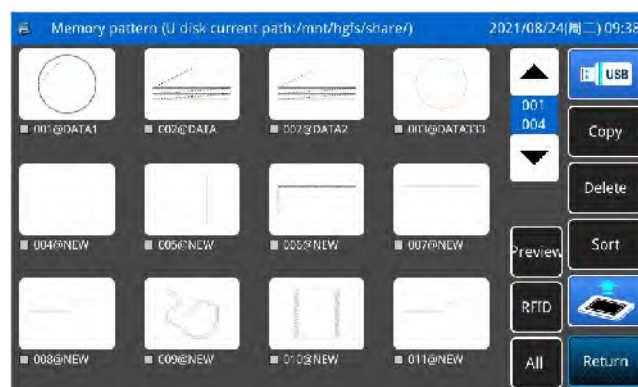
After selecting, press the Confirm button  to activate the corresponding function.

(3) RFID usage method (identifying pattern name)



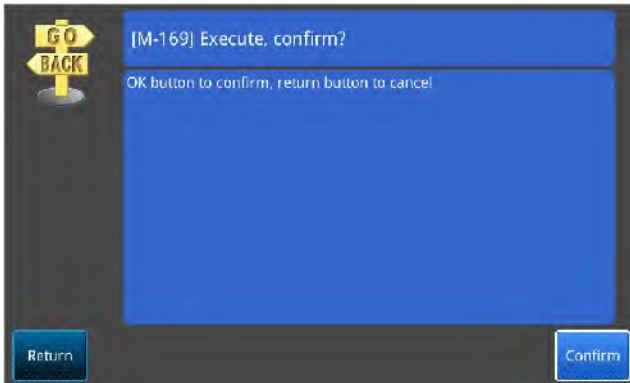
Operate the catalog button  on the main interface P1 (or P2) interface, that is, open the multi-category catalog mode, and then press the user parameter button .

Select other parameter settings, press Other button  to enter the other parameter internal setting interface.

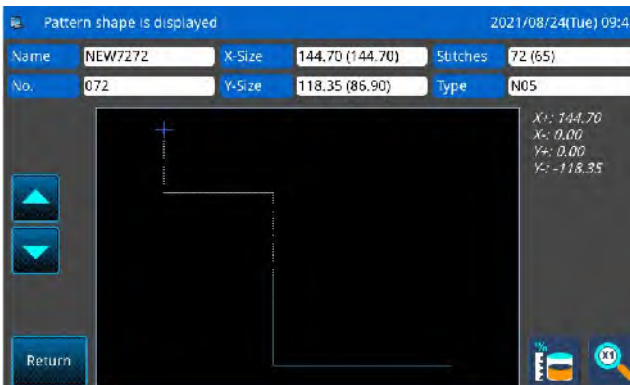


Enter the pattern access interface, select the pattern to be written into RFID, click the RFID button , the system prompts [M-169] to execute, confirm? Click Confirm button  to write the name of the current pattern into the RFID.

Scan the RFID card with the pattern stored in the panel in the current interface, and the pattern can be switched automatically.



2.1.3 Pattern Preview

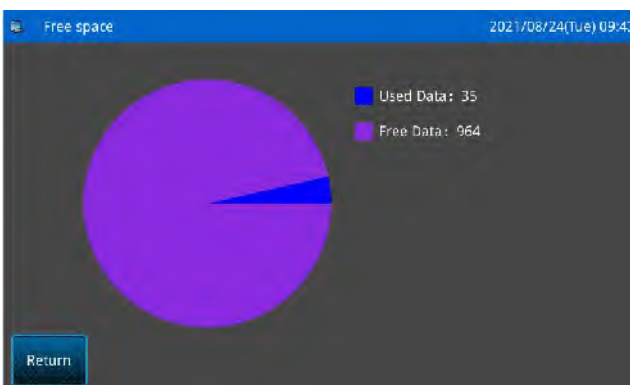


In the main interface P1, click the pattern display area to display the graphics and basic parameters of the pattern.

Or click the preview button  in the file management interface to display the graphics and basic parameters of the pattern.

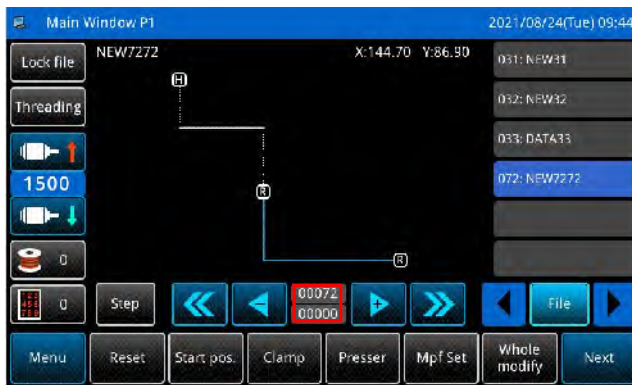


In the design preview interface, click the display function code button  to display the function code in the design.



Click  to display the remaining memory.

2.1.4 Jump



In the main interface P1, click   to enter the interface for setting the specified number of stitches for jumping. There are two options for jumping:

Stitch jump: jump to the specified stitch

Segment Jump: Jump to the specified segment

Select the jump mode, use the numeric button board to input the value, click the jump button



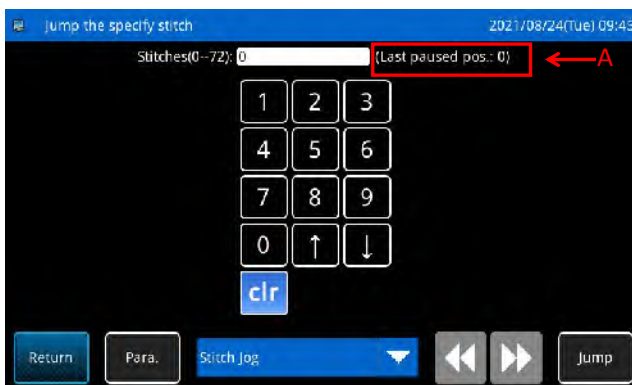
to jump to the specified position, click



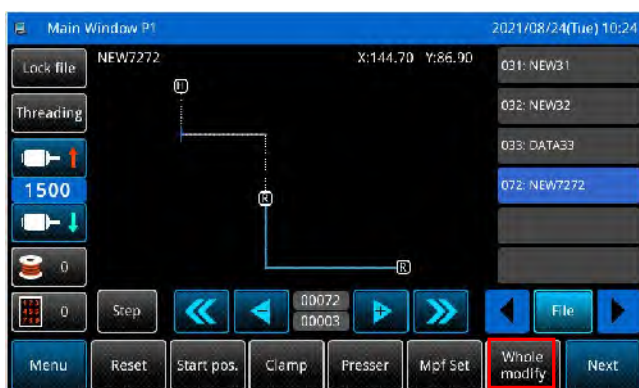
to close the interface and return to the main

interface P1. At this time, in the pattern display area, the needle has moved to the specified position.

A: The last pause position: 0, which is the number of stitches for the last pause or thread break detection. When entering this interface, the number of stitches in the stitch number jump interface is the number of stitches for the last pause or thread break detection.



2.1.5 Whole Image Modification

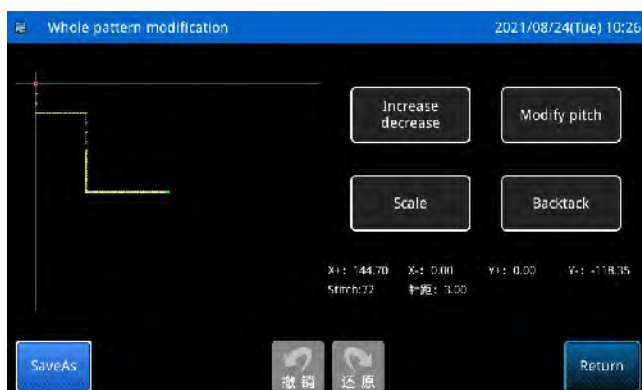


In the main interface P1, click  to enter the interface of setting the whole image modification, there are four options:

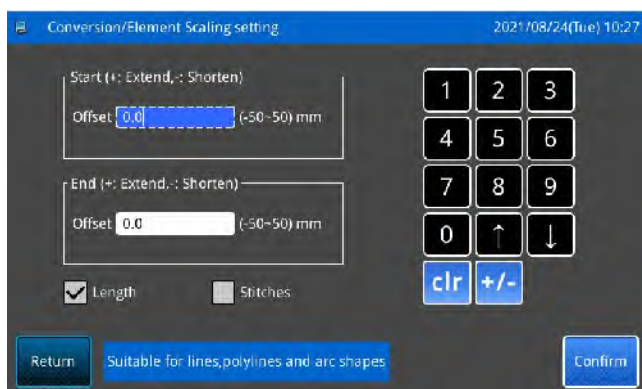
Increase or decrease: By modifying the start and end stitch length or the number of stitches for the specified line segment or the entire graphic.

Stitch length modification: directly modify the stitch length of the sewing data in the entire pattern.

Scaling: Set the center point datum of the pattern by keeping the number of stitches and stitch distance unchanged, and scale the X and Y directions by percentage or actual size (setting the modification method in the parameters).

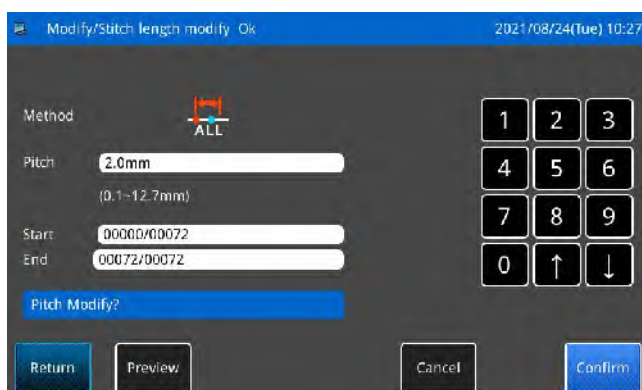


Reverse seam conversion: By selecting a single line segment or the entire graph for closed or non-closed graph operations, modify the starting seam and end reinforcement of the overall pattern.



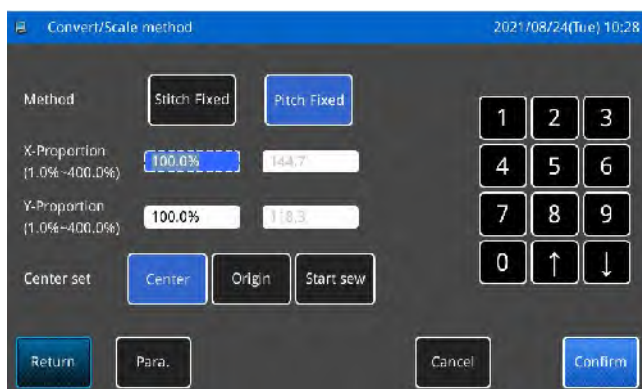
Scaling:

Conversion/element expansion and contraction settings, set the length or the number of stitches through the keyboard. Execution cannot be continued when the sewing range is exceeded or the curve is about to close.



Needle distance modification:

The stitch length of the entire pattern can be modified through the keyboard.



Zoom:

- 1、 There are two input methods:
 - A. The number of stitches remains the same, that is, the total number of stitches of the pattern remains unchanged after scaling, and the graphics can be scaled by adjusting the sewing stitch spacing. If the stitch spacing exceeds 12.7 or is less than 0.05, it cannot continue to be scaled;
 - B. The stitch length remains unchanged, that is, the sewing stitch length of the pattern remains unchanged after scaling, and the graphics can be scaled by adjusting the number of sewing stitches, and the pattern cannot be further scaled after the pattern is smaller than two stitches.

2、Scale/Size: It can be adjusted to scale according to size or scale through parameter setting.

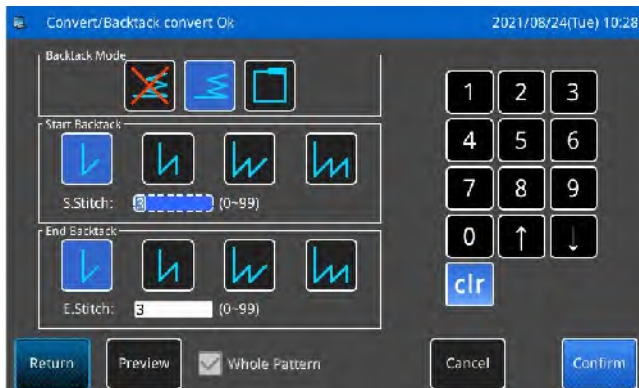
3、Scale reference point selection: You can choose to scale the pattern with reference to the graphic center, origin or starting point.

Backstitch conversion:

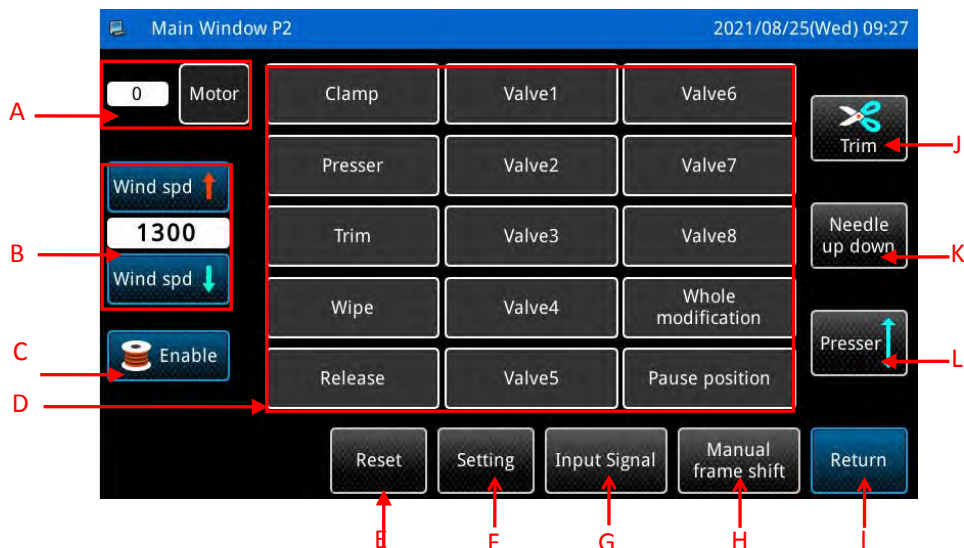
1. Backstitch mode: turn off back stitch, turn on back stitch, and turn on overlapping stitch according to the icon sequence.

2. Reverse sewing mode: After selecting to enable reverse sewing, you can set various reverse sewing modes from the first stitch at the beginning and the end respectively. There are single-row back stitches, double-row back-stitches, three-row back-stitches, and four-row back-stitches, that is, after the specified number of stitches is sewn, reinforcement is performed according to the style set in the icon.

3. Overlapping sewing mode: Use any overlapping method and number of overlapping stitches in this function to perform the whole drawing of the pattern edited by the closing tool or any object conversion operation.



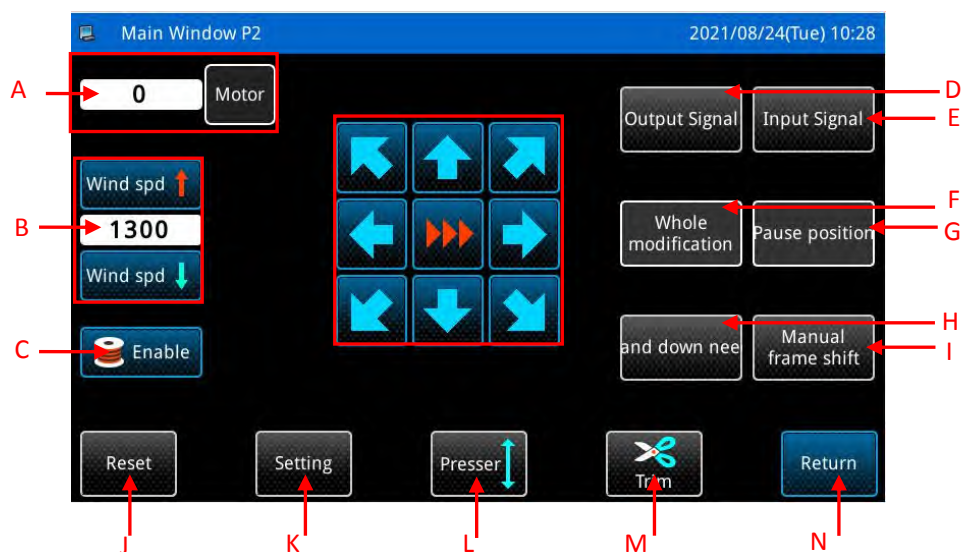
2.2 Main Interface P2 Function Introduction



No.	Functions	Description
A	Spindle calibration	Press the Main Motor button  to enter the Main Motor installation angle setting mode, display and set the Main Motor installation angle.
B	Set the winding speed	Add or subtract winding speed.

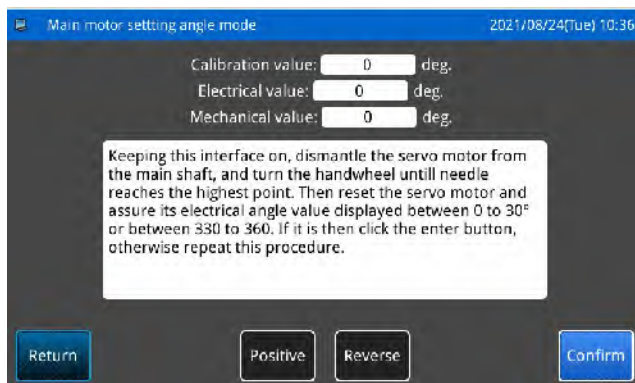
No.	Functions	Description
C	Enable/disable winding	Enable/disable winding. Note: Middle presser foot will drop after pressing
D	Output signal detection	Output signal detection: After pressing the corresponding button, the output status of the following output signals can be detected: Press frame Presser foot Trimming Dial Loose thread Auxiliary air valve 1~7 Led Whole image modification Pause position
E	Reset	Perform back-to-origin operation
F	Set up	Set custom parameters
G	Input signal detection	Enter the input signal detection interface, press the corresponding button, the input signal status can be detected ON: means open OFF: means off
H	Manual frame shifting	Perform XY origin detection and adjust the frame moving direction
I	Return button	Return to the main interface P1
J	Thread trimmer	Test thread trimming
K	Needle up/down	Set Needle Up/Needle Down
L	Presser foot setting button	Set Middle presser foot up/down

Another style interface:



No.	Functions	Description
A	Spindle calibration	Press the Main Motor button  to enter the Main Motor installation angle setting mode, display and set the Main Motor installation angle.
B	Set the winding speed	Add or subtract winding speed.
C	Enable/disable winding	Enable/disable winding. Note: Middle presser foot will drop after pressing
D	Output signal detection	Output signal detection: After pressing the corresponding button, the output status of the following output signals can be detected: Press frame Presser foot Trimming Dial Loose thread Auxiliary air valve 1~7 Led Whole image modification Pause position
E	Input signal detection	Enter the input signal detection interface, press the corresponding button, the input signal status can be detected ON: means open OFF: means off
F	Whole modification	Set increase/decrease, zoom, stitch length modification, reverse stitch conversion
G	Pause position	Set pause position
H	Needle position up and down	Set Needle Up/Needle Down
I	Manual frame shifting	Enter the XY origin detection function
J	Reset	Perform back-to-origin operation
K	Set up	Set custom parameters
L	Presser foot settings	Set Middle presser foot up/down
M	Thread trimmer	Test thread trimming
N	Return	Return to the main interface P1
L	Manual frame shifting	Perform XY origin detection and adjust the frame moving direction

2.2.1 Installation Angle Setting of Main Motor



Press the Main Motor installation angle setting button  in the main interface P2 interface to enter the Main Motor installation angle setting function.

Remove the Main Motor in the current interface, rotate the handwheel to swing the needle bar of the sewing machine to the highest point, and turn the Main Motor coupling by hand to make the displayed electrical angle value within the range of 30 degrees. Reinstall the Main Motor and press the Confirm button

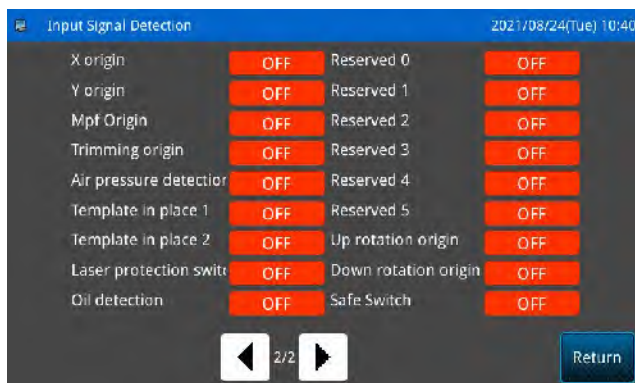
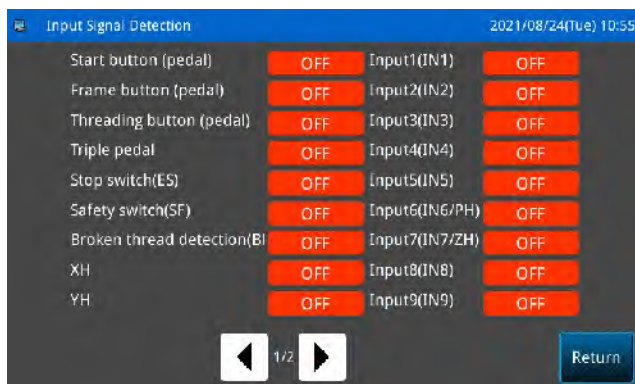


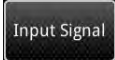
2.2.2 Winding

Enter this interface when you want to wind the core. Step on the outer platen switch or press the frame button on the panel to lower the outer platen, then step on the run switch or press the start button on the panel. The sewing machine will rotate according to the set speed, and the X-Y moving axis will not move. If you step on the start switch or press the start button again, the sewing machine will stop at the upper stop position.

[Note] The action of the winding core is executed by the setting of the "winding core" parameter in the operation setting mode. (Refer to the parameter description in [3.6.5 User Parameter Table])

2.2.3 Input Signal



Press the input signal detection button  in the main interface P2 interface to enter the input signal detection function.

ON: means open OFF: means off

Type of input signal:

- Start button (pedal)
- presser foot button (pedal)
- Threading button (pedal)
- Triple pedal
- Emergency stop switch (ES)
- Safety switch (SF)
- Broken wire detection (BRK)
- XH, YH
- Input 1~9
- X origin, Y origin
- Middle presser foot origin
- Thread trimming origin
- Air pressure detection

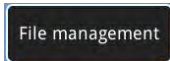
- N. Template in place 1
- O. Template in place 2
- P. Laser protection switch
- Q. Oil detection
- R. Reserve 0~5
- S. Top rotation origin
- T. Lower rotation origin
- U. Safety switch

Press the return button  to return to the previous screen.

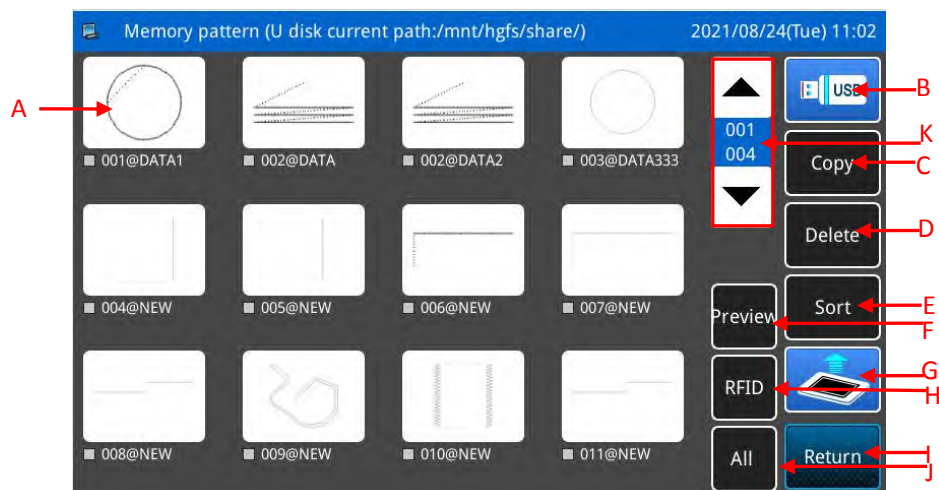
Or in debug detection mode, click the input signal button  to enter.

3. Menu Function Operation Instructions

3.1. Pattern Access

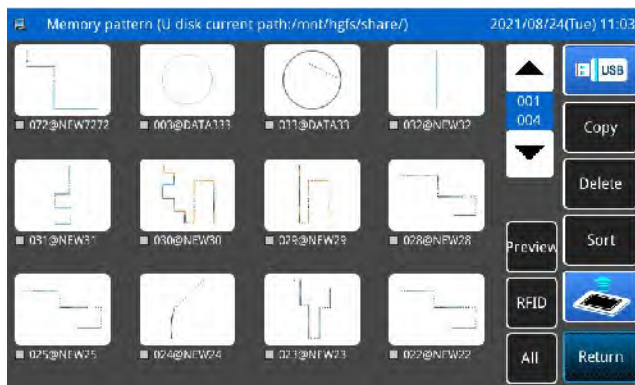
In the main interface P1, click the menu button  → file management button  to enter the pattern access interface.

[Note] If it is not at the origin, the graphics data cannot be read, please perform the back-to-origin operation first.



No.	Function	Content
A	Pattern list	Display the list of saved patterns (display number and name) [Note 1] If another format pattern is selected, a prompt message will be displayed to convert the pattern format. [Note 2] If the number of stitches in the selected pattern exceeds the range or the data is damaged, a corresponding prompt message will be displayed and the pattern cannot be selected.
B	Select Memory/U Disk	Choose to read memory or U disk pattern  : Switch to select U disk or memory
C	Copy	Copy pattern
D	Delete button	Delete the specified pattern [Note] The current sewing pattern cannot be deleted.
E	Sort button	Sort by modification time or number size and redisplay the pattern list
F	Preview button	Pattern preview
G	Copy confirmation	Whether to copy the specified pattern data
H	RFID	Write the name or number of the selected pattern into the chip through RFID
I	Back to main interface	Return directly to the main interface
J	Select all	Copy all pattern data
K	Page button	Support page forward and backward search interface

3.1.1 Pattern Sorting



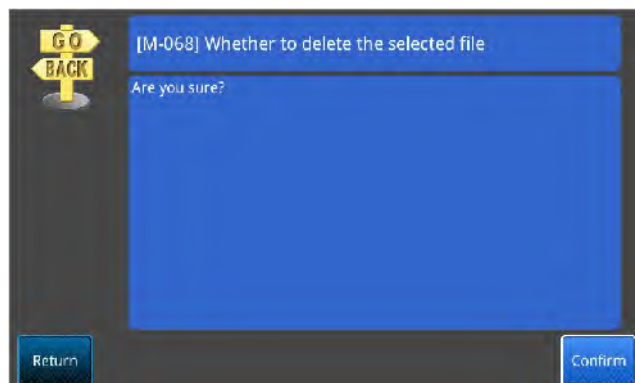
Click the sort button  to switch the current sorting method of the patterns. The default sorting method is to display the pattern list according to the modification time. After switching, the pattern list is re-displayed according to the number size, as shown in the left figure.

If there are many designs, use the page button  to browse the screen, and use the sort

button  to view the list of designs more intuitively.

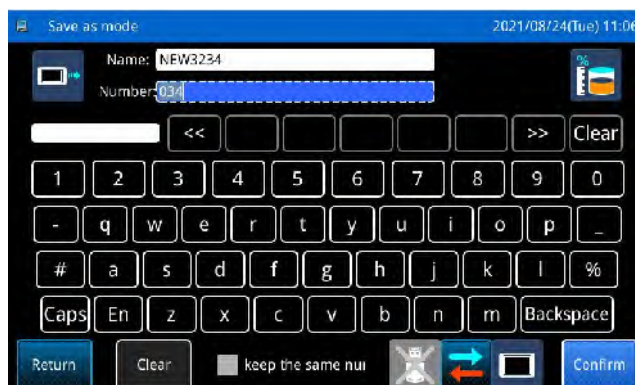
[Note] The pattern shape list can only display the used pattern shapes.

3.1.2 Pattern Deletion



Select the design to be deleted, click the delete button , click Enter  to delete the design, and click Return  to exit the current operation.

3.1.3 Pattern Save



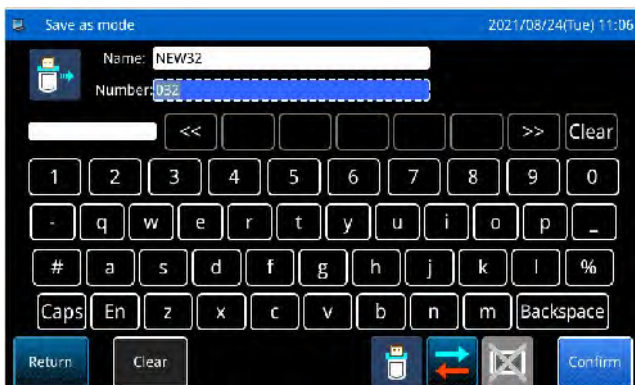
Save pattern to local

Select the pattern to be saved and click the copy button  to enter the pattern save interface. Use the keyboard to input the name and number of the pattern and save it. When setting, it supports Chinese naming, which can be switched by the button  of the keyboard. After the setting is completed, press the confirm button  to complete and save the naming of the pattern name. After the operation is successful, it will directly return to the main interface.

[Note] A pattern can be freely selected and stored. The pattern file name format is:

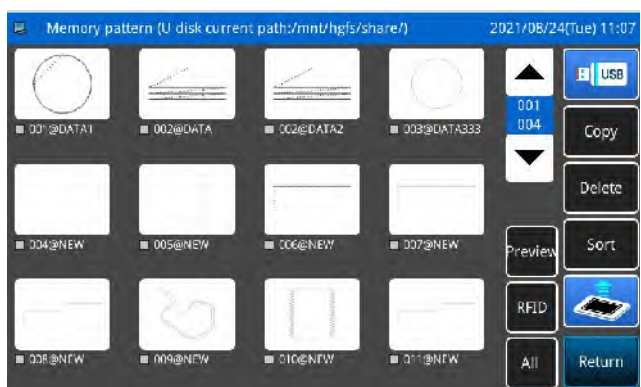
"pattern number@pattern name.nsp": "

[Note] If the stored pattern number is the same as the stored pattern number, the prompt message "Whether to overwrite the pattern with the same

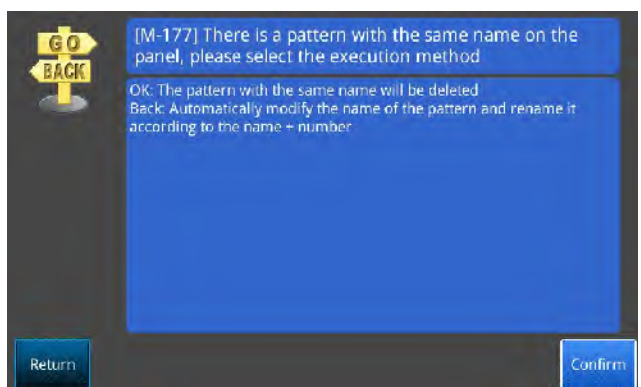


Save the pattern to U disk

3.1.4 Pattern Transmission



3.1.5 Copy U disk pattern



name in the U disk" will be displayed during the operation. Press the Confirm button  to overwrite the file, and press the Cancel button to exit the current operation.

There are two ways to select patterns: single selection and all selection.

Single selection: directly click a pattern you want to select.

Select all: After clicking the multi-select button , all patterns can be selected for transmission or deletion.

Note: After clicking the Select All button , a graphic prompt will appear whether to copy all.

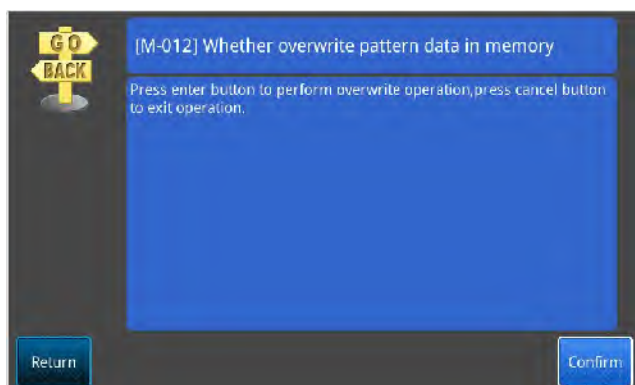
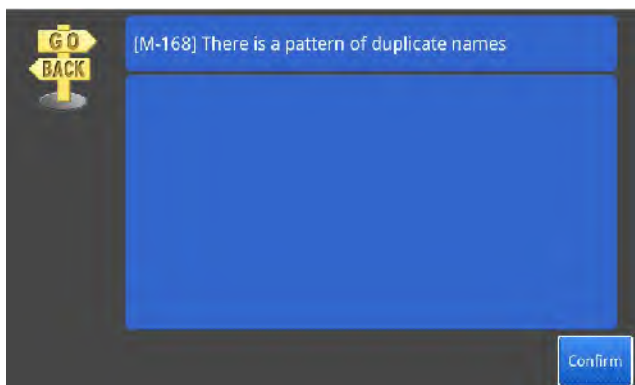
Copying U disk patterns can be performed in two ways: "File Management" or "Direct Read". The operation steps are as follows:

1、File management (execute batch or individual

copy): Click "Menu"  in the main interface, and then click "File Management"  to enter the pattern management interface. When entering this interface, it is displayed as the pattern in the

system memory by default. Click the "

icon in the upper right corner of the interface to switch the display interface to the U disk directory mode. The title bar at the top can display the current path of the U disk. The default display path is the DH_PAT folder in the root directory of the U disk. If there is no such folder in the U disk, it will be automatically created. If the pattern in the U disk is in another path, click the



"Upper dir." icon to find the pattern placed in the U disk.

After selecting the desired pattern, click the "". icon to copy the pattern to the system memory. During this period, if there are duplicate names or patterns with duplicate numbers, follow the system prompts to click Confirm  (to perform overwriting) or

Return  (to modify the name and save as) to complete the copy operation.

After returning to the main interface, click the "  " icon to find the pattern you just copied and click the system to automatically jump to the main interface P1. Or click the page button  on both sides of the "File" icon to find and select the pattern.

2、 **Direct reading** (reading a single pattern): Click the

"  " icon in the main interface, then click the " " icon in the upper right corner of the interface, find and click the desired pattern. At this time, the interface pops up the "Save Mode" interface,

click Confirm button  to directly copy the pattern to the memory, and jump to the main interface P1.

If the selected pattern has the same name as the memory pattern, the system will pop up a prompt, click

the Confirm button  to modify the name of the

pattern, and click Return  to return to the U disk pattern interface. If the modified name still has the same name, the system will not respond when click

Confirm button , then continue to modify the pattern name.。

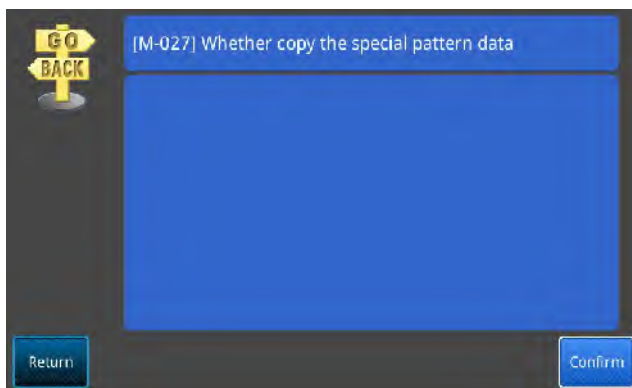
If the pattern number copied after modifying the pattern name already exists in the memory, it will prompt whether to overwrite it. Click the Confirm

button  to overwrite the pattern in the memory, and click Return  to pop up the “save mode”, where the pattern number can be modified.

[Note] When performing the above operation when the USB disk is not inserted, the message "USB disk has been unplugged" will be displayed.

[Note] If the selected number also exists in memory when reading patterns from a U disk, a prompt of "whether to overwrite pattern data in memory" will be displayed and operate according to the specified information.

3.1.6 Copy Confirmation



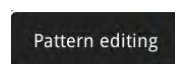
Select the design to be copied, click the copy confirmation button , click Enter  to copy the design, and click Return  to exit the current operation.

3.2 Pattern Editing

In the main interface P1, click the menu button



→ pattern editing button



to enter the pattern edit interface.



(1) Whether to re-enter

To replace the entered data with new data, press the button (to clear the last printing data and re-print).

To continue to use the entered data for pattern making, press the button (continue the last pattern patterning data).

(2) Speed Setting

Click the four speed buttons in the interface to select different speeds:



(3) Stitch length setting

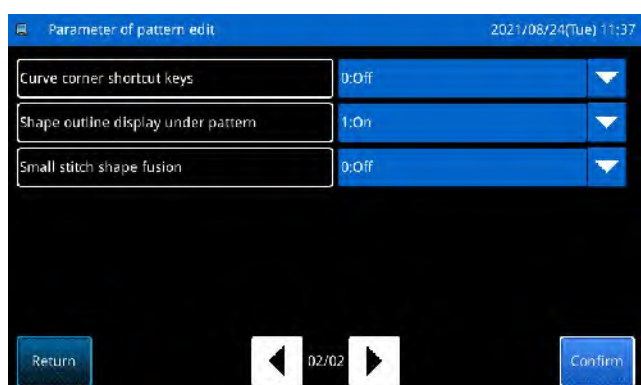
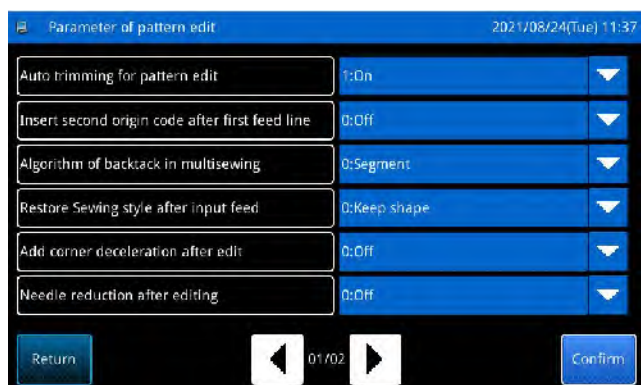
Input the stitch length through the number buttons and buttons ~ , the range is 0.1mm~12.7mm.

(4) Graphical parameter modification

There are parameter buttons in the pattern-making, modification and conversion interface, which gather the relevant parameters, which is convenient for users to set.

The parameter details are as follows:

- A. Automatically add trimming when making a pattern
- B. The secondary origin is automatically added after the first empty delivery
- C. Algorithm for reverse sewing under multiple sewing
- D. Restore the sewing style after air delivery
- E. Add inflection point to slow down after making the pattern
- F. Restoration of stitches after patterning
- G. Curve corner shortcut buttons
- H. Shape outline display under the pattern



I. Small stitch shape fusion

(5) Confirm input

After the above data setting is completed, press



the button to complete the setting.

(6) Presser foot



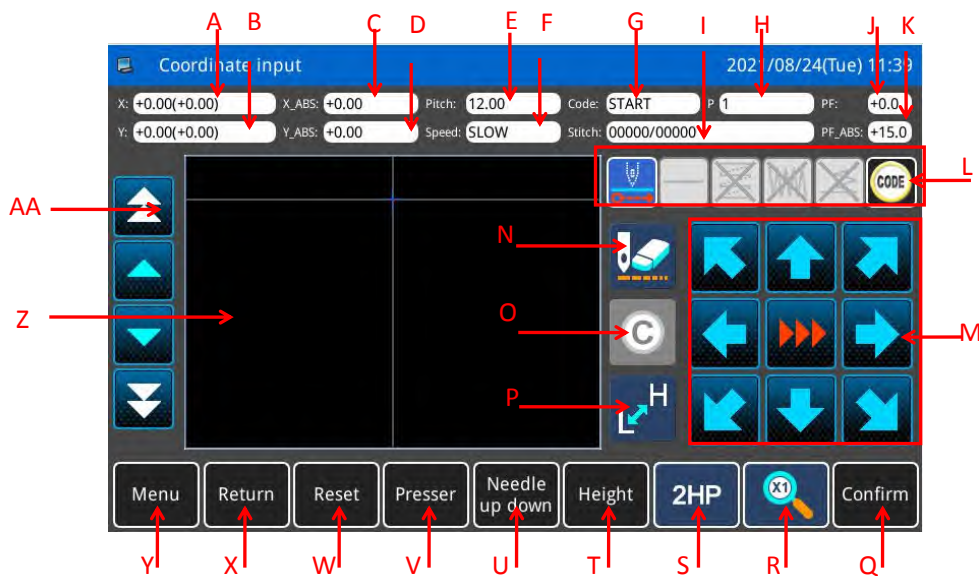
Press to adjust the rise or fall of the middle presser foot.

(7) Needle up and down



Raise or lower the needle position.

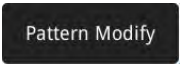
Cursor Input Interface Supplementary Instructions



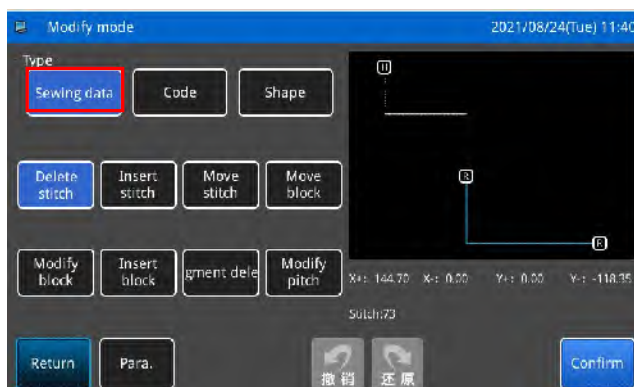
No.	Function	Content
A	X-relative coordinate	Displays the relative coordinate X value of the current move. (In brackets is the difference between the cross cursor and the pattern position)
B	Y relative coordinate	Displays the relative coordinate Y value of the current move. (In brackets is the difference between the cross cursor and the pattern position)
C	X absolute coordinate	Displays the X value of the current coordinate.
D	Y absolute coordinate	Displays the Y value of the current coordinate.
E	Pitch	Displays the set stitch length. [Note] The stitch length of empty feed is displayed as 12.0mm
F	Speed	Displays the current needle speed.
G	Code	Displays the current input code.
H	Shape points	The number of shape points entered during the current editing process.
I	Contacts	Displays the number of stitches/total stitches at the current needle position.
J	Middle presser foot height relative value	Displays the relative value of the current Middle presser foot height.
K	Middle presser foot height absolute value	Displays the absolute value of the current Middle presser foot height.

No.	Function	Content
L	Typing input	Various typing input functions. [Note] Including sewing of various shapes, empty delivery, various function codes, etc.
M	Arrow buttons	Move the frame in all directions.
N	Cancel the last input data button	Press this button to cancel the last confirmed input point and return to the previous input point.
O	Cancel (go back to the previous step)	Press this button to cancel the last undecided input operation and return to the previous step of input.
P	Switching the sewing machine speed	Press this button to switch the sewing machine speed in sequence: low speed, high speed, medium and high speed, and medium and low speed.
Q	Confirm button	Confirm the currently edited shape.
R	Enlarge	The pattern can be enlarged.
S	Second origin	After transfer, the second origin can be inserted at the current position.
T	High	Material thickness position setting.
U	Needle up and down	Raise or lower the needle position.
V	Middle presser foot rise/fall	Adjust Middle presser foot up or down
W	Home button	Return to origin command is executed after pressing.
X	Return	Return to the previous screen.
Y	Directory button	Enter directory mode.
Z	Pattern screen display	Display the current pattern graphics
AA	Jog button (point movement button)	  : move forward/backward on the created pattern to jog. (Do point movement on the already generated pattern)   : move forward/backward on the created pattern to jog. (Quick point movement on the already generated pattern)

3.3 Pattern Modification

In the main interface P1, click the menu button  → pattern making button  to enter the pattern modification interface. There are three modification modes to choose from.

3.3.1 Sewing Data



When entering this interface, the sewing data is selected by default.

Change mode to

 : delete the needle point;

 : Insert 1 needle with empty feed or needle pitch less than 12.7 in the specified position;

 : Move the selected single stitch point (the stitch distance after moving should be less than 12.7);



: Send the selected sewing segment to other positions;



: Modify the selected position to other sewing methods;



: Insert any sewing method in the selected position;

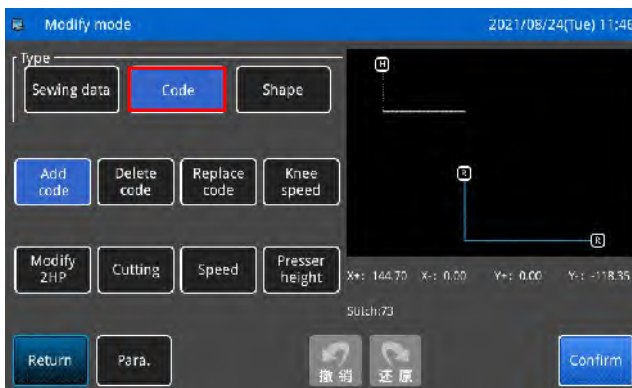


: Delete the selected sewing segment;



: Modify the stitch length of the selected area;

3.3.2 Function Code



Modify the type selection function code when entering this interface.



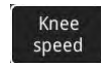
: Add a function code at the cursor position;



: Delete the function code selected by the cursor;



: Modify the function code selected by the cursor;



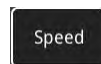
: Set the speed to be reduced within 5 stitches when the corner of the pattern reaches the specified degree;



: Modify the secondary origin position;



: Set the selected area as laser cutting;

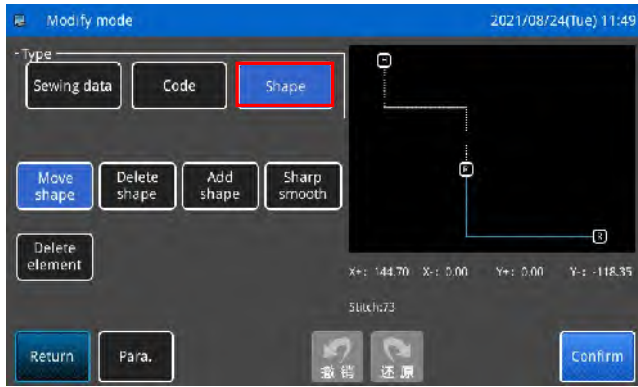


: Press "high speed, medium high speed, medium low speed, low speed" to adjust the sewing speed of the selected area;



: Adjust the height of the presser foot after the cursor position;

3.3.3 Shape



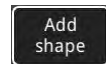
Modify the type selection shape when entering this interface.



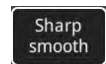
: Move the position of any point in the shape of a section of sewing;



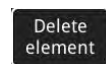
: Points selected when generating stitches from graphs such as curves, polylines, rectangles, etc. can be deleted (Note: Shape points cannot be added to shapes that have added inflection point deceleration);



: Continue to add shape points at the turning positions of graphs such as curves, polylines, rectangles, etc. (Note: Shape points cannot be added to shapes that have added inflection point deceleration);



: Change the turning position in the curve to a polyline or restore it to a curve;



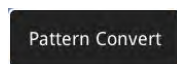
: Take the position of the node when the pattern is generated by clicking confirm as a segment, and this function can delete any segment;

3.4 Pattern Conversion

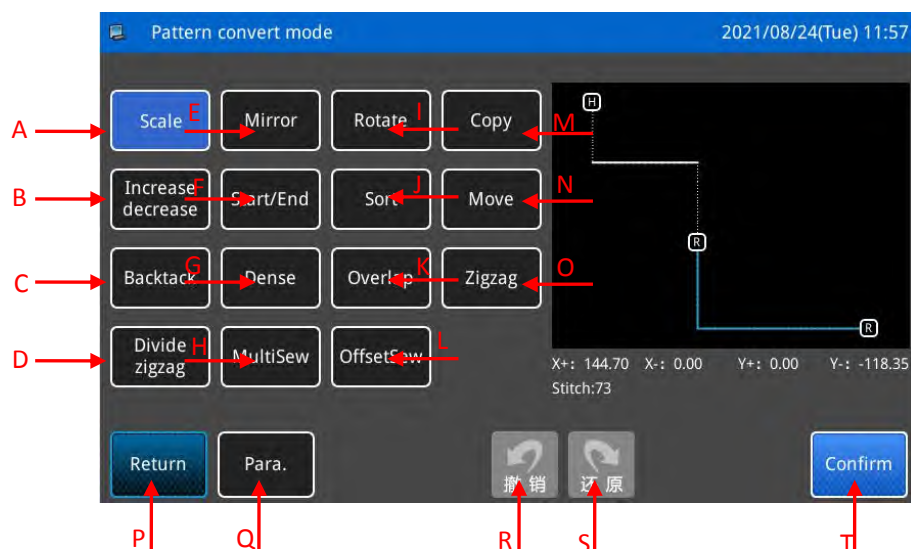
In the main interface P1, click the menu button



→system setting button



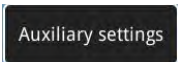
to enter the system setting interface.

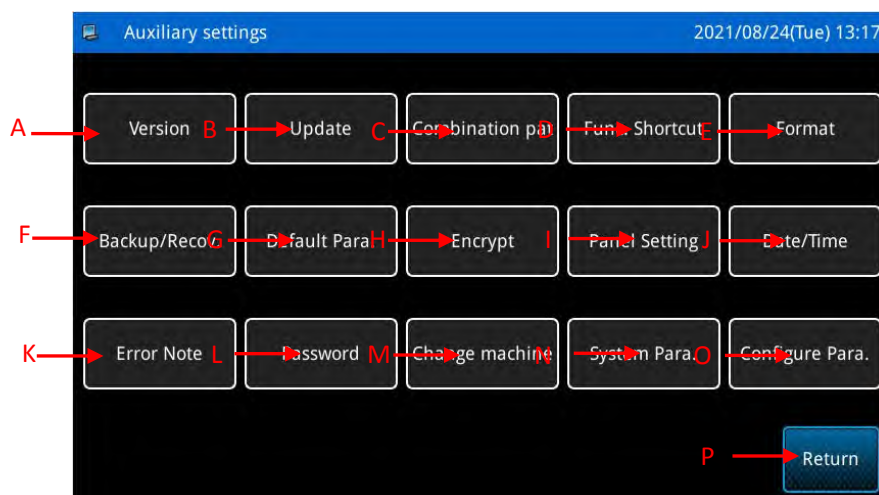


No.	Function	Content
A	Zoom	Set the center point datum for the pattern by keeping the number of stitches and stitch distance unchanged, and scale the X and Y directions by percentage or actual size (setting the modification method in the parameters).
B	Increase or decrease	The start and end stitch length or the number of stitches can be modified by the specified line segment or the entire graphic.
C	Backstitch conversion	By selecting a single line segment or the entire graphic to perform closed or non-closed graphic operations, the start and end reinforcement of the overall pattern can be modified.
D	Herringbone seam segmentation	Allowed to divide the whole picture or a certain section of the herringbone seam (that is, insert a stitch between each stitch point of the herringbone seam to change the stitching from  to ).
E	Mirror	Allowed to choose the method of keeping the original image or clearing the original image, and the current pattern can be symmetric up and down, left and right or intersected to generate a mirror image.
F	End-to-end exchange	Select the objects in the pattern to adjust the sewing order of the beginning and the end.
G	Condensation	The entire pattern or an object in the pattern can be selected for the start and end positions, and the needles are added in equal proportions within 10 stitches (for example, if the ratio of one stitch is set to 1:2, the original one stitch becomes two stitches).
H	Multiple encounter conversion	Select any sewing object in the pattern to create multiple sewing operations.
I	Rotate	Select different directions, angles and designation methods to operate the whole pattern or individual objects.
J	Sort	Arrange the objects in the pattern in any order.
K	Overlap seam conversion	Use any overlapping method and number of overlapping stitches in this function to perform the whole drawing of the pattern edited by the closed tool or any object transformation operation.
L	Off-edge seam conversion	Use the cursor to select the sewing objects in the pattern, and set the offset direction and distance.
M	Copy	Copy the standard position in the selected pattern, and move and copy the selected object or the entire graphic (up to 50 copies at a time).
N	Pan	The selected sewing object can be moved.
O	Herringbone conversion	Converts the sewing object at the cursor position to a chevron stitch.
P	Return	After resetting according to the prompt, you can perform the operation of "overwrite, save as a new file, and exit without saving" for the modified pattern.
Q	Parameter	The selection position, modification method and moving method of some functions can be modified.
R	Revoke	After making changes to the graphics, click Undo to restore the unmodified state.
S	Reduction	After the modified pattern is clicked to undo, if you want to restore it to the modified

		state, you can click to restore.
T	Confirm	Click Confirm to save all modifications and overwrite the original pattern.

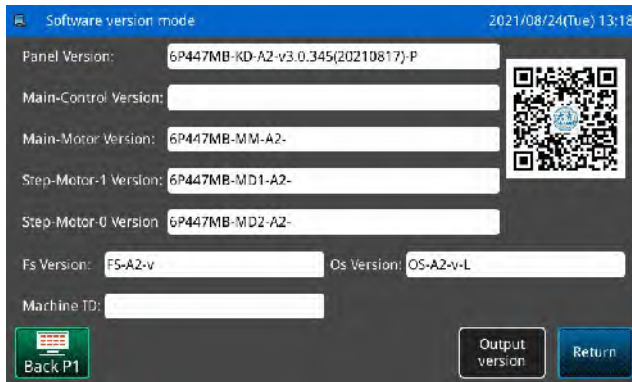
3.5 System Settings

In the main interface P1, click the menu button  → system setting button  to enter the system setting interface.



No.	Function	Content
A	Software version query	Query the system software version.
B	Software upgrade	Enter software upgrade mode.
C	Combination pattern	Enter the combined pattern editing mode.
D	Function shortcut buttons	You can edit and select the content of the shortcut buttons on the main interface.
E	Format	Format the U disk and memory.
F	Restore backup	The parameter setting values are saved to the U disk for subsequent restoration operations.
G	Default parameters	Provides recovery of default parameters and custom read and write functions.
H	Parameter encryption	Passwords are set for each operation entry in parameter mode.
I	Panel Settings	Provides display settings such as backlight, button lock, brightness, etc.
J	Date and Clock Settings	Set date and time.
K	Alarm record	View alarm statistics.
L	Installment password	The user can set the installment password function.
M	Change machine	Allows to choose to import data from a USB flash drive or export data to a USB flash drive.
N	System parameters	Allows to upgrade parameters, return parameters, set system parameters and TD system parameters. Note: When upgrading parameters, place the upgrade file in the /tdpara_group directory
O	Configuration parameters	Parameter transfer and machine code setting

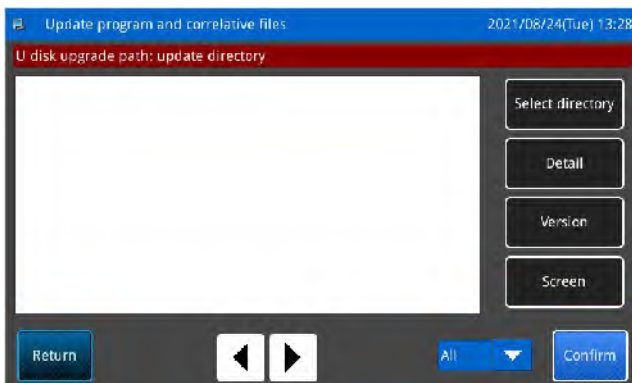
3.5.1 Software Version



Click the software version button  on the system setting interface to view the current software version.

Press the button  to export the software version to the root directory of the U disk, the file name is version.png.

3.5.2 Software Upgrade

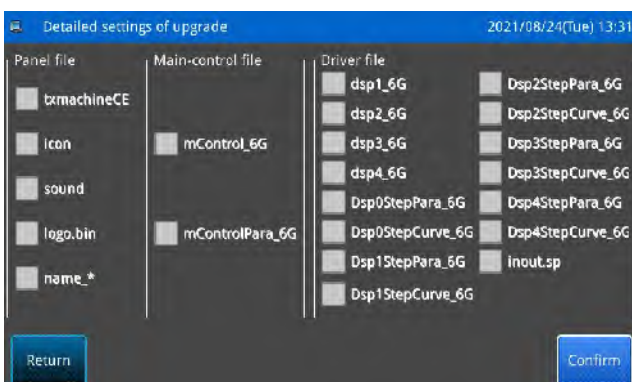


Click the software upgrade button  on the system setting interface to enter the software upgrade mode.



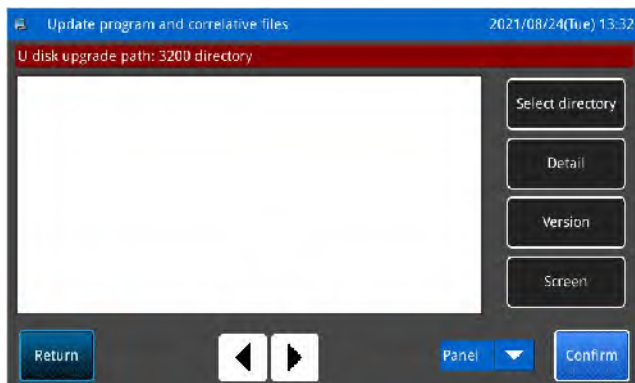
Put the programs (master, stepper, panel, driver, curve) in the "update" directory of the U disk or other folders.

If the required program is placed in the "update" folder, the system will automatically detect the program data after inserting the U disk. If it is placed in another directory, click  to select the folder where the program is placed, then click

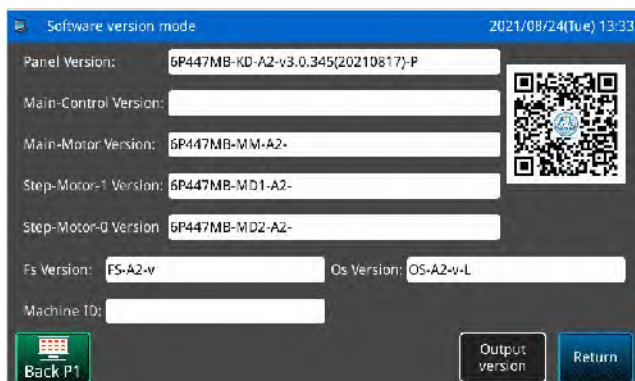


 Detailed Settings , check the software program to be upgraded, or click the shortcut button to upgrade the required program by switching between "Main Control, Panel, Driver, All".

After selecting the upgrade file, the corresponding program file will appear in the display area, click "Confirm"  to start the program upgrade.

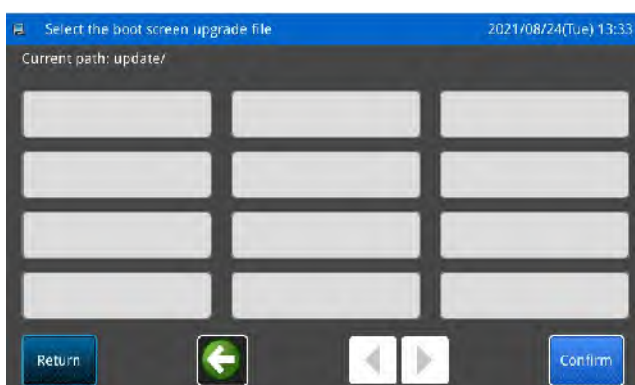


Click the software version shortcut button



Version

to enter the software version interface.

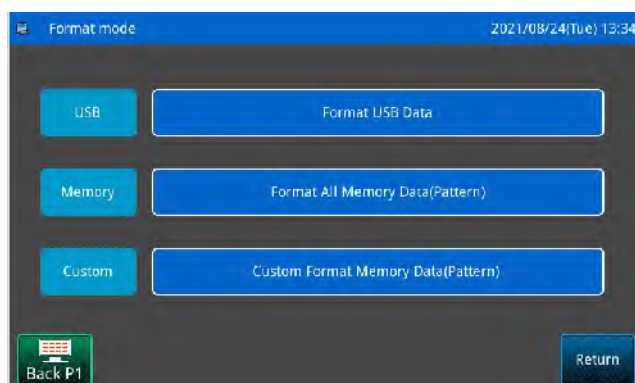


Click the software version shortcut button

Screen

to enter the interface for selecting the boot screen upgrade.

3.5.3 Format



In the system setting interface, click the format

Format

button to enter the format mode.

Click on the content that needs to be upgraded (white text on a blue background is the selected state), and a confirmation window will pop up whether to format or not.

Press the Confirm button

Confirm

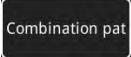
to execute the formatting operation, and press the Back button

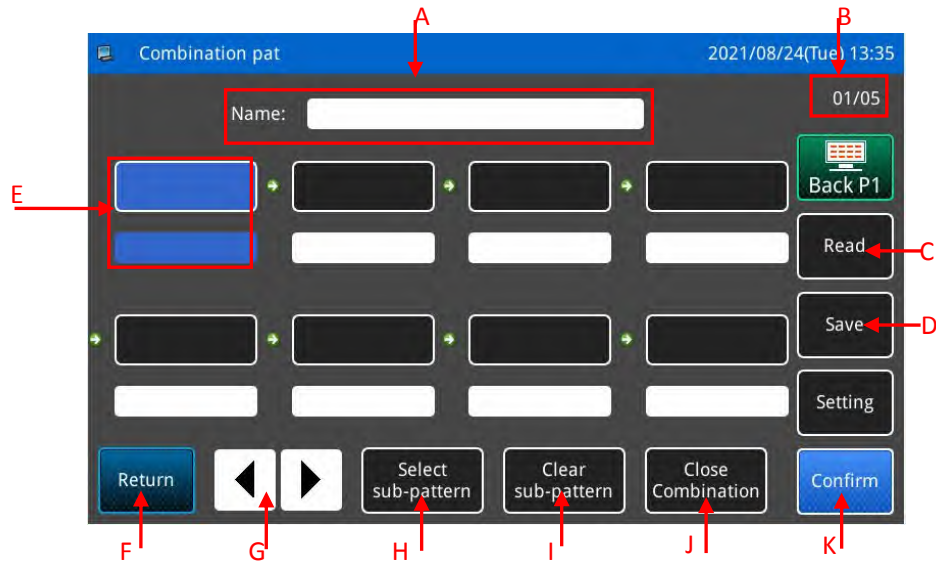
Return

to exit the current operation.

Note: After formatting, all U disk files and all memory pattern data will be deleted.

3.5.4 Combination Pattern

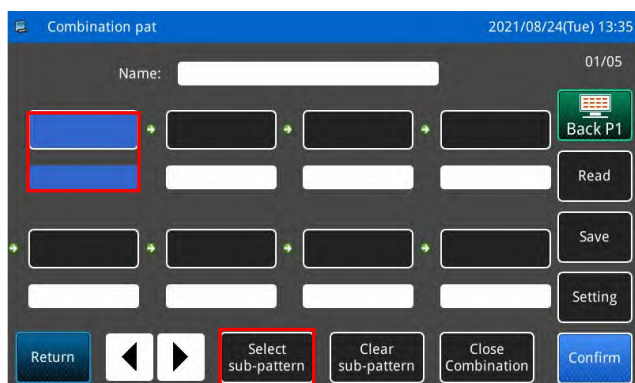
Click the combined pattern button  in the system setting interface to enter the combined pattern editing mode. The combined pattern editing mode is mainly used to create and edit combined patterns, that is, to perform combined editing on the basis of existing patterns, and the files that constitute combined patterns are called sub-pattern files.



Function Description:

No.	Description
A	Combination pattern name display
B	Page number display
C	Read combined pattern
D	Store combined patterns
E	Sub pattern file display
F	Exit, return to the previous screen
G	Turn pages
H	Read the existing pattern from memory and add it to the combined pattern
I	Delete sub-pattern files in combined pattern
J	Close the combined pattern
K	Determine the current operation

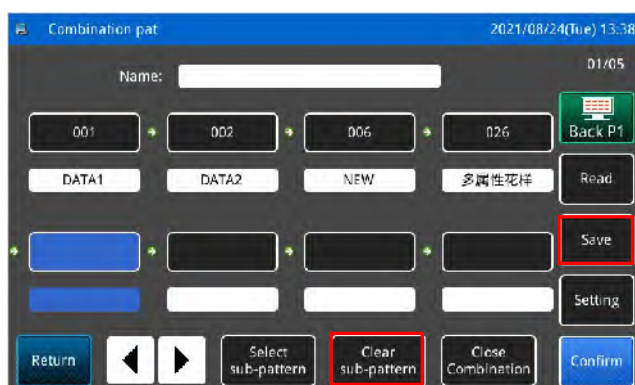
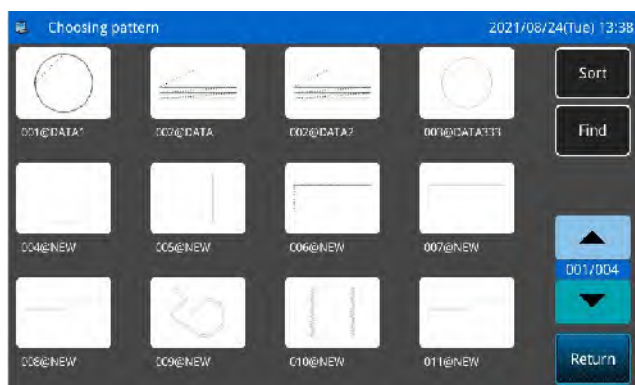
Instructions:



1、 Select a subfile

Click the button  to enter the read mode, select the pattern file you want to add (here, pattern 001 is selected), and press the Confirm button  to confirm the selection.

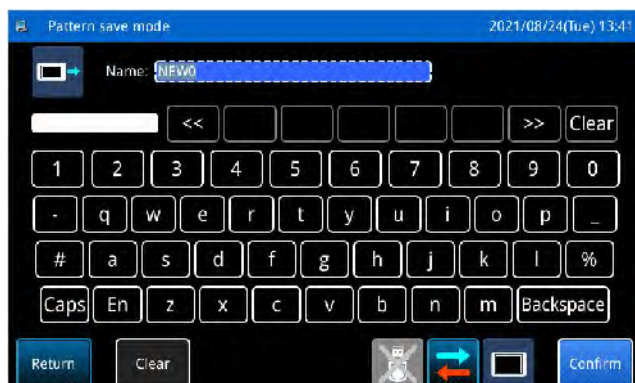
[Note] The files to be added in the combined pattern must be added in the sequence.



2、 Continue adding subfiles

The same as the previous operation, continue to add sub-patterns (here choose to continue to add 002, 006 and 026 patterns).

If you want to delete one of the sub-pattern files, click the drawing number of the sub-pattern file you want to delete, and then press the delete button



3、 Save the combined pattern file

Press the save button  to enter the combined pattern save mode.

After naming the combined pattern, press the Confirm button  to confirm saving.



4、Return to the main interface

When the editing of the combined pattern is finished, press the Confirm button  to return to the main interface.

As shown in the figure, there are some differences between the combined pattern sewing interface and the ordinary pattern sewing interface:



A. The name of the combined pattern is displayed after the number field, and the name of the current sub-pattern file in the combined pattern is displayed in the name field.

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

B. The original pattern number shortcut button area displays the sub pattern files contained in the combined pattern. You can directly click the figure number of the sub-pattern file, in this case, the sewing will start from this pattern.



5、Cancel combination pattern sewing

To cancel the combined pattern sewing, you need to enter the graphic connection mode again, then click the button , and then the Confirm button  to return.



6、Read the combined pattern file

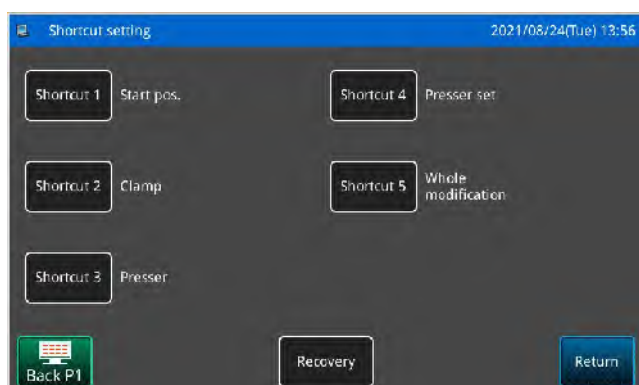
In the graphical connection mode interface, if there is a combined pattern data display, click the button  the prompt message "Please clear the current combined data" will be displayed, and the current combined pattern display data will be cleared after clicking the button . Click the button  again to enter the mixed graphics reading interface, and select the combined pattern file you want to sew or edit.

3.5.5 Function shortcut buttons



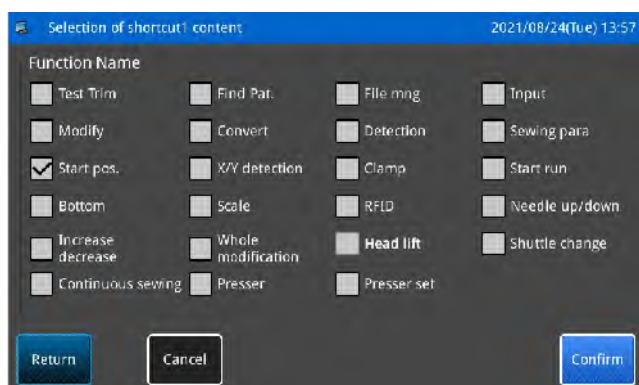
Shortcut button location:

The shortcut button function is used to set the five function buttons at the bottom of the main interface P1, and users can set the commonly used function buttons by themselves.



Enter shortcut button setting mode:

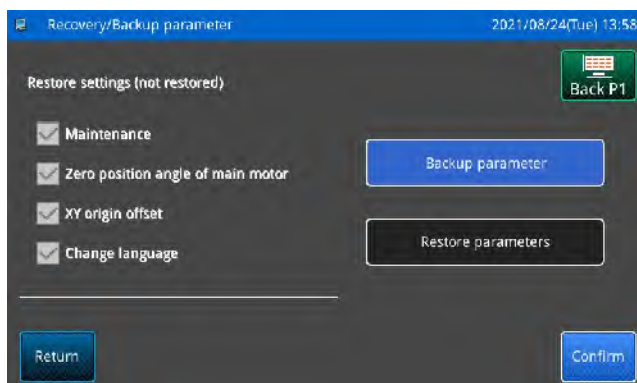
Click the function shortcut button  in the system setting interface, and you will be asked to enter the manufacturer ID. After the correct input, you can enter the shortcut button setting mode.

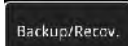


Shortcut button content selection:

Click the shortcut button you want to modify to enter the shortcut button content selection interface, select the function you want to set as a shortcut, press the Confirm button  to save and exit.

3.5.6 Recovery Backup



Click the Restore Backup button  on the System Settings interface to enter the Restore Backup Parameters interface.

Save Parameters

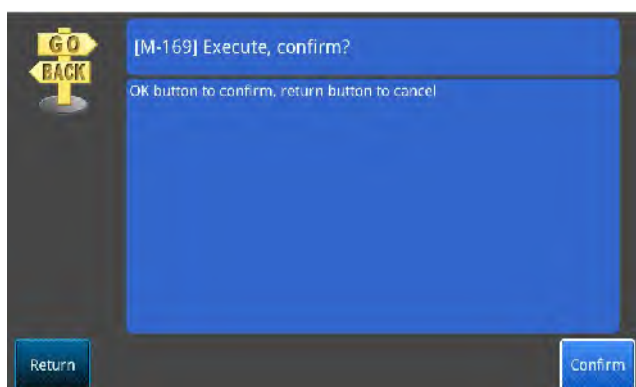
Enters the restore backup parameter interface, which is backup user parameters by default.

Press the Confirm button  after inserting the U disk. After the operation is successful, a "bakParam" directory will be automatically created on the U disk, and the "backup.param" file in this directory is the parameter backup file.

[Note] If there is a file with the same file name, new data will be overwritten, and the original data will disappear.

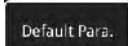
Recovery Parameters

The recovery parameter operation requires pressing the reset parameter button. After pressing it, it prompts whether to execute it? Click  to perform the parameter restoration operation, and return to the previous screen after the operation is successful.

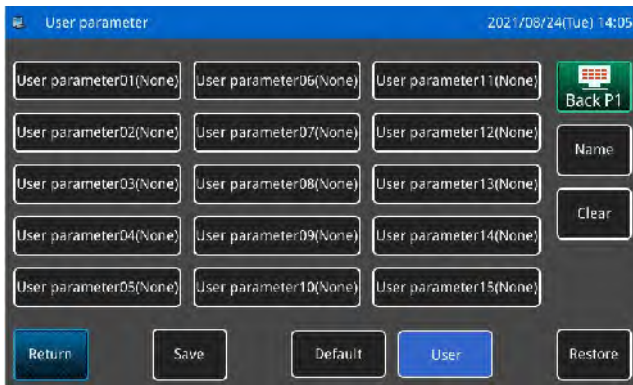


3.5.7 Default Parameters

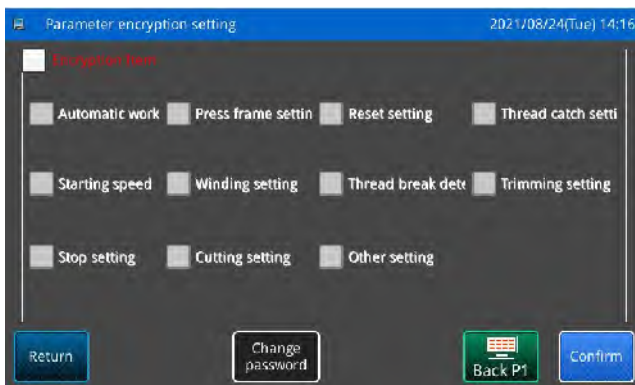


Click the default parameters button  in the system settings interface to enter the default parameters interface.

It is mainly used to restore the factory parameters, and to customize and save the current parameter settings for future calls.



3.5.8 Parameter Encryption



Parameter Encryption:

Click the parameter encryption button  in the system setting interface, and you will be asked to enter the manufacturer ID. After the input is correct, you can enter the parameter encryption interface to set the decryption item.



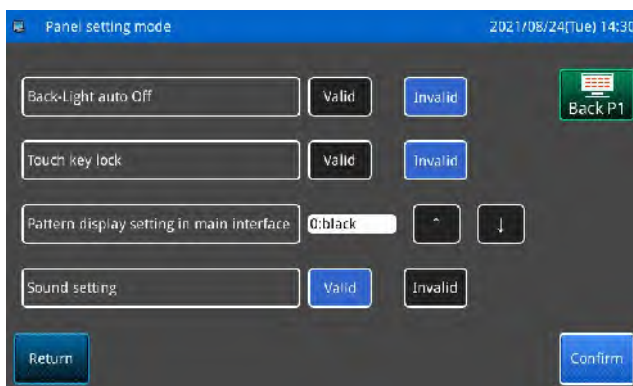
Change Password:

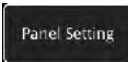
Click the Modify Password button  to enter the new password setting interface, where you can modify the password.

Note: long press "default parameter" for 10s to restore the password.

Note: After the statistics permission password is successfully entered once, it is not necessary to enter it again.

3.5.9 Panel Settings



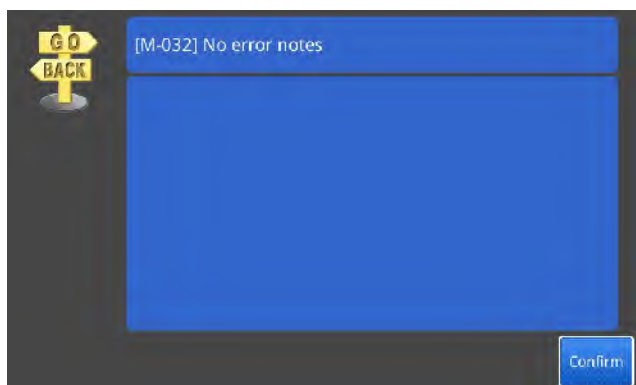
Click the panel setting button  in the auxiliary setting interface to enter the panel setting interface.

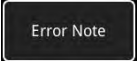
It can provide display settings such as backlight, button lock, and main interface patterns.

Panel Parameters:

Function	Initial Value	Range
Automatically turn off the backlight	Invalid	Efficient Invalid
Touch button lock	Invalid	Efficient Invalid
Main interface pattern display setting	0: black	0: Black 1: Cyan 2: Red 3: Green 4: Blue 5: Purple 6: Yellow
Voice settings	Efficient	Efficient Invalid

3.5.10 Alarm Record



Press the alarm record button  in the auxiliary setting interface, and it will ask to enter the manufacturer ID. After the input is correct, you can enter the alarm record mode.

In the alarm record mode, the latest alarm content of the system is displayed. The smaller the serial number, the newer the time of the alarm information.

In addition, the time when each alarm occurred is recorded.

After pressing the number button, the error message and solution will be displayed.

3.5.11 Work Statistics

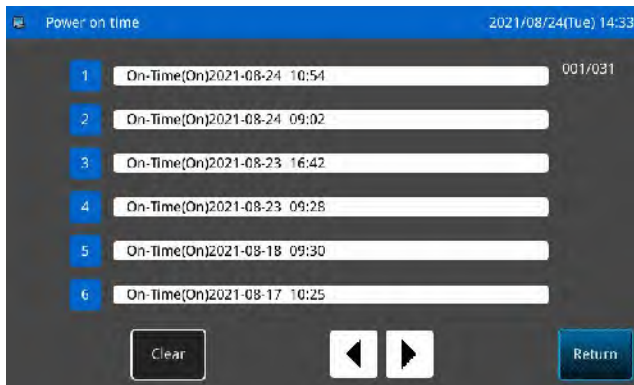


Press  in the main interface P1 to enter the work statistics viewing interface.

- ① Cumulative Pieces: Record the total number of sewing patterns
- ② Cumulative working hours: record the sum of machine sewing time
- ③ Cumulative number of needles: record the total number of sewing needles of the machine
- ④ Cumulative startup time: record the total startup time of the machine

In addition, click the clear button  to clear the count value.

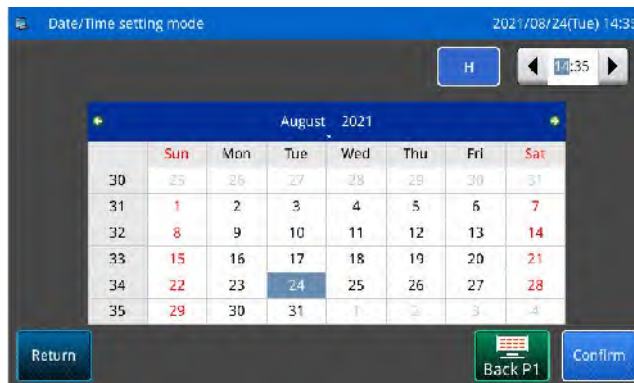
[Note]If the accumulated number of sewing pieces is cleared, the "cumulative count" in the auxiliary information column of the main interface will also



be cleared to zero.

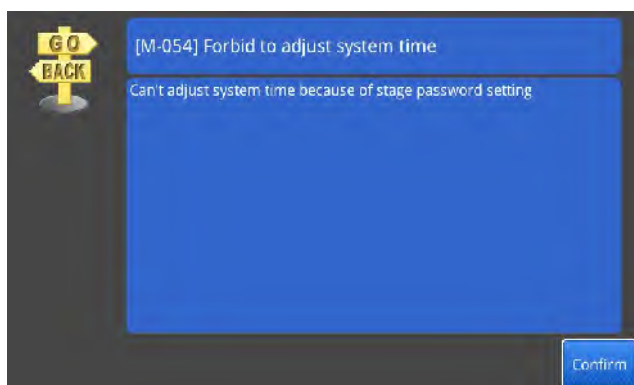
Press the boot time button  to record the time of each boot, press the delete button , and then press the Confirm button  to clear the button record.

3.5.12 Date and Clock Settings



Date and Clock Settings:

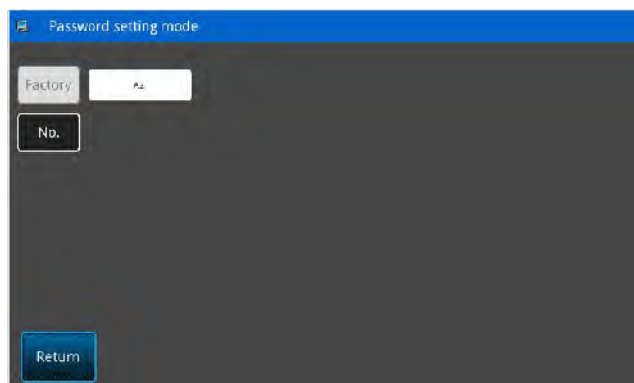
Press the date and time setting button  in the auxiliary setting interface, it will ask to enter the manufacturer ID, and the password is correct to enter the date and time setting mode.



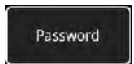
Forbid to adjust system time:

Once the phased password is set, it is forbidden to modify the system time, and the ban can be lifted after all passwords are cleared.

3.5.13 Installment Password



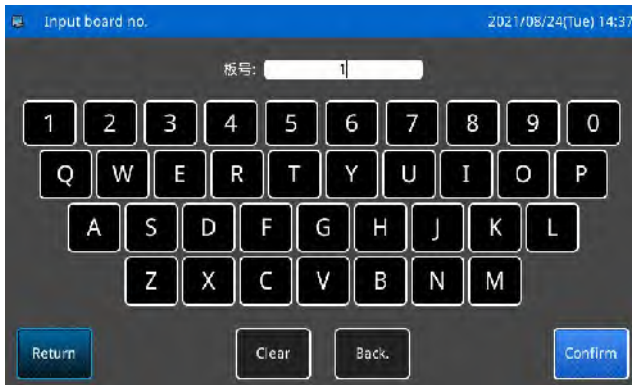
1) Enter the installment password setting mode

Press the phased password button  in the function setting interface to enter the phased password setting interface.

Before setting the password, you need to set the board number and system clock, which are mainly used for the setting and management of user installment passwords.

Note: Up to 10 different password attack dates can be set.

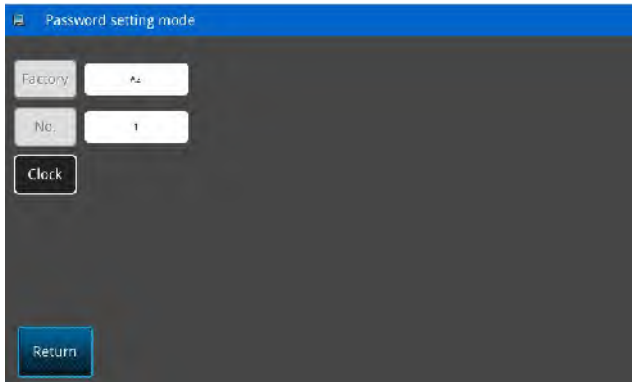
Note: The system can display the password information set by the factory.



2) Input Board No.

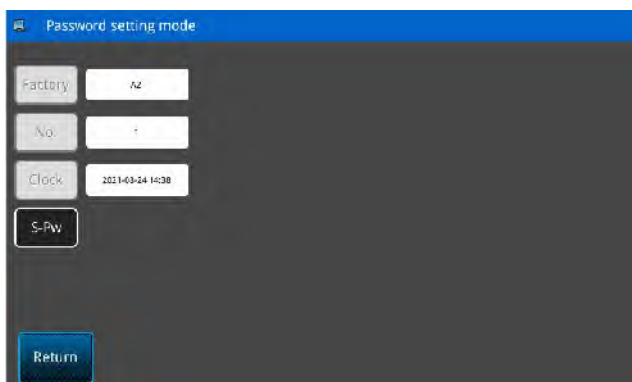
Press the board number button  to enter the board number input interface, use the button board to input the board number, and press the Confirm button  to complete the input.

Note: The board number can be set to 1~10 digits or letters.



3) Input system clock

Press the clock button  to automatically confirm the system clock time and return to the password setting mode.



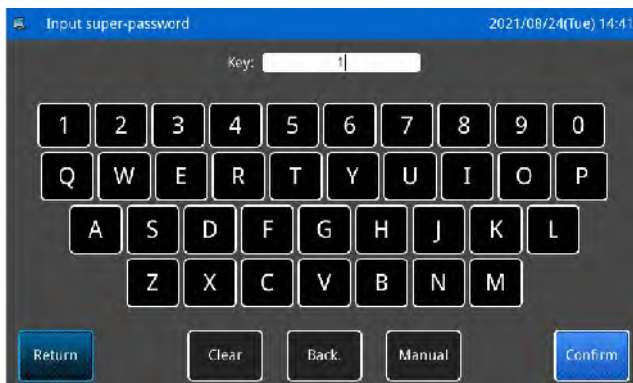
4) Enter the super password

Press the super password button  to enter the super password setting interface and enter the super password.

After entering the interface, a group of passwords will be randomly set, you can click the reset button  to reset the random password, click the back button  to delete one password from the back to the front, and click the manual button  to manually set the password.

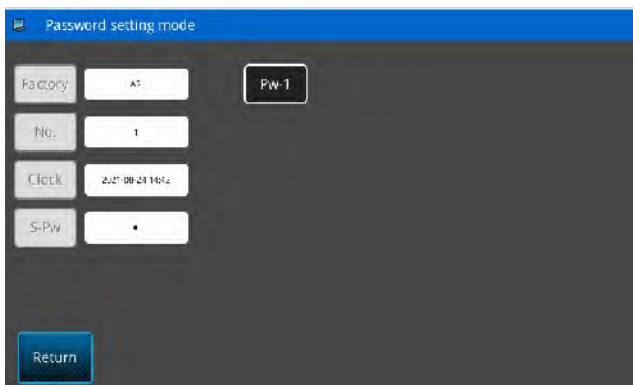
After clicking the manual button , use





the keyboard to enter the password, and press the Enter button  to confirm the input.

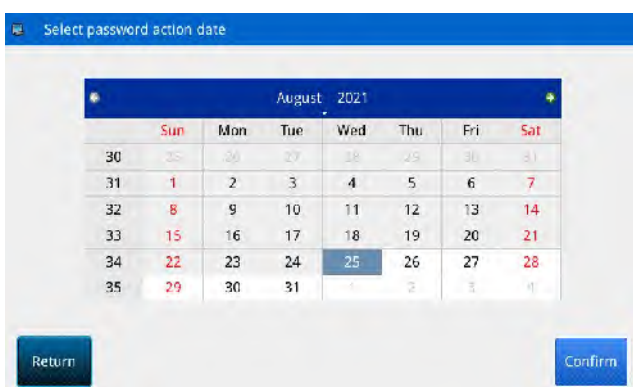
Note: The password can be set to 1~10 digits or letters.



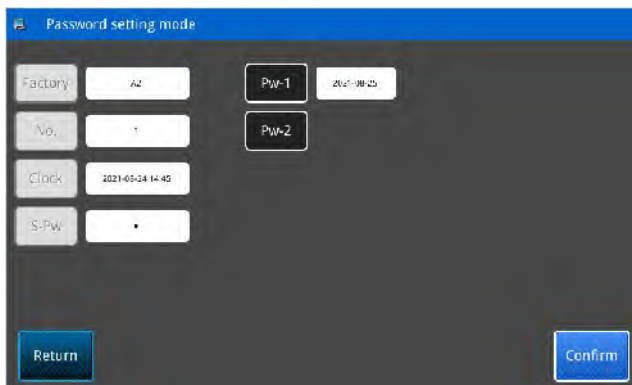
5) Enter the installment password-1

Press the password-1 button  to enter the first phase password setting interface, requiring input of the first valid date. After selecting the appropriate date, press  to confirm.

Note: The date cannot be earlier than the system date



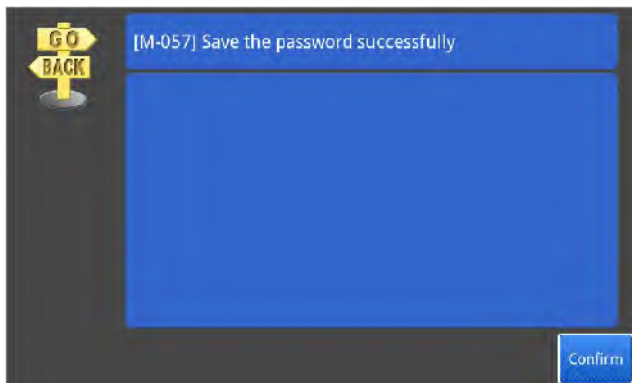
Then enter the password setting interface, which is the same as the super password setting method.



6) Enter another installment password

The setting of other installment passwords is the same as that of installment password-1.

Note: The next valid date must be after the previous valid date



7) Save password

After entering the password, press the Confirm button  to save. After the password is saved successfully, a message indicating that the password is saved successfully will be displayed.

Press the Confirm button  to enter the password statistics interface.



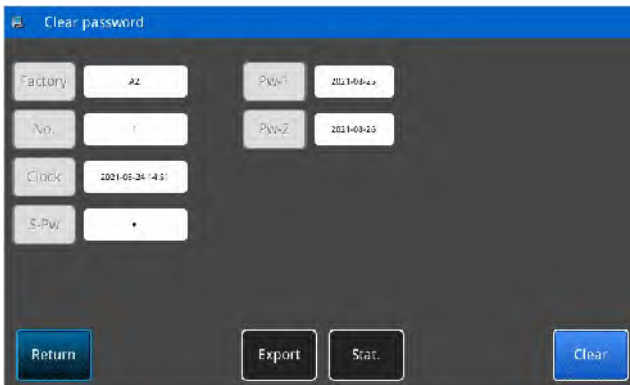
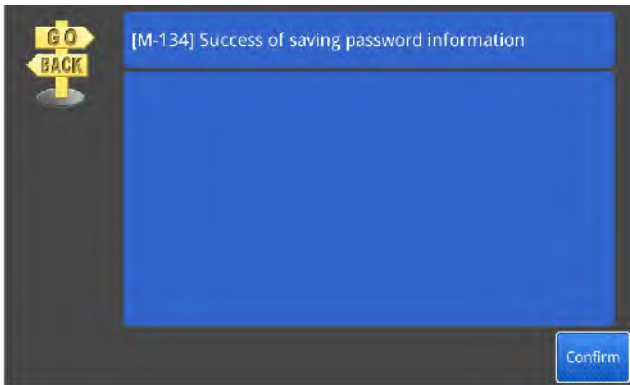
8) Save password information

Enter the password statistics interface to display the board number and password, installment password and date. After inserting the U disk, press the output

button , enter a new name, and press the Enter

button  to save, after the password is saved successfully, the prompt message that the password information is saved successfully will be displayed.

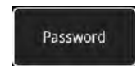




9) Actively clear the password

Actively clearing the password refers to the setting of automatically clearing the password before the installment password is issued.

A. Press the installment password button

 in the function setting interface to enter the installment password setting interface.

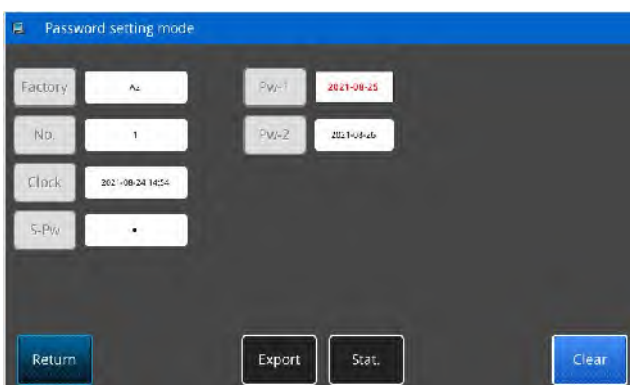
B. After entering the correct manufacturer ID, the interface on the right will be displayed.

C. The system displays the current clock and the date of issue of each installment password.

D. Press the delete password button  to delete the installment password from front to back.

E. Press the output button  to save the password information directly.

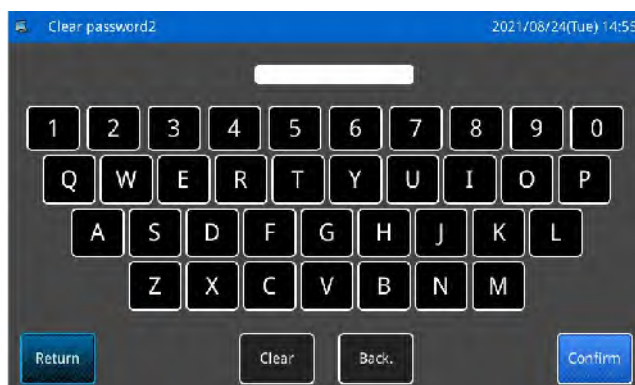
F. Press the statistics button  to enter the password statistics interface.



Press the delete password button  to delete the installment password from front to back. After entering the correct installment password, click

the Enter button  to clear the password of the current installment, and automatically enter the next installment password delete interface. Press the button

 to exit the delete password interface, otherwise it can be deleted until the last installment password is deleted, and all passwords are cleared. After the password is cleared, it will be displayed in red text. If all passwords are cleared, it will automatically exit and return to the main



information interface.

10) Password attack

If the system has set a password, it will encounter a password attack when it is used until the password attack date.

If you continue to use it at this time, you must enter a valid password.

A. Valid passwords include the current password and super password.

B. If the current password is entered, the current password will be cleared. After clearing the current password, if there is no password behind, the machine will no longer have the problem of password generation.

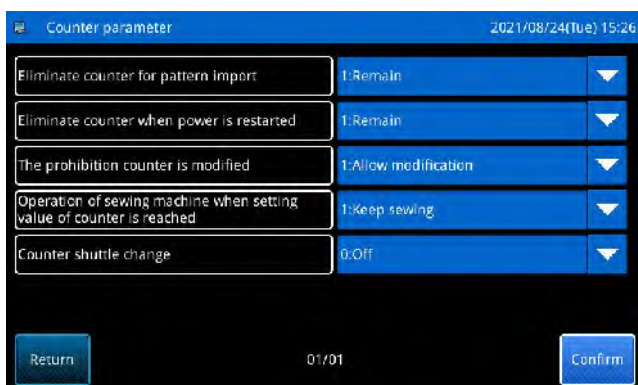
C. If the super password is entered, all installment passwords will be cleared.

3.5.14 Work Statistics Function Settings



Press  in the main interface P1 to enter the work statistics viewing interface. Press  to enter the counter parameter setting interface.

Note: The piece count setting value is the value of the set counter



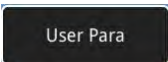
The counter parameter setting interface has the following options:

1. Whether to eliminate the counter when importing the pattern
2. Whether to eliminate the counter when the power is turned on again
3. The counter is prohibited from being modified
4. The operation of the sewing machine when the set value of the counter is reached
5. Counter shuttle change

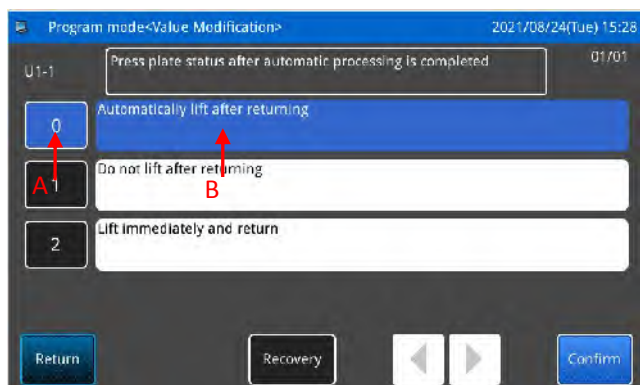
3.6. User Parameter (U Parameter)

3.6.1 Enter the Function Parameter Setting Interface

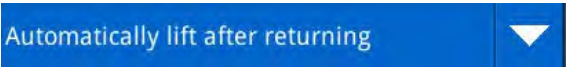


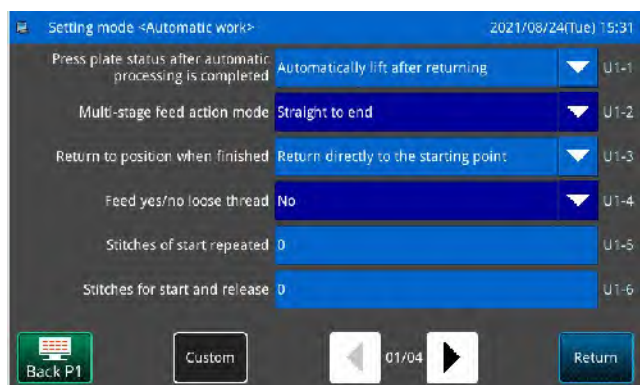
Press the menu button  on the main interface P1 (or P2) interface to open the multi-category directory mode, and then press the user parameter button  to enter the user parameter mode selection interface.

3.6.2 Parameter Change Method

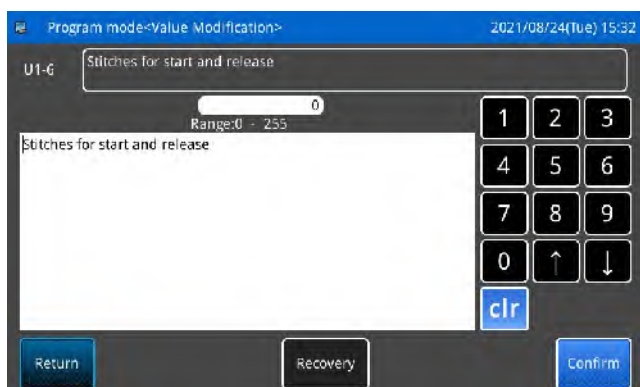


For example, select parameter setting for reference, as follows:

Press the button  to enter the [Press plate status after automatic processing is completed] setting interface, find the parameter code A: [U1-1], and set the parameters. At this time, B:[Automatically lift after returning] is the selected state.



At this time, after returning to the previous interface, the status of [Press plate status after automatic processing is completed] has been changed to [Automatically lift after returning], and the parameter setting is completed.

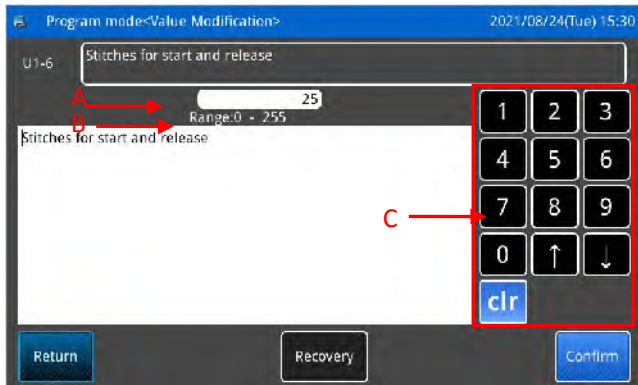


An example of input parameter setting for reference is as follows:

Press the button

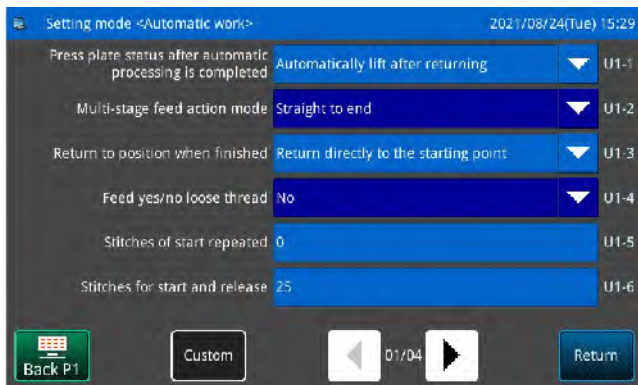


to enter the Stitches for start and release setting interface, parameter code [U1-6] to set the parameters, at this time, the parameter value of [Stitches for start and release] is [0].



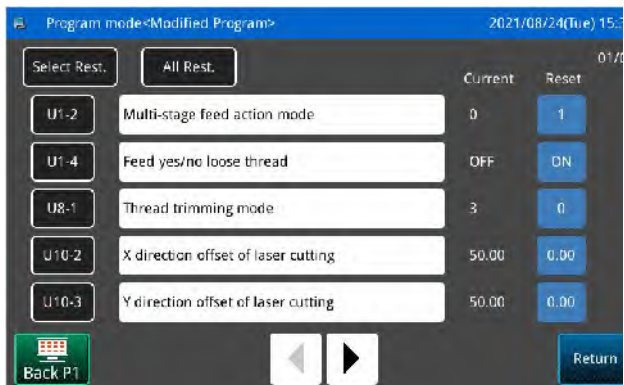
Press the U1-6 parameter button to enter the [Stitches for start and release] parameter setting interface, enter the desired value in the value A through the keypad C, and press the Confirm button  to complete the setting change of the corresponding parameter.

Note: B is the input range of parameter values.



At this time, after returning to the previous interface, the parameter value of [Stitches for start and release] has been changed to [25], and the parameter setting is completed.

3.6.3 Parameters Modified



Query Modified Parameters

If there is parameter modification, the modified button  will be displayed in the parameter setting interface.

In the parameter setting interface, press the modified button , and you will be asked to enter a password. After entering the correct password, you can enter the modified parameter query interface to query the modified parameters.

In the modified parameter query interface, you can query the list of all modified parameters.

Restore Modified Parameters

Press the reset all button  to restore all modified parameters to Default.

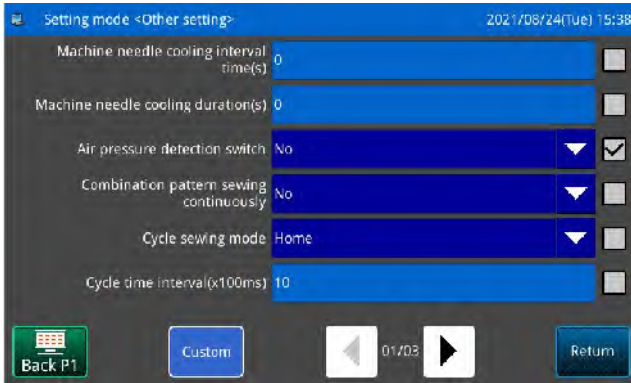
Click the parameter name button, such as U1-6[Number of stitches for starting and loosening the thread], and press the Restore Default button  to restore the selected parameter to Default, and also supports the check operation.

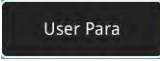
Press the parameter number button, such as the

[U1-6] button  to enter the parameter setting interface, and to reset the parameter value.

Press the return button  to exit this interface.

3.6.4 Parameter Customization Method



Press the menu button  on the main interface P1 (or P2) interface to open the multi-category directory mode, and then press the user parameter button  to enter the user parameter mode selection interface.

For example, click [Other] parameter mode to enter other parameter setting interface, and click the

Customize button  at the bottom of the interface to customize parameters.

By clicking the box behind the parameter, set whether to display the parameter:  : display the parameter;  : do not display the parameter.

After setting, click the Customize button  again to exit customization.

Note: Customized parameters can be opened in the setting button of P2 on the main interface.

3.6.5 User Parameter Table

Automatic Processing

Code	Description	Details	Unit	Step	Range	Default	Type
U1-1	The state of the platen after the automatic processing is completed	The state of the platen after the automatic processing is completed			0:0: The platen is automatically lifted after returning to the position 1:1: The platen does not lift after returning to the position 2:2: The platen is lifted immediately	0	Select

U1-2	Multi-stage air feed action mode	Multi-stage air feed action mode			0:0: Straight line to the end point 1:1: Follow the segmented path to the end point	1	Select
U1-3	Return to location when done	Return to location when done			0:0: Return to the origin directly 1:1: Return directly to the starting point	1	Select
U1-4	Air delivery yes/no loose line	Whether to open the thread releaser for air feed			0:OFF: No 0:OFF: Yes	1	Select
U1-5	Number of repetitions of stitches	Number of repetitions of stitches		1	0~3	0	Input
U1-6	Number of stitches for starting and loosening	Number of stitches for starting and loosening		1	0~255	0	Input
U1-7	Presser foot	Presser foot		1	0~15	0	Input
U1-8	Follow the presser foot to lower the height	Follow the presser foot to lower the height	x0.1mm	1	0~40	1	Input
U1-9	End presser foot	End presser foot		1	0~15	0	Input
U1-10	Follow the presser foot to finish pressing the height	Follow the presser foot to finish pressing the height	x0.1mm	1	0~40	1	Input
U1-11	First and last presser foot swing setting	First and last presser foot swing setting			0:0: normal 1:1: halved 2:2: increase	0	Select
U1-12	Thread trimmer motor reset after work	Thread trimmer motor reset after work			0:0: no 1:1: yes	1	Select
U1-13	After work, presser foot reset	After work, presser foot reset			0:0: no 1:1: yes	1	Select
U1-14	The starting angle of the needle and thread	The starting angle of the needle and thread	°	1	0~359	100	Input
U1-15	End angle of needle start and clamping	End angle of needle start and	°	1	0~359	350	Input

	thread	clamping thread					
U1-16	Needle reinforcement method	Needle reinforcement method			0:0: no reinforcement 1:1:1 Needle Condensation 2:2:V reinforcement 3:3:N-type reinforcement 4:4:W-shaped reinforcement	0	Select
U1-17	Number of stitches for starting and reinforcing	Only valid for V,N,W type reinforcement		1	2~4	3	Input
U1-18	end reinforcement	end reinforcement			0:0: no reinforcement 1:1:1 Needle Condensation 2:2:V reinforcement 3:3:N-type reinforcement 4:4:W-shaped reinforcement	0	Select
U1-19	End reinforcement stitches	Only valid for V,N,W type reinforcement		1	2~4	3	Input
U1-20	Sewing start method	Sewing start method			0:0: Normal mode (press frame, start) 1:1: Fast start mode (boot) 2:2: Secondary start mode (press frame, start, start) 3:3: Automatic start (automatic start after template detection is in place)	0	Select
U1-21	Loose Wire Start Mode	Loose Wire Start Mode			0: OFF: Off 1:ON: Open	1	Select
U1-22	Upper thread tension adjustment	Upper thread tension		1	0~255	100	Input

		adjustment					
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Frame Pressing Settings

Code	Description	Details	Unit	Step	Range	Default	Type
U2-1	Press frame type selection	Press frame type selection			0:0: Pneumatic 1:1: Electromagnet 2:2: Motor	0	Select
U2-2	Do not sew when the frame is raised	Do not sew when the frame is raised			0:OFF: No 0:OFF: Yes	1	Select
U2-3	Manually move the axis to press the frame first	Manually move the axis to press the frame first			0:OFF: No 0:OFF: Yes	1	Select
U2-4	The frame must be pressed when moving	The frame must be pressed when moving			0:OFF: No 0:OFF: Yes	1	Select
U2-5	Delay when the double press frame is lifted	Delay when the double press frame is lifted	ms	1	0~10000	100	Input
U2-6	Delay when double pressing frame is pressed	Delay when double pressing frame is pressed	ms	1	0~10000	100	Input
U2-7	Double press frame lifting method	Double press frame lifting method			0:0: After the processing is completed, the platen is lifted 1:1: After the processing is completed, the left platen is continuously pressed down 2:2: After the processing is completed, the right platen is continuously pressed down	0	Select
U2-8	Double frame pressing method	Double frame pressing method			0:0: Left and right platens descend at the same time 1:1: The platen goes down first left and then	0	Select

					right 2:2: The platen goes down first to the right and then to the left		
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Reset Settings

Code	Description	Details	Unit	Step	Range	Default	Type
U3-1	The pressure frame is automatically reset when the power is turned on	The pressure frame is automatically reset when the power is turned on			0:OFF: No 0:OFF: Yes	0	Select
U3-2	Press the frame down when resetting	Press the frame down when resetting			0: OFF: No (Allowed when the pressure plate is lifted) 0:OFF: Yes (only allowed when the platen is down)	1	Select
U3-3	Lift the platen after manual reset	Lift the platen after manual reset			0:OFF: No 0:OFF: Yes	1	Select
U3-4	Back to origin method	Back to origin method			0:0:XY Simultaneous 1:1:X priority 2:2:Y priority	0	Select
U3-5	Return to origin speed	Return to origin speed	mm/min	1	100~60000	20000	Input
U3-6	Whether to select top dead center during origin search	Whether to select top dead center during origin search			0:OFF: No 0:OFF: Yes	0	Select

Thread Catch Settings

Code	Description	Details	Unit	Step	Range	Default	Type
U4-1	Thread catch function switch	Thread catch function switch			0: OFF: Off 1:ON: Open	0	Select
U4-2	Thread trimming position	Thread trimming position	°	1	0~359	0	Input
U4-3	Seam start catcher position	Seam start catcher position	°	1	0~359	0	Input

U4-4	Number of stitches for thread catch and release	Number of stitches for thread catch and release		1	0~255	1	Input
U4-5	Grab the thread and grasp the angle	Grab the thread and grasp the angle	°	1	0~359	90	Input
U4-6	Thread release angle	Thread release angle	°	1	0~359	300	Input

Needle Start Speed

Code	Description	Details	Unit	Step	Range	Default	Type
U5-1	1st stitch start speed	1st stitch start speed	x100RPM	1	2~30	3	Input
U5-2	2nd needle start speed	2nd needle start speed	x100RPM	1	2~30	7	Input
U5-3	3rd pin start speed	3rd pin start speed	x100RPM	1	2~30	10	Input
U5-4	4th pin start speed	4th pin start speed	x100RPM	1	2~30	15	Input
U5-5	5th pin start speed	5th pin start speed	x100RPM	1	2~30	20	Input
U5-6	Rewind needle speed	Rewind needle speed	x100RPM	1	2~30	15	Input
U5-7	Whether to start the needle slowly	Whether to start the needle slowly			0:OFF: No 0:OFF: Yes	1	Select
U5-10	5 stitch speed before the end of sewing	5 stitch speed before the end of sewing	x100RPM	1	4~27	27	Input
U5-11	4 stitch speed before sewing end	4 stitch speed before sewing end	x100RPM	1	4~27	27	Input
U5-12	3 stitch speeds before the end of sewing	3 stitch speeds before the end of sewing	x100RPM	1	4~27	12	Input
U5-13	2 stitch speed before sewing end	2 stitch speed before sewing end	x100RPM	1	4~27	4	Input
U5-14	Whether to stop slowly	Whether to stop slowly			0:OFF: No 0:OFF: Yes	1	Select

Winding Settings

Code	Description	Details	Unit	Step	Range	Default	Type
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U6-1	Winder stop mode setting	Winder stop mode setting			0:0: Activate the button or lift the pedal 1:1: Activate button or pedal again 2:2: Timing	1	Select
U6-2	Timing stop winding time setting	Timing stop winding time setting	s	1	2~498	30	Input
U6-3	Winding speed setting	Winding speed setting	x100RPM	1	2~27	13	Input

Disconnection Detection

Code	Description	Details	Unit	Step	Range	Default	Type
U7-1	Automatic disconnection detection	Automatic disconnection detection			0:OFF: No 0:OFF: Yes	0	Select
U7-2	Break detection and automatic thread trimming	Break detection and automatic thread trimming			0:ON:No 1:OFF:Yes	0	Select
U7-3	Ignore the number of stitches when sewing	Ignore the number of stitches when sewing		1	1~255	8	Input
U7-4	Detecting the number of valid pins when disconnected	Detecting the number of valid pins when disconnected		1	1~255	3	Input

Thread Trimming Settings

Code	Description	Details	Unit	Step	Range	Default	Type
U8-1	Thread trimming mode	Thread trimming mode			0:0: close 1:1: Electromagnet 2:2: Air valve 3:3: Motor	0	Select
U8-2	Thread trimming Main Motor speed	Thread trimming Main Motor speed	x10RPM	1	10~40	25	Input
U8-4	Whether to force thread trimming after each section is sewn	Whether to force thread trimming after each section is sewn			0:OFF: No 0:OFF: Yes	1	Select

U8-5	dialer type selection	dialer type selection			0:0: close 1:1: Electromagnet 2:2: Air valve 3:3: Motor	0	Select
U8-6	Timing selection	Timing selection			0:0: dial in advance 1:1: Main Motor parking dial 2:2: After the presser foot is raised, the auxiliary presser foot is pulled down 3:3: Presser foot and auxiliary presser foot are raised after dialing 4:4: Set the thread before sewing	1	Select
U8-7	Advance dial angle	It is only used when the dial timing is 0	°	1	0~359	40	Input
U8-8	Dial Line Duration	Dial Line Duration	ms	2	0~998	30	Input
U8-9	Dial delay to lift presser foot	Dial delay to lift presser foot	ms	1	0~255	0	Input
U8-10	loose wire angle	loose wire angle	°	1	0~359	300	Input
U8-11	Is the buckle open?	Is the buckle open?			0:OFF: No 0:OFF: Yes	0	Select
U8-12	Thread angle when trimming	Thread angle when trimming	°	1	0~359	250	Input
U8-13	The starting angle of the thread clamp when cutting the thread	The starting angle of the thread clamp when cutting the	°	1	0~359	350	Input

		thread					
U8-14	End clip angle when trimming	End clip angle when trimming	°	1	0~359	50	Input
U8-15	Main Motor stop needle and retract	Main Motor stop needle and retract	°	1	0~160	0	Input
U8-16	Automatically add trimming when making patterns	Automatically add trimming when making patterns			0: OFF: Off 1: ON: Open	1	Select

Pause Settings

Code	Description	Details	Unit	Step	Range	Default	Type
U9-1	Needle position when paused	Needle position when paused			0:0: Needle lower positioning 1:1: Needle upper positioning	1	Select
U9-2	Platen Raise During Pause	Platen Raise During Pause			0:0: frame pressing 1:1: frame lifting	0	Select
U9-3	Automatic thread trimming when paused	Automatic thread trimming when paused			0:OFF: No 0:OFF: Yes	0	Select

Laser Cutting & Markers

Code	Description	Details	Unit	Step	Range	Default	Type
U10-1	Laser Cut Switch	Laser Cut Switch			0:OFF: Off 1:ON: Open	0	Select
U10-4	Laser cutting speed	Laser cutting speed	mm/min	1	1000~60000	1000	Input
U10-5	Laser suction switch	Laser suction switch			0:OFF: Off 1:ON: Open	0	Select
U10-6	Laser suction opening delay	Laser suction opening delay		1	0~65535	100	Input
U10-7	Laser suction off delay	Laser suction off delay		1	0~65535	100	Input
U10-8	Delay before laser start	Delay before laser start		1	0~65535	100	Input
U10-9	Delay after the laser head descends	Delay after the laser head descends		1	0~65535	100	Input
U10-10	Delay after the laser	Delay after the		1	0~65535	100	Input

	head is raised	laser head is raised					
U10-11	Marker X Offset	Marker X Offset	x0.1mm	1	-5000~5000	0	Input
U10-12	Marker Y offset	Marker Y offset	x0.1mm	1	-2000~2000	0	Input
U10-13	marker pen speed	marker pen speed	mm/min	1	1000~60000	100 0	Input
U10-14	Punching X offset	Punching X offset	x0.1mm	1	-5000~5000	0	Input
U10-15	Punching Y offset	Punching Y offset	x0.1mm	1	-2000~2000	0	Input

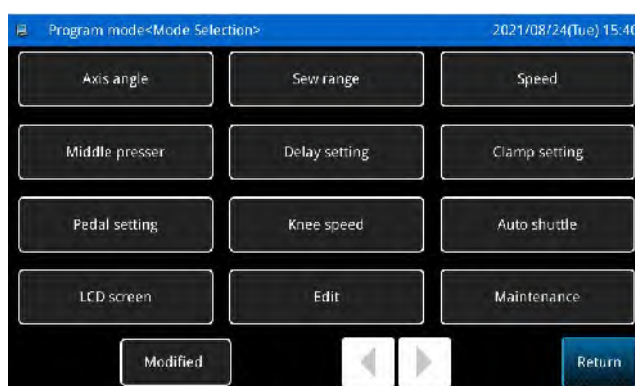
Other Settings

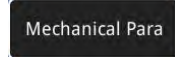
Code	Description	Details	Unit	Step	Range	Default	Type
U11-1	Needle cooling interval	0: Do not turn on needle cooling >0: Cooling interval time	s	1	0~255	0	Input
U11-2	Needle cooling duration	0: Do not turn on needle cooling >0: Cooling duration	s	1	0~255	0	Input
U11-3	Air pressure detection switch	Whether the air pressure detection is turned on			0:OFF: No 0:OFF: Yes	0	Select
U11-4	Combination pattern continuous stitch	Combination pattern continuous stitch			0:OFF: No 0:OFF: Yes	0	Select
U11-5	Cycle sewing work mode	Cycle sewing work mode			0:HP: Origin point 1:SP:starting point	1	Select
U11-6	Cycle seam interval time	Cycle seam interval time	x100ms	1	0~255	10	Input
U11-7	Template Recognition Settings	Template Recognition Settings			0:0: close 1:1: Barcode Scanning Device 2:2:RFID, pattern number 3:3: RFID, pattern name	0	Select
U11-8	Activate pre-work sport mode	Activate pre-work sport			0:0: XY Simultaneous	1	Select

		mode			1:1:X priority 2:2:Y priority		
U11-9	Air shift mode during work	Air shift mode during work			0:0:XY Simultaneous 1:1:X priority 2:2:Y priority	1	Select
U11-10	Did the Middle presser foot drop during trial sewing?	Did the Middle presser foot drop during trial sewing?			0:OFF: No 0:OFF: Yes	0	Select
U11-11	The file is valid when the electronic tag leaves	The file is valid when the electronic tag leaves			0:OFF: No 0:OFF: Yes	0	Select
U11-12	Frame moving direction setting	Frame moving direction setting			0:0: same direction 1:1: Reverse direction	1	Select

3.7. Mechanical Parameters (K Parameters)

3.7.1. Mechanical Parameter Setting



Press the menu button  on the main interface P1 (or P2) interface to open the multi-category directory mode, and then press the mechanical parameter button  to enter the user parameter mode selection interface.

There are 12 parameter modes in total. Click one of the modes to enter the parameter interface in this mode.

Refer to 3.6 User Parameters (U Parameters) for the operation method of parameters.

3.7.2 Mechanical Parameter Table

Axis angle

Code	Description	Details	Unit	Step	Range	Default	Type
K1-1	X feeding start angle	X feeding start angle	°	1	0~359	0	Input
K1-2	X feeding range	X feeding range	°	1	0~359	0	Input
K1-3	Y feeding start angle	Y feeding start angle	°	1	0~359	0	Input
K1-4	X feeding range	X feeding range	°	1	0~359	0	Input
K1-5	X feeding start angle fine adjustment	X feeding start angle fine adjustment	°	1	-100~100	0	Input
K1-6	X feeding range fine-tuning	X feeding range fine-tuning	°	1	-100~100	0	Input
K1-7	Y feed start angle fine-tuning	Y feed start angle fine-tuning	°	1	-100~100	0	Input
K1-8	Y feeding range fine-tuning	Y feeding range fine-tuning	°	1	-100~100	0	Input
K1-9	Trimming start angle	Trimming start angle	°	1	0~359	300	Input
K1-10	Trimming end angle	Trimming end angle	°	1	0~359	47	Input
K1-12	Positioning on the needle	Positioning on the needle	°	1	0~359	53	Input
K1-13	Positioning under the needle	Positioning under the needle	°	1	0~359	180	Input
K1-14	Needle top dead center	Needle top dead center	°	1	0~359	10	Input

Scope limit

Code	Description	Details	Unit	Step	Range	Default	Type
K2-1	Scope protection	Scope protection			0: off: off 1: on: open	1	Select
K2-2	Set the effective range in the left direction of x	Set the effective range in the left direction of x	Mm	1	0~5000	300	Input

K2-3	Set the effective range in the right direction of x	Set the effective range in the right direction of x	Mm	1	0~5000	300	Input
K2-4	Set the effective range in the upper y direction	Set the effective range in the upper y direction	Mm	1	0~5000	200	Input
K2-5	Set the effective range in the lower y direction	Set the effective range in the lower y direction	Mm	1	0~5000	200	Input

Speed

Code	Description	Details	Unit	Step	Range	Default	Type
K3-1	Main motor maximum speed	Main motor maximum speed	X100rpm	1	2~35	25	Input
K3-2	Press frame idling speed	Press frame idling speed	Mm/min	1	100~60000	20000	Input
K3-3	Press frame inching speed	Press frame inching speed	Mm/min	1	100~20000	20000	Input
K3-4	Trial sewing speed	Trial sewing speed	Mm/min	1	100~60000	20000	Input
K3-5	High speed magnification	High speed magnification	%	1	1~100	100	Input
K3-6	Medium and high speed magnification	Medium and high speed magnification	%	1	1~100	100	Input
K3-7	Medium and low speed magnification	Medium and low speed magnification	%	1	1~100	100	Input
K3-8	Low speed magnification	Low speed magnification	%	1	1~100	100	Input
K3-9	Sewing speed magnification	Sewing speed magnification	%	5	70~100	100	Input

Middle presser foot

Code	Description	Details	Unit	Step	Range	Default	Type
K4-1	Middle presser foot type	Middle presser foot type			0:0: pneumatic control	0	Select

					1:1: motor control, mechanical follow-up 2:2: electromagnet control 3:3: motor control, motor follow-up		
K4-2	Lift start angle	Lift start angle		1	0~359	230	Input
K4-3	Sustained angle of lift	Sustained angle of lift		1	0~250	0	Input
K4-4	Drop start angle	Drop start angle		1	0~359	40	Input
K4-5	Descent angle	Descent angle		1	0~250	0	Input
K4-6	presser foot follow-up height	presser foot follow-up height	X0.1mm	1	0~80	30	Input
K4-7	Middle presser foot stroke setting	Middle presser foot upper and lower value settings	X0.1mm	2	0~220	150	Input

Delay settings

Code	Description	Details	Unit	Step	Range	Default	Type
K5-1	Presser foot drop delay	Presser foot drop delay	Ms	1	0~255	50	Input
K5-2	Presser foot lift delay	Presser foot lift delay	Ms	1	0~255	50	Input
K5-3	Auxiliary presser foot descent delay	Auxiliary presser foot descent delay	Ms	1	0~255	50	Input
K5-4	Auxiliary presser foot lift delay	Auxiliary presser foot lift delay	Ms	1	0~255	50	Input
K5-5	Platen operation delay	Platen operation delay	Ms	1	0~255	50	Input
K5-6	Sewing delay start	0: do not enable delay start >0: delay start time	S	1	0~255	0	Input

Grip settings

Code	Description	Details	Unit	Step	Range	Default	Type
K6-1	Wire grip type	Type of thread catcher			0:0: mechanical 1:1: electronics 2:2: motor	0	Select

Pedal settings

Code	Description	Details	Unit	Step	Range	Default	Type
K7-1	Pedal type	Pedal type			0:0: digital double pedal 1:1: digital three-pedal 2:2: analog pedal	0	Select
K7-2	Foot pedal operation	Foot pedal operation			0:0: control the lift/fall of the large pressure plate 1:1: interval control large platen and auxiliary platen lift/fall 2:2: interval control left and right platens 3:3: triple pedal	0	Select

Knee point deceleration

Code	Description	Details	Unit	Step	Range	Default	Type
K8-1	Knee point reduction switch	Whether to enable inflection point			0:off: no 0:off: yes	0	Select

		deceleration					
K8-2	Inflection point speed	Inflection point speed	X100rpm	1	2~30	16	Input
K8-3	1st step speed after inflection point	1st step speed after inflection point	X100rpm	1	2~30	17	Input
K8-4	2nd step speed after inflection point	2nd step speed after inflection point	X100rpm	1	2~30	18	Input
K8-5	3rd step speed after inflection point	3rd step speed after inflection point	X100rpm	1	2~30	20	Input
K8-6	4th step speed after inflection point	4th step speed after inflection point	X100rpm	1	2~30	22	Input
K8-7	5th step speed after inflection point	5th step speed after inflection point	X100rpm	1	2~30	25	Input

Automatic shuttle change

Code	Description	Details	Unit	Step	Range	Default	Type
K9-1	Automatic shuttle switch	Automatic shuttle switch			0: off: off 1:on: open	0	Select
K9-2	Shuttle mode	Shuttle mode			0:0: manual shuttle change after bottom thread alarm 1:1: automatic shuttle change when the bottom thread alarms	1	Select
K9-3	Start mode after shuttle change	Start mode after shuttle change			0:0: manual start 1:1: automatic start	1	Select
K9-4	Empty bobbin handling	Empty bobbin			0:0: put	1	Select

		handling			back the shuttle 1:1: put in storage box		
K9-5	Shuttle arm parking position	Shuttle arm parking position			0:0: shuttle side 1:1: nose side	1	Select
K9-6	Change the shuttle arm to the fine adjustment of the machine head position	Change the shuttle arm to the fine adjustment of the machine head position		1	-100~100	0	Input
K9-7	Change the shuttle arm to the shuttle dial position fine adjustment	Change the shuttle arm to the shuttle dial position fine adjustment		1	-100~100	0	Input
K9-8	Shuttle motor origin offset	Shuttle motor origin offset		1	-100~100	0	Input

Lcd screen

Code	Description	Details	Unit	Step	Range	Default	Type
K10-1	Language selection	Language selection			0:ch: chinese 1:en: english	0	Select
K10-2	Whether to enter language selection when booting	Whether to enter language selection when booting			0:off: no 0:off: yes	0	Select
K10-3	Voice settings	Voice function settings			0:off: no 0:off: yes	1	Select
K10-4	Button voice volume	Button voice volume		1	0~31	25	Input
K10-6	The prompt information is displayed after threading	The prompt information is displayed after threading			0:off: no 0:off: yes	1	Select
K10-7	Buzzer sound setting	Buzzer sound setting			0:off:no beep 1:on: operation panel	2	Select

					sound 2: all: operation panel + alarm sound		
K10-11	Main interface pattern display function code	Main interface pattern display function code			0:yes:displ ay 1:no:do not display	0	Select
K10-12	Communication speed increase	Communicati on speed increase			0:off: no 0:off: yes	1	Select
K10-13	Menu item function encryption	Menu item function encryption			0:off: no 0:off: yes	0	Select

Pattern settings

Code	Description	Details	Unit	Step	Range	Default	Type
K11-1	Modify Datum settings at the starting point	Modify the Datum settings at the starting point			0:0: starting point 1:1: secondary origin	0	Select
K11-2	Whether to automatically add a secondary origin after the first empty delivery	Whether to automatically add a secondary origin after the first empty delivery			0:0: close 1:1: open (switch sewing pattern) 2:2: open (continue to send and print version)	0	Select
K11-3	Needle restoration after patterning	Needle restoration after patterning			0:off: no 0:off: yes	0	Select
K11-4	Restore the style of sewing after printing and empty delivery	Set the style of sewing to restore after blanking			0:0: keep 1:1: straight	0	Select
K11-5	Algorithm for backstitching under multiple seams	Algorithm for backstitching under multiple			0:0: generate by segment	0	Select

		seams			1:1: generated by head and tail		
K11-6	Whether the graphics center keeps the initial empty feed	Graphic center setting when the pattern is zoomed and rotated			0:0: reserved 1:1: removal	1	Select
K11-7	Whether the origin of the rotation function rotates next time	Whether the origin of the rotation function rotates next time			0:0: no 1:1: yes	0	Select
K11-8	Whether to increase the inflection point deceleration after printing	Whether to increase the inflection point deceleration after printing			0:off: no 0:off: yes	0	Select
K11-9	Air feed stitch setting	Air feed stitch setting	X0.1mm	1	10~120	120	Input
K11-10	Pattern conversion selection method	Modified position selection method for multiple seams, offset seams, zigzag seams, etc.			0:0: stitch 1:1: elements	0	Select
K11-11	Whether to display the needle drop point	Whether to display the needle drop point			0:0: no 1:1: yes	1	Select
K11-12	Scaling unit	Scaling unit			0:%: % 1:size: size	0	Select
K11-13	Multi-stitch zoom method	Multi-stitch zoom method			0:0: spacing variable 1:1: spacing unchanged	1	Select
K11-14	Size calculation method under zoom function	Size calculation method under			0:0: start from the origin	0	Select

		zoom function			1:1: from the starting point		
K11-15	Return method after modification	Return mode after modification (point and function code)			0:0: function selection 1:1: continue to modify	0	Select
K11-16	Multi-stitch, offset seam, segment insertion modification method	Multi seam, offset seam, segment insertion modification method (transformation affects the position of the following features)			0:0: relative modification 1:1: absolute modification	0	Select
K11-17	Parallel curve algorithm	Parallel curve algorithm			0:a1:algorithm 1 1:a2:algorithm 2 2:a3:algorithm 3	2	Select
K11-18	Fast movement	Fast movement			0:0: linear movement 1:1: follow the stitch movement	0	Select
K11-19	Vector graphics conversion stitch setting	Vector graphics conversion stitch setting	X0.1mm	1	10~127	30	Input
K11-20	Form corner angle criteria	Form corner angle standard: 0: no corner, 180: full corner	°	1	0~180	90	Input
K11-21	Zoom method	Enlargement method of pattern making			0:0: Area 1:1: length and width	1	Select
K11-22	Display shape point	Display shape			0:off: no	0	Select

	range	point range			0:off: yes		
K11-23	Curve punching style	Curve punching style			0:s1:style1 1:s2:style 2	0	Select
K11-24	Shape outline display under punching	Shape outline display under punching			0:off: no 0:off: yes	1	Select
K11-25	Small stitch shape fusion	For straight lines only, shape points within 1mm distance will be merged with the previous element			0:off: no 0:off: yes	0	Select
K11-26	Automatically enlarge according to the size of the pattern outline	Automatically enlarge according to the size of the pattern outline during graphic modification			0:off: no 0:off: yes	1	Select
K11-27	Point move selection method	Point move selection method			0:0: single selection (absolute and relative modification) 1:1: multiple choice	0	Select
K11-28	Point move and segment move change tracks	Point move and segment move change tracks			0:0: no 1:1: yes	1	Select
K11-30	Display coordinate system limits	Display coordinate system limits			0:0: no 1:1: yes	1	Select

Maintenance

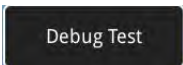
Code	Description	Details	Unit	Step	Range	Default	Type
K12-1	Replacement needle remaining value	Replace the needle remaining value	X1000 pins	1	0~9999	0	Input

K12-2	Replacing the needle setting	Replace the needle setting	X1000 pins	1	0~9999	0	Input
K12-3	Cleaning time remaining value	Cleaning time remaining value	Hour	1	0~9999	0	Input
K12-4	Cleaning time set value	Cleaning time set value	Hour	1	0~9999	0	Input
K12-5	Oil change remaining value	Oil change remaining value	Hour	1	0~9999	0	Input
K12-6	Oil change settings	Oil change settings	Hour	1	0~9999	0	Input
K12-9	Bottom line counting method	Bottom line counting method: Segment calculation: suitable for multiple sewing segment patterns Corner calculation: only applicable to one sewing section + 90 degree corner pattern			0:0: calculated by segment 1:1: corner calculation	0	Select
K12-14	Less than 1500 rpm main motor laps	Less than 1500 rpm main motor laps	Lap	1	0~60000	0	Input
K12-15	Less than 2000 rpm main motor laps	Less than 2000 rpm main motor laps	Lap	1	0~60000	0	Input
K12-16	Less than 2300 rpm main motor laps	Less than 2300 rpm main motor laps	Lap	1	0~60000	0	Input
K12-17	Less than 2600 rpm main motor laps	Less than 2600 rpm main motor laps	Lap	1	0~60000	0	Input

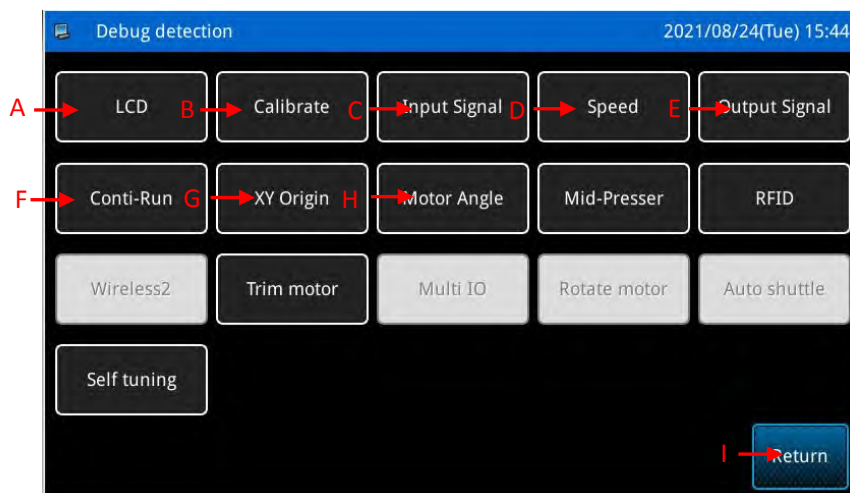
K12-18	Less than 3000 rpm main motor laps	Less than 3000 rpm main motor laps	Lap	1	0~60000	0	Input
K12-19	Main motor oil supply laps	Main motor oil supply laps	Lap	1	100~60000	2000	Input
K12-20	Fuel supply duration	Fuel supply duration	Ms	1	0~9999	250	Input
K12-21	Insufficient oil detection enable	Insufficient oil detection enable			0:0: no 1:1: yes	0	Select

3.8 Debug Detection

3.8.1 Enter Debug Detection Mode

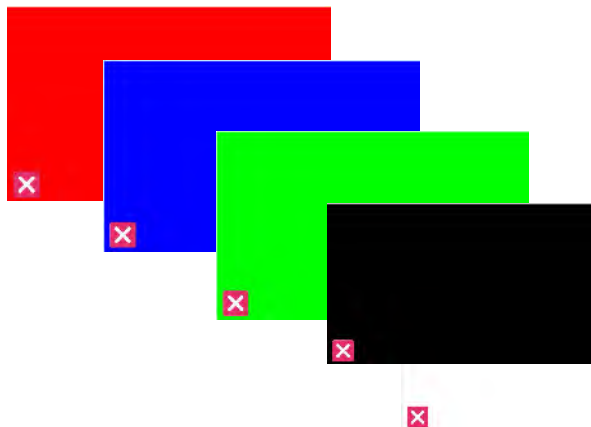
Press the menu button  on the main interface P1 (or P2) interface to open the multi-category directory mode, and then press the debug detection button  to enter the debug detection mode interface.

Note: Middle presser foot detection, RFID, thread trimming detection can also be turned on according to the parameter settings.



Items	Functions	Content
A	LCD detection	Used to detect liquid crystal displays.
B	touch screen calibration	Used to calibrate the touch screen.
C	Input signal detection	Used to detect various types of switches, sensors and other input signals.
D	Speed detection	Used to detect the speed of the Main Motor.
E	output signal detection	Used to detect various output signals such as presser foot and thread trimmer.
F	continuous operation	Used to set the parameters of continuous operation and enter the aging state.
G	XY origin	Used to detect the origin of the X-axis and Y-axis motors.
H	Spindle calibration	Used to adjust the installation angle of the Main Motor.
I	Return	Exit the detection mode and return to the main interface.

3.8.2 LCD Detection

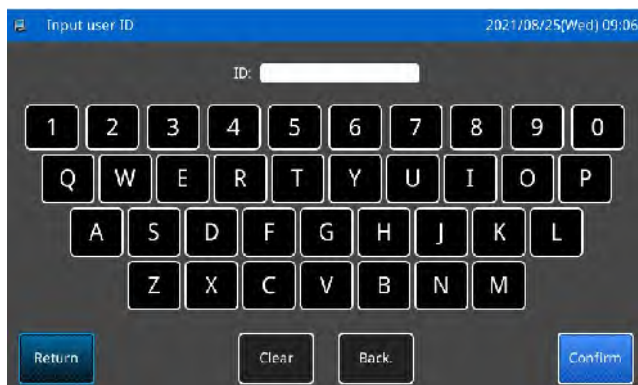


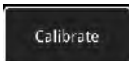
Press the LCD detection button  in the debug detection mode interface to enter the LCD detection function, and the LCD detection is now in automatic mode.

Detection status: After entering the LCD screen detection function, the LCD screen will automatically switch in turn according to the colors of white, black, red, green, and blue. (Used to judge whether the liquid crystal is discolored) After the detection is correct,

press the exit button  to exit the detection mode.

3.8.3 Touch Screen Calibration



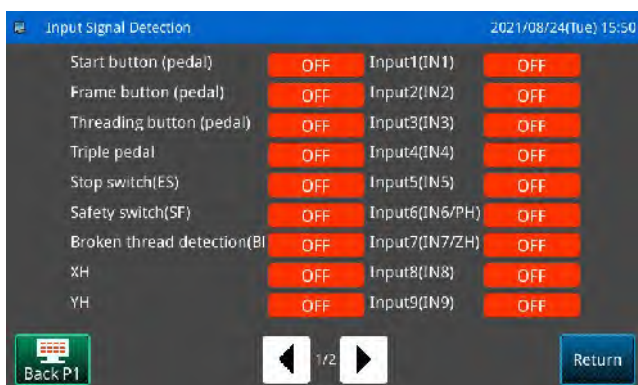
Press the touch screen calibration button , in the debugging and testing mode interface, it will ask to enter the manufacturer ID, after the input is correct, you can enter the touch screen calibration function.



Need to carry out 5-point correction, it is best to use tools such as a stylus to click on the crosshairs in the screen, after the correction will display a prompt to show whether the operation is successful or not.

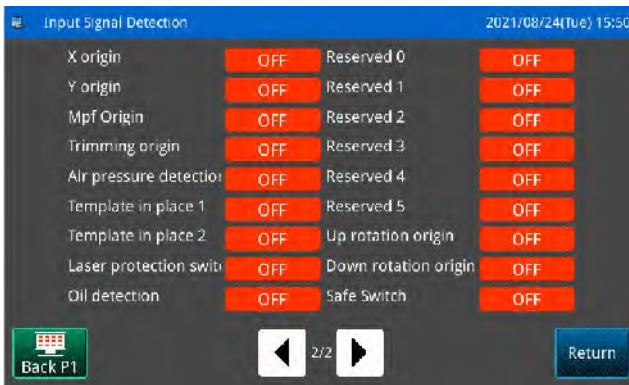
[Note] During the calibration process, please make sure to follow the position indicated by the cross cursor, otherwise the touch screen will not be able to be used normally after calibration.

3.8.4 Input Signal Detection

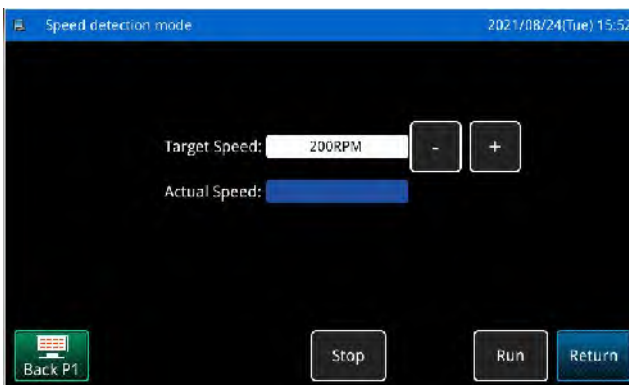


Press the input signal button  in the debug detection mode interface to enter the input signal detection interface.

See 2.2.3 Input Signal for details.



3.8.5 Speed Detection



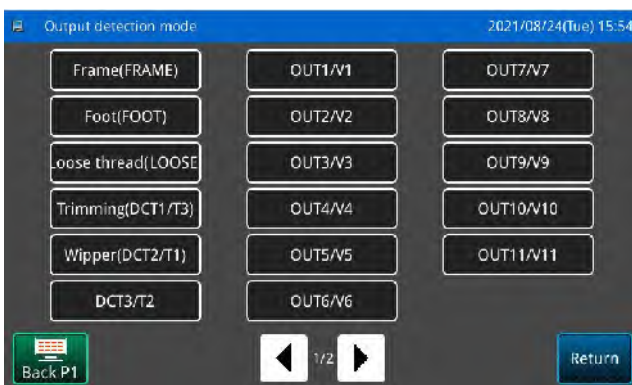
Press the speed detection button  in the debug detection mode interface to enter the Main Motor speed detection function.

Set the target speed of the Main Motor through  and  After pressing the run button , the Main Motor will rotate at the set speed. At this time, the actual measured speed will be displayed in the actual speed input field.

Press the stop button  to stop the machine.

Press the exit button  to return to the previous screen.

3.8.6 Output Signal Detection

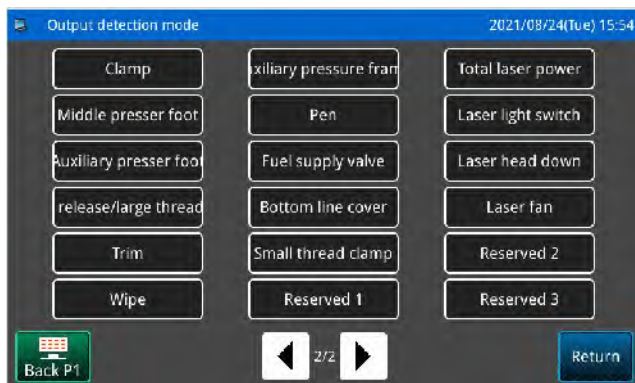


Press the output signal detection button  in the debug detection mode interface to enter the output signal detection function.

Press the output signal button under the interface to detect the output state of the output signal such as electromagnet.

Type of output signal:

- A. Press frame
- B. presser foot
- C. loose thread
- D. Thread trimming
- E. Dial the line
- F. Clamping



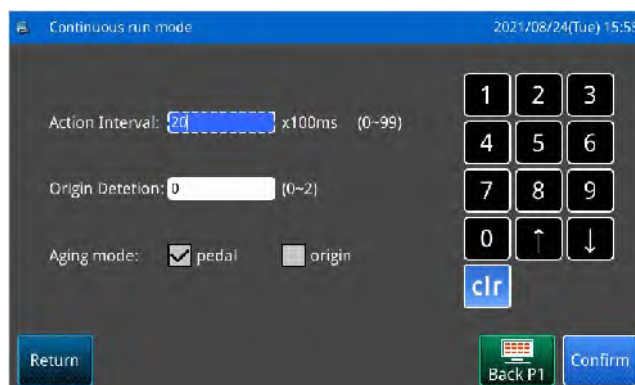
- G. OUT1-11
- H. presser foot
- I. Middle presser foot
- J. Auxiliary presser foot
- K. Thread releaser/large thread tensioner
- L. Auxiliary frame
- M. Brush
- N. Oil supply valve
- O. Lower thread cover
- P. Small thread clamp
- Q. Laser power supply
- R. Laser light switch
- S. Laser head down
- T. Laser Fan
- U. Reserve 1~3

Press the return button  to return to the previous screen.

Or enter the detection through the output signal detection shortcut button in the main interface P2, see 2.2 Main interface P2 function introduction for details.

[Note] After pressing the output signal button, the sewing machine will have actual action.

3.8.7 Continuous Operation



Press the continuous operation button  in the debug detection mode interface to enter the continuous operation setting function.

Click the action interval input field or the narrowing origin detection input field, input the value you want to set through the numeric keyboard, and press the Confirm button  to return to the previous screen.

Or through the pedal or the origin of two aging start methods. After setting, return to the main interface P1 (or P2), step on the foot pedal or press the back-to-origin button to make the sewing machine run, that is, enter the continuous operation mode.

3.8.8 XY Origin



Press the XY origin detection button

XY Origin

in the debug detection mode interface to enter the XY motor origin detection function.

In this interface, the XY motor is driven by the direction buttons to move, and the ON/OFF status of the sensor can be displayed in real time during the process.

ON: Sensor detected

OFF: No sensor detected

[Note] The sewing machine has actual action.

Origin compensation and laser compensation:

After moving to the origin position by the arrow

buttons, click Save  to complete the origin compensation setting.

After moving to the desired position with the arrow buttons, click Save  to save the current position as the compensation value.

Or click the digital box of origin compensation or laser compensation, and directly input the compensation value you want to set.

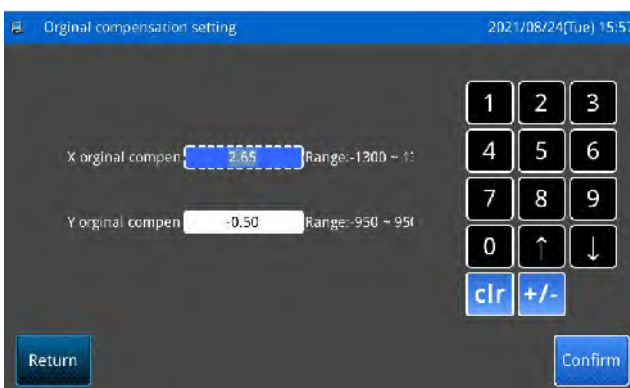
Lock axis: Control the current XY state whether the

axis is locked or released through  .

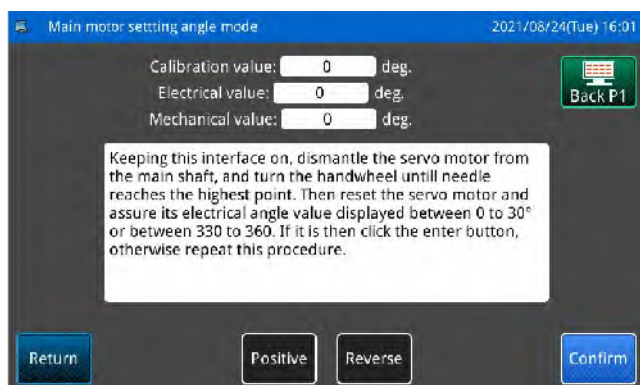
Laser: Press  to turn on the laser (automatically turn off after 100ms), which is convenient to adjust the laser compensation.

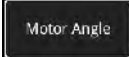
Reset: Press  to reset to the initial position.

Press the return button  to return to the previous screen.



3.8.9 Spindle calibration

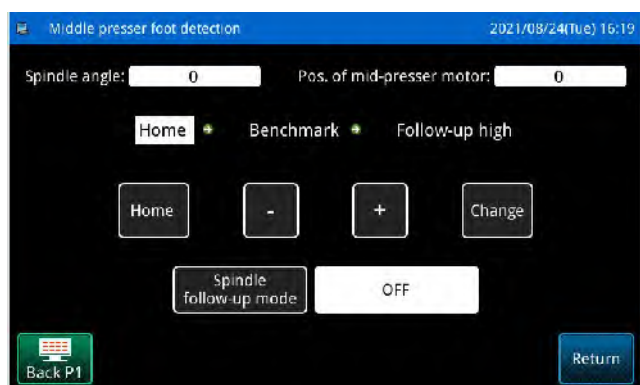


Press the Spindle calibration button  in the debugging and testing mode interface to enter the Main Motor installation angle setting interface.

Or press the spindle shortcut button  on the main interface P2 to enter the Main Motor installation angle setting interface.

For details, see 2.2.1 Main Motor Installation Angle Setting.

3.8.10 Middle presser foot detection



Press the middle presser foot detection button  in the debug detection mode interface to enter the middle presser foot detection setting interface.



Press the trim motor detection button  in the debug detection mode interface to enter the trim motor detection setting interface.

3.8.11 Trim motor detection

4. Attachment 1

4.1 List of Alarm Information

No.	Name	Sub-information Content
[E-002]	Emergency stop during operation	1. Check whether the emergency stop switch is pressed. 2. Check whether the emergency stop switch cable is in good contact. 3. If there is no problem with the switch cable, please replace the electric control

[E-003]	Nose tip over	1. Turn off the power and check whether the nose is turned over. 2. Check whether the nose flip switch position is normal and whether the cable is in good contact. 3. Turn off the parameters of the nose flip switch or change the electric control
[E-004]	AC input voltage is too low	Please turn off the power and check the system hardware. 1. Check whether the AC power supply voltage fluctuates abnormally, and see if there are high-power equipment steps around the equipment that start and stop frequently, preferably with a voltage regulator. 2. If the AC power supply is normal, it is likely to be a hardware circuit failure and return to the factory to overhaul the main control board hardware.
[E-005]	AC input voltage is too high	1. Check whether the AC power supply voltage fluctuates abnormally, and see if there are high-power equipment steps around the equipment that start and stop frequently, preferably with a voltage regulator. 2. If the AC power supply is normal, it is likely to be a hardware circuit failure and return to the factory to overhaul the main control board hardware.
[E-008]	Solenoid valve short circuit	1. Turn off the power supply and unplug the external electromagnet and solenoid valve cable. 2. If the error is no longer reported on, please check whether the external solenoid and solenoid valve are short-circuited. 3. If the error is still reported after removing the external fault, please replace the electric control
[E-010]	Fan failure	1. Check whether the internal fan of the electric control box is connected and running normally. 2. The error is still reported after troubleshooting the fan, please replace the electric control
[E-012]	The motor is running abnormally	If it is a closed loop motor, please check: 1. Check whether the motor encoder is damaged. 2. Check whether the encoder cable is damaged.
[E-013]	Spindle encoder fault or disconnected	Turn off the power and check whether the connection of the spindle encoder is normal
[E-014]	Main Motor origin detection error	1. Turn off the power supply to check whether the machine is stuck or not, to ensure that the machine can run smoothly without dead point. 2. Replace the Main Motor. 3. Replace the electric control box
[E-015]	Running out of sewing range	Check whether the pattern exceeds the range set by the panel

[E-017]	Thread interruption during sewing	1. Check whether the disconnected detection equipment is in the correct position. 2. Check the disconnection and check whether the cable is connected properly. 3. Appropriately increase the number of broken wire detection needles. 4. If it is still not solved, you can choose to turn off the disconnection detection function or replace the electronic control.
[E-018]	RFID module not connected	1. Check whether the RFID module is connected. 2. Check whether the RFID-related cables are normal. 3. If it is still not solved, you can choose to turn off the RFID function or replace the RFID module.
[E-019]	Emergency stop switch not in normal position	1. Check whether the emergency stop switch is pressed. 2. Check whether the emergency stop switch cable is in good contact. 3. If there is no problem with the switch cable, please replace the electric control. Note: if you press the emergency stop switch to return to normal, please change the type of emergency stop switch
[E-020]	Error reading system parameters	Please contact the manufacturer's technical service personnel
[E-021]	Write system parameter error	Please contact the manufacturer's technical service personnel
[E-025]	X origin detection abnormality	1. Turn off the power, first make sure that the machine can move the card-free point normally, the X sensor and baffle can work normally, and the X motor and inductor cable are connected. 2. Power on and enter the signal detection interface to detect the X inductor. If the signal does not jump, change the inductor and test the electronic control in turn. 3. If the signal can jump normally, enter the XY detection interface to detect the action of X motor. 4. If the X motor can work normally but turn in the opposite direction, please change the steering parameters of the X motor. 5. If the X motor does not work properly, replace the X motor and the electric control box in turn to test.
[E-026]	Y origin detection error	1. Turn off the power, first make sure that the machine can move the jam-free point normally, the Y inductor and baffle can work normally, and the Y motor and inductor cable are well connected. 2. Power on and enter the signal detection interface to detect the Y inductor. If there is no jump in the signal, change the inductor and test the electric control in turn. 3. If the signal can jump normally, enter the XY detection interface to detect the action of Y motor. 4. If the Y motor can work normally but turn in the opposite direction, please change the Y motor steering parameters. 5. If the Y motor does not work properly, replace the Y motor and

		the electric control box in turn to test.
[E-029]	Middle presser origin detection error	1. Turn off the power supply, first make sure that the machine can move the jam-free point normally, that the inductor and baffle of the Middle presser foot can work normally, and that the motor of the Middle presser foot and the inductor cable are well connected. 2. Power on and enter the signal detection interface to detect the Middle presser foot inductor. If the signal does not jump, change the inductor and test the electric control in turn. 3. If the signal can jump normally, enter the Middle presser foot detection interface to detect the action of the pressure foot motor. 4. If the Middle presser foot motor can work normally but turn in the opposite direction, please change the steering parameters of the Middle presser foot motor. 5. If the medium voltage foot motor does not work properly, replace the medium voltage foot motor and the electric control box in turn to test.
[E-030]	Communication error between master and stepper	1. Please check the program version is correct 2. Re-upgrade the main control and step program to check whether it is normal 3. Replace the electronic control Sub-number meaning: 0-DSP0 communication failure 1-DSP0 communication packet check error 2-DSP0 communication packet illegal command 10-DSP1 communication failure 11-DSP1 communication packet check error 12-DSP1 communication packet illegal command 20-DSP2 communication failure 21-DSP2 communication packet check error 22-DSP2 communication packet illegal command
[E-031]	Motor overcurrent	Please turn off the power. 1. Stepper motor damage, replace stepper motor. 2. Step drive board is damaged. Replace step drive board.

[E-032]	Motor origin detection error	1. Turn off the power, first make sure that the machine can move the jam-free point normally, the corresponding motor inductor and baffle can work normally, and the corresponding motor and inductor cable are well connected. 2. Power on and enter the signal detection interface to detect the corresponding motor inductor. If there is no jump in the signal, change the inductor and test the electric control in turn. 3. If the signal can jump normally, enter the corresponding motor detection interface to detect the corresponding motor action. 4. If the corresponding motor can work normally but turn in the opposite direction, please change the steering parameters of the corresponding motor. 5. If the corresponding motor does not work properly, change the corresponding motor and electric control box in turn to test.
[E-033]	The position of the laser head is abnormal	1. Turn off the power supply and check whether the mechanical position of the laser head is normal. 2. Check whether the laser protection switch is normal and the related cables are normal.
[E-034]	Main Motor overcurrent	1. Turn off the power supply and check whether the Main Motor is damaged. 2. If the motor is not damaged, replace the electric control box
[E-035]	Drive voltage is too low	1. Turn off the power and check whether each stepper motor is normal and whether the cables and plugs are correct. 2. Replace the electric control box
[E-036]	Drive voltage is too high	1. Turn off the power and check whether each stepper motor is normal and whether the cables and plugs are correct. 2. Replace the electric control box
[E-039]	Main Motor overspeed	Please turn off the power. 1. Turn off the power, check whether the Main Motor and spindle encoder are damaged, and whether the cable is connected properly. 2. If the motor is not damaged, replace the electric control box
[E-045]	The frame does not fall	Please drop the frame
[E-046]	Not at the origin, unable to operate	Please press the reset button.
[E-047]	Main Motor overload	1. Turn off the power supply, check whether the machine is stuck or not, and ensure that the machine can run smoothly without dead point. 2. Replace the Main Motor. 3. Replace the electric control box
[E-050]	X-axis motor overcurrent	1. Turn off the power supply and check whether the X-axis motor connector is firmly connected and whether the cable is intact and undamaged. 2. Replace the X-axis motor. 3. Replace the electric control box

[E-051]	Y-axis motor overcurrent	1. Turn off the power supply and check whether the Y-axis motor connector is firmly connected and whether the cable is intact and undamaged. 2. Replace the Y-axis motor. 3. Replace the electric control box
[E-054]	X motor running abnormally	1. Turn off the power supply and confirm that the mechanical X direction can move the card-free point normally. 2. Ensure that the X motor cable is connected correctly, firmly and without damage. 3. Replace the X motor. 4. Replace the electric control
[E-055]	The Y motor is running abnormally	1. Turn off the power supply and confirm that the machine can move the jam-free point in the Y direction. 2. Ensure that the Y motor cable is connected correctly, firmly and without damage. 3. Replace the Y motor. 4. Replace the electric control
[E-081]	Insufficient bottom line	After replacing the bottom line, press the Confirm button to restore
[E-082]	Not enough oil	The oil level of the mechanical oil tank is too low, please add oil
[E-083]	Pattern data error	
[E-085]	Trim motor origin detection error	1. Turn off the power, first of all, make sure that the machine can move the card-free point normally, the wire-cutting inductor and baffle can work normally, and the wire-cutting motor and inductor cable are well connected. 2. Power on and enter the signal detection interface to detect the trimming inductor. If there is no jump in the signal, change the inductor and test the electric control in turn. 3. If the signal can jump normally, enter the wire-cutting detection interface to detect the action of the wire-cutting motor. 4. If the wire-cutting motor can work normally but turn in the opposite direction, please change the steering parameters of the wire-cutting motor. 5. If the wire-cutting motor does not work properly, replace the wire-cutting motor and the electric control box in turn to test.
[E-088]	Bobbin detection abnormality	1. Please check that the shuttle disc is empty. If so, please replace the shuttle tray and press to confirm. 2. If there is a shuttle core in the shuttle tray, please check that the shuttle core sensor is normal after shutdown and restart.
[E-089]	The automatic shuttle changer is abnormal	
[E-090]	Automatic shuttle change in progress	
[E-091]	Template not recognized	Please reposition the template
[E-093]	Middle presser motor overcurrent	1. Turn off the power supply and check whether the connection of the motor joint of the Middle presser foot is firmly connected and the cable is intact and undamaged.

		2. Replace the medium voltage foot motor. 3. Replace the electric control
[E-094]	Trim motor detection overcurrent	Please turn off the power.
[E-095]	The middle presser motor is running abnormally	1. Turn off the power and make sure that the mechanical parts of the Middle presser foot can move smoothly without sticking points. 2. Ensure that the motor cable of the Middle presser foot is connected correctly and firmly without damage. 3. Replace the medium voltage foot motor. 4. Replace the electric control
[E-096]	The trim motor runs abnormally	1. Turn off the power and make sure that the wire-cutting mechanical parts can move smoothly without sticking points. 2. Ensure that the cable of the wire-cutting motor is connected correctly, firmly and without damage. 3. Replace the trim motor. 4. Replace the electric control
[E-097]	The control box does not match the operating head type	Please replace the panel
[E-102]	Insufficient air pressure	1. Check whether the air pressure is insufficient and whether the relevant cable plugs are correct. 2. Whether the alarm threshold setting of the barometer is incorrect. 3. If it is not solved, you can turn off the air pressure detection first.
[E-107]	Upper Main Motor overcurrent or blocked	
[E-108]	Lower Main Motor overcurrent or locked rotor	
[E-110]	Danger warning	Someone or its object is close to the rotating area of the rotating head, please stay away!
[E-112]	Needle lost or out of position during sewing	1. Please turn off and check whether the spindle encoder signal connection plug is correct, whether it is secure, and whether the connection cable is broken. 2. Please check whether the moving frame angle fine-tuning and moving box time fine-tuning are the default values in the transfer mode. 3. Please check the pattern for unrecognized function code information and continuous repetition of function code.
[E-113]	The origin of the upper rotation axis is abnormal (exceeds the limit number of steps)	1. Please turn off and check whether the connection plug of the upper rotation axis origin sensor is correct, whether it is reliable, and whether the connection line is broken. 2. Please check the upper rotation axis origin sensor for damage. 3. Please check whether the machinery related to the upper rotation shaft is loose, whether the rotation is smooth, and whether there is blockage.
[E-114]	The origin of the lower	1. Please turn off and check whether the connection plug of the

	rotation axis is abnormal (exceeds the limit number of steps)	lower rotation axis origin sensor is correct, whether it is reliable, and whether the connection line is broken. 2. Please check the lower rotation axis origin sensor for damage. 3. Please check whether the machinery related to the lower rotation shaft is loose, whether the rotation is smooth, and whether there is blocking.
[E-115]	Upper spindle servo drive failure	1. Please check the alarm code displayed by the spindle servo drive and check the alarm code instructions in the driver manual. 2. Please turn off and check whether the spindle servo drive control cable connection plug is correct, whether it is reliable, and whether the connection cable is broken. 3. Please check whether the mechanical structure of the upper spindle is loose, whether the rotation is smooth, and whether there is blocking. 4. Please check whether the needle and shuttle are positioned correctly after restarting.
[E-116]	Lower spindle servo drive failure	1. Please check the alarm code displayed by the spindle servo drive and check the alarm code instructions in the driver manual. 2. Please turn off and check whether the spindle servo drive control cable connection plug is correct, whether it is reliable, and whether the connection cable is broken. 3. Please check whether the mechanical structure of the spindle is loose, whether the rotation is smooth, and whether there is blocking. 4. Please check whether the needle and shuttle are positioned correctly after restarting.
[E-117]	Upper rotating shaft motor overcurrent	1. Please turn off and check whether the machinery related to the upper rotation shaft is loose, whether the rotation is smooth, and whether there is any blocking. 2. Please check whether the connection plug of the upper rotating shaft motor encoder is correct, whether it is secure, and whether the connection cable is broken. 3. Please check whether the connecting plug of the power cord of the upper rotating shaft motor is correct, whether it is secure, and whether the connecting cable is broken. 4. Please check whether the parameters of the upper rotating shaft motor are configured correctly.
[E-118]	Lower rotating shaft motor overcurrent	1. Please turn off and check whether the machinery related to the lower rotating shaft is loose, whether the rotation is smooth, and whether there is any blocking. 2. Please check whether the connection plug of the upper rotating shaft motor encoder is correct, whether it is secure, and whether the connection cable is broken. 3. Please check whether the connecting plug of the power cord of the upper rotating shaft motor is correct, whether it is secure, and whether the connecting cable is broken.

		4. Please check whether the parameters of the upper rotating shaft motor are configured correctly.
[E-119]	The upper rotating shaft motor is out of tolerance	1. Please turn off and check whether the machinery related to the upper rotation shaft is loose, whether the rotation is smooth, and whether there is any blocking. 2. Please check whether the connection plug of the upper rotating shaft motor encoder is correct, whether it is secure, and whether the connection cable is broken. 3. Please check whether the connecting plug of the power cord of the upper rotating shaft motor is correct, whether it is secure, and whether the connecting cable is broken. 4. Please check whether the parameters of the upper rotating shaft motor are configured correctly.
[E-120]	The lower rotating shaft motor is out of tolerance	1. Please turn off and check whether the machinery related to the lower rotating shaft is loose, whether the rotation is smooth, and whether there is any blocking. 2. Please check whether the connection plug of the lower rotary shaft motor encoder is correct, whether it is secure, and whether the connection cable is broken. 3. Please check whether the power cord connection plug of the lower rotating shaft motor is correct, whether it is secure, and whether the connection cable is broken. 4. Please check whether the parameters of the lower rotary shaft motor are configured correctly.
[E-121]	DSP3 first motor overcurrent	Turn off the computer, unplug the power cable, confirm the motor or board fault, contact professional maintenance personnel"
[E-122]	DSP4 first motor overcurrent	Turn off the computer, unplug the power cable, confirm the motor or board fault, contact professional maintenance personnel
[E-123]	DSP3 second motor overcurrent	Turn off the computer, unplug the power cable, confirm the motor or board fault, contact professional maintenance personnel
[E-124]	DSP4 second motor overcurrent	Turn off the computer, unplug the power cable, confirm the motor or board fault, contact professional maintenance personnel
[E-125]	DSP3 first motor out of tolerance	Turn off the machine and check whether the encoder plug is loose and whether there is a foreign body hindering the operation of the motor.
[E-126]	DSP4 first motor out of tolerance	Turn off the machine and check whether the encoder plug is loose and whether there is a foreign body hindering the operation of the motor.
[E-127]	DSP3 second motor out of tolerance	Turn off the machine and check whether the encoder plug is loose and whether there is a foreign body hindering the operation of the motor.
[E-128]	DSP4 second motor out of tolerance	Turn off the machine and check whether the encoder plug is loose and whether there is a foreign body hindering the operation of the motor.
[E-129]	Abnormal synchronization between	1. Please turn off to check whether the machinery related to the rotating shaft is loose and whether the rotation is smooth.

	the upper and lower rotation axes	2. Please check whether the rotary shaft motor encoder cable and power cord are normal and damaged. 3. Please check whether the parameters of the rotary shaft motor are configured correctly.
[E-130]	The upper Main Motor is out of tolerance	1. Please turn off and check whether the machinery related to the upper spindle is loose, whether the rotation is smooth, and whether there is blocking. 2. Please check whether the connection plug of the upper Main Motor encoder is correct, whether it is secure, and whether the connection cable is broken. 3. Please check whether the connection plug of the power cord of the upper Main Motor is correct, whether it is reliable, and whether the connection cable is broken. 4. Please check whether the parameters of the upper Main Motor are configured correctly.
[E-131]	Excess error of lower Main Motor.	1. Please turn off and check whether the spindle related machinery is loose, whether the rotation is smooth, and whether there is blocking. 2. Please check whether the connection plug of the Main Motor encoder is correct, whether it is secure, and whether the connection cable is broken. 3. Please check whether the Main Motor power cord connection plug is correct, whether it is reliable, and whether the connection cable is damaged. 4. Please check whether the Main Motor parameters are configured correctly.
[E-132]	Synchronous anomaly of upper spindle and lower spindle.	1. Please turn off to check whether the spindle related machinery is loose and whether the rotation is smooth. 2. Please check whether the Main Motor encoder cable and power cord are normal and damaged. 3. Please check whether the parameters of the Main Motor are configured correctly.
[E-133]	Spindle parking timeout or parking position error.	1. Please turn off to check whether the spindle related machinery is loose and whether the rotation is smooth. 2. Please check whether the Main Motor encoder cable and power cord are normal and damaged. 3. Please check whether the Main Motor parameters are configured correctly.
[E-134]	Spindle locking timeout not completed.	1. Please turn off to check whether the spindle related machinery is loose and whether the rotation is smooth. 2. Please check whether the Main Motor encoder cable and power cord are normal and damaged. 3. Please check whether the Main Motor parameters are configured correctly.
[E-135]	Troubleshooting is under way.	After troubleshooting, confirm button to perform automatic shuttle change, cancel button to perform manual shuttle change.

[E-136]	The nose movements are abnormal!	Please check whether the nose lifting mechanism is normal and whether the electrical wiring is in good condition.
[E-137]	Automatic shuttle change module failed to connect.	1. Please check whether the power supply of the automatic shuttle changer module is normal. 2. Please turn off and check whether the relevant circuit is correct, whether it is reliable, and whether the connection line is broken. 3. Please check that the program version of the automatic shuttle changer module is normal.
[E-138]	Shuttle disc motor fault.	1. Please turn off and check whether the shuttle mechanism is smooth and whether there is any blocking. 2. Please check whether the shuttle motor plug is correct, whether it is reliable, and whether the connection cable is broken. 3. Please check whether the shuttle motor is damaged.
[E-139]	Abnormal detection of origin of shuttle disc motor	1. Please turn off and check whether the shuttle mechanism is smooth and whether there is any blocking. 2. Please check whether the shuttle motor plug is correct, whether it is reliable, and whether the connection cable is broken. 3. Please check whether the origin signal of the shuttle motor is normal.
[E-140]	Abnormal rotation of shuttle arm	1. Please turn off and check whether the telescopic mechanism of the shuttle arm is smooth and stuttered. 2. Please check whether the telescopic connection plug of the shuttle arm is correct, whether it is secure, and whether the connection cable is broken. 3. Please check that the relevant sensor is normal.
[E-141]	Abnormal expansion and contraction of shuttle arm	1. Please turn off and check whether the telescopic mechanism of the shuttle arm is smooth and stuttered. 2. Please check whether the telescopic connection plug of the shuttle arm is correct, whether it is secure, and whether the connection cable is broken. 3. Please check that the relevant sensor is normal.
[E-142]	Abnormality of the shuttle arm taking the hook bobbin	1. Please turn off and check whether the docking position of the shuttle arm and the shuttle wheel is the same. 2. Please check whether the shuttle core clamping mechanism is normal. 3. Please check that the shuttle core sensor is normal.
[E-143]	Abnormal start angle of spindle synchronous action	1. Restore the most recently modified parameters to ensure that the parameters change within the appropriate range. 2. Please contact the relevant after-sales service personnel for troubleshooting.
[E-144]	Abnormal position of spindle synchronous rotation axis	1. When sewing, the rotation axis can not complete the rotation normally, resulting in the deviation of the needle angle. 2. Restore the most recently modified parameters to ensure that the parameters change within the appropriate range. 3. Please contact the relevant after-sales service personnel for troubleshooting.

[E-145]	Abnormal position of presser foot (follow-up) during spindle synchronization	1. The Middle presser foot (follow-up) fails to complete the lifting or falling action normally, resulting in a height deviation. 2. Restore the most recently modified parameters to ensure that the parameters change within the appropriate range. 3. Please contact the relevant after-sales service personnel for troubleshooting.
[E-146]	The spindle synchronization X-axis position is abnormal	1. When sewing, the X axis fails to complete the action according to the pattern, resulting in the deviation of the frame in the X axis direction. 2. Restore the most recently modified parameters to ensure that the parameters change within the appropriate range. 3. Please contact the relevant after-sales service personnel for troubleshooting.
[E-147]	Spindle synchronization Y-axis position abnormal	1. When sewing, the Y axis fails to complete the action according to the pattern, resulting in the deviation of the frame in the Y axis direction. 2. Restore the most recently modified parameters to ensure that the parameters change within the appropriate range. 3. Please contact the relevant after-sales service personnel for troubleshooting.
[E-148]	Abnormal position of spindle synchronization frame	1. When sewing, the XY axis fails to complete the action according to the pattern, resulting in the deviation of the frame. 2. Restore the most recently modified parameters to ensure that the parameters change within the appropriate range. 3. Please contact the relevant after-sales service personnel for troubleshooting.
[E-149]	Pattern beyond sewing range	Please press the Confirm button to remove the failure. 1. Please modify the starting point. 2. Check whether the sewing range set by the operation head does not match the selected pattern.
[E-150]	Main Motor calibration angle value is abnormal	Please enter the Main Motor correction interface to reset the spindle installation angle
[E-151]	Laser offset beyond sewing range	Please adjust the offset parameters of laser or brush
[E-152]	Expansion module not connected	Shut down the system and check the connection and power supply between the expansion module and the system
[E-153]	Expansion module overcurrent error	Shut down the system, check whether there is a short circuit of the external valve, and remove the valve one by one
[E-254]	Undefined error	Communication got undefined error

4.2 List of Prompt Information

No.	Name	Sub-Information Content
M-001	Up counter reaches maximum value	Please press Confirm
M-002	The down counter reaches the maximum value	Please press Confirm
M-003	Not at the origin, unable to operate	Please go back to the origin
M-004	Pattern data does not exist	Please re-read or type out the input
M-005	The setting value is too large	Please enter a value within the range
M-006	The setting value is too small	Please enter a value within the range
M-007	Please press the home button	
M-008	Parameter out of range	If the parameters are out of range, the out-of-range parameters will be restored according to the default parameters after confirmation!
M-009	No pattern in memory	Please press the Confirm button to load the factory pattern
M-010	The number of patterns in memory is full	Please delete unused sewing data
M-011	Whether to delete pattern data in memory	Press the Confirm button to execute the delete operation, and press the Cancel button to exit the current operation
M-012	Overwrite pattern data in memory?	Press the Confirm button to execute the overwrite operation, and press the Cancel button to exit the current operation.
M-013	Pattern data cannot be deleted	The selected sewing data is in use!
M-014	Whether to format the memory	Press the Confirm button to execute the formatting operation, and press the Cancel button to exit the current operation. After formatting, all memory pattern data will be deleted!
M-015	Communication error	The communication between the operation head and the control box is abnormal!
M-016	Beyond the sewing range	Make sure the pattern data is within the sewing range!
M-017	The operating head does not match the control box type	Please check the model and software version
M-018	Incorrect pattern number entered	Please enter the correct pattern number
M-019	Exceed the maximum stitch length	None
M-020	Wrong password	Please enter again
M-021	Hardware clock failure	If the hardware clock is found to be faulty, please contact the manufacturer for maintenance!
M-022	The number of pins is out of range	
M-023	Needle pitch input value is too small	Please enter a value within the range
M-024	Needle pitch input value is too large	Please enter a value within the range
M-025	A second origin already exists	Only one second origin can be entered
M-026	Please press the reset button	
M-027	Whether to copy the specified pattern data	
M-028	Whether to copy all pattern data	Confirm button to execute the operation, cancel button to exit the operation

M-029	Factory reset?	Confirm button to execute the operation, cancel button to exit the operation
M-030	USB drive removed	The USB drive has been pulled out!
M-031	No pattern data found in the U disk	None
M-032	No alarm record	
M-033	Replace the needle	The needle replacement setting value has been reached, please replace the needle!
M-034	Change the oil	The oil change time set value has been reached, please change the oil!
M-035	Cleaning machine	The time set value for cleaning the machine has arrived, please clean the machine!
M-036	Different data formats	Please confirm the data format
M-037	Unable to generate curve	Please re-enter according to the precautions for curve input
M-038	The trimmer cannot be inserted at the current position	Please insert trimmer after sewing data
M-039	Cannot insert the same function code in the same position	
M-040	The current position cannot be inserted into the second origin	Please insert second origin after transfer
M-041	Entering points cannot generate a circle or arc	Please enter again
M-042	Unable to generate overlapping seam data	Please add overlapping seam after closing the figure
M-043	Unable to join trim motor after down pause	None
M-044	Unable to add next pause before line cutting	None
M-045	Incorrect location selected	None
M-046	Can't zoom	None
M-047	Incorrect pattern data	None
M-048	Generate arc data?	None
M-049	Generate circle data?	None
M-050	Generate curve data?	None
M-051	Generate polygon data?	None
M-052	The frame is not down	Please press the frame button
M-053	Incorrect user ID entered	Please enter again
M-054	Do not modify the system time	The installment password is set, and the system time cannot be modified
M-055	Failed to write password file	None
M-056	Failed to read password file	None
M-057	Password saved successfully	None
M-058	Failed to clear all passwords	Password file cannot be deleted
M-059	Failed to clear password	After the password is cleared, the file is written abnormally
M-060	Password file is maliciously deleted	The installment password set by the user has been maliciously

		deleted, please shut down
M-061	User ID file corrupted	
M-062	Enter the pattern name	
M-063	Input can not be empty	Please enter password
M-064	The current password does not match	Please re-enter your current password
M-065	The new password does not match	Please re-enter the new password and confirm again
M-066	Touch screen calibration is successful	The calibration is successful, please turn off the power and restart
M-067	Clear alarm history?	Sure?
M-068	Whether to delete the selected file	Sure?
M-069	Copy all graphics	Overwrite the original graphics?
M-70	Failed to copy file	Please check if the disk space is full!
M-71	Failed to copy file	Please check if the USB stick is unplugged!
M-72	Fail to open the file	Fail to open the file!
M-73	Format mismatch	Format mismatch, discard current read!
M-74	Please create directory and file	Please create a bakparam directory under the U disk, name the backup file bkparam, and copy it to the bakparam directory!
M-75	File read and write error	File read and write error!
M-76	Please select an entry	Please check the entry to read and write!
M-77	File does not exist	The file corresponding to the current entry does not exist!
M-78	Movement amount not entered	Please enter the amount of movement!
M-79	The installment password cannot be the same as the total password	Please re-enter your password
M-80	The pattern list (shortcut button) is empty	If the pattern list is empty, the system will automatically import the currently opened pattern into the list
M-81	Upgrade entry not selected	Please select items to upgrade, at least one item must be selected
M-82	Update successes	The upgrade is successful, please restart the machine
M-83	Whether to format the U disk	Press the Confirm button to execute the formatting operation, and press the Cancel button to exit the current operation. After formatting, all U disk files will be deleted!
M-84	Success	The current operation has been successfully performed!
M-85	Fail	The current operation failed!
M-86	Whether to overwrite the pattern with the same name in the U disk	Press the Confirm button to overwrite the file, and press the Cancel button to exit the current operation.
M-87	Touch screen calibration failed	Please recalibrate
M-88	This pattern cannot be converted	Please confirm the pattern file
M-89	Whether to reset all settings	Sure?
M-90	Whether to restore selected items	Sure?
M-91	No item selected	Please select one or more parameters
M-92	Parameter initialization	Clear all data in the storage area, please turn off the power and restore the position of the DIP switch
M-93	Cannot copy and overwrite the	The current pattern number exists in the copy queue, and the

	current pattern	current pattern cannot be overwritten
M-94	Need to convert pattern format	The selected pattern is not a standard file format, please use it after conversion
M-95	This operation cannot be performed for combined patterns	Please enter the combined pattern function, select to close the combined pattern, and then press the Confirm button to cancel
M-96	Whether to delete the original pattern	Whether to delete the original pattern after format conversion
M-97	Middle presser foot in lowered position	Please raise the Middle presser foot
M-98	Shut down, bye	None
M-99	Large stitch pattern file format	This pattern format is not supported by this system
M-100	Conversion pattern format error	Please confirm the pattern file
M-101	Converting pattern data is too long	
M-102	The converted pattern cannot be opened	Please confirm the pattern file
M-103	Conversion pattern precision error	
M-104	Recovery parameters succeeded	The parameters are restored successfully, please restart the machine
M-105	Save the software version successfully	The software version has been successfully saved to the root directory of the U disk
M-106	Parameter setting is successful	Need to restart the machine
M-107	There is no second origin	There is no second origin for the current pattern
M-108	Verification failed when upgrading the master program	
M-109	Threading...	
M-110	Whether to restore the saved custom parameters	Confirm button to execute the operation, cancel button to exit the operation
M-111	Parameter load failed	Please contact the manufacturer for maintenance!
M-112	Insufficient bottom line	Please replace the bottom thread, press the Confirm button and count again
M-113	Unable to generate multi-seam data	
M-114	Done with graphic duplication?	
M-115	Memory allocation error	
M-116	Continued use will convert to point stitching	
M-117	The panel does not match the master	There is an installment password in the current system, and you need to contact the manufacturer to unlock it!
M-118	There is a password in the current panel and needs to be synchronized	The panel has a password, but the master has no password!
M-119	The current master has a password and needs to be synchronized	The master has a password, but the panel has no password!
M-120	Motherboard ID does not exist	
M-121	The content of the pattern shortcut button is incorrect	

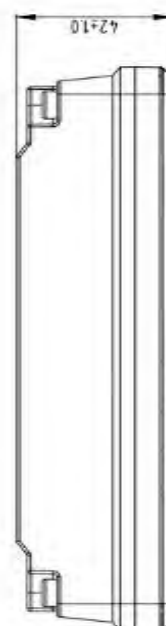
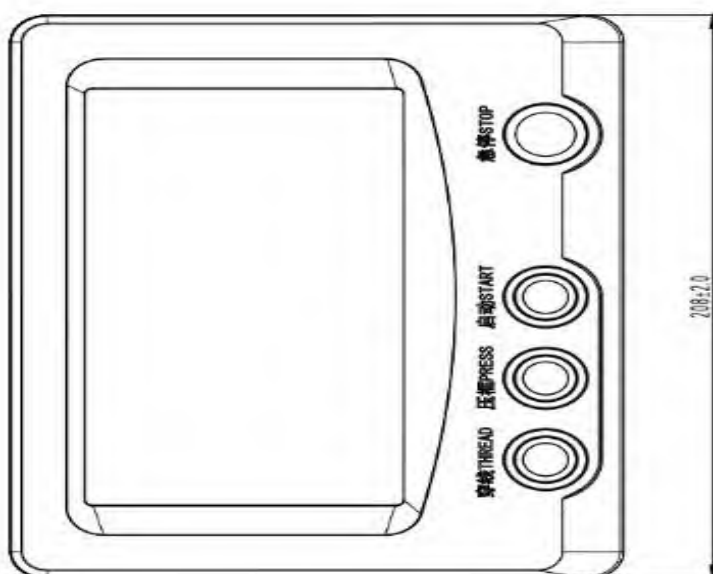
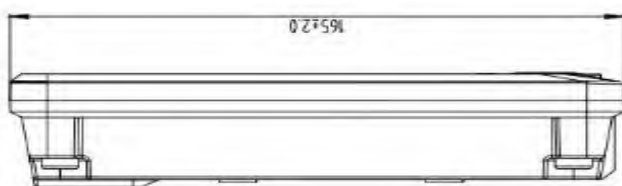
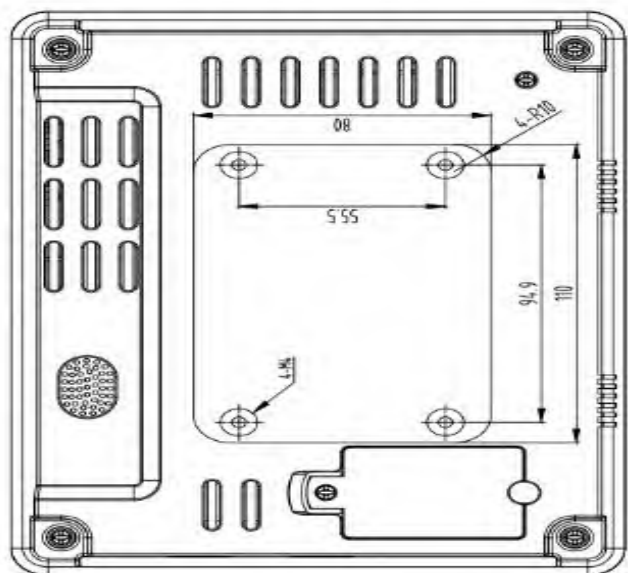
M-122	Number already taken	
M-123	Unable to generate stitches	
M-124	Internal data exception	
M-125	Arc exists	Ellipse will be converted to point seam
M-126	Clear production records?	Sure?
M-127	Check in successfully	
M-128	Failed to punch	
M-129	Condensation conversion succeeded	The condensed seam has become a point seam, and the condensed seam cannot be converted again. It is recommended to save the original pattern for the next modification.
M-130	Clear the switch record?	Sure?
M-131	No switch record	
M-132	Failed to upgrade driver	
M-133	Request failed	
M-134	Password information saved successfully	
M-135	Upgrade file does not exist	The directory does not exist or there are no files in the directory
M-136	Do Spindle Calibration?	Sure?
M-137	Invalid group number	
M-138	Deny current operation	
M-139	Receive parameter is empty	
M-140	Parameters have not changed	
M-141	QR code display failed	
M-142	Due to reading a new pattern, the current position needs to be corrected	Please press the confirm button
M-143	The number of condensation stitches exceeds the actual number of stitches	
M-144	Unable to generate condensation data	
M-145	Perform upper axis correction?	Sure?
M-146	Perform down axis correction?	Sure?
M-147	Can't enter point	Coincidence with the last input point position
M-148	Generate curve data?	
M-149	Password date change failed	The date of entry should be before the date of the next password attack
M-150	The start pin contains function code, please confirm whether to modify	The confirm button means to modify the function code, and the cancel button exits the selection again. If it is necessary to keep the function code, please refer to the code information on the right side of the interface to continue moving, so that the starting needle is the function code.
M-151	The panel is not encrypted, the	Please confirm whether to replace the new panel

	master is encrypted	
M-152	Panel encryption, master not encrypted	Determining button Sync Encryption Status
M-153	Remote staging settings already exist in the system	Confirm button to continue the operation, cancel button to exit the operation
M-154	Wireless module 1 connection failed	The system speed is reduced to the minimum, please contact the manufacturer
M-155	Do you want to update the pattern thumbnail now?	Thumbnails will also be generated after the pattern is used
M-156	The system has been set to offline mode	Check after turning on the networking function
M-157	Join failed	
M-158	Can't convert	
M-159	Whether to delete the selected shape point	
M-160	Whether to modify shape point attributes	
M-161	The pattern does not exist, is it downloaded from the server?	Sure?
M-162	The requested pattern is not in standard NSP format	
M-163	The request pattern does not exist on the server	
M-164	The server updates the software, whether to perform the upgrade operation	Upgrade now?
M-165	Action not completed timeout	
M-166	Location query timed out	
M-167	Expansion affects shrinkage data	If there is a condensation seam in the sewing data, the expansion will automatically add a condensation seam, which will destroy the previous condensation seam data. Please pay attention to saving the pattern.
M-168	There is a pattern with the same name	
M-169	Execute, confirm?	Confirm button to confirm, return button to cancel
M-170	Boot screen upgrade abnormally	
M-171	The panel is not connected to the master	DIP switch 5 is turned on
M-172	The pattern precision is higher than the system precision	Pattern data will lose precision
M-173	The current pattern is a special pattern for rotary models	Please switch to other patterns to use
M-174	Save the laser offset value?	Sure?
M-175	Save origin offset value?	Sure?

M-176	Return the stiffness of all stitch lengths to the initial value?	Sure?
M-177	There is a pattern with the same name on the panel, please select the execution method	Confirm: The pattern with the same name will be deleted Return: automatically modify the name of the pattern, and rename it according to the name + number
M-178	Model recovery succeeded	Please power off and restart
M-179	Whether to determine the winding	Sure?
M-180	Template recognition result is empty pattern	Please complete the operation after identifying the valid pattern

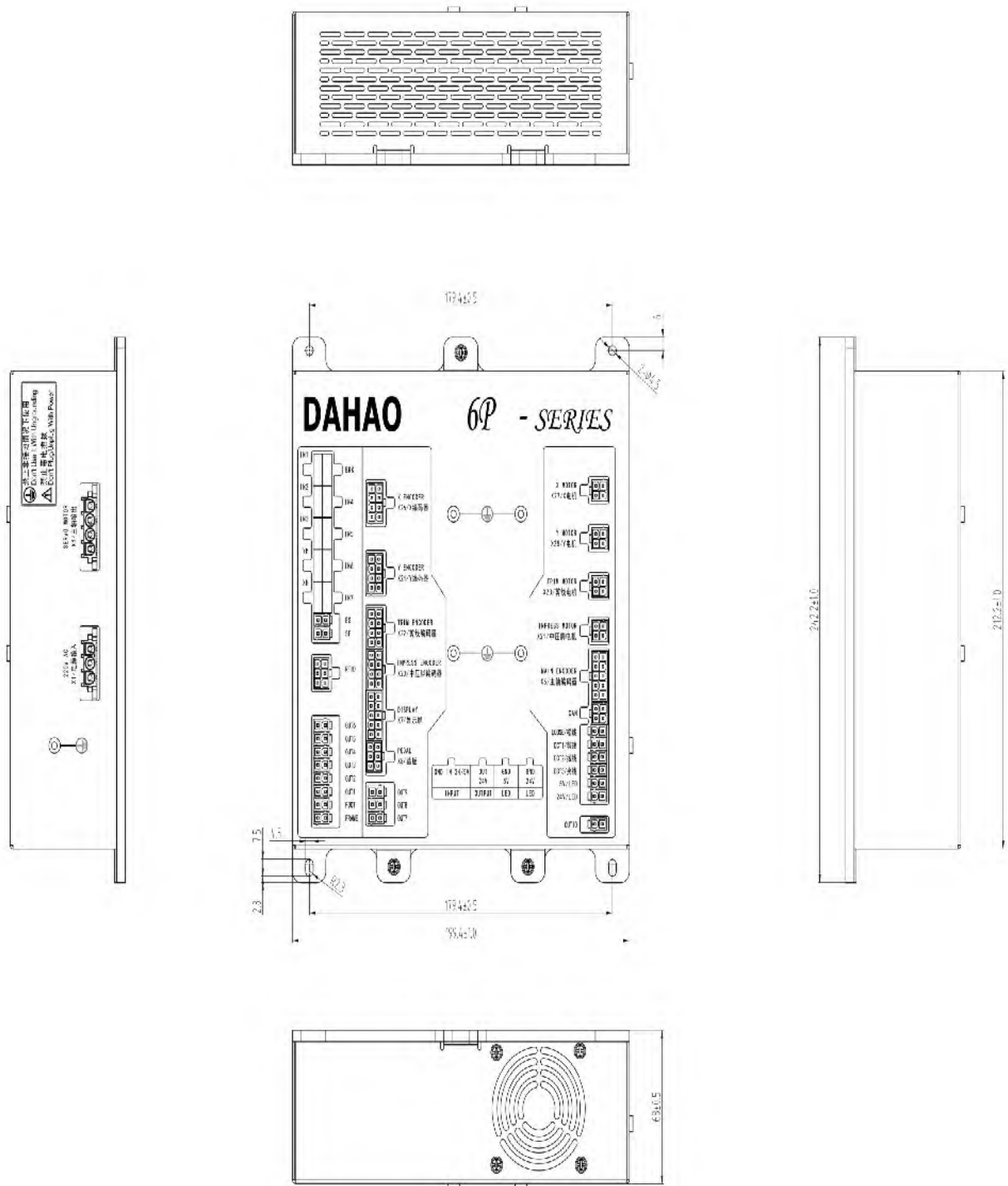
5 Attachment 2

5.1 Operating box installation dimensions

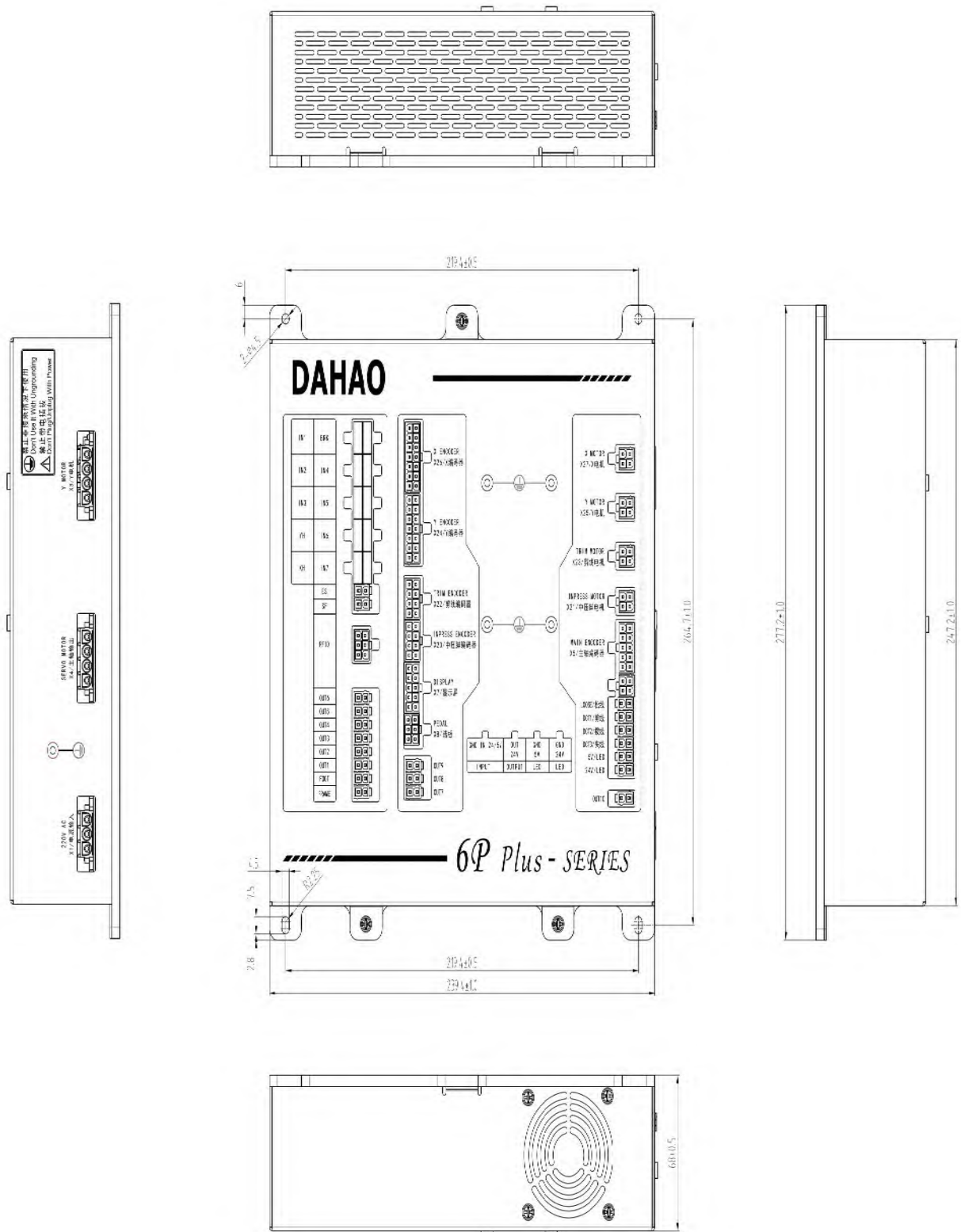


5.2 Electronic control box installation size

6P Electronic control box installation size:

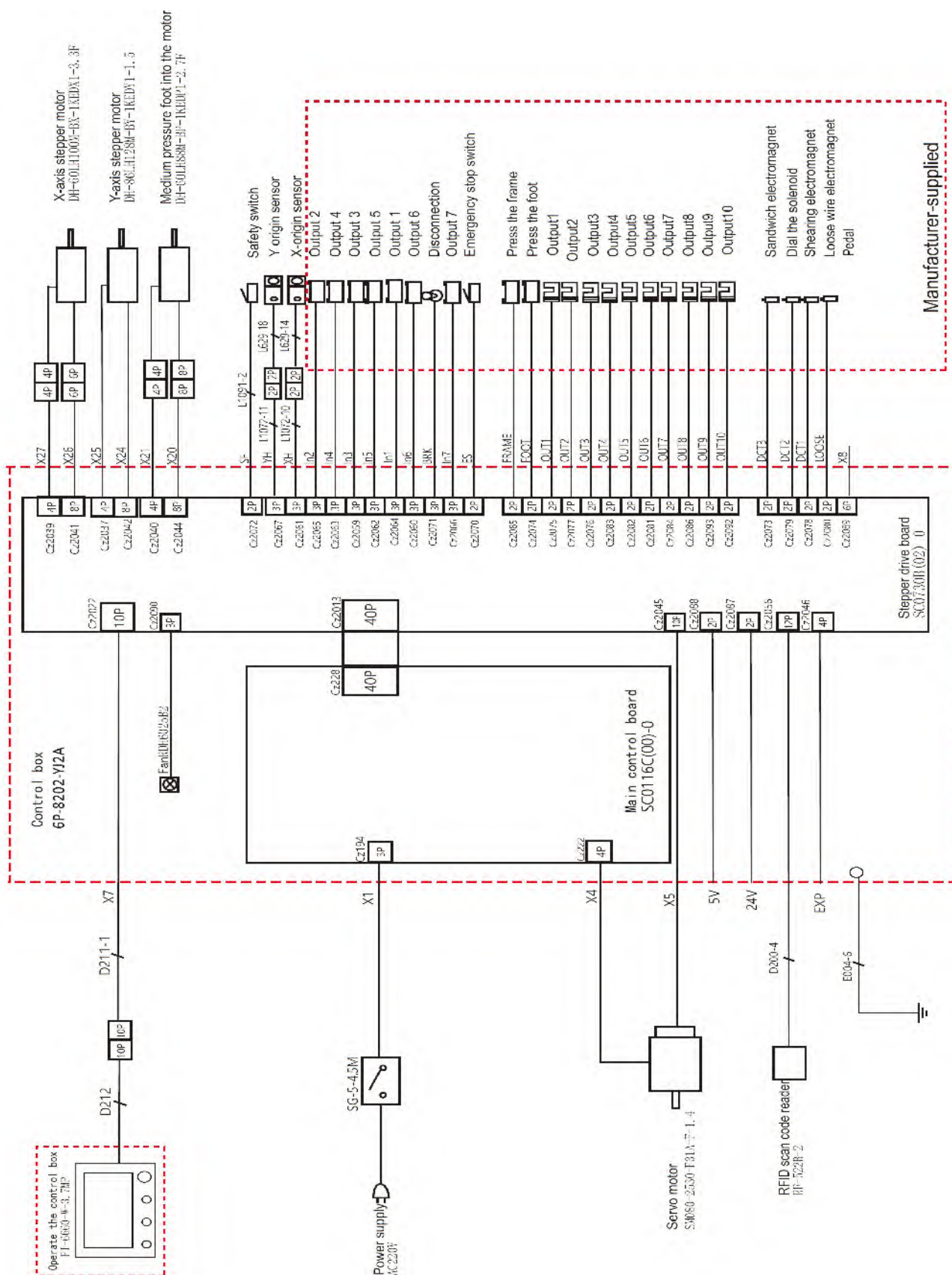


6P plus Electronic control box installation size:



5.3 System Diagram

6P820-2HB3-B System Diagram:



6P821-2HB3-B System Diagram:

