Content

Chapter1 summarize

1.1 Security considerations

In order to avoid injury to you and prevent damage to this product or any product connected to it, please read the following precautions carefully before using this quilting machine to ensure that you use the machine safely and correctly.

1.Do not use the machine without grounding.When machine performance degrades and break down,grounding can prevent the risk of electric shock.When the computer of quilting machine control the system to install, it should be connected to the frame of the quilting machine through the protective ground terminal of the electric control box. When the quilting machine is connected to the electrical connection (including connecting the power supply), it should be directly connected to the ground or connected to the power supply terminal through the ground terminal of the quilting machine frame or electric control box.

2.The protection of grounding wire should use yellow-green combined color copper wire, and the cross-sectional area of the protection wire is greater than or equal to 1.5mm²; The protection of grounding circuit should have reliable continuity,and use PELV (security ultra-low voltage) power supply, corresponding to the test current is 10A. The maximum measured voltage drop between the ground terminal of the electric control box and the ground terminal of the quilting machine frame to the ground point should be less than or equal to 2.6V.

3.When opening various boxes of electrical appliances, and replacing the circuit board in the box, be sure to pull out the power plug from the power socket or turn off the external power switch.

4.Please don't leave it unused for a long time after plug in the quilting machine. In addition, be sure to disconnect the electrical system connected to the machine after use and before cleaning the machine.

5. When cleaning the dust and debris on the machine, be sure not to scrub with water or use the air gun of the air compressor to purge, the air compressed by the air compressor has water mist, which is easy to cause short circuit of the circuit system.

6. When you need to remove the cover of the mechanical system to refuel or other adjustments, please be sure to pull out the power plug of the machine or turn off the external power switch.

7. When threading, changing the needle and changing the spindle are operated near the edge of the needle, please be sure to stop the quilting machine or carry out in the offline state.

8. Do not operate when the power cord and power plug are damaged, the machine cannot operate normally,the machine is faulty and there is leakage. When happening, please entrust the manufacturer's technical personnel to repair.

9. After the operation is finished, please put all switches in the "OFF" position, turn off the power and then pull out the power plug. Do not pull the wire when pulling out the power plug, be sure to hold the plug to pull it out.

10. Don't pile up sundries around the electric control box to facilitate heat dissipation.

Electronic control equipment is prohibited to work overtime and work in dust, corrosive gas, flammable and explosive gas, otherwise it may cause electric shock or fire.

1.2 Main function features

⬚ The machine adopts 15.6 inch large screen and 10.1 inch small screen color LCD to display, the operation interface for characters and icon, simple and easy to understand, fast to operate, and in the process of embroidery can be displayed in real time embroidery pattern, image intuitive.

⬚ The system can store 1000 patterns,the total number of shorted needles is up to 100 million.

⬚ You can click directly on the screen with your hand.

⬚ Add flash disk interface, flash disk capacity is large, fast read and write speed, easy to carry, longevity.

⬚ Function Key Grey display function

In different operating states, the function key will change when it fails, which is clearly distinguished from the effective function key.

⬚ Browse the pattern information directly

When selecting a pattern, you can see the actual pattern of the pattern (10 per page),you can know what pattern is stored directly.

⬚ Read patterns in various formats

It can read DST and DSR patterns.

⬚ Twist turns, side to side flips, and zoom in and out

The embroidery pattern can be rotated at any Angle, in addition, it can also be enlarged or reduced by different ratios of x and y directions.
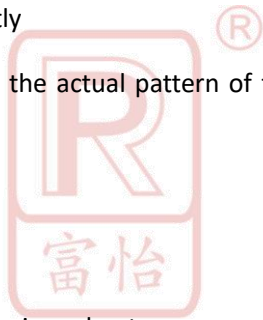
⬚ Unique piece embroidery function

This equipment has the function of piece embroidery, which can be embroidered in batches, so it can make the work efficiency greatly improved.

⬚ Astern to achieve automatic sewing

In the case of stopping the embroidery, pull the pull rod to the direction of stopping, and reverse will be realized, and then pull in the direction of stopping, and reverse stop. In the process of embroidery, due to broken lines and other reasons, individual machine head leakage phenomenon will occur, then the machine's head indicator light will be light in time, as long as the reverse to the leakage point pull rod can automatically repair embroidery.

⬚ Confirmation of frame limit device and pattern range

The frame limit device includes hardware limit and software limit, so it can prevent the accident of the needle falling on the frame. In addition, the confirmation of the pattern range before

starting embroidery can reset the embroidery point of the pattern range beyond the border, which can also prevent accidents.

⬚ high speed operation

Support flat embroidery to work normally at the maximum speed of 1500rpm.

⬚ Automatic speed change

Within the speed range indicated in the embroidery, the machine will automatically adjust to the most reasonable speed according to the stitch size of the pattern.

⬚ Automatic or manual color change

In the embroidery process, the user can choose the automatic or manual color change function according to the actual needs of the embroidery, select the color of different needle positions, complete the embroidery.

⬚ Empty walk

If you specify the empty walk, you can not carry out the actual embroidery, just according to the embroidery stitch to move the frame, and display the number of moving needles, in addition, you can enter the number of needles directly to move the frame to the specified number of needles; You can also move the frame by color, directly to the previous color or the next color.

⬚ Power off protection

If the power supply is disconnected in the middle of the embroidery, the power supply can be turned on again to make the pattern continue to embroider in the state before the power failure.

⬚ Error message

In the process of embroidery, when there is an error, such as the surface line broken, the screen will display the "surface line broken" prompt information to help workers quickly analyze the error.

⬚ Statistics table function

It can store the work information for a period of time automatically, and can inquire the number and time of embroidery at any time.

⬚ provides a powerful gold embroidery function.

1.3 Technical specification

Table1.1

Number	content	Technical standard
1	The number of memory patterns	Two hundred
2	The capacity of memory	100 million needles
3	Display brightness	300cd/m²(small screen),220cd/m²(large screen)
4	Touch screen	Four-wire resistance-type
5	Display color	262K
6	Input voltage	24±20%
7	Rated power	6W(small screen) 15W(large screen)
8	Ambient temperature	0℃-50℃（working）；0℃-60℃（storage）
9	Humidity	5%-90%（no-condensing）
10	Number of heads	1～32
11	Rotate speed	0rpm～1500rpm
12	Number of needles	1 to 15

1.4 Precautions for using the touch screen

Due to the particularity of the touch screen, the following points should be paid attention to during operation to ensure its life:

1. Do not press the screen, just touch it lightly with your fingers; Don't slap and tap the touch screen;

2. Do not use nails to poke the screen, do not use hard objects to scratch the screen;

3. Keep the screen clean, too much dust on the screen will affect the sensitivity of the screen;

4. Lightly press and hold the icon with your finger during operation, stay for 1 second then picking it up. If the icon automatically springs up at this time, it indicates that the command has been executed; If the button on the screen shows a hand icon and the button is concave, it indicates that the operation has not taken effect, you must press again until the button springs.

Chapter 2 Interface description Introduction

2.1 Display interface introduction
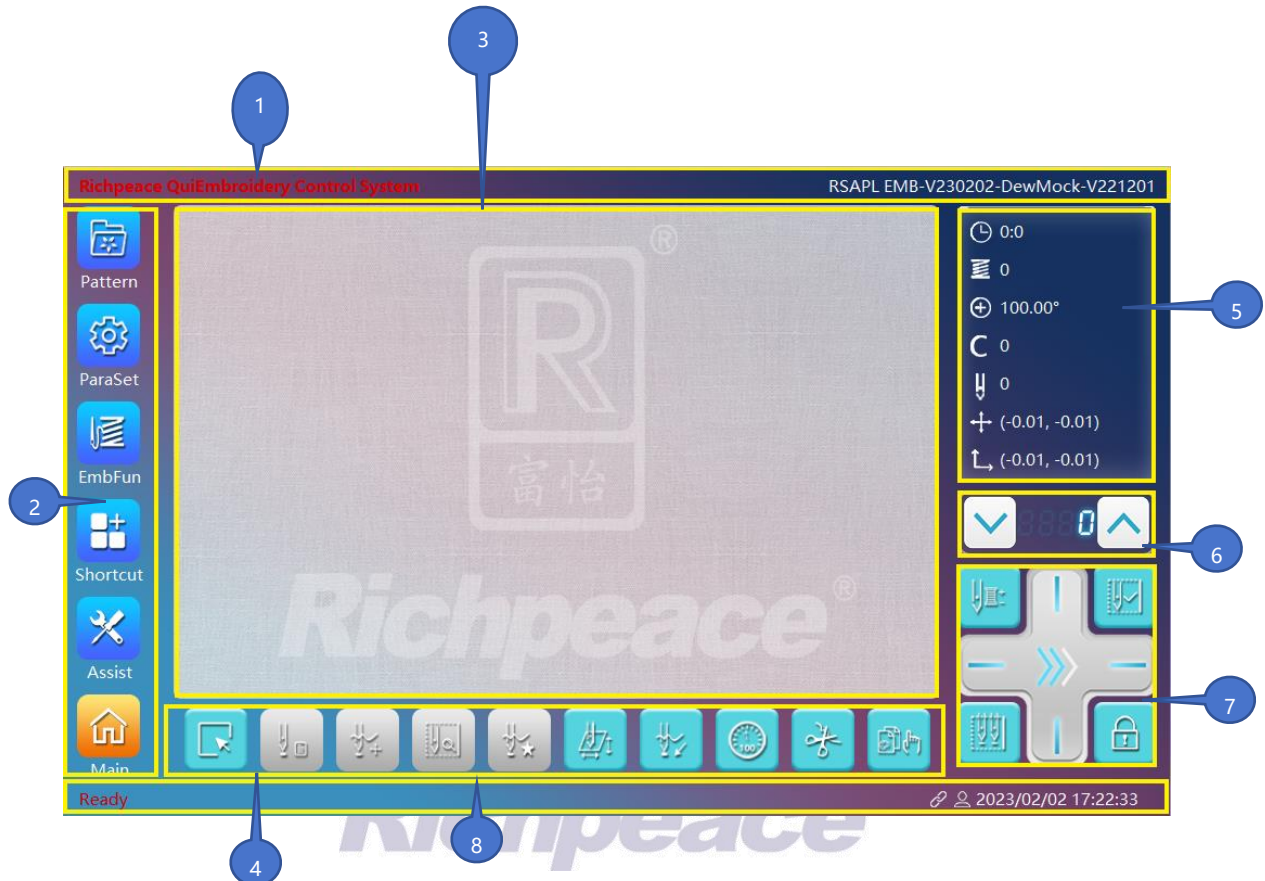
(Figure 2-1Main interface)

1. Upper area

2. Left area (main menu)

3. Display area

4. Bottom area (Common Settings menu)

5. Upper right area

6. Right middle area

7. Right bottom area (nine squares)

8. Bottom area

2.2Upper area

Richpeace Embroidery Control System	RSAPL EMB-V230520

(Figure 2.2 Upper area)

(1) System name: Richpeace quilting control system

(2) System version: RSAPL EMB-V230128

2.3Left area (main menu)

(Figure 2.3 Left area)

The left menu (main menu) contains the following information:

1. Pattern Settings

2. Parameter setting

3. Embroidery function

4. Shortcut function

5. Auxiliary functions

6. Home screen
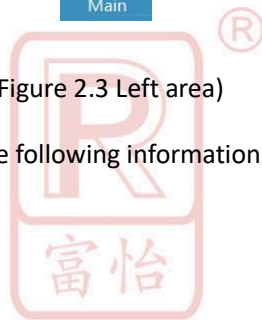
2.3.1 Pattern selection

(Figure2.3.1 Pattern selection)

Click the "Pattern Settings" icon, and the interface as shown in Figure 2.3.1 will appear in the display area.

Pattern Settings include the following module information:

1. Pattern selection

2. Pattern parameters

3. Pattern color order

4. Pattern introduction

5. Export patterns

6. Pattern deletion

1. Pattern selection

Select the desired pattern. After clicking the "Pattern Selection" icon, the interface will display all the existing patterns on the machine. Clicking on the desired pattern file displays information about the pattern on the right.

(1)Click the pattern selection icon " " to enter the interface as shown in Figure 1.0.
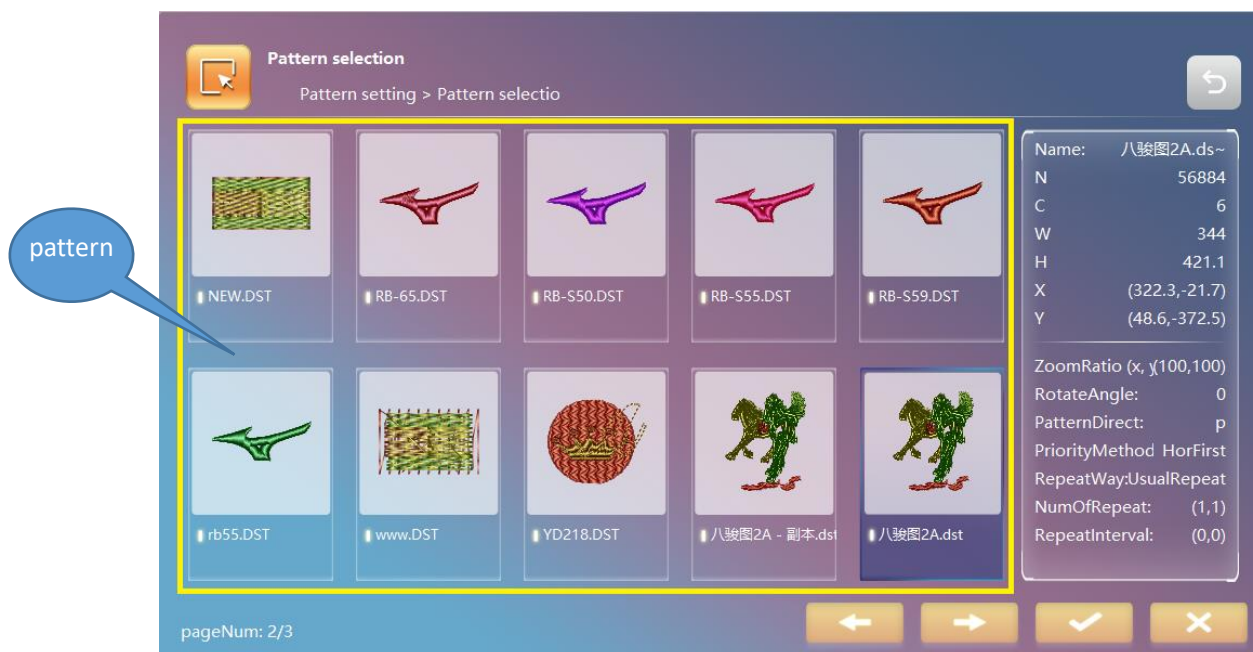
(Figure 1.0)

(2) Browse patterns by clicking the up-page icon " " or down-page icon" ", directly click patterns to select patterns, you can see the relevant information and parameter Settings of the patterns in the preview diagram on the right, as shown in Figure 1.1,the meaning of each parameter is shown in Table 1.0. Click the OK icon " " to enter the interface as shown in Figure 1.2:
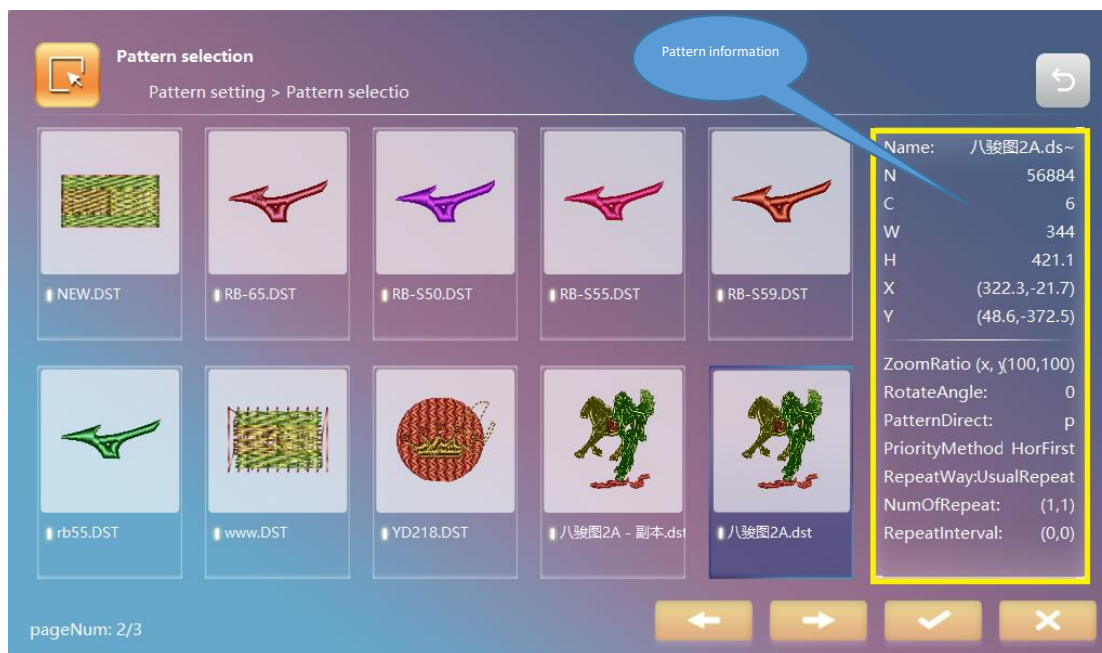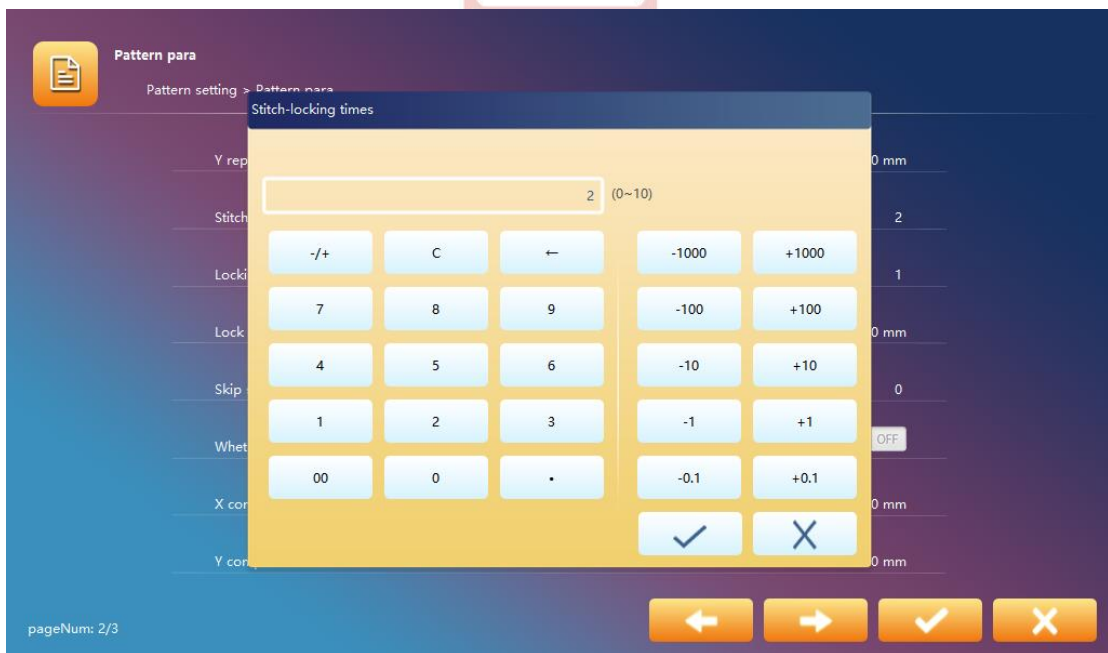
(Figure 1.1)

Parameter name	Instructions
Pattern name	MRB-S35.~ is the name of the pattern
N	The total number of stitches in the pattern
C	The color number of the pattern
W	The width of the pattern
H	The height of the pattern
X	The x-coordinate of the pattern
Y	The y-coordinate of the pattern
Zoom ratio(x,y)	Set the zoom ratio of the pattern
Rotation Angle	Set the rotation Angle of the pattern
Pattern direction	Set the pattern direction of the pattern
Priority mode	Set the priority mode of the pattern
Iterative mode	Set the iterative mode of the pattern
Number of iterations(x,y)	Set the number of iterations(x,y) of the pattern
Iterative interval(x,y)	Set the iterative interval(x,y) of the pattern
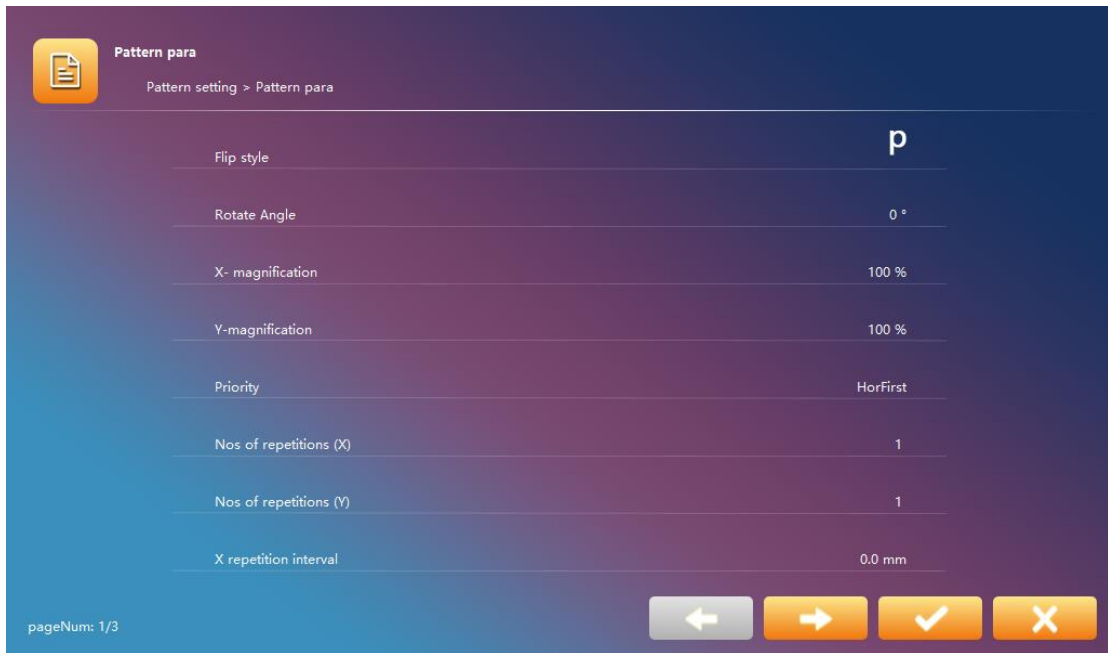
(Figure 1.2)

(3) Some default values of the selected patterns are listed on the interface. You can also click the item to be modified, and a dialog box will pop up to modify the parameter values (see Section 2.3.1, Part 2 for the meaning of the parameters), as shown in Figure 1.3.

(Figure 1.3)

(4) After the modification, click the confirm icon " ✓ ", and the pattern information will be saved to the memory; After saving, click the " ✓ " icon to return to the main screen.
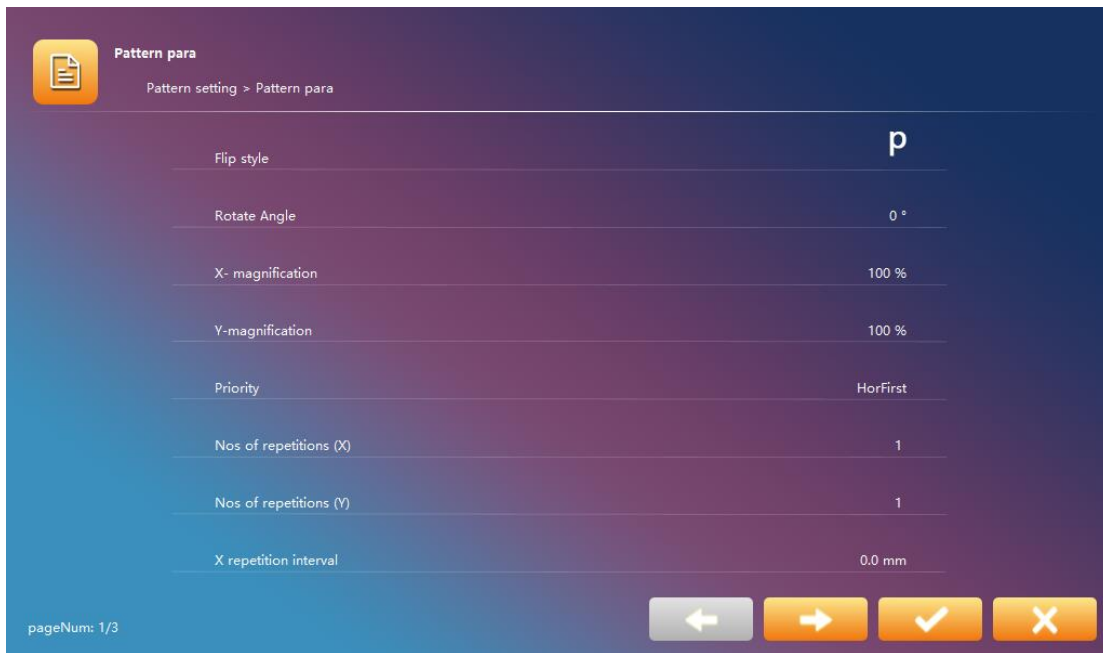
花样选择.mkv

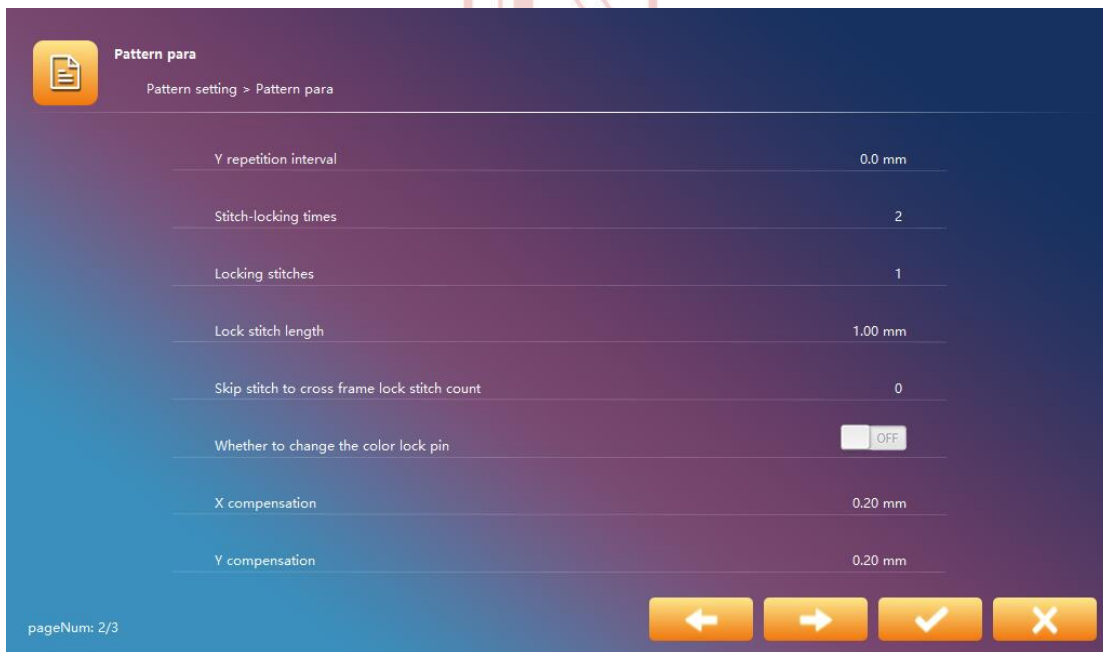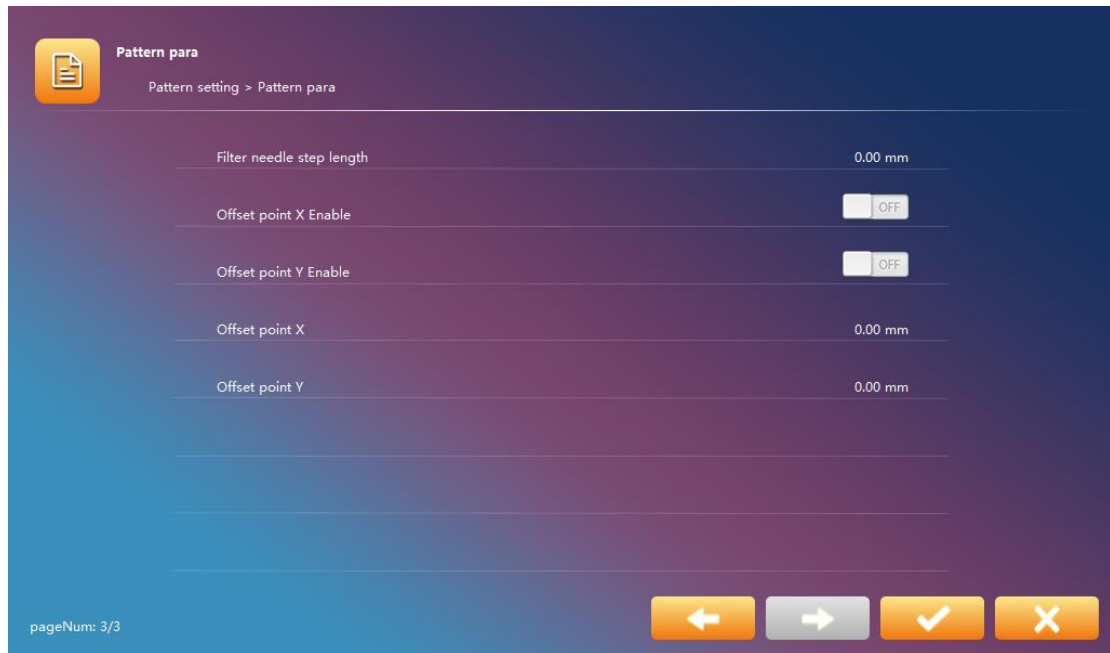The detailed operation is shown in the video:

2. Pattern parameters

(Figure 2.0 pattern parameter page 1/3)

(Figure 2.0 pattern parameter page 2/3)

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(Figure 2.0 pattern parameter page 3/3)

Click the "Pattern Parameters" button, and the interface as shown in Figure 2.0 will appear:

Parameter name	Instructions
Lock stitch times	Times of lock stitches before embroidery starts. The range of input value is between (0~10).
Lock stitch steps	Number of stitches for locking stitches before embroidery starts. The range of input value is between (0~10).
Lock stitch length	The length of the interval between two stitches when locking stitches. The input value range is between (0.00~1.00) mm.
Flip style	There are 8 commonly used rotation styles for the pattern flip. (for details, see the section 4.1 transformation mode setting in chapter 4)
Rotation angle	Use the rotation angle to modify when the common flip styles cannot be satisfied. The input range of numbers is 0~90 degrees. After modification, the effect is that the pattern rotates clockwise by an angle, and input value is 0~9.
X- magnification	Zoom in or out to the pattern at X direction. Input value from the number key, which is between 50 and 200. Inputting 100 means same size as the original, 50 means half of the original size (50%), and 200 means double the size (200%).
Y- magnification	Zoom in or out to the pattern at Y direction. Input value from the number key, which is between 50 and 200. Inputting 100 means same size as the original, 50 means half of the original size (50%), and 200 means double the size (200%).
Iterative mode	Optional values are: X-symmetric/Y-symmetric /XY symmetric/usually repeated. X-symmetric: In the case of repeated times, the embroidery produces patterns that are p and q. (For details, see section 4.2 Setting the Iterative Mode in Chapter 4.) Y-symmetric: in the case of repeated times, the pattern produced by the

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	embroidery is P and b. (For details, see section 4.2 Setting the Iterative Mode in Chapter 4.) XY symmetric: In the case of repeated times, the embroidery produces a pattern that is p and d. (For details, see section 4.2 Setting the Iterative Mode in Chapter 4.) Usually repeated: Repeated many times, all embroidery produces the same pattern. (For details, see section 4.2 Setting the Iterative Mode in Chapter 4.)
Order of priority	Set horizontal priority or vertical priority in repeated embroidery. Optional values are: Horizontal embroider first/vertical embroider first. (1)Horizontal-embroidery first: doing embroidery horizontally (x-direction) firstly during repeat-embroidering, and continue to embroider other rows one after another. 2.Vertical-embroidery first: doing Embroidery vertically (y-direction) first during repeated embroidery, and continue to embroider other columns one after another.
X-repetition times	Set how many patterns to embroider repeatedly in the x direction, that is, nos of patterns produced by embroidery, and the setting value is between 1 and 200.
Y-repetition times	Set how many patterns to embroider repeatedly in the y direction, that is, nos of patterns produced by embroidery, and the setting value is between 1 and 200.
X -compensation	X-direction compensation is a small displacement adjustment in the horizontal direction to make the embroidery thicker or thinner in the x-direction to meet customer needs. The input value is between (-3000.0~3000.0) mm. The unit is 0.1mm, that is, 200 means 20mm.
Y- compensation	Y-direction compensation is a small displacement adjustment in the vertical direction to make the embroidery thicker or thinner in the y-direction to meet customer needs. The input value is between (-3000.0~3000.0) mm.

	The unit is 0.1mm, that is, 200 means 20mm.

3. Color order setting

Color order setting, that is, according to the colors provided on the embroidery needle rod, to set the color order of the current pattern.
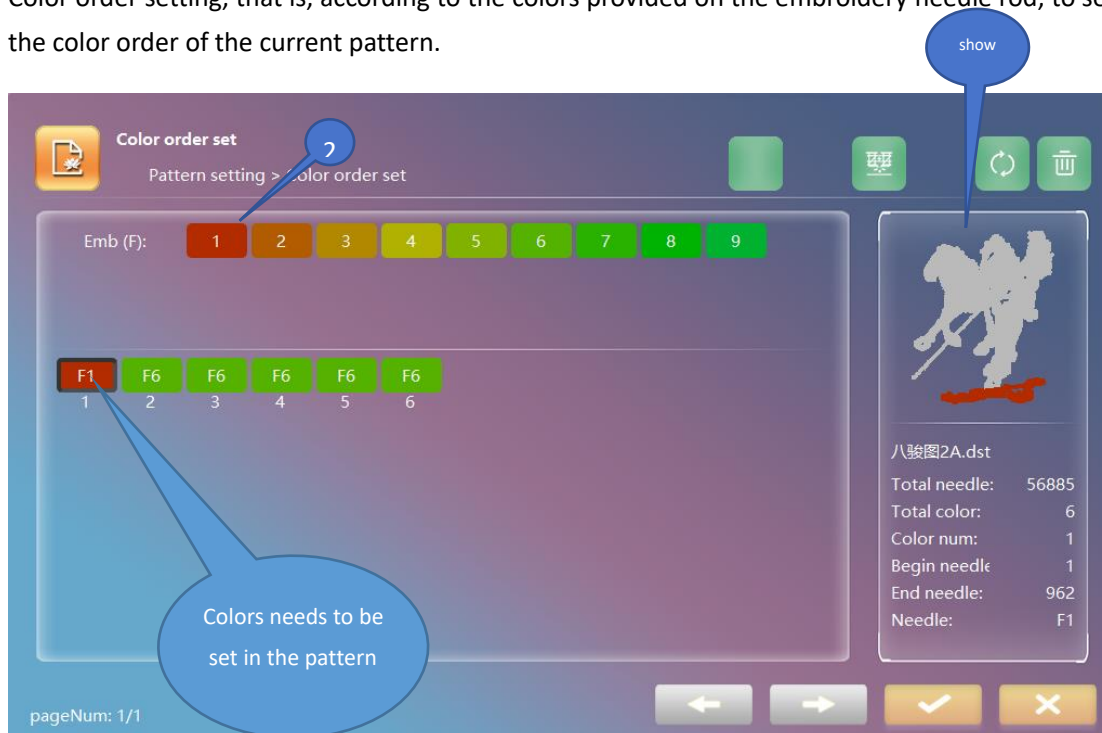

(Figure 3.0 Color order setting)

Click the "Pattern Color Order" button to jump to the Figure 3.0 interface. The yellow box area on the left can be set for pattern color order. The figure shows a total of 6 color sequences for this pattern. If you want to set the color sequence 1 to the color sequence 1 in the embroidery needle rod, the specific operation process is as follows:

(1) Click the color order 1 icon that needs to be set for this pattern.

(2) Then click the icon of color sequence 1 in the embroidery needle rod, that is, the position shown by mark 2.

At this time, the color sequence 1 icon of the pattern has been displayed as the color sequence 1 color in the embroidery needle rod, as shown in Figure 3.1.
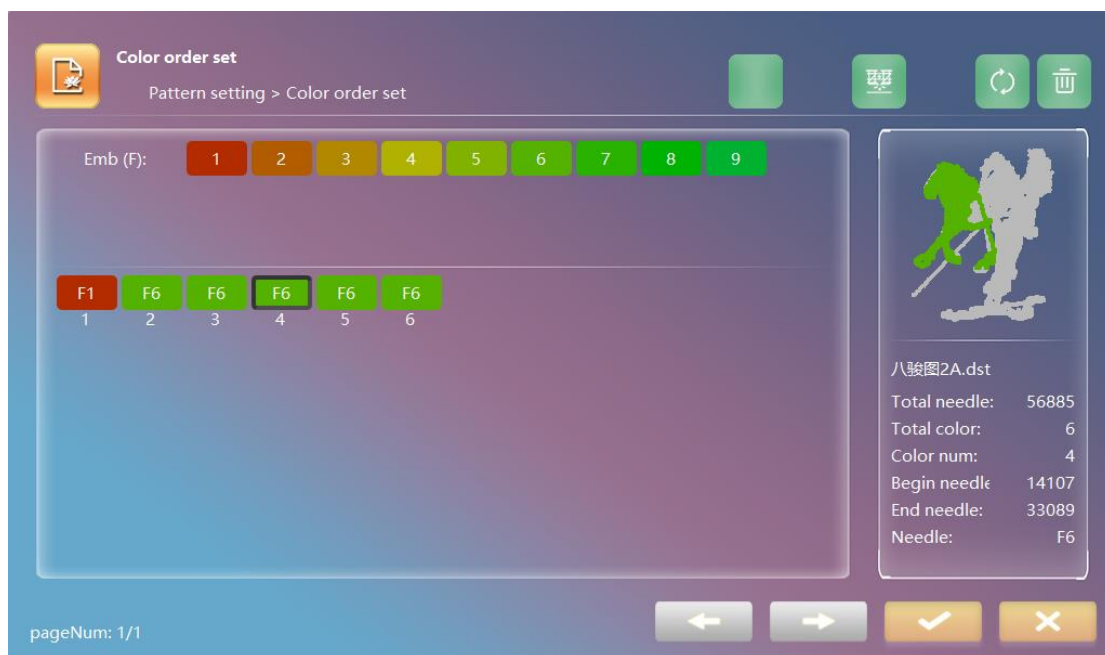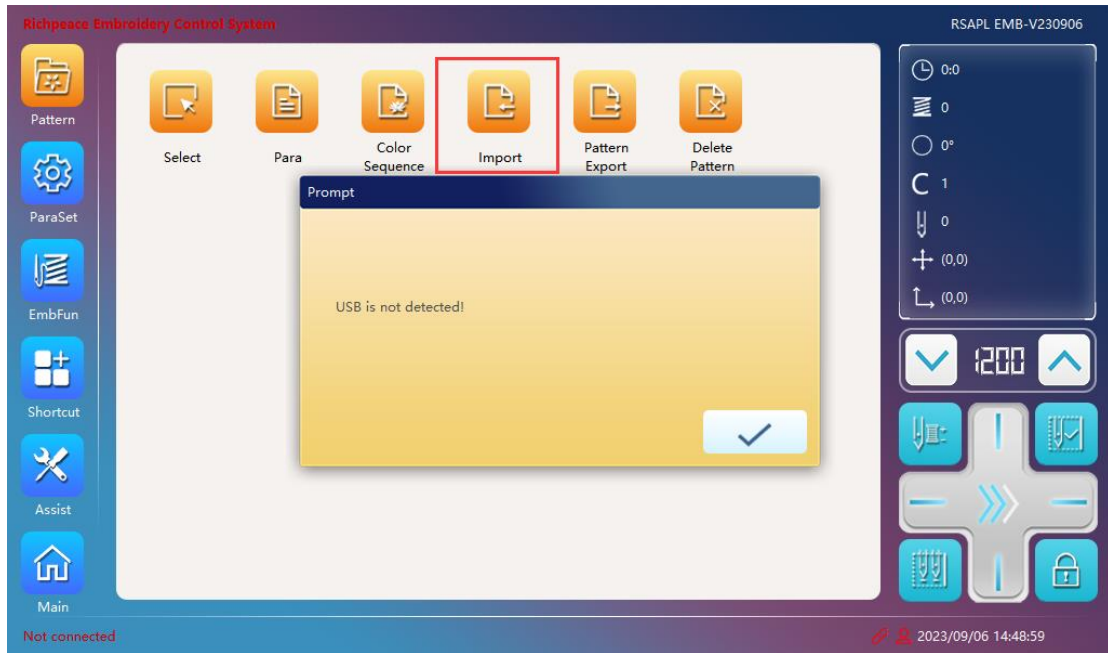
(Figure 3.1)

The preview on the right dynamically displays where the current color order is used on the flower board based on the selected color order. In addition, it also shows the name of the pattern, the total number of stitches, the total number of colors, the number of starting stitches, the number of ending stitches, and the selection of pins.

Parameter name	instructions
⟳	Color sequence cycle
🗑	Clear the current color order Settings, restore the default color order Settings, and regenerate the preview

4. Pattern import

Need to insert the USB disk, the interface will display the files and folders on the USB disk, select the pattern file you need to import, and the preview of the pattern will be displayed on the right side, and the related information of the pattern.
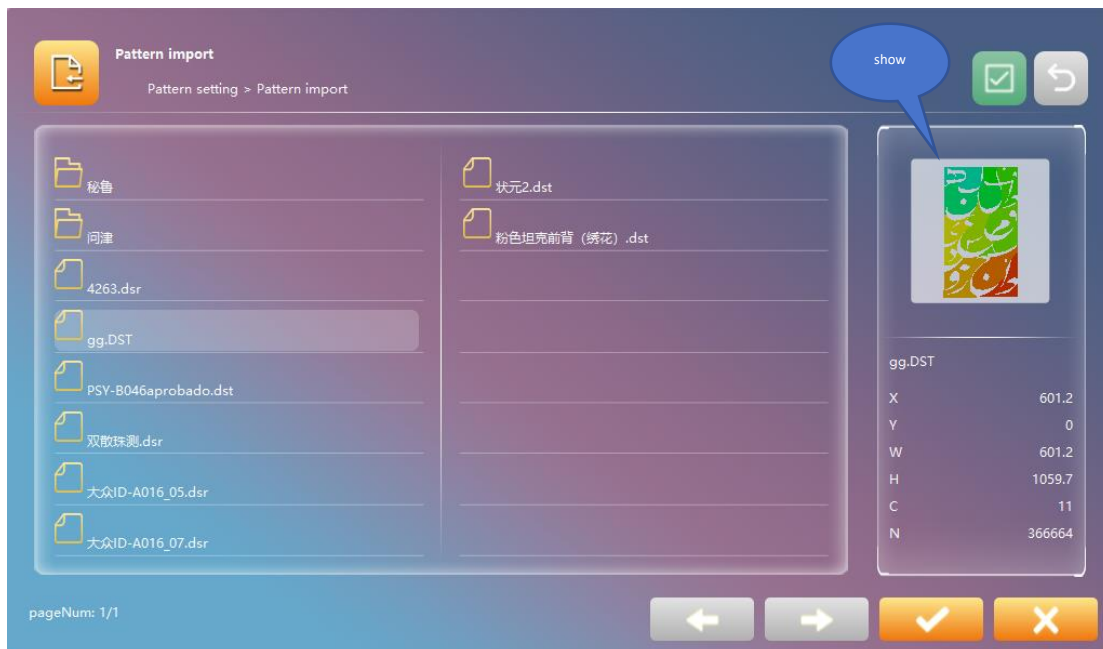

(Figure 4.0 Pattern import)

Click the "Pattern Import" icon, if no USB disk is inserted, the interface as shown in Figure 4.0 will appear.
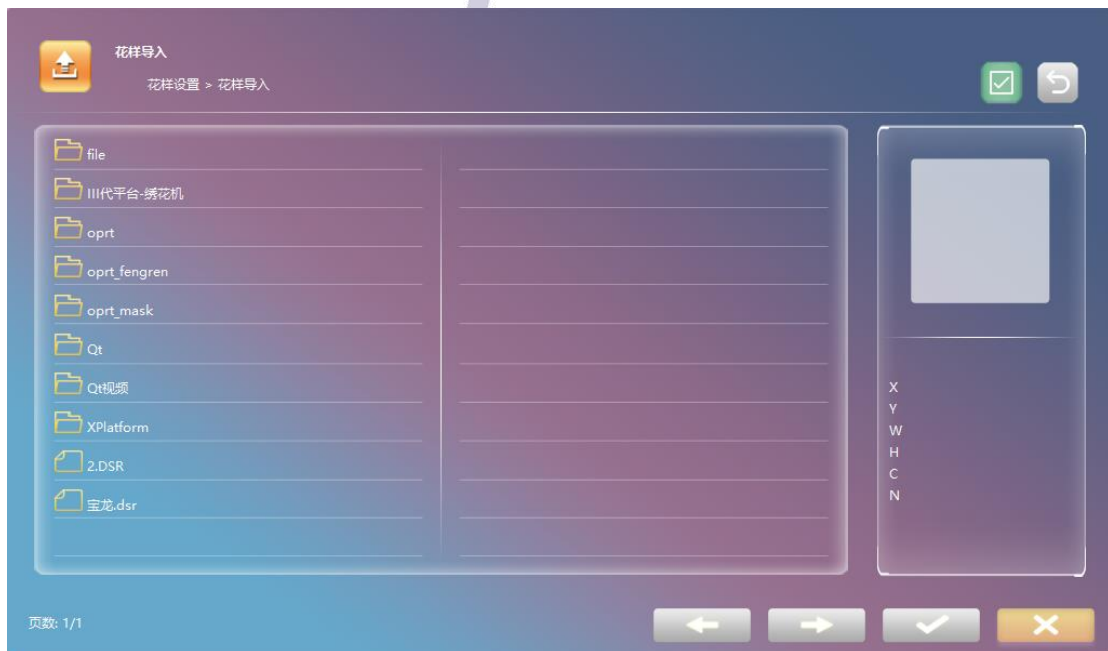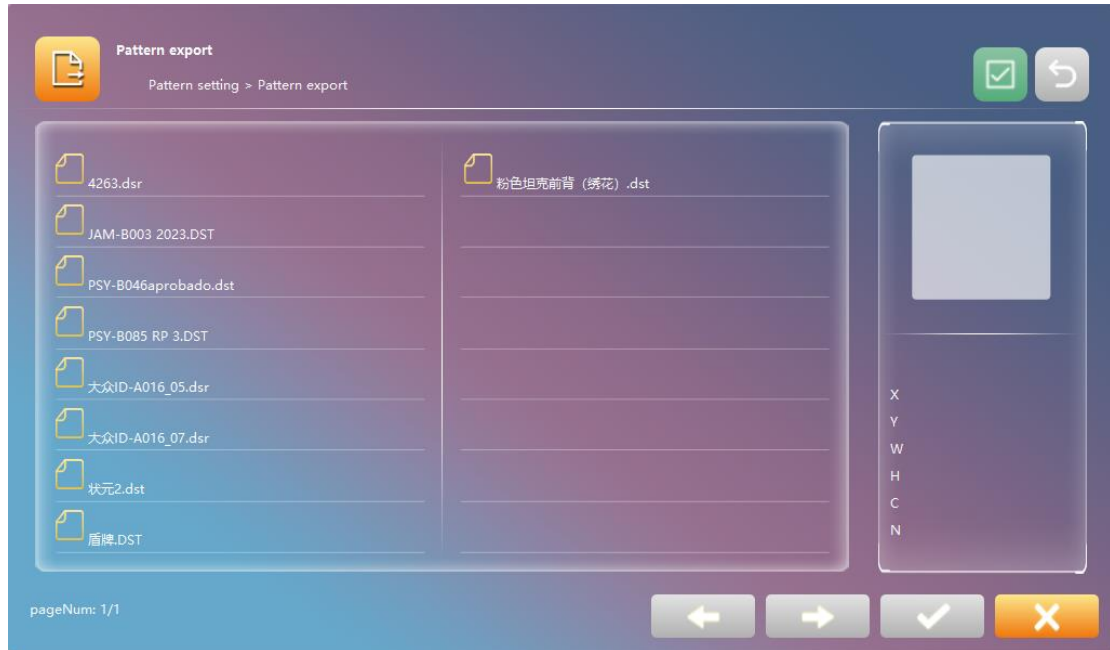
(Figure 4.1 Pattern import)

After inserting the USB disk, click the "Pattern Import" button, the interface as shown in Figure 4.1 will appear. Click on the pattern file you need to import, and a preview of the pattern will appear on the right, as shown in Figure 4.2.

(Figure 4.2 Pattern import)

Parameter name	instructions
Pattern name	The name of the imported pattern
X	X coordinate
Y	Y coordinate
W	The width of pattern
H	The height of pattern
C	The number of color sequences
N	Total stitches
☑	Select all files with the suffix dst/dsr
↩	Back to the previous directory

5. Pattren export

(Figure 5.0 Pattern export)

Click the "Pattern Export" button and the interface shown in Figure 5.0 will appear. Display all the existing patterns on the machine, select the pattern file you need to export (you can choose multiple pattern files to export, the preview on the right side only shows the last selected pattern).

When the pattern file to be exported is selected, the preview image on the right side will appear the effect of the corresponding pattern, as well as the information content of the pattern.

Multiple patterns can also be selected for export, and the pattern and information of the last selected pattern (07 shield) will be displayed on the right side by default, as shown in Figure 5.1.

Parameter name	instructions
Pattern name	The name of the imported pattern
X	X coordinate
Y	Y coordinate
W	The width of pattern
H	The height of pattern
C	The number of color sequences
N	Total stitches
☑	Select all files with the suffix dst/dsr
↩	Back to the previous directory

6. Pattern delete

(Figure 6.0 Pattern delete)

The interface will display all the existing pattern files on the machine, select the file you want to delete. Click the "Remove Patterns" button and the interface shown in Figure 6.0 will appear.
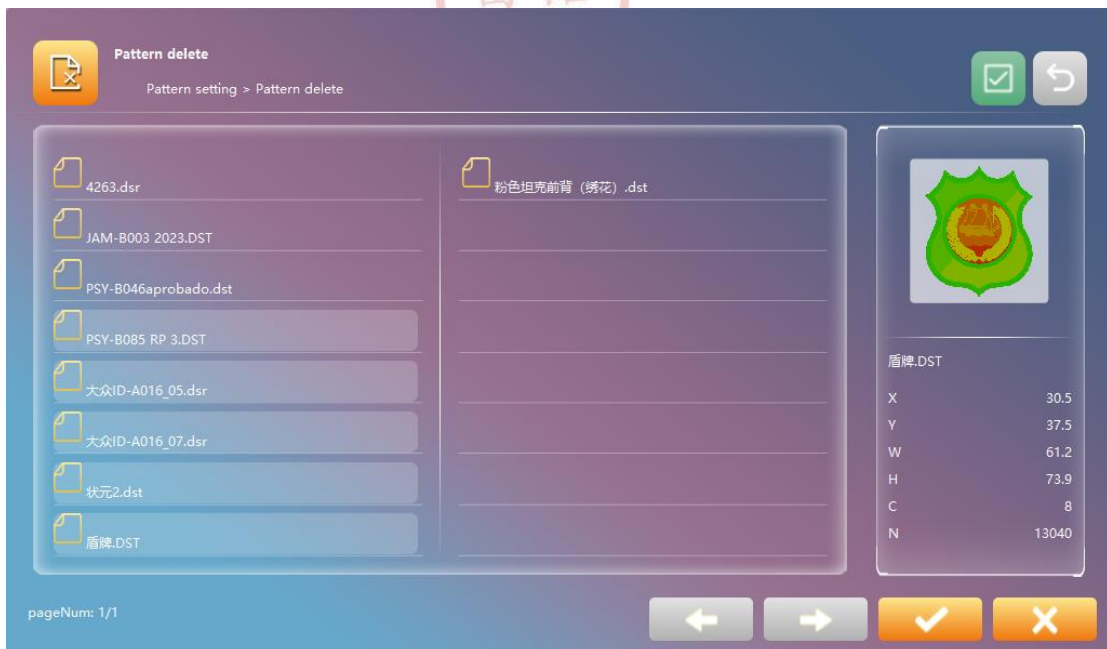
(Figure 6.1 Pattern delete)

Select the pattern file you want to delete, you can select multiple pattern files, and the right side will display the pattern and information of the last selected file (encryption test 01.dsr), as
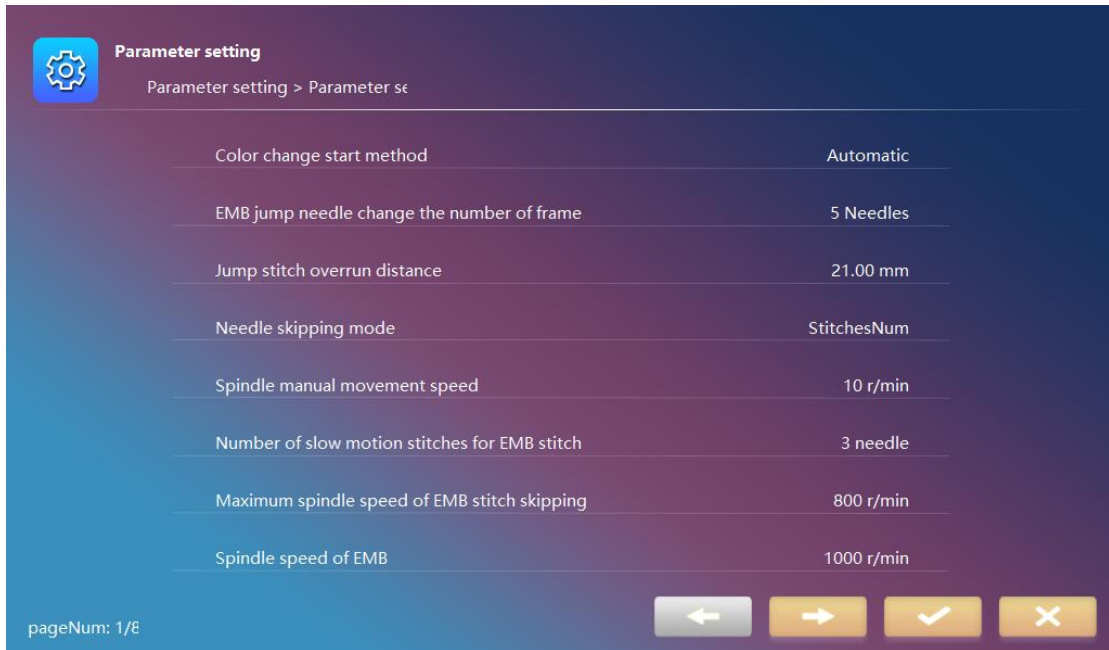
shown in Figure 6.1. Click OK to delete the pattern.

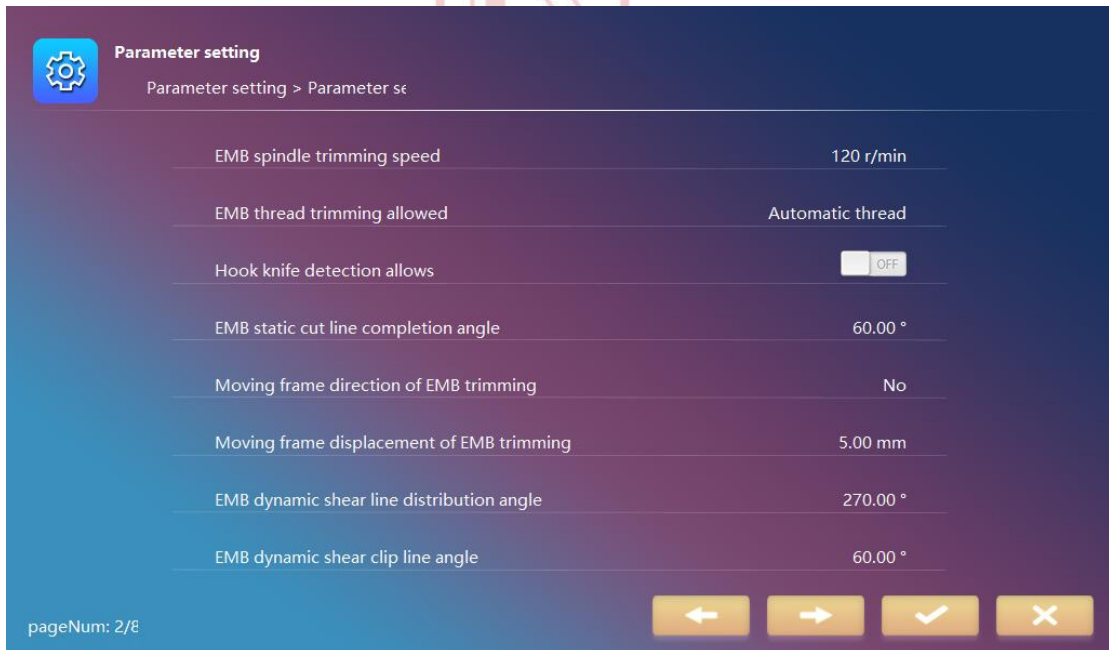| Parameter name	instructions
Pattern name	The name of the imported pattern
X	X coordinate
Y	Y coordinate
W	The width of pattern
H	The height of pattern
C	The number of color sequences
N	Total stitches
☑	Select all files with the suffix dst/dsr
↺	Back to the previous directory

2.3.2Parameter setting

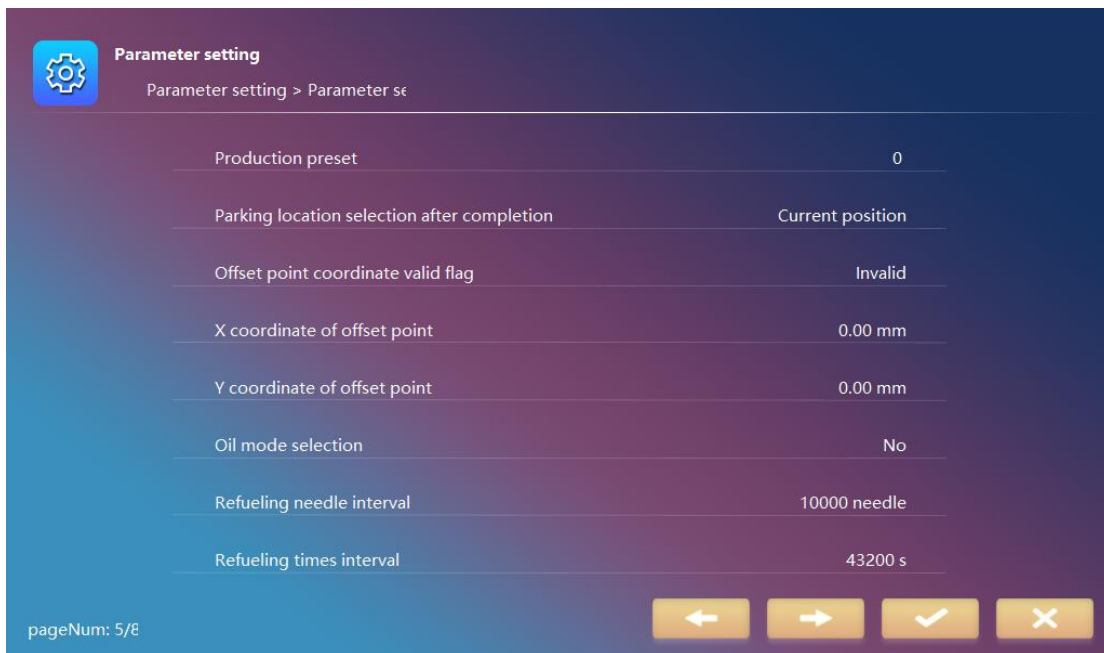(Figure 2.3.2 Parameter setting page 1/8)

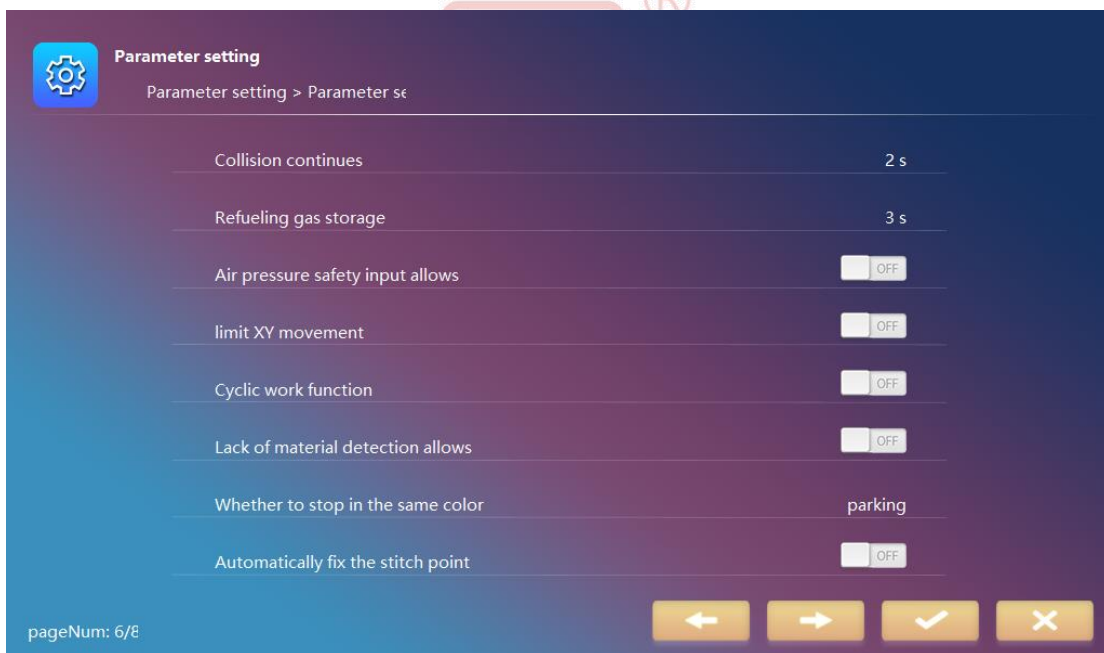(Figure 2.3.2 Parameter setting page 2/8)
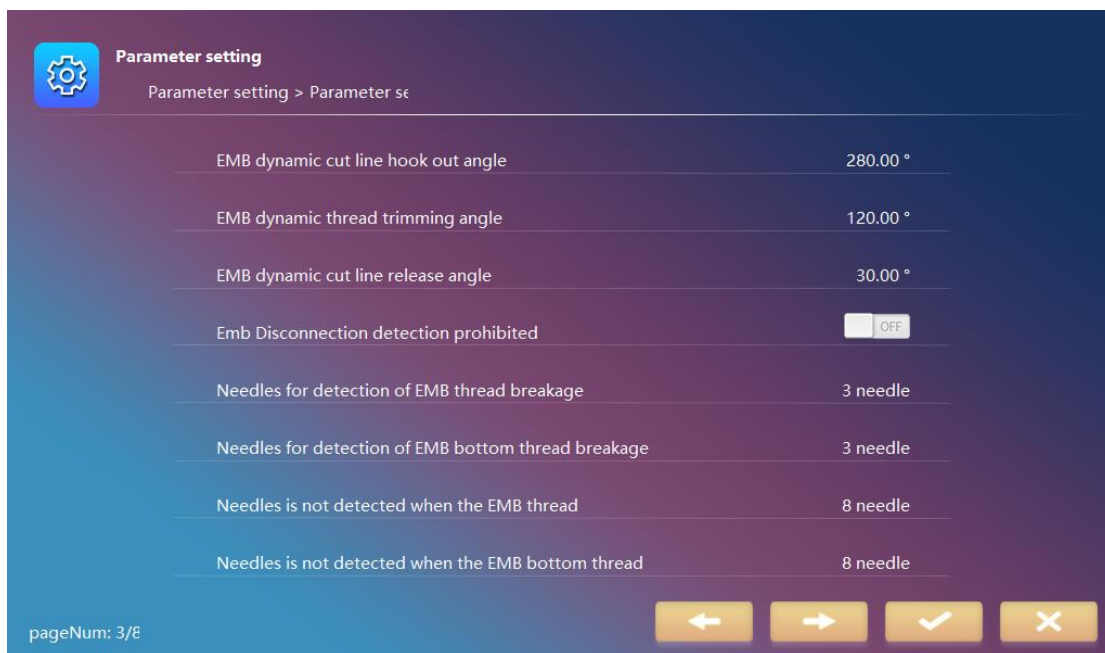
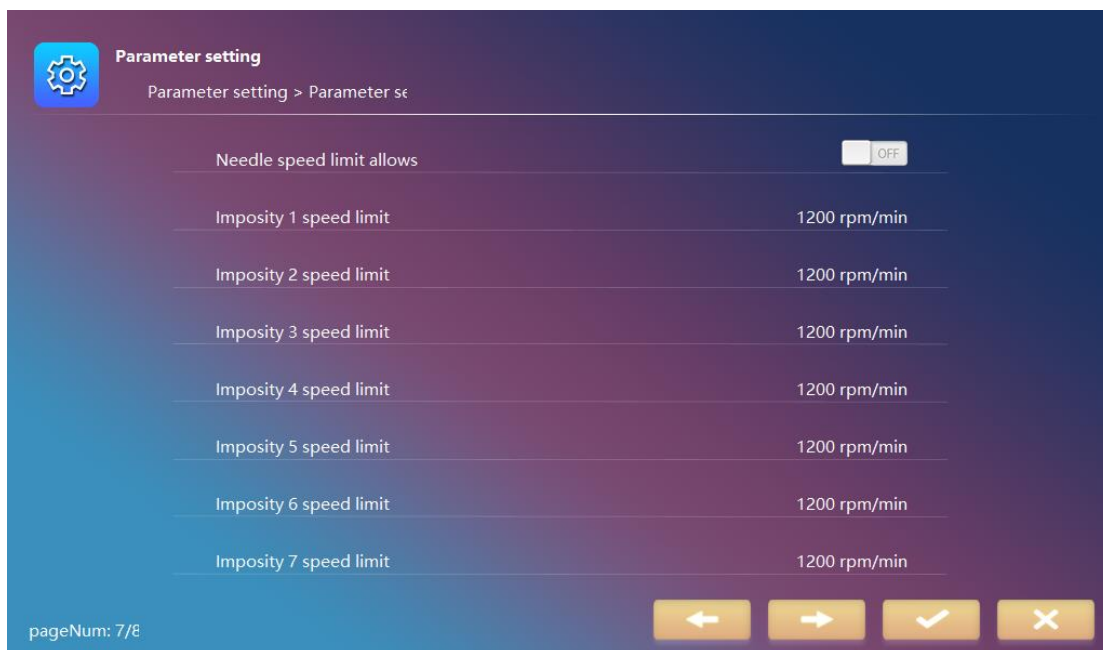(Figure 2.3.2 Parameter setting page 3/8)
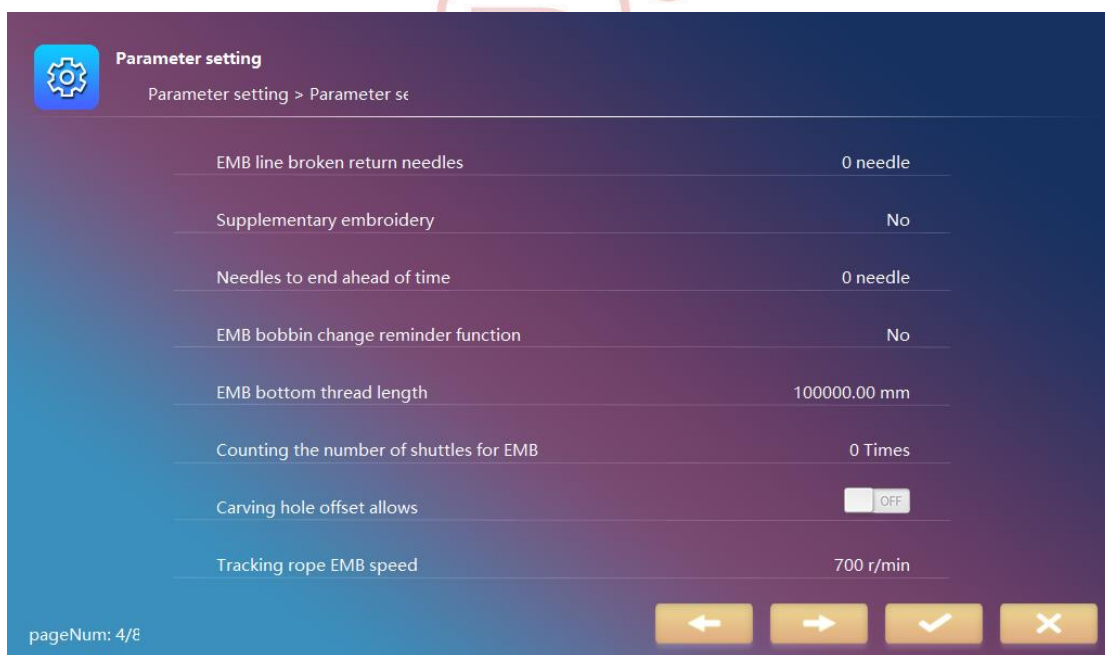
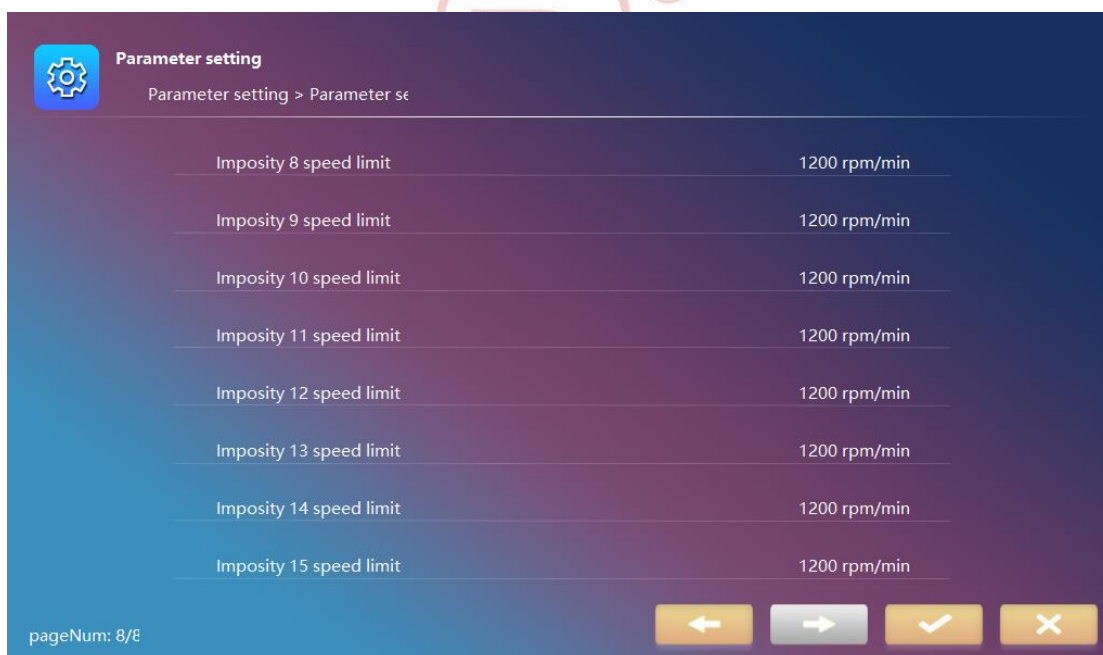(Figure 2.3.2 Parameter setting page 4/8)

(Figure 2.3.2 Parameter setting page 5/8)

(Figure 2.3.2 Parameter setting page 6/8)

(Figure 2.3.2 Parameter setting page 7/8)

(Figure 2.3.2 Parameter setting page 8/8)

Click the "Parameter Setting" button to jump to the interface as shown in Figure 2.3.2.

Parameter name	instructions
Color change starting mode	The value can be automatic start or manual start. Refers to the setting of the starting mode after the color change. That is, do not stop after the automatic color change to continue the automatic embroidery, or stop after the automatic

	color change and wait for the manual pull rod to start the embroidery.
X-axis change compensation	The X-axis change compensation can be manually set in mm。
Y-axis change compensation	The X-axis change compensation can be manually set in mm
Working speed of plain embroidery spindle	The running speed of the spindle motor during flat embroidery work
Flat embroidery spindle return speed	The running speed of the spindle return needle in flat embroidery work
Flat embroidery spindle start slow speed	Slow moving speed when the spindle starts in flat embroidery work
Maximum spindle speed of flat embroidery skip stitch	The maximum spindle speed of flat embroidery skip stitch
Acceleration of flat embroidery work	Acceleration of flat embroidery work
Number of slow moving stitches in flat embroidery	The number of slow moving stitches in flat embroidery
Flat embroidery stitch clamping allowed	Whether flat embroidery stitch clamping is allowed.This is a switch that defaults to "off" and allows flat stitch clamping when on.
Flat stitch stitch stitch allowed	Whether flat stitch stitch stitch allowed.It's a switch.The default is "off" state, when it is "on", it means that the flat stitch is allowed to buckle the thread.
Cutting speed of the plain embroidery spindle	when cutting the thread, the speed of the plain embroidery spindle.The input value ranges from 1 to 150, The unit is r/min.
Flat embroidery cutting line allowed	When flat embroidery work, whether it is allowed to cut lines.You can select the following values: No wire cutting/Automatic wire cutting/Last wire cutting
Flat embroidery cutting line moving frame direction	The moving direction of the frame when cutting the line of flat embroidery.The optional values are: left/forward/right/backward/stationary frame
Flat embroidery cutting line moving frame displacement	The distance that the moving frame moves when cutting thread in plain embroidery.The input value ranges from (0.01 to 10.00) mm.The unit is mm.

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Flat embroidery dynamic cutting and clamping Angle	Clamping Angle of flat embroidery dynamic cutting thread.The input value ranges from (0.00 to 100.00) degrees.The units are degrees.
Flat embroidery dynamic line cutting hook knife Angle	Flat embroidery dynamic cutting line, hook knife out Angle.The input value ranges from (0.00 to 360.00) degrees.The units are degrees.
Flat embroidery dynamic line cutting hook back Angle	Flat embroidery dynamic cutting line, hook knife back Angle.The input value ranges from (0.00 to 360.00) degrees.The units are degrees.
Flat embroidery dynamic cutting line finish Angle	Flat embroidery dynamic cutting line, the Angle when finished.The input value ranges from (0.00 to 360.00) degrees.The units are degrees.
Plain embroidery spindle cutting speed	When cutting the thread, the speed of the flat embroidery spindle.The input value ranges from 1 to 150, The unit is r/min.
Flat embroidery cutting line allowed	Whether cutting thread is allowed during flat embroidery work.You can select the following values: No wire cutting/Automatic wire cutting/Last wire cutting
Flat embroidery surface thread broken thread detection needle number	During flat embroidery work, the number of broken stitches in the surface line is detected.The input value ranges from 0 to 10.
Flat embroidery bottom line broken thread detection needle number	Check the number of broken stitches in the bottom line during flat embroidery work.The input value ranges from 0 to 10.
Flat embroidery change lock core reminder function	The optional value of the reminder function when the flat embroidery works The lock core is: count by the number of pieces/immediately remind by the length/Disable the function/delay reminder by the length count
Length of plain embroidery bottom line	Length of plain embroidery bottom line.The value ranges from 0.00 to 900000.00.The unit is mm.
Flat embroidery per stitch bottom line correction amount	When working flat embroidery, the amount of correction per stitch bottom line.The value ranges from (0.00 to 900000.00) mm.
Flat embroidery shuttle	The calculated number of shuttles changed during flat embroidery work.The value ranges from (0.00 to 900000.00)

3

number count	mm.
Flat embroidery mending embroidery method	Flat embroidery mending mode, optional values are: manual mending/automatic mending/full head mending/no mending
Flat embroidery drawing delay	The delay time of plain embroidery.The input value ranges from 0 to 100.
Flat embroidery drawing shrinkage	When working flat embroidery, the drawing line shrinks.The input value ranges from 0 to 70.
Number of backsliding stitches in flat embroidery broken thread	When the thread of flat embroidery is broken, the number of stitches is reversed.The input value ranges from 0 to 10.
Number of stitches in advance of breakpoint	The number of stitches in advance when the thread is broken.The input value ranges from 0 to 10.
Pin count	Number of stitch locks before embroidery begins.The input value ranges from 0 to 5.
Number of pin steps	Number of lock stitch steps before embroidery begins.The input value ranges from 0 to 5.
Pin length	Stitch length before embroidery begins.The input value ranges from (0 to 100) %.
XY movement limit	It's a switch.The default is "off", and when it is in the "on" state, it means that XY movement limits are allowed.
Embroidery drop bar limit	It's a switch.The default is "off" state, when it is in the "on" state, it means that the embroidery rod limit is allowed.
Yield presupposition	The input value ranges from 0 to 999999999.
Automatic closure of air frame allowed	It's a switch.The default status is off. When the status is on, the air frame is allowed to close automatically.
Gas frame automatically opens to allow	It's a switch.The default status is off. When the status is on, the air frame is allowed to open automatically.
Frame opening and closing delay	The input value of the opening and closing delay of the air frame ranges from 0 to 5000, the unit is ms.
Parking position selection after completion	The value can be the start point, offset point, or current position.
Offset point coordinates	The optional values are: X valid /Y valid /XY valid/invalid.

3

valid flag	
Offset point X coordinate	X coordinate value range is between (-9,999,999.99~9999999.99) mm.
Offset point Y coordinate	Y coordinate value range is between (-9999999.99~9999999.99) mm.
Valid Feeding point Coordinate	There are: X valid/Y valid/XY valid/invalid.
Feed point X coordinates	The x-coordinate of the feeding point. The input value ranges from -9999999.99 to 9999999.99.The unit is mm.
Feeding point Y coordinates	The y-coordinate of the feeding point. The input value ranges from -9999999.99 to 9999999.99.The unit is mm.
Refueling mode selection	Optional refueling methods. Optional options are: No refueling/refueling according to working time/refueling according to the number of working pins/continuous refueling. When the fuel oil mode is set to Fuel by working Pins, it must be used together with Fuel pin Number Interval. If the refueling mode is set to Refueling during working hours, it must be used together with Refueling Interval.
Fuel needle number interval	When the machine needle number interval reaches the set value, it will be refueled. When Fuel Mode Selection is set to Fuel by Working pins, you need to set the fuel pin interval.
Refueling interval	When the machine time interval reaches the set value, it will be refueled. When Select Fuel Mode is Fuel by Working Hours, you need to set the fuel interval.
Refueling duration	The duration of refueling the machine needs to be set.
Pin speed limit allowed	It's a switch. The default value is off. The value of the pin speed limit setting is only effective when it is in the "on" state.
Hook detection allowed	It's a switch. The default value is off. Check whether the hook is back in place. The parameter is on. After cable cutting is complete, check whether the hook knife returns to the position.

	If not in place, report "hook knife is not back"; If the parameter is off, the hook is not detected after cable cutting.
Pin position 1 speed limit	Pin lever 1 Maximum allowable spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 2 speed limit	Pin lever 2 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 3 speed limit	Pin lever 3 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 4 speed limit	Pin lever 4 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 5 speed limit	Pin lever 5 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 6 speed limit	Pin lever 6 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 7 speed limit	Pin lever 7 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 8 speed limit	Pin lever 8 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 9 speed limit	Pin lever 9 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in

	conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 10 speed limit	Pin lever 10 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 11 speed limit	Pin lever 11 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 12 speed limit	Pin lever 12 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 13 speed limit	Pin lever 13 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 14 speed limit	Pin lever 14 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.
Pin position 15 speed limit	Pin lever 15 allows maximum spindle speed. 0 indicates that the spindle does not speed limit. This parameter must be used in conjunction with Pin Speed Limit Allowed. The pin speed limit can be set only after the on state is selected.

2.3.3Embroidery function
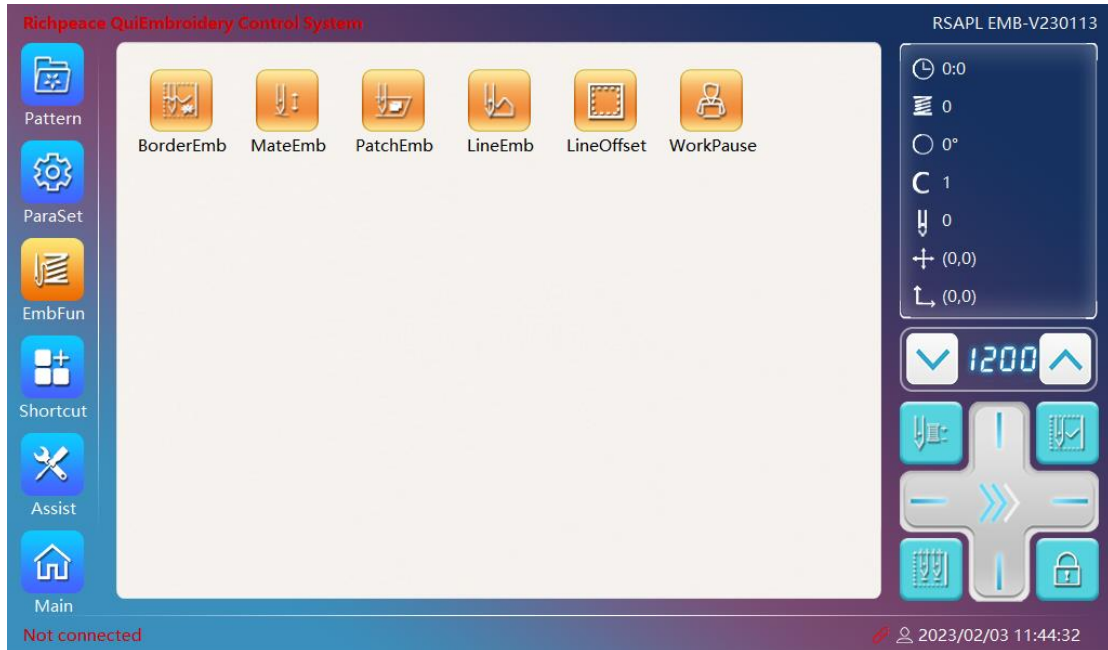
(Figure 2.3.3 Embroidery function)

Click the "Embroidery Function" button and the interface as shown in Figure 2.3.3 will be displayed.

Embroidery features include the following information:

1. Border embroidery

2. Piece embroidery

3. Cloth embroidery

4. Open line embroidery

5. The stitch is offset

6. Work is suspended

3

1. Border embroidery

This function by moving the embroidery frame, along the actual embroidered pattern (scaled and rotated pattern) around the path of embroidery a week, to the embroidered pattern added a rectangular border.
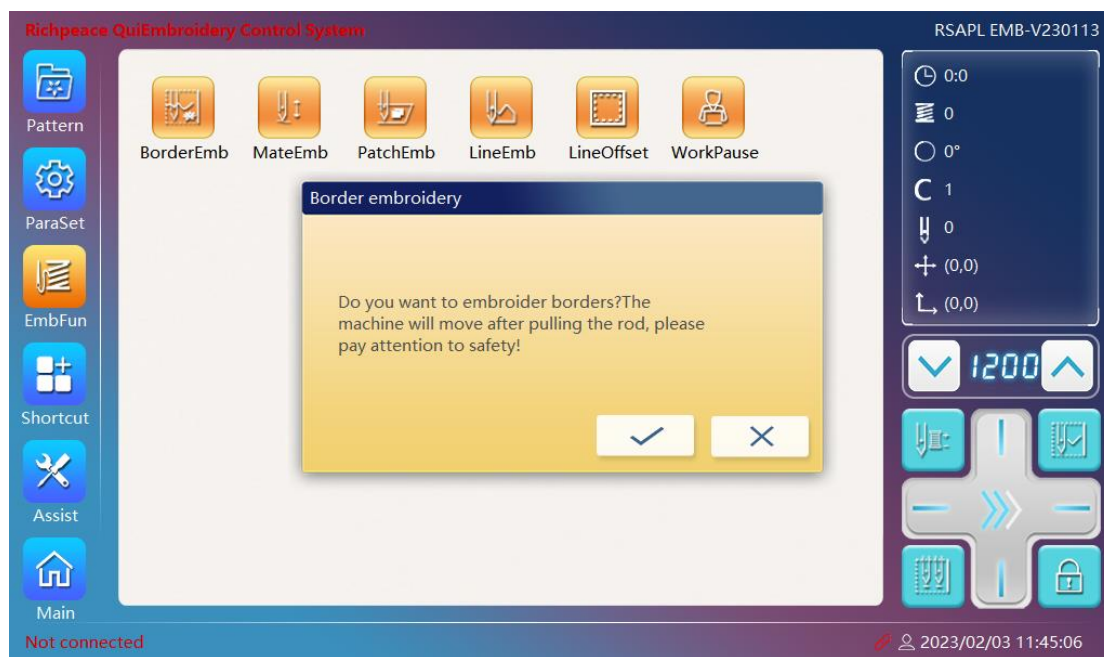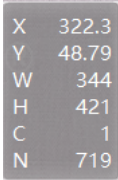
(Figure 1.0 Border embroidery)

Click the "Border Embroidery" button to pop up the "Border Embroidery" pop-up window, prompting "Do you want to do border embroidery? The machine will move after pulling the rod, please be careful!" , as shown in Figure 1.0.

(Figure 1.1Border embroidery)

When you click OK, the Data File Transfer dialog box is displayed. When the transfer is complete, the display area will display the border embroidery of the pattern. The interface is shown in Figure 1.1.

Parameter name	instructions
	Click the icon button to set the color order. See "3-color Sequence Settings in 2.3.1 Pattern Settings" for details.
X 322.3 Y 48.79 W 344 H 421 C 1 N 719	Click the icon to set the pattern parameters. See "2 Pattern Parameters in 2.3.1 Pattern Settings" for details.

2. Piece embroidery

(Figure 2 Piece embroidery)

This function is used to embroider the whole piece of fabric.

When you click the "Embroidery" button, the display area will display the border embroidery of the pattern, and the embroidery mode will appear in the upper menu on the right, as shown in Figure 2.

Parameter name	instructions
knit stitch	Perform the under-pin command
Lift the needle	Perform the needle lifting command
Quit the embroidery	Exit the embroidery mode

4
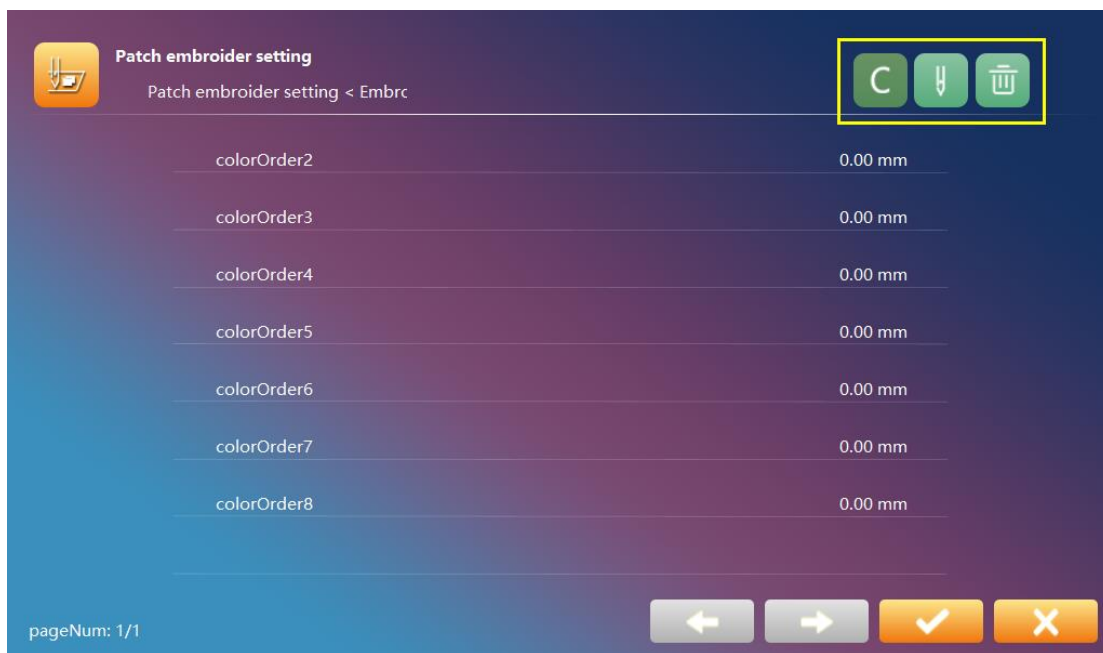
3. **Cloth embroidery**

(Figure 3 Cloth embroider)

Cloth embroidery is two kinds by color and by needle, by color is to set the color sequence corresponding to the frame shift distance, by needle is set for the frame shift distance, after setting the pattern embroidery to the current color sequence or the current needle will stop, the frame shift artificial cloth.Click the "Applique embroidery" icon to jump to the interface as shown in Figure 3.

Parameter icon	instructions
C	Each color order used by the pattern is displayed, and the length of the color order is set.
⬇	The stitch index and the move distance of the stitch index for the pattern are displayed, and the move distance of the stitch index can be set.
🗑	Zero up the color sequence, needle index and moving distance of needle index.

4

4. Open line embroidery
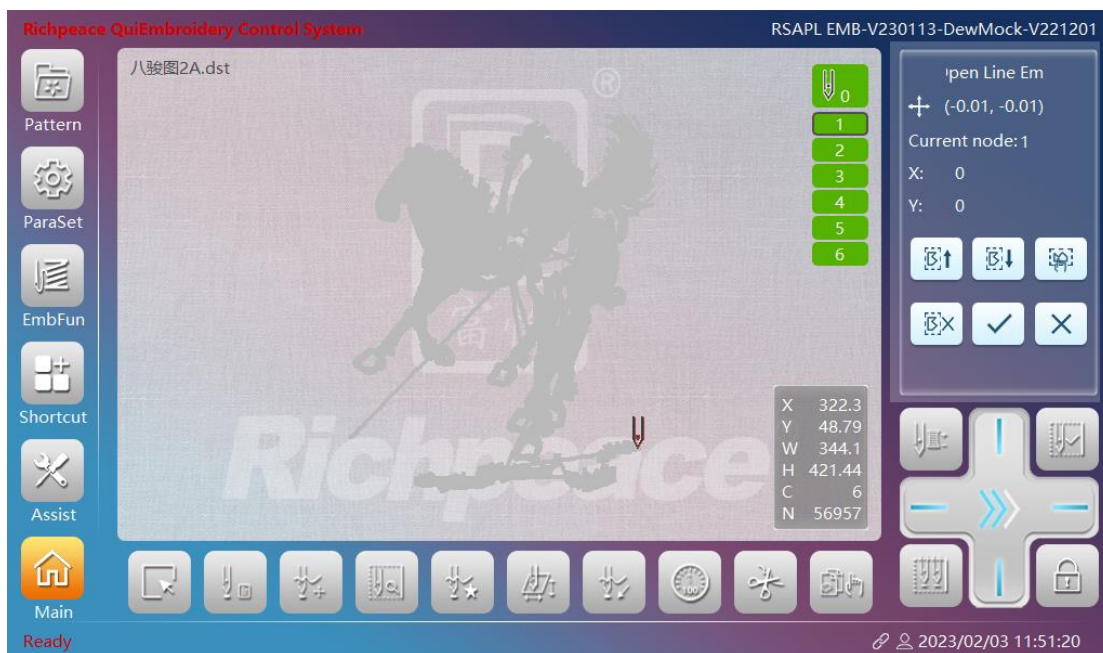
(Figure 4 Open line embroidery)

Click the "open line embroidery" button to jump to the interface as shown in Figure 4.

Parameter name	instructions
Current motor coordinate	Real-time display of motor current coordinates.
Current node	Artificially selected point, the index of the current node
The x-coordinate of the node	Current x-coordinate of the node
The y-coordinate of the node	Current x-coordinate of the node
![button]	Reduce the number of current nodes, the minimum number of nodes is 1, click this button, the current number of nodes is still 1.
![button]	Increase the number of current nodes, the maximum number of nodes is 20, click this button, the current number of nodes is still 20.
![button]	Repeated the number of nodes is adjusted. When the number of nodes is 20, the current number of nodes will change to 1 when you click this button.

4

	Clicking this button does not adjust the current number of nodes. Do not perform any operation.
	Click this button to save the current operation value.
	Click this button to exit the open stitch

2.3.4 Shortcut function

(Figure 2.3.4 Shortcut function)

Click the "Shortcut function" button, and the interface as shown in Figure 2.3.4 will appear.

The shortcut menu includes the following information:

1. All to zero

2. Flat embroidery hook line

3. Spindle point

4. Spindle rotation

5. Return to work

6. Return to the origin

7. Set the offset point

8. Return to the offset point

9. Locate rust spots

10. Pick up rust spots

11. Border check

12. Plain embroidery cutting thread

13. Cut the thread

14. Manual color change

15. Forward and backward

16. Quantitative frame transfer

17. Needle rod positioning

18. Empty border

19. Manually refuel
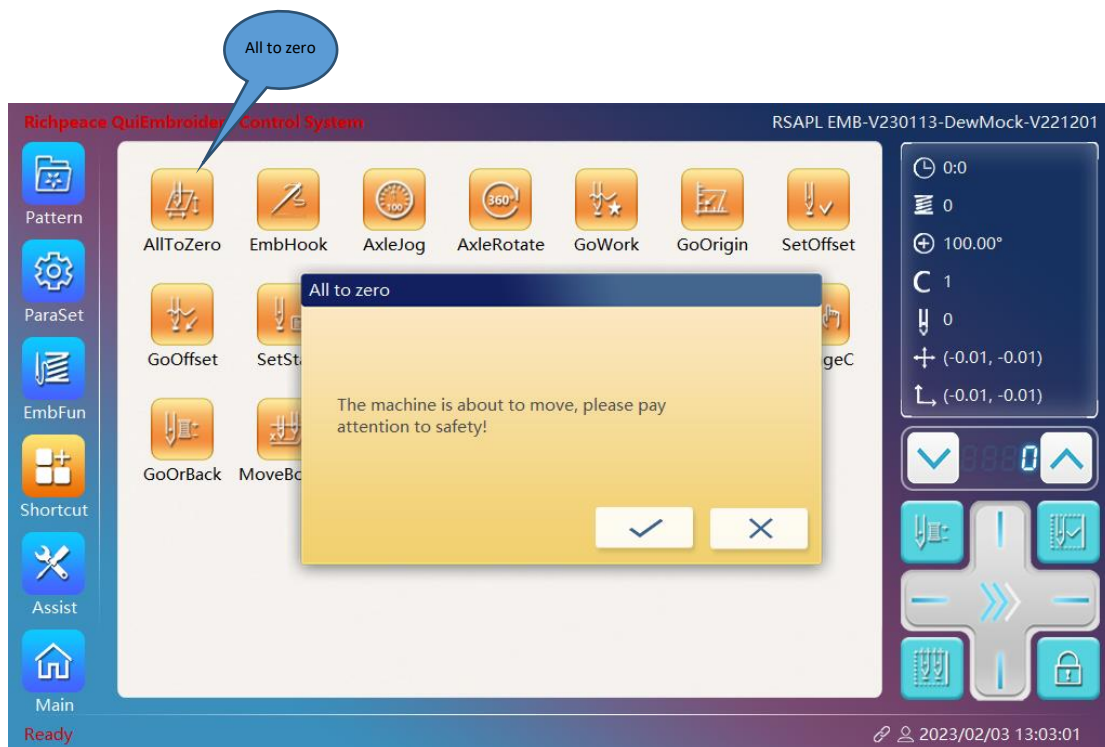
1. All to zero

(Figure1.0　All to zero)

Click the "All to zero" icon to pop up the "All to zero" pop-up window. "The machine is about to move, please pay attention to safety!" ;

2. Flat embroidery hook line

(Figure 2 Flat embroidery hook line)

Click the "Flat embroidery hook line" icon to pop up the "Flat embroidery hook line" pop-up window. "The machine is about to move, please pay attention to safety!" ;

3. Spindle point
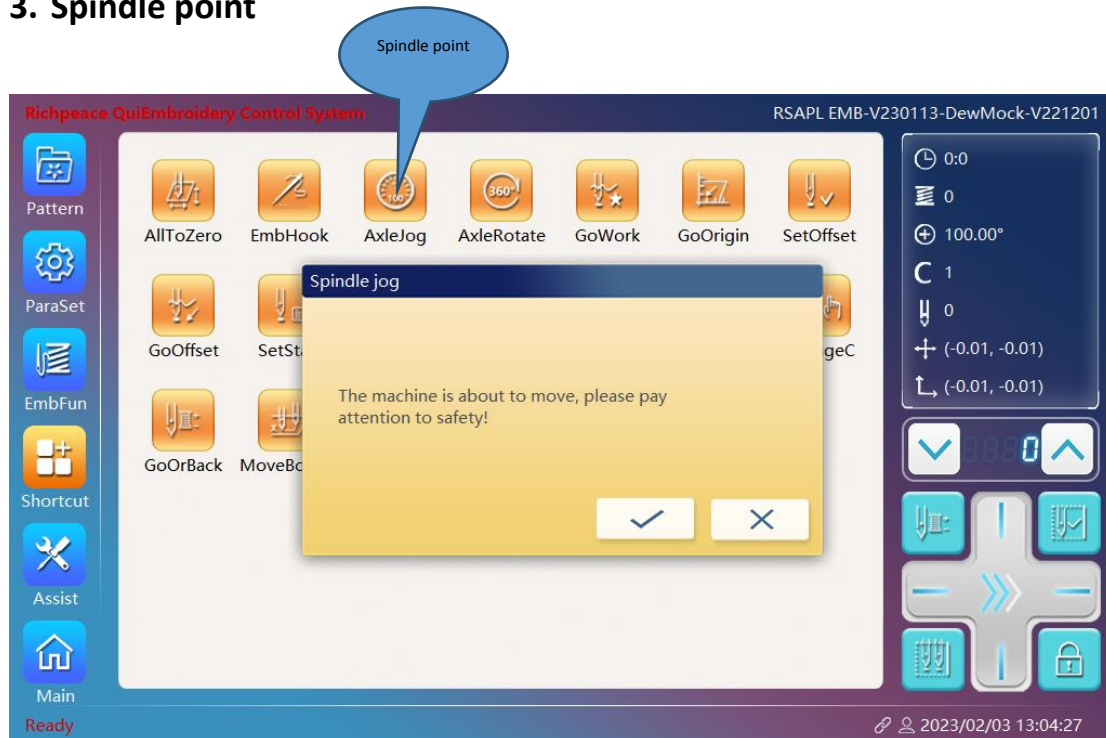
(Figure 3.0 Spindle point)

When the spindle is not in place, the point of the spindle can make the spindle in place.

Click the Spindle point icon, and the Spindle point pop-up window is displayed. "The machine is about to move,   please pay attention to safety!" , as shown in Figure 3.0.

Click the OK icon " ✓ " to perform the operation, the popup will disappear, and the spindle will be rotated to a position of 100 degrees. When you click the " ✕ " button, the popup window will disappear and the spindle will not move.

4. Spindle rotation
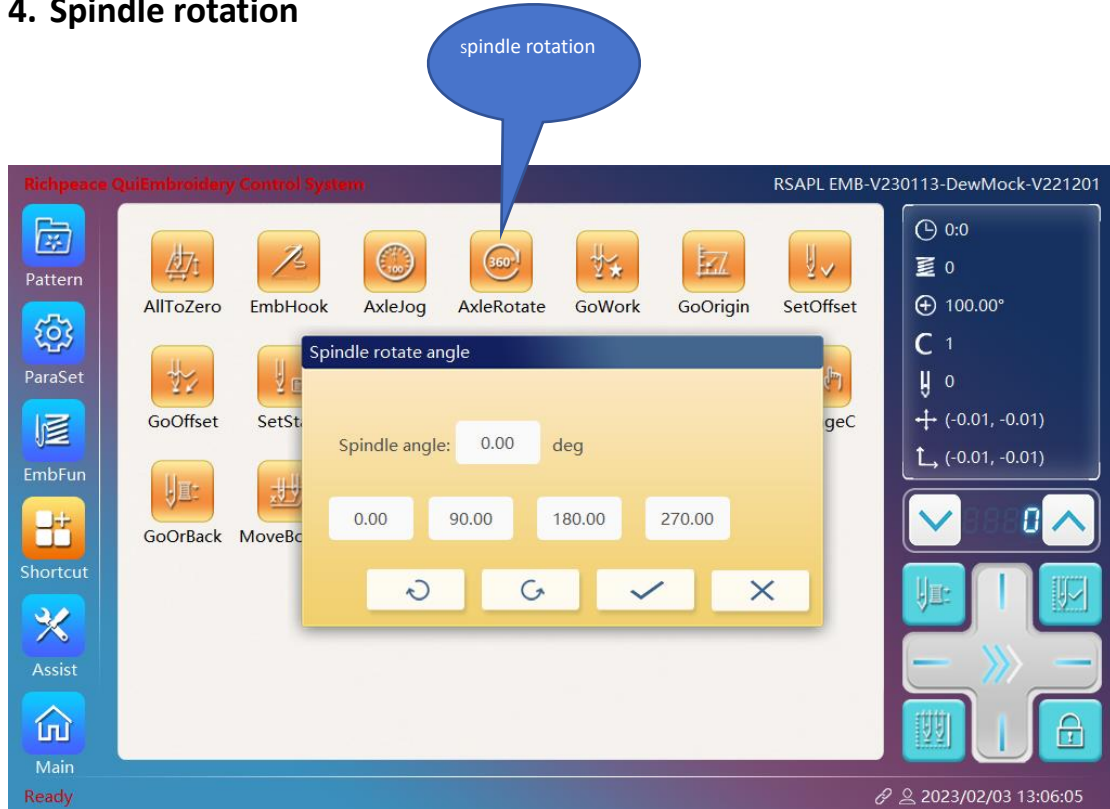
(Figure 4.0 Spindle rotation)

Click the "Spindle rotation" icon to pop up a pop-up window to set the spindle rotation Angle. Set spindle Angle, input value range from 0 to 360 degrees. Figure 4.0 shows the interface.
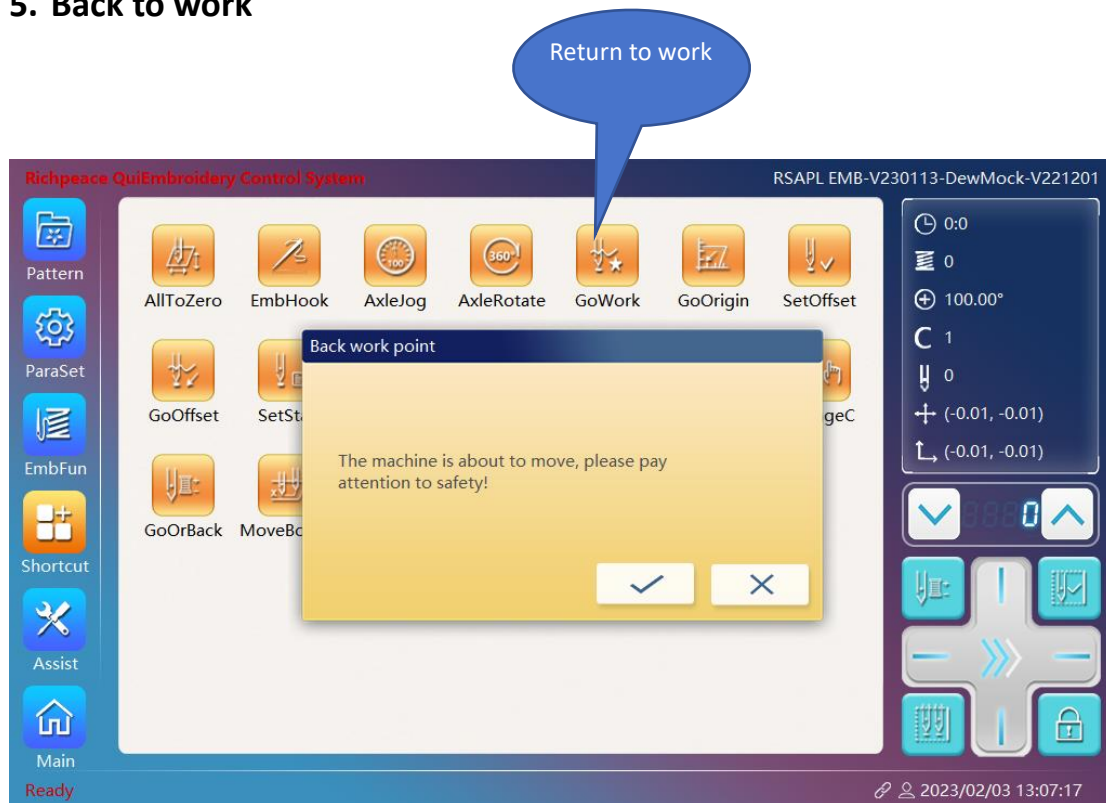
5. Back to work

(Figure 5.0 Back to work)

Click the Back to Work icon. The Back to Work window is displayed. "The machine is about to move, please pay attention to safety!" , as shown in Figure 5.0.

6. Back to the origin
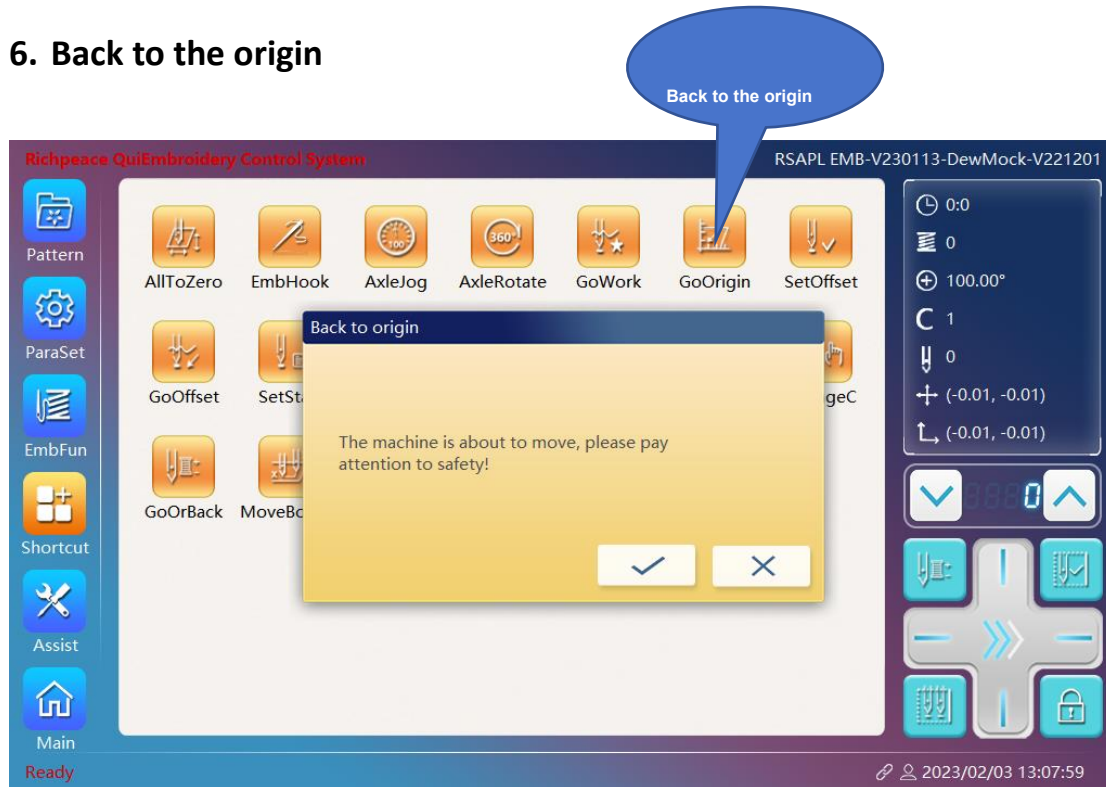
(Figure 6.0 Back to the origin)

Click the Back to the origin icon. The Back to the origin window is displayed. "The machine is about to move, please pay attention to safety!" , as shown in Figure 6.0.

7. Set the offset point
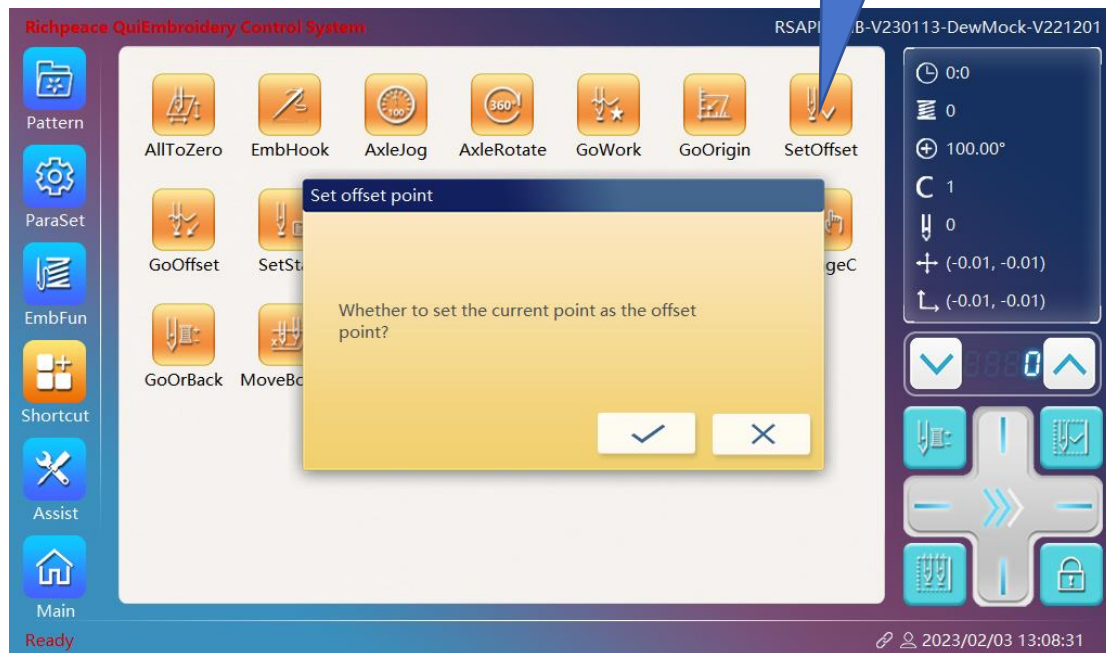
(Figure 7.0 Set the offset point)

The offset point is the position where the frame stops during the embroidery or after the embroidery is finished. After setting the offset point, when the machine encounters the offset command, it will automatically move the frame to the offset point, wait for the next operation, and automatically return to the offset point after the embroidery is finished.

Click the "Set the Offset point" icon. The Set the Offset point pop-up window is displayed. "Whether to set the current point as the offset point?" is displayed. , as shown in Figure 7.0.

8. Return to the offset point
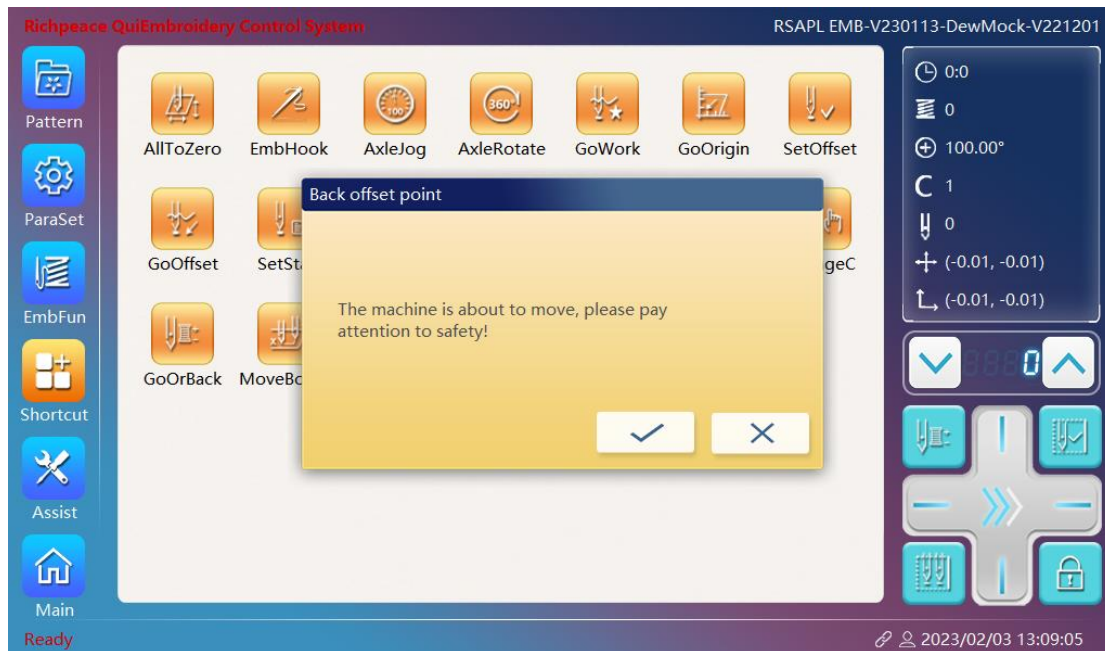
(Figure 8.0 Return to the offset point)

Let the frame quickly return to the offset point. This operation is valid only after the offset point is specified.

Click the Return to the Offset point button. The return to the Offset point window is displayed. "The machine is about to move, please pay attention to safety!" , as shown in Figure 8.0.

9. Set the rust point
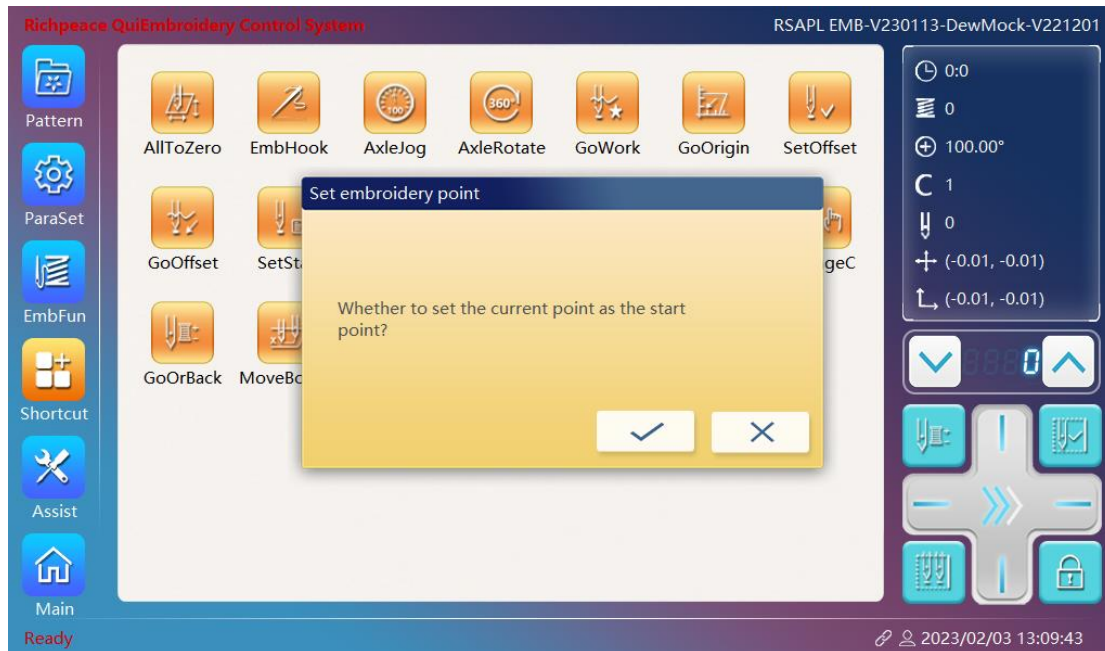
(Figure 9.0 Set the rust point)

After selecting the pattern in memory, before starting the embroidery, the operation of setting the rust point must be performed to determine the starting point of the pattern embroidery.

Click the "Set Rust Point" icon to display the "Set Rust Point" pop-up window. "Whether to set the current point as the start point?" is displayed. The interface is shown in Figure 9.0.

10. Back to the rust spots
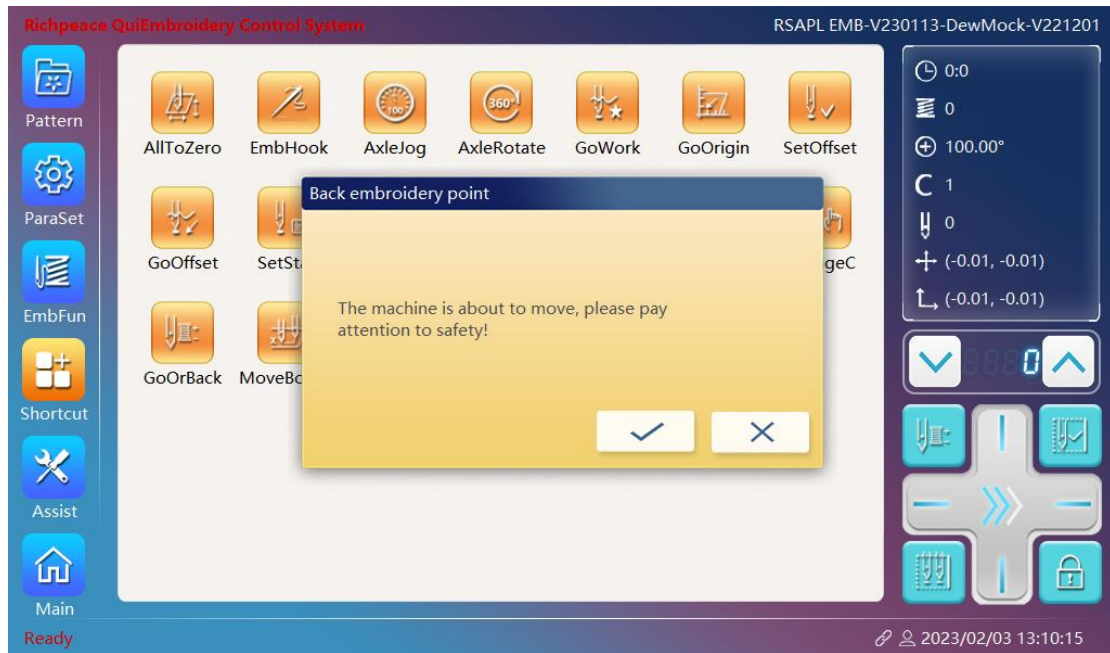
(Figure 10.0 Back to the rust point)

Return the frame to the starting point of the pattern work, and clear the X and Y coordinates. The computer has a memory function for the rust spots of the patterns. Under normal circumstances (such as no power off the embroidery frame, etc.), after re-selecting the pattern in the memory, the operation of "back to the rust point" will make the embroidery frame move to the rust point of the latest setting of this pattern; In abnormal cases, please pay attention to whether the limit switch works properly to prevent bumping the frame.

Click the "Back to the Rust Spots" icon, pop up the "Back to the Rust spot" pop-up window, indicating "the machine is about to move, please pay attention to safety!" , as shown in Figure 10.0.

5
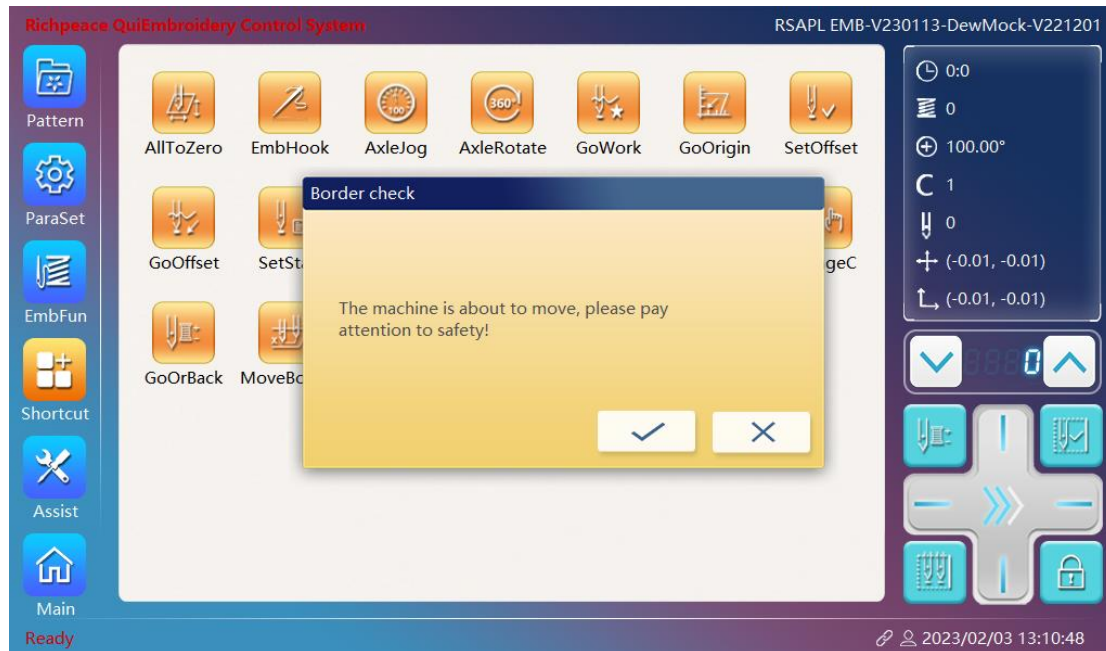
11. Border check

(Figure 11.0 Border check)

After the rust point is defined, the border inspection is carried out to avoid the embroidery of the border over the embroidery frame and damage to the machine.

Click the "Border check" icon, the "Border check" pop-up window appears, prompting "The machine is about to move, please pay attention to safety!" , as shown in Figure 11.0.

12. Plain embroidery cutting thread
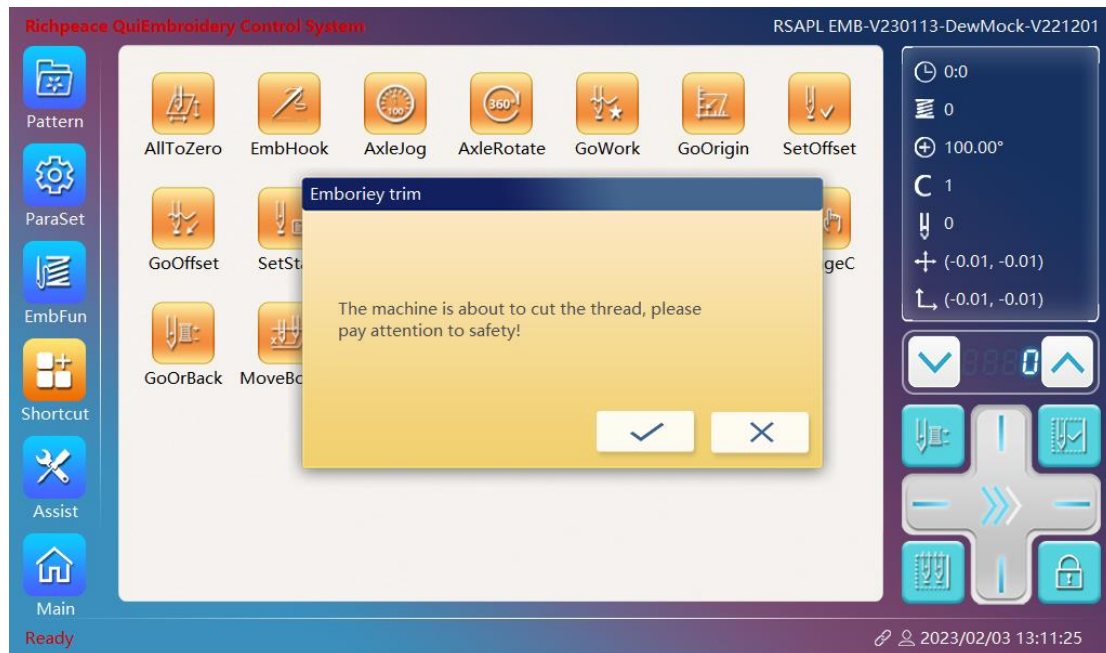
(Figure 12.0 Plain embroidery cutting thread)

Click the "plain embroidery cutting thread" icon, pop up "plain embroidery cutting thread" pop-up window, prompt "machine is about to cut thread, please pay attention to safety!" , as shown in Figure 12.0.
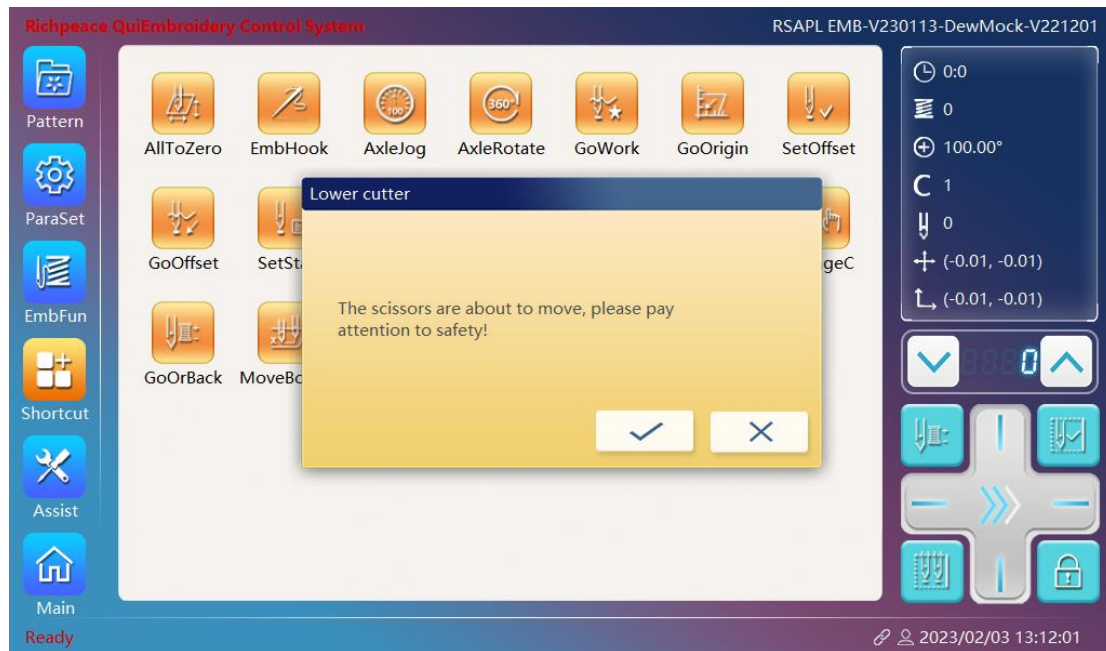
13. Cut the thread

(Figure 13.0   Cut the thread)

Click the "Cut the thread" icon, the "Cut the thread" pop-up window is displayed, indicating "Scissors are about to move, please pay attention to safety!" , as shown in Figure 13.0.

14. Manual color change
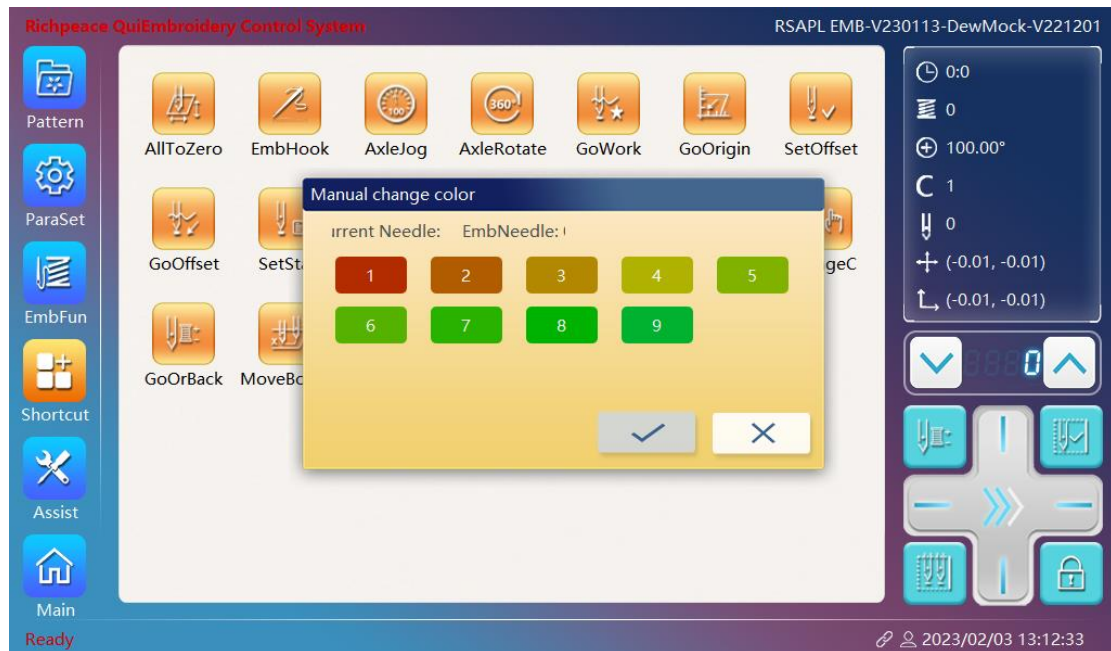
(Figure 14.0 Manual color change)

In some cases, a manual color change is required to select the stitch position for the work. Select the pin position (maximum pin position is 9) and select the color to change the color operation.

Click the "Manual color change" icon, and the interface as shown in Figure 14.0 will appear.

15. Forward and backward
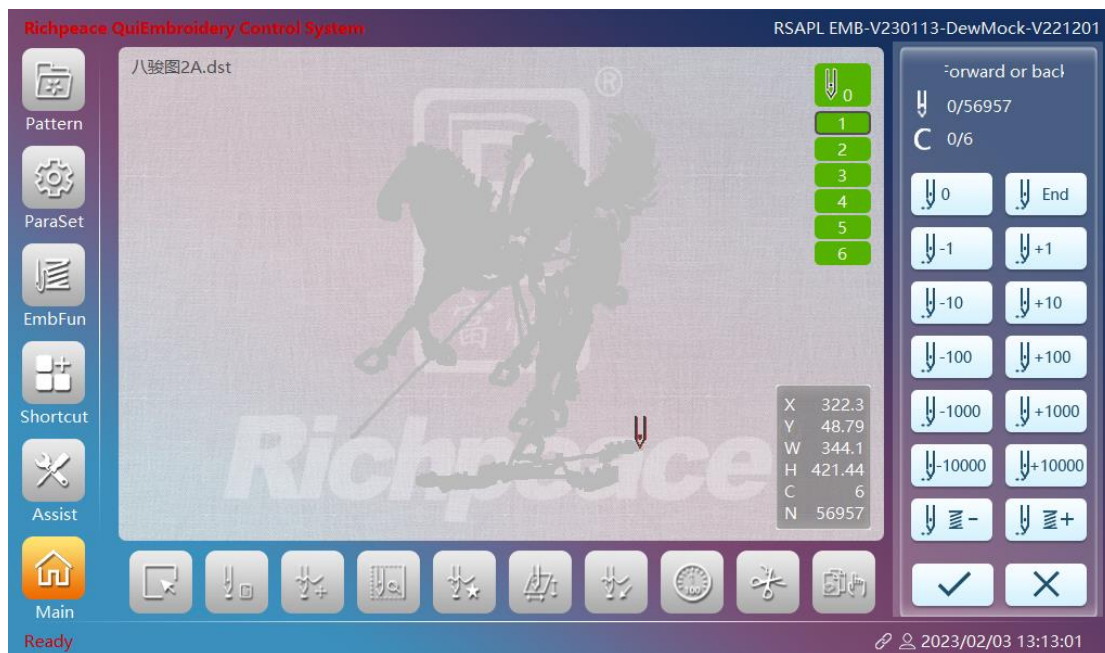
(Figure 15.0 Forward and backward)

Click the "forward and backward" icon, and the embroidery pattern will be displayed in the display area. Click the corresponding stitch button on the right, and you can see the embroidery operation process in the display area, as shown in Figure 15.0.

16. Quantity move frame
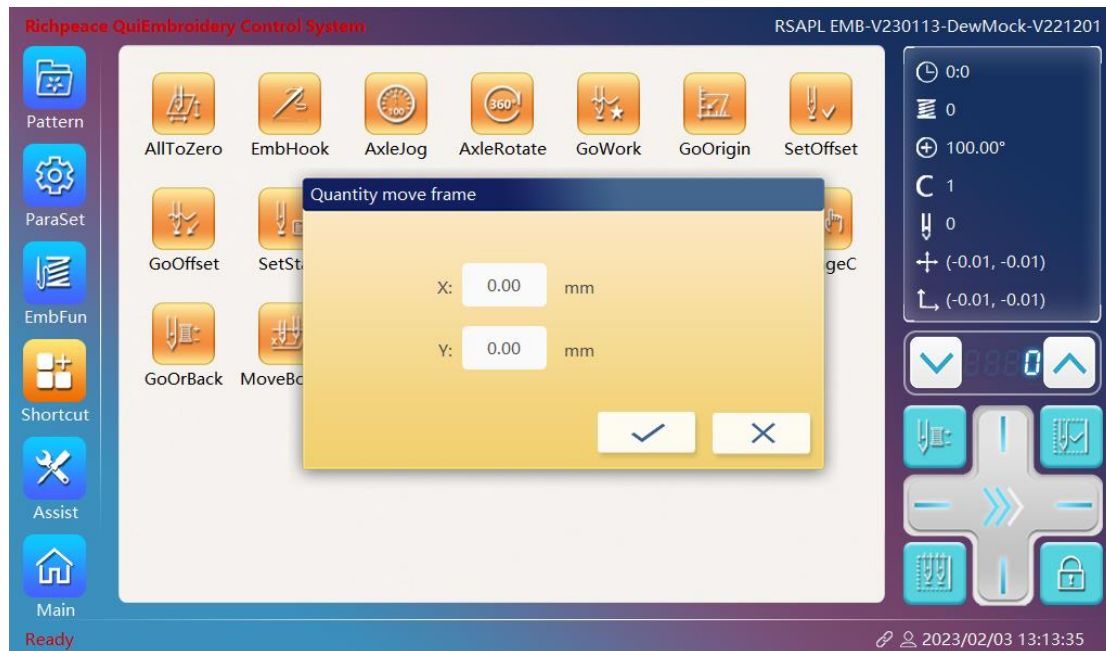
(Figure 16.0 Quantity move frame)

Click the "Quantity move frame" icon, the "Quantity move frame" pop-up window is displayed. Figure 16.0 shows the page. You can move the frame in X and Y directions. The input values of X movement and Y movement range from (-9999999.99 to 9999999.99) mm.

6

17. Needle rod position
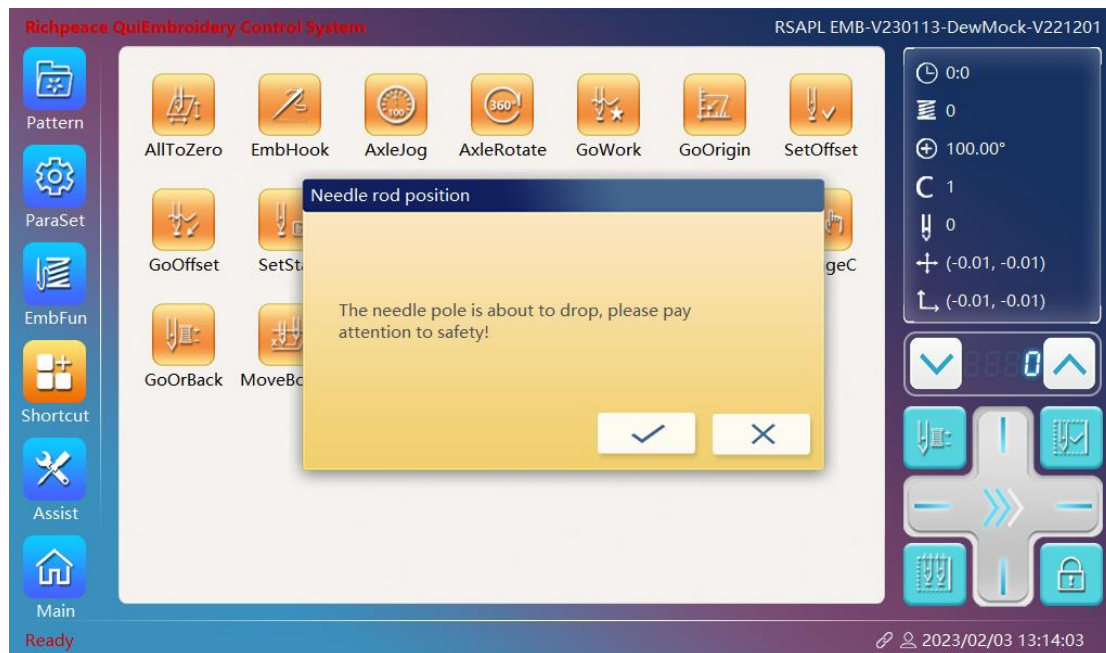
(Figure 17.0 Needle rod position)

Click the "Needle rod position" button, the "Needle rod position" pop-up window will appear. Prompt "The needle pole is about to drop, please pay attention to safety!" , as shown in Figure 17.0.
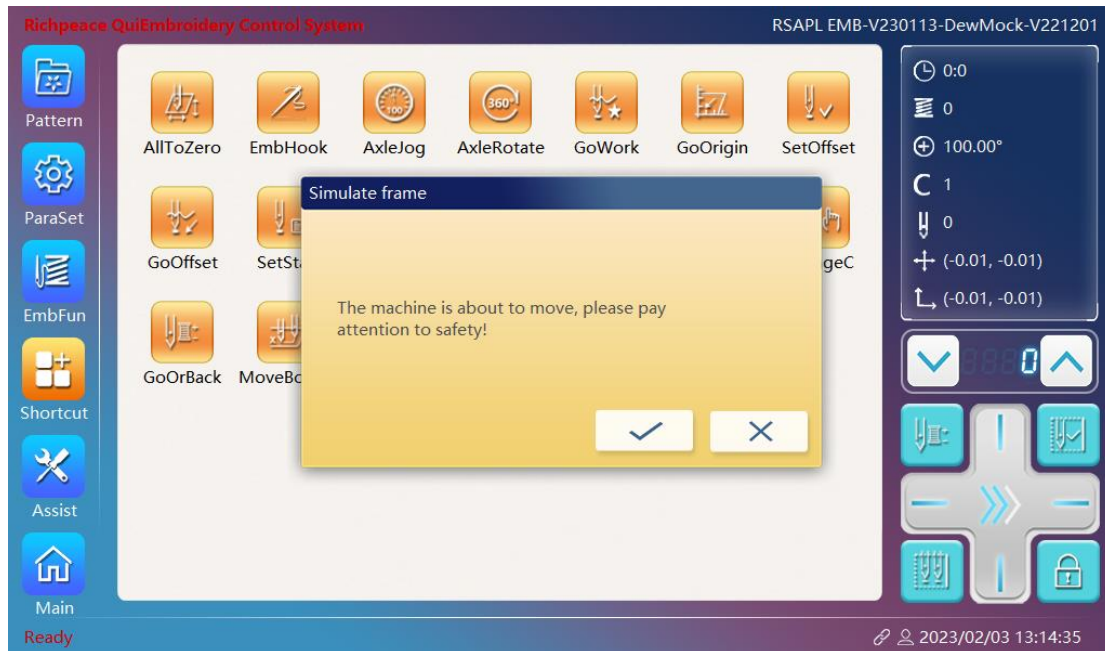
18. Empty border

(Figure 18.0 Empty border)

Determine the X and Y coordinates of the pattern border directly without tracing the stitch.

Click the "empty border" icon, the "empty border" pop-up window will pop up, prompting "The machine is about to move, please pay attention to safety!" , as shown in Figure 18.0.
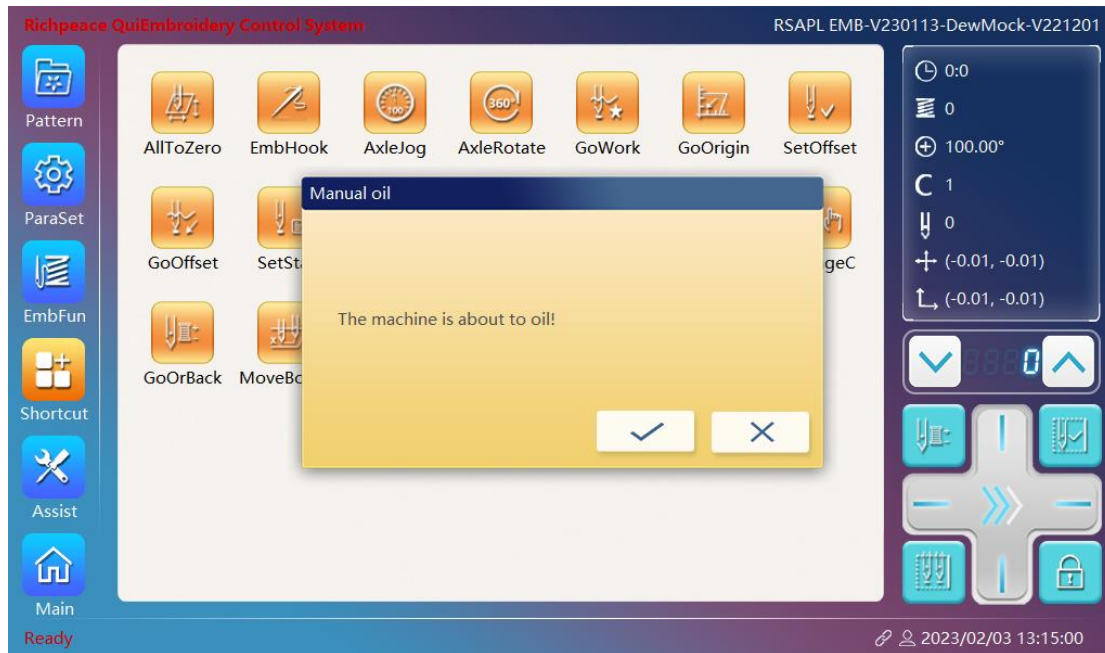
19. Manually refuel

(Figure 19.0 Manually refuel)

Click the "Manual Refueling" icon, the "Manual refueling" pop-up window will appear, prompting "The machine is about to reset the process, please pay attention to safety!" , as shown in Figure 19.0.

2.3.5 Auxiliary function

(Figure 2.3.5 Auxiliary function)

Click the "Auxiliary Functions" button, and the interface as shown in Figure 2.3.5 will appear.

Accessibility includes the following information:

1. Sensor signal

2. Control action

3. Upgrade the interface

4. Main control upgraded

5. Parameter import

6. Parameter export

7. Software Setting

8. Software authorization

9. Network management

10. Needle Setting

11. Time Setting

12. Common Setting

13. Production statistics

14. Version information

15. Peripheral plate information

16. Bottom line detection

17. Face line detection

18. Spindle test

19. Super user

20. Shutdown
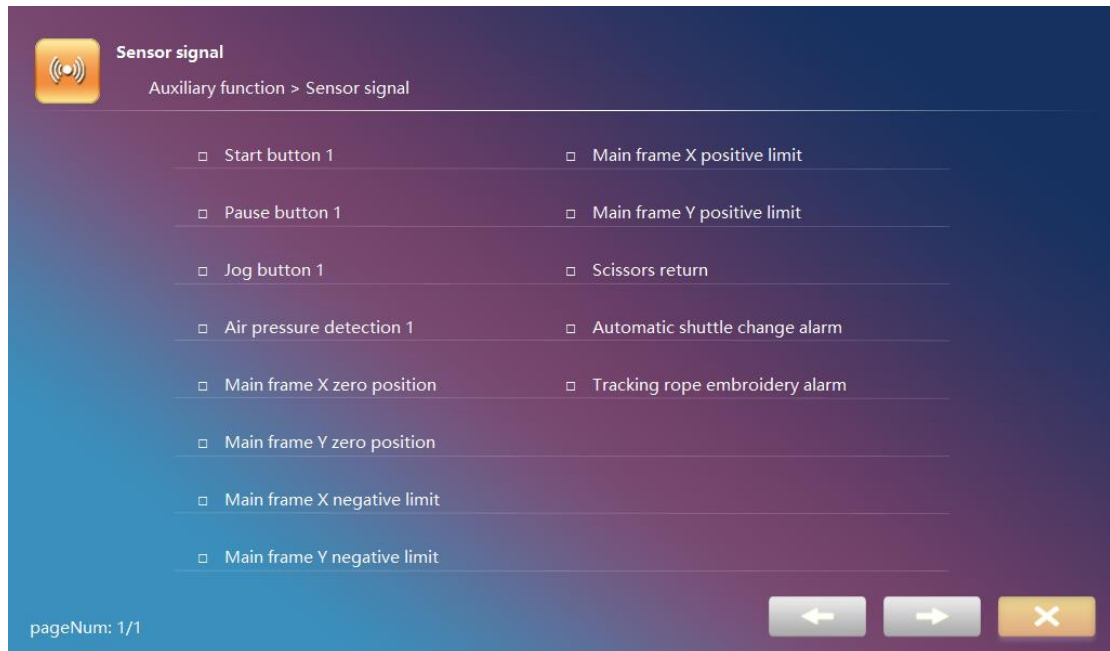
1. Sensor signal

(Figure 1.0 Sensor signal)

Click the "Sensor Signal" button, and the interface as shown in Figure 1.0 will appear.
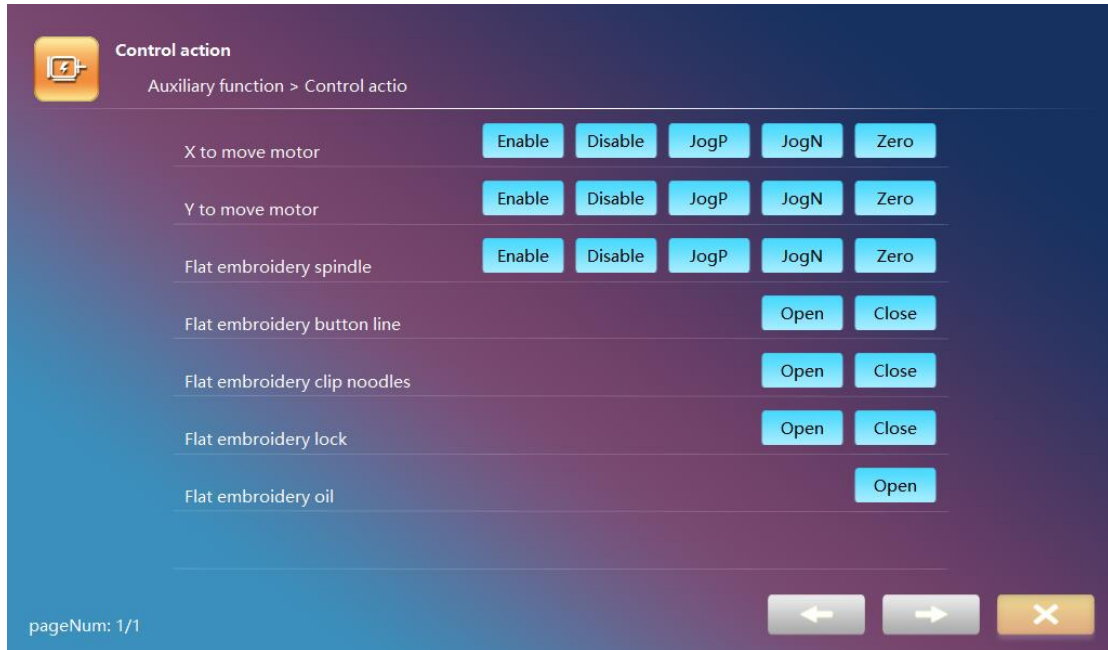
2. Control action

(Figure 2.0 Control action)

Click the "Control Action" button, and the interface as shown in Figure 2.0 will appear.

Parameter name	Instructions
X to mobile motor	Capacity: X to mobile motor Disabled: the X to the mobile motor is disabled Forward: X to the moving motor Reverse: X to the moving motor Zero: X goes to zero to the mobile motor
Y to mobile motor	Enabling: Y-directional mobile motor enabling Disability: Y to mobile motor disability Forward: Y to the moving motor Reverse: Y to the moving motor Zero: Y goes to zero to the mobile motor
Flat embroidery spindle	Ability: flat embroidery spindle ability Disabled: flat embroidery spindle enabled

	Is turn: flat embroidery is turn
	Reversal: flat embroidery reversal
Color changing motor	Turning: the color changing motor is turning
	Reverse: color changing motor reverse
	Zero: the color changing motor back to zero
Flat embroidery buckle line	Open: execute the flat embroidery buckle line
	Close: Cancel the operation of flat embroidery buckle wire
Flat embroidery clip line	Open: perform flat embroidery clip line
	Close: cancel the flat clip line operation
Flat embroidery lock head	Open: execute the flat embroidery lock
	Close: cancel the flat embroidery lock operation
Flat embroidery hook knife	Open: execute the flat embroidery hook knife
	Close: cancel the operation of the flat embroidery hook knife
Flat embroidered scissors	Open: perform flat embroidery scissors
	Close: cancel the flat embroidery scissors operation

3. Upgrade the interface
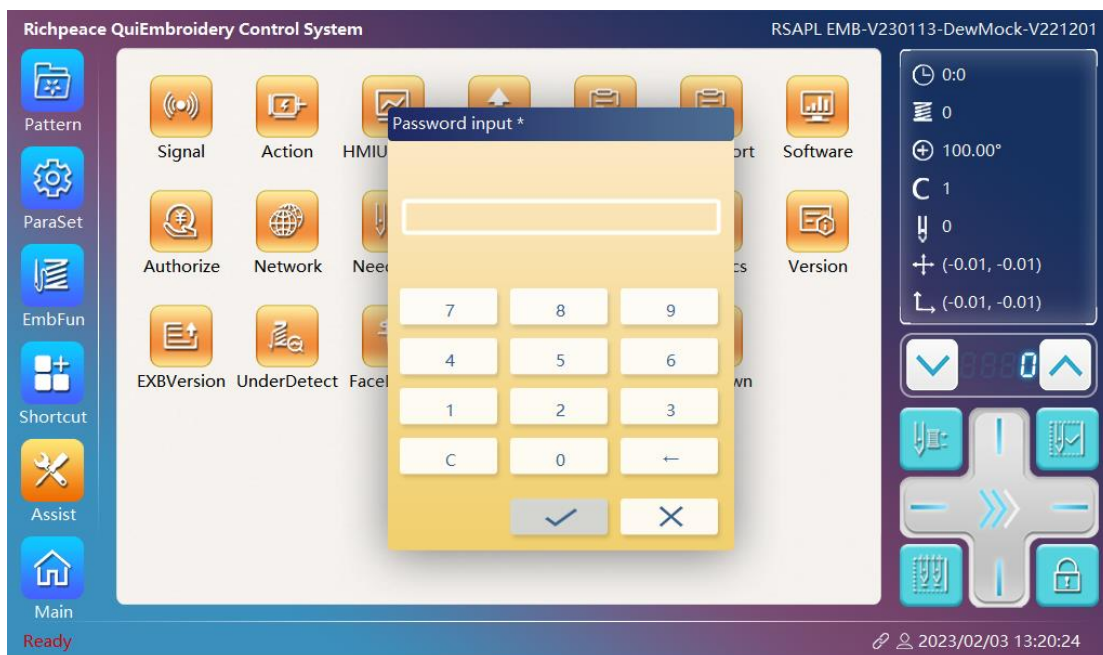
(Figure 3.0 Upgrade the interface)

When the user upgrades for the first time, need to enter the password, will pop up the "Password input" pop-up window, and need to insert the USB disk, if the USB disk is not inserted, will prompt the alarm "USB disk not detected!" , as shown in Figure 3.0.
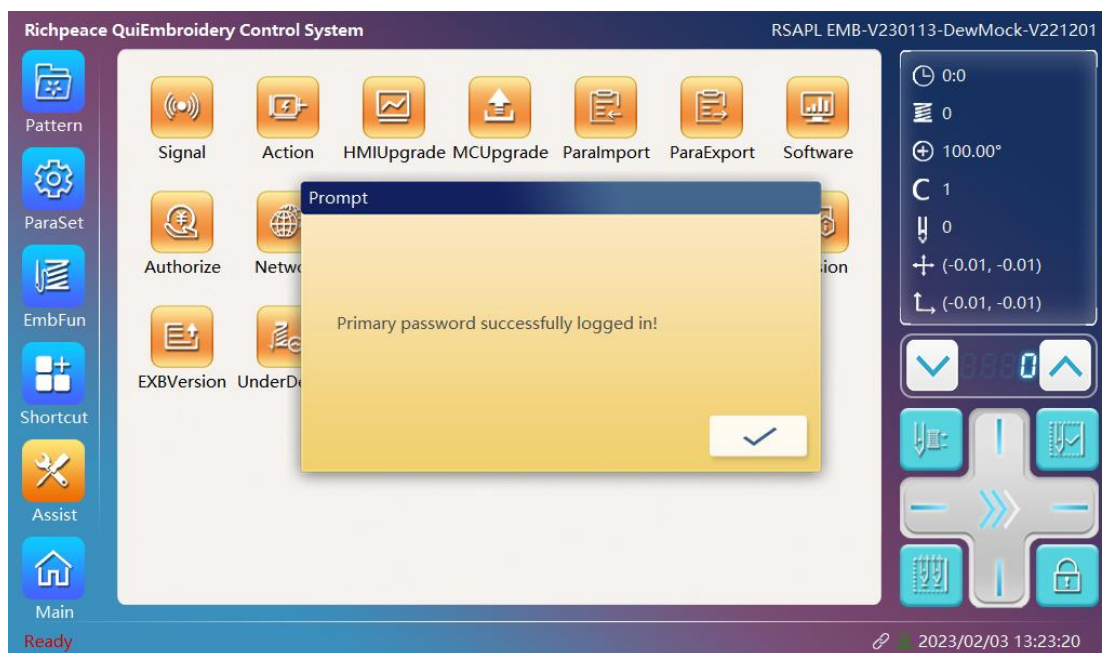
When the user enters "290810", the dialog box "Primary password successfully logged in" will be displayed. , as shown in Figure 3.1.

After a successful log-in, you do not need to log in again. At this time, the interface will display the folder and file on the USB disk; Select the corresponding interface or language package to upgrade.

4. Main control upgraded
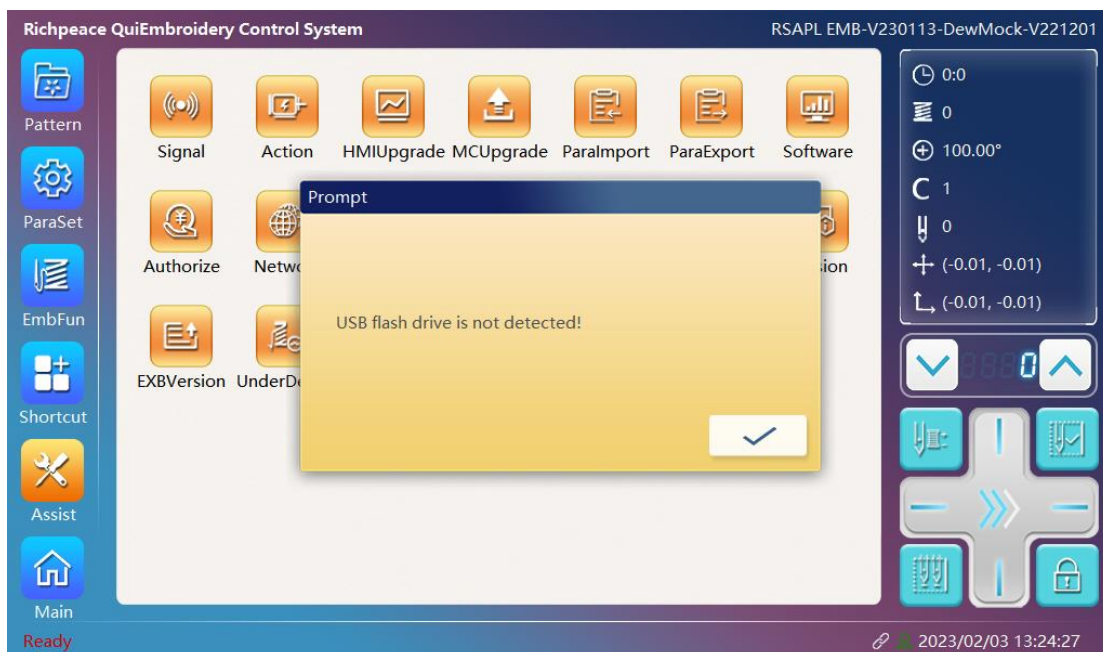
(Figure 4.0 Main control upgraded)

If the machine has been upgraded before booting, the "Password Enter" pop-up window will no longer pop up.

Before the master control upgrade, you need to insert the USB flash drive. If the USB flash drive is not inserted, the alarm "USB flash drive is not detected!" will be displayed. The interface is shown in Figure 4.0.
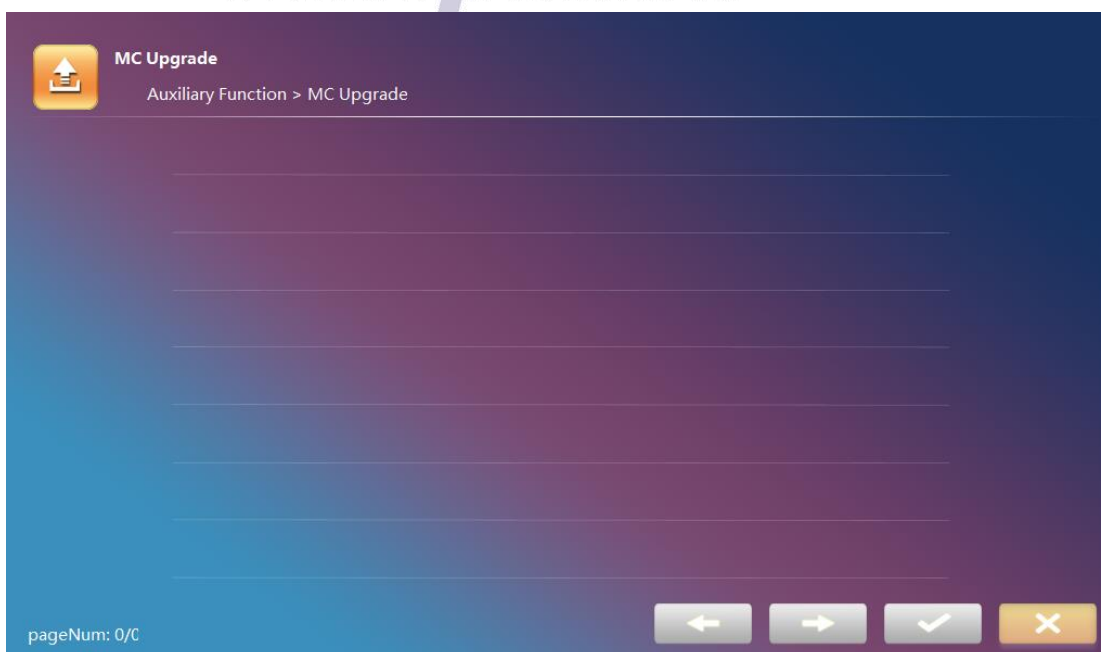
After the USB flash drive is inserted, click Upgrade. The interface displays the file whose extension name is.rnpu.
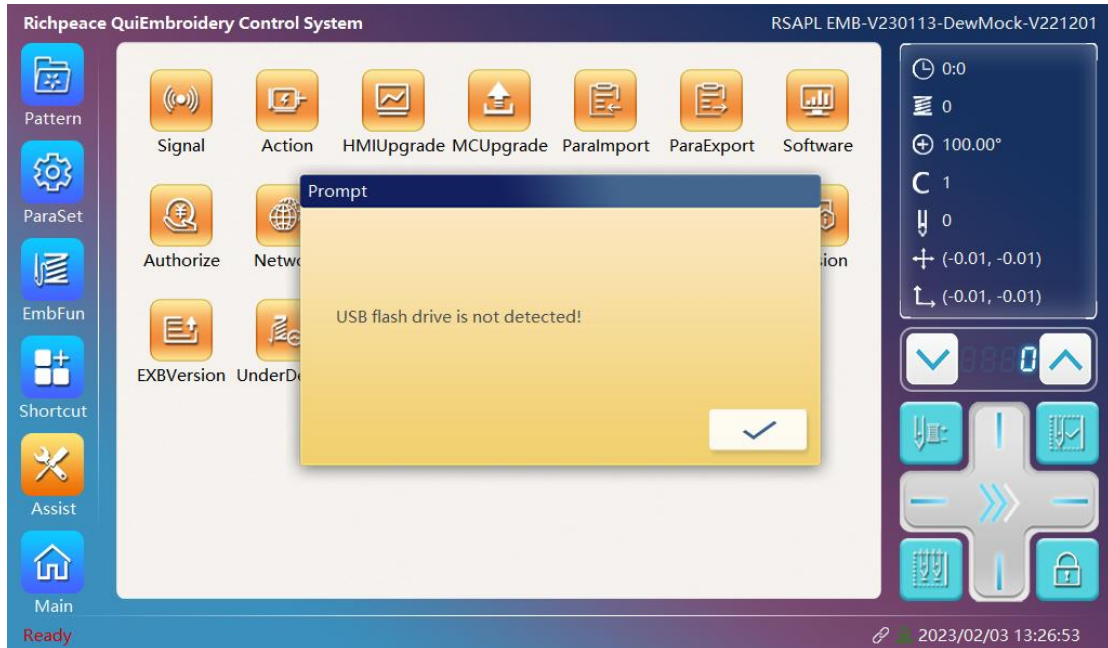
5. Parameter import

(Figure 5.0 Parameter import)

Before importing parameters, you need to insert a USB flash drive. If no USB flash drive is inserted, click the Import Parameter button. The message "No USB drive detected!" is displayed. , as shown in Figure 5.0.
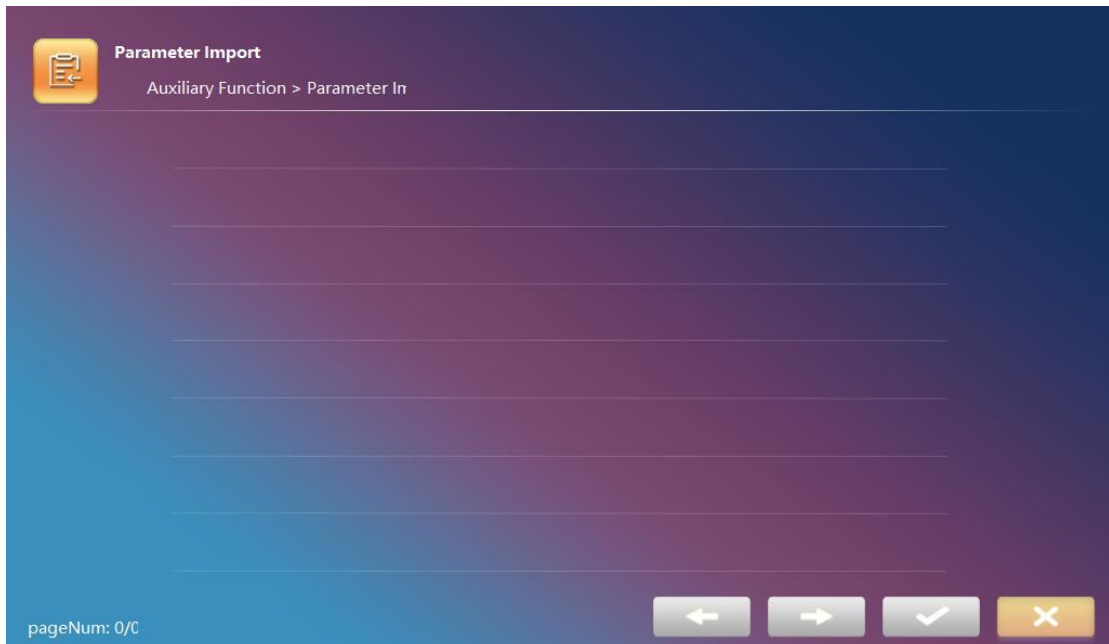

(Figure 5.1 Parameter import)

After you insert the USB flash drive and click the Parameter Import button, the interface

7

displays the file with the.paradat extension on the USB flash drive. Select the parameter file to be imported, as shown in Figure 5.1.
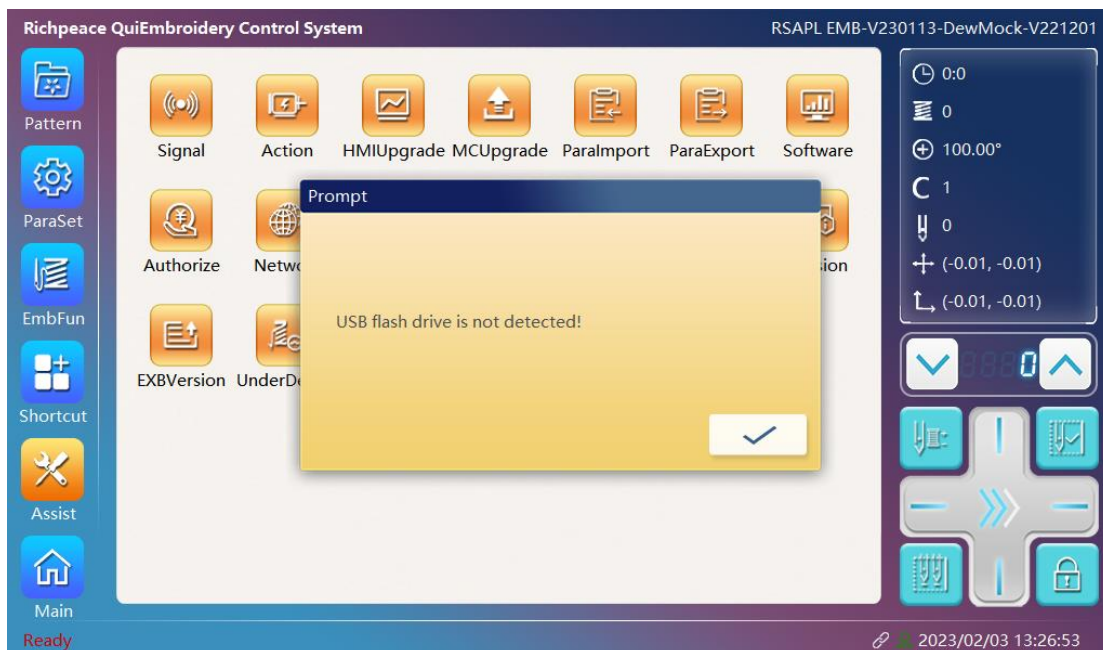
6. Parameter export

(Figure 6.0 Parameter export)

Before exporting parameters, you need to insert a USB flash drive. If no USB flash drive is inserted, click the Export Parameters button. The message "USB drive detected!" is not detected. , as shown in Figure 6.0.
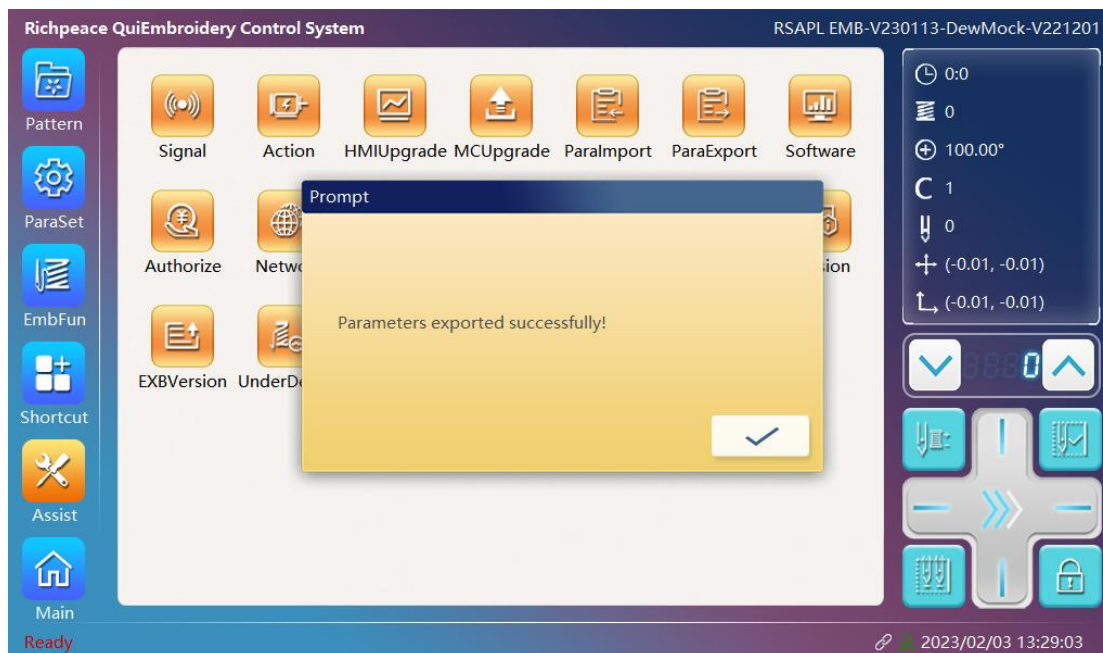
(Figure 6.1 Parameter export)

After the USB flash drive is inserted, click the Parameter Export button. The message

"Parameter exported successfully" is displayed. Figure 6.1 shows the page.

7. Software Settings
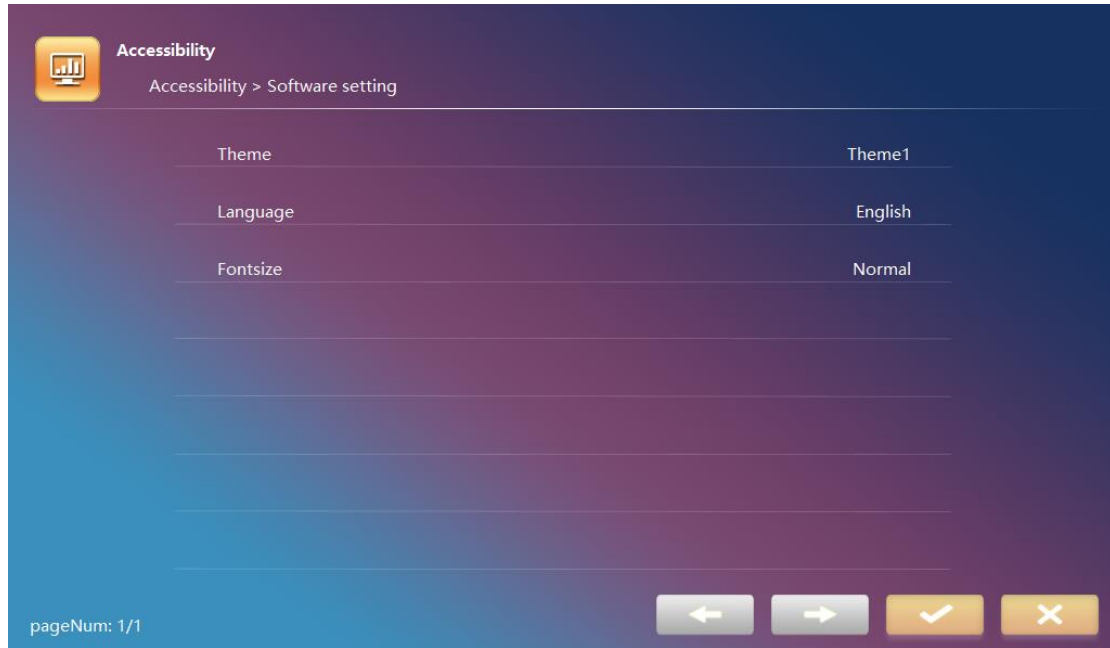
(Figure 7.0 Software Settings)

Click the "Software Settings" button, and the interface as shown in Figure 7.0 will appear. The meanings of each parameter are shown in the table below.

Parameter name	Instructions
theme	Select the theme style of the interface. The default value is topic 1
language	Different languages, to suit different requirements, can be switched at any time as required. The optional value for language is: Chinese /English
body size	Optional values for font size are: Normal/enlarged

8. Software authorization
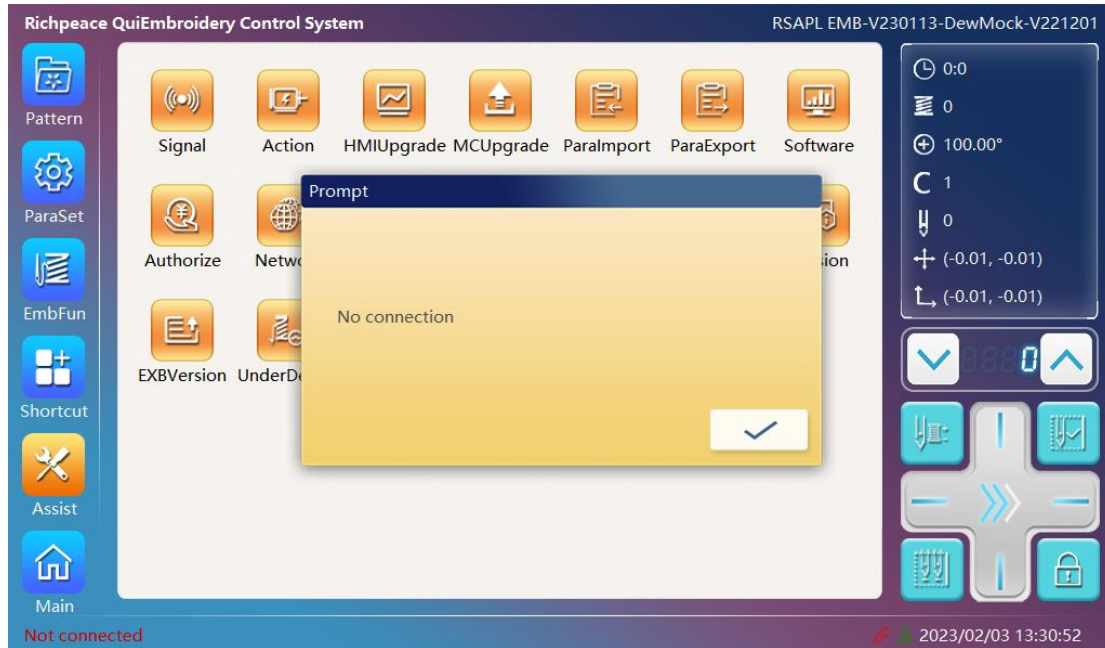
(Figure 8.0 Software Authorization)

If the machine is not powered on, click the Software License button, a message is displayed indicating that the device is not connected. The page shown in Figure 8.0 is displayed.
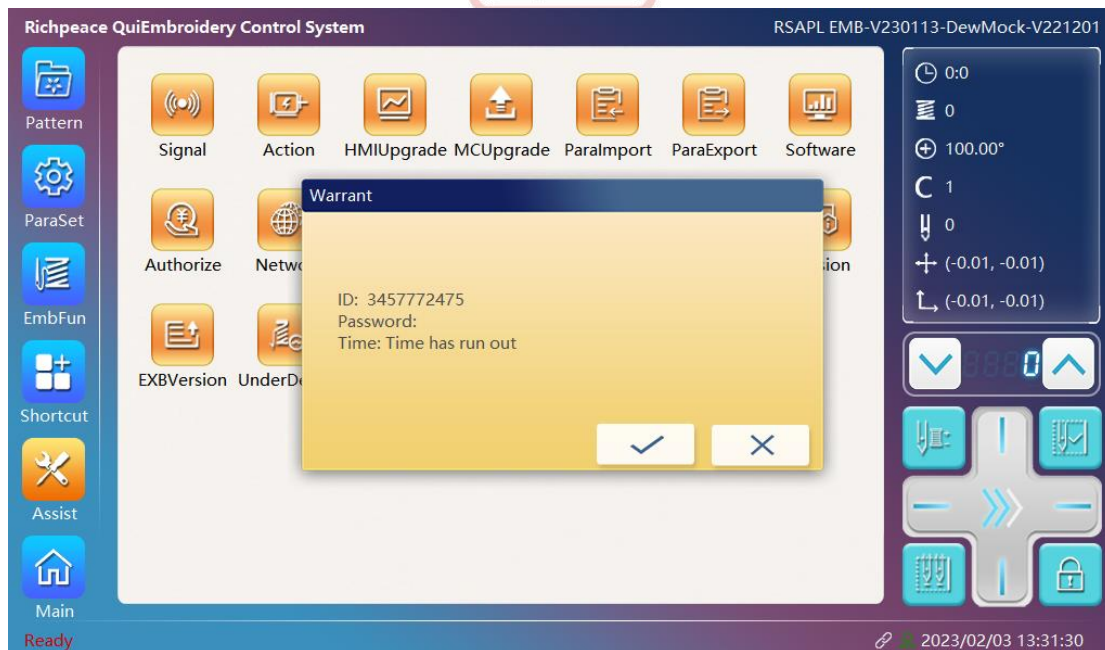
(Figure 8.1 Software Authorization)

If the machine is powered on, click the License button. The License window is displayed,

8

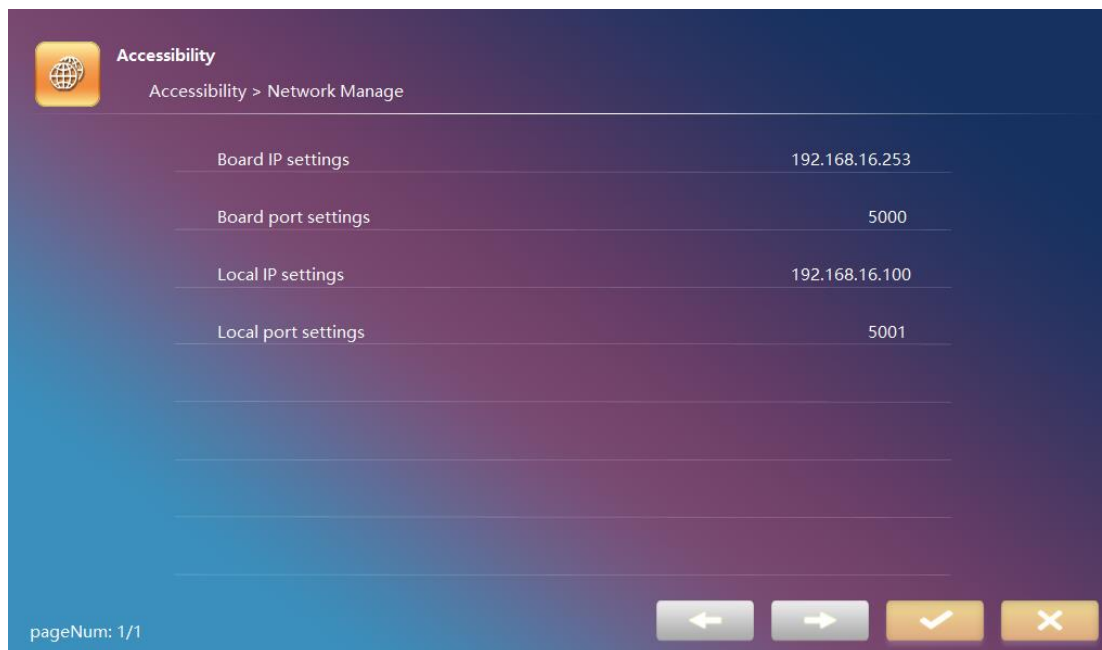showing information such as ID, password, and time.

When you click "OK", the authorization pop-up window will pop up. Enter the authorization code in the name input box. Figure 8.2 shows the page.
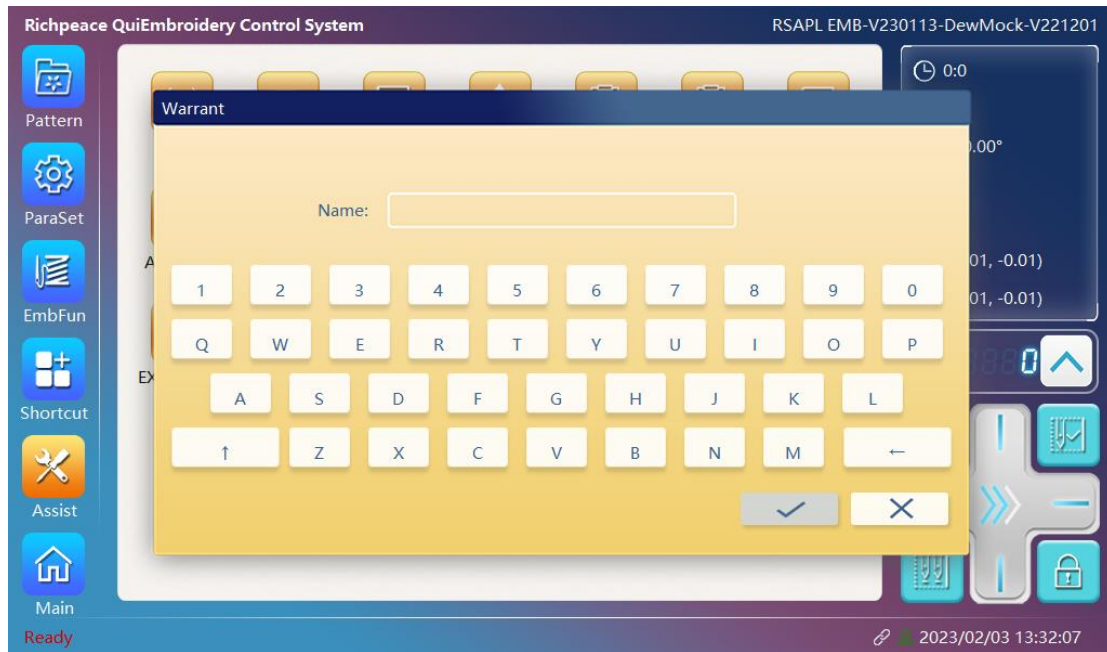
(Figure No.8.2 Software Authorization)

9. Network management

(Figure 9.0 Network Management)

When clicking the "Network Management" button, the interface will appear as shown in Figure 9.0.

Parameter name	Instructions
Motherboard 1IP setting	The default value is 192.168.16.253; you can set the IP for motherboard 1.
Motherboard 1-port setup	The default port number is 5000. The input values of the port number range from (0 to 65535).
Local IP Settings	The default value is 192.168.16.100; you can set the local ip.
Local 1-port settings	The default value is 5001, so you can set the local 1 port, and the input values range between (0 and 65535).

10. Needle setting
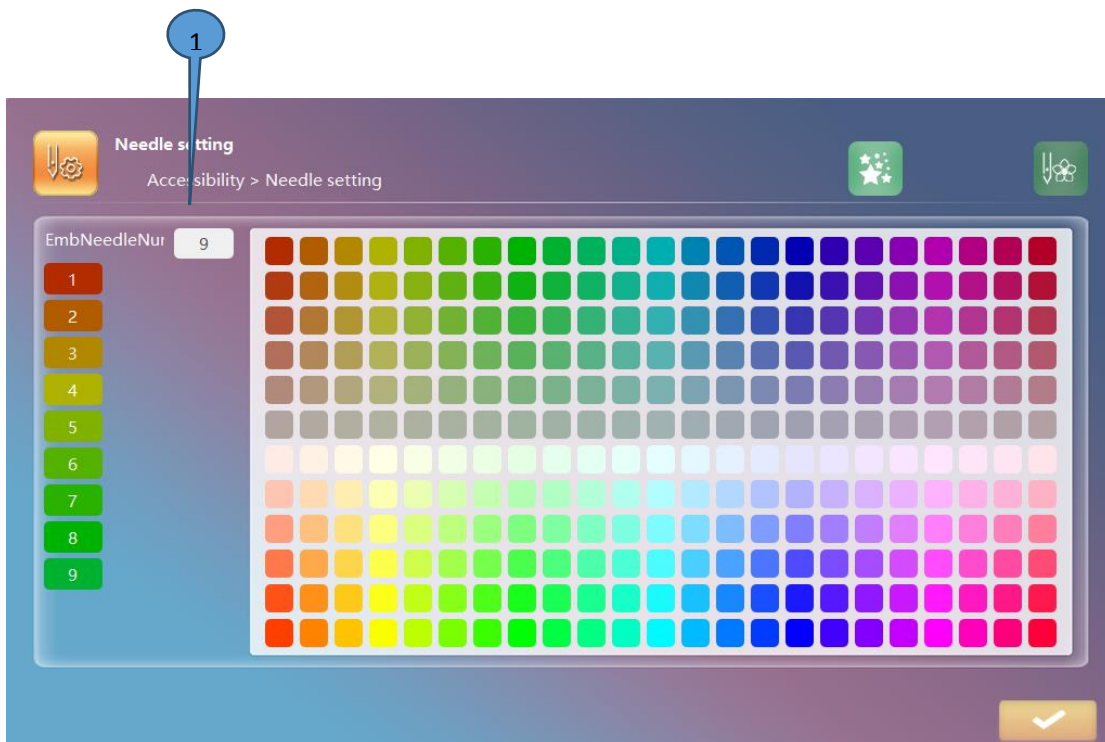
(Figure 10.0)

Click the needle rod setting icon " " and enter the interface shown in Figure 10.0. Click the number of embroidery needle rod icon, that is, mark the position of 1, will pop up the number of embroidery needle lever pop-up window. As shown in Figure Figure 10.1, the interface.
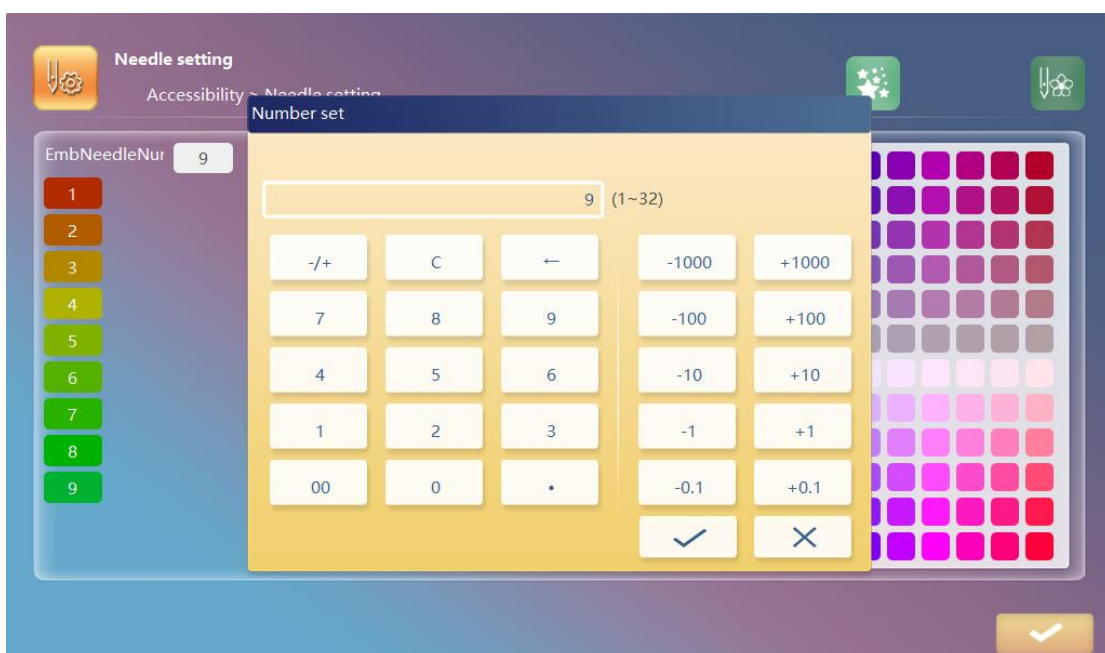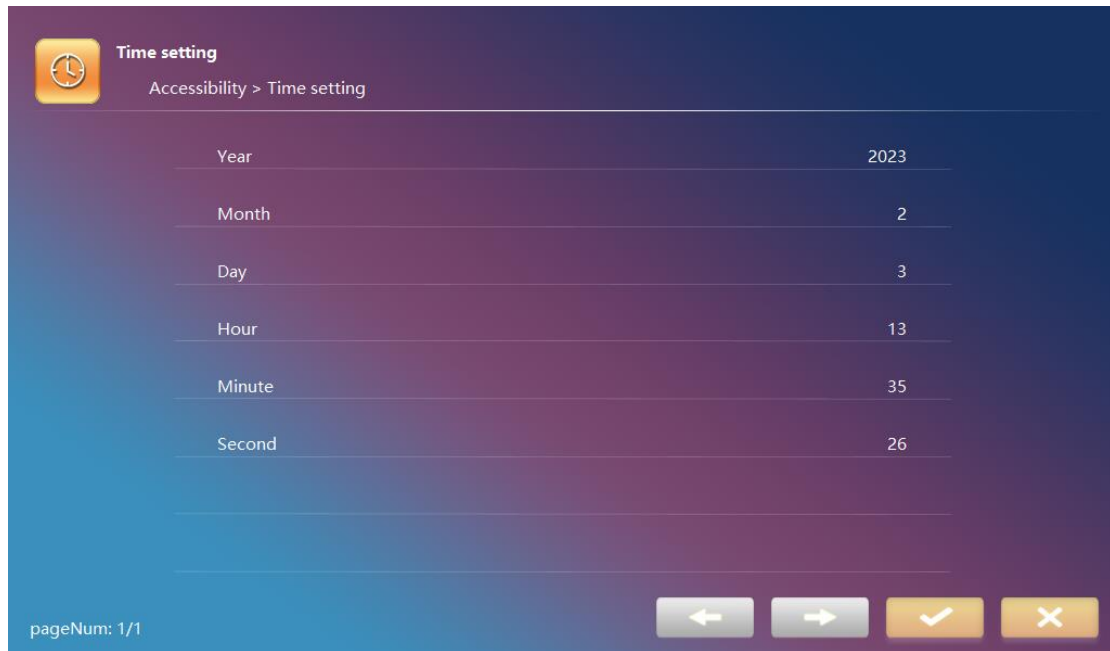
(Figure 10.1)

The input number represents the total number of needle rods in the machine. You can select the desired color from the color palette on the right to the corresponding needle rods. The specific operation is as follows:

(1) First select the embroidery needle lever, click the needle lever;

(2) Select the desired color and click it;

(3)Now you have the desired color on the needle

11. Time setting

(Figure 11.0 Time Setting)

Click the "Time Setting" button to display the interface as shown in Figure 11.0.
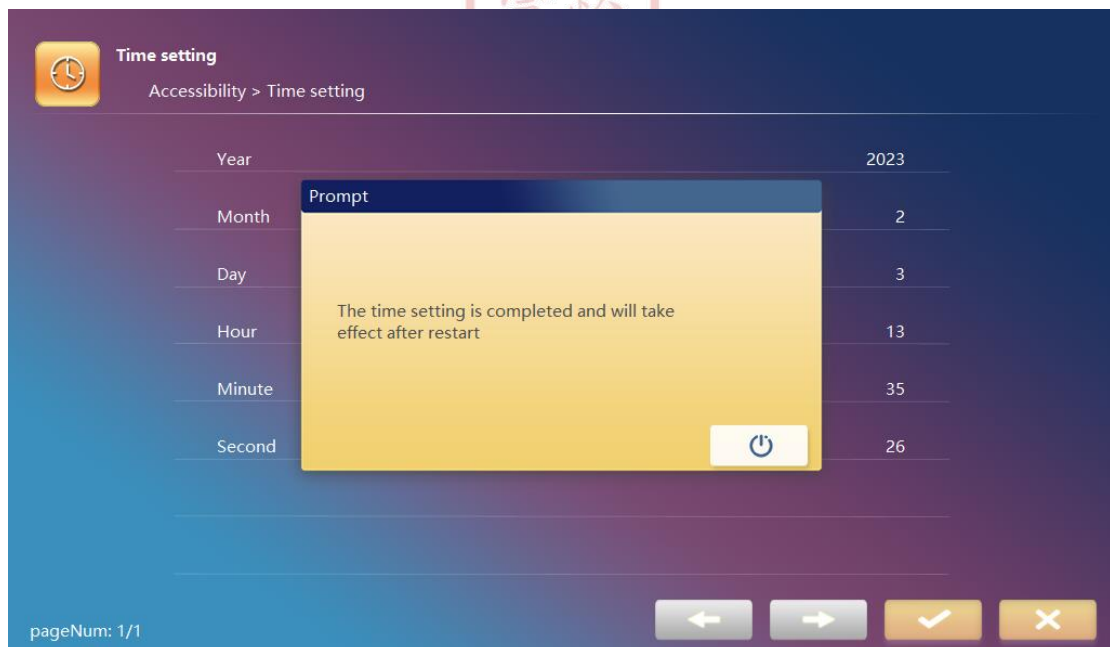
(Figure 11.1 Time Setting)

After the Settings are completed, when the "OK" button is clicked, a dialog box will pop up, as shown in Figure 11.1.

8

Parameter name	Instructions
year	The input values range from (1000 to 9999)
moon	The input values range between (1 to 12)
sky	The input values range between (1 and 31)
time	The input values range between (0 and 23)
component	The input values range between (0 and 59)
second	The input values range between (0 and 59)
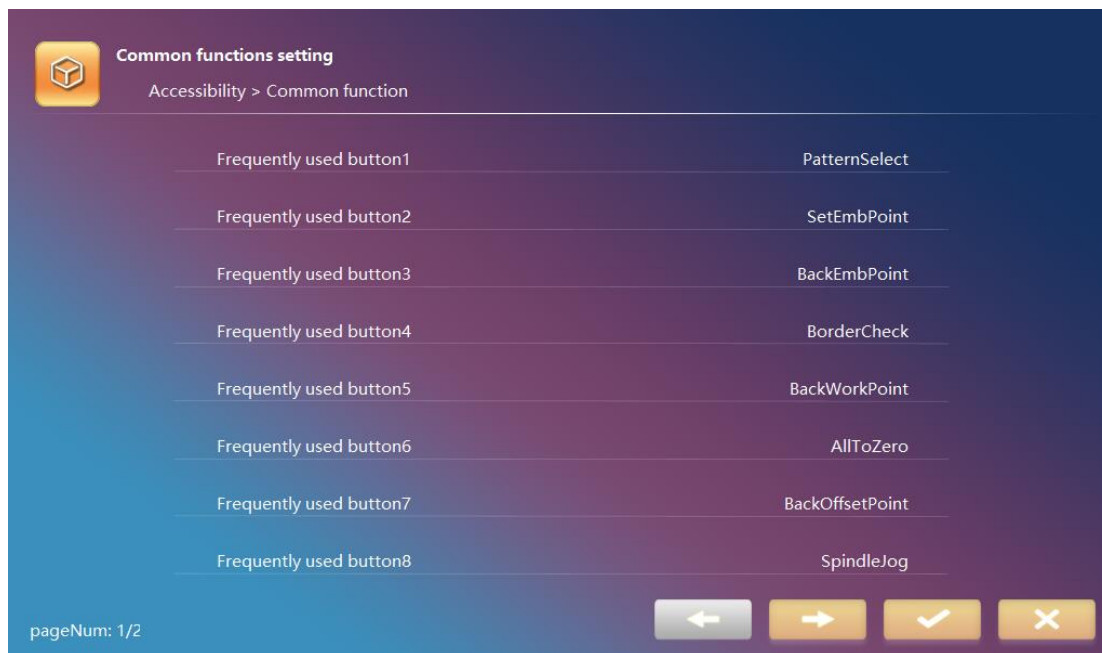
12. Common Setting

(Figure 12.0 Common Setting)

When you click the "Common Setting" button, the interface shown in Figure 12.0 will appear.

The optional values for these 10 commonly used buttons are: Pattern selection/No function/All zero/Plain embroidery pointing/Spindle point/spindle rotation/back to work point/back to origin/fixed offset point/back offset point/fixed rust point/back rust point/Border check/Plain embroidery cutting line/cut line/manual color change/forward backward/quantitative frame/iron positioning/empty frame/process reset/back loading point.

Setting Common Buttons can change the ICONS and functions of menu buttons at the bottom of the main screen.

13. Production statistics
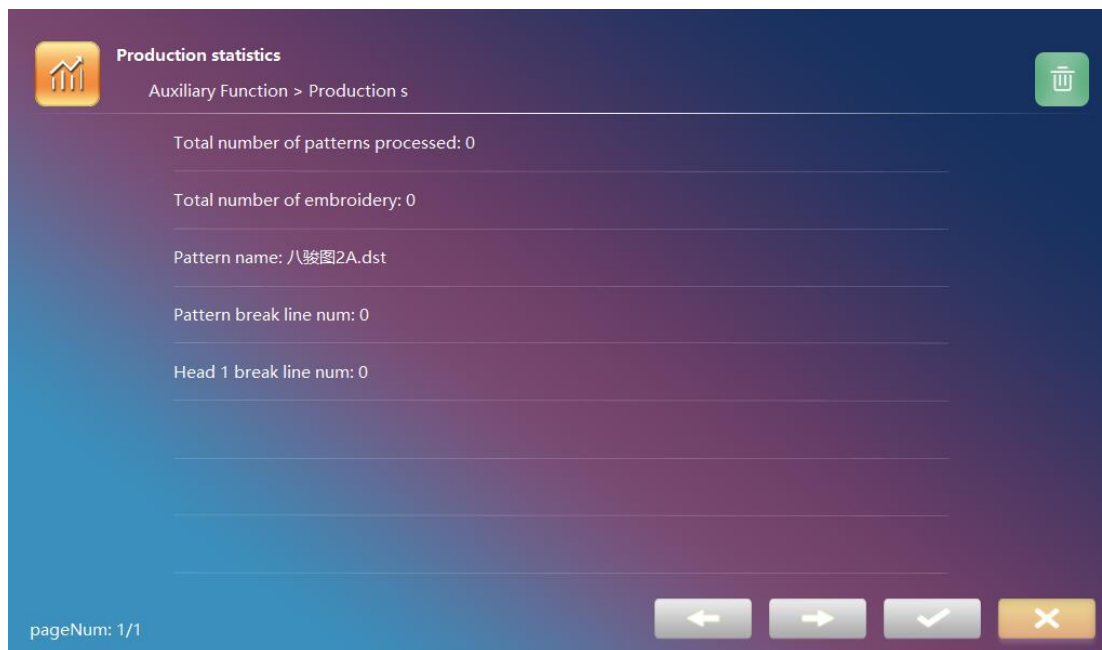
(Figure 13.0 Production Statistics)

Click the "Production Statistics" button, and the interface shown in Figure 13.0 will pop up.

Parameter name	Instructions
The total number of processed patterns	The total number of processing patterns from the boot to the present
Total number of embroidery needles	The total number of embroidery needles from the boot to the present
Pattern name	Show the name of the current pattern.
The number of broken lines	The total number of times from the boot to the current pattern break
delete	The total number of processed patterns, the total number of embroidery stitches, and the number of pattern broken threads are cleared to zero When you click Delete, the message "Do you want to clear production statistics?" is displayed. The prompt.

14. Version information
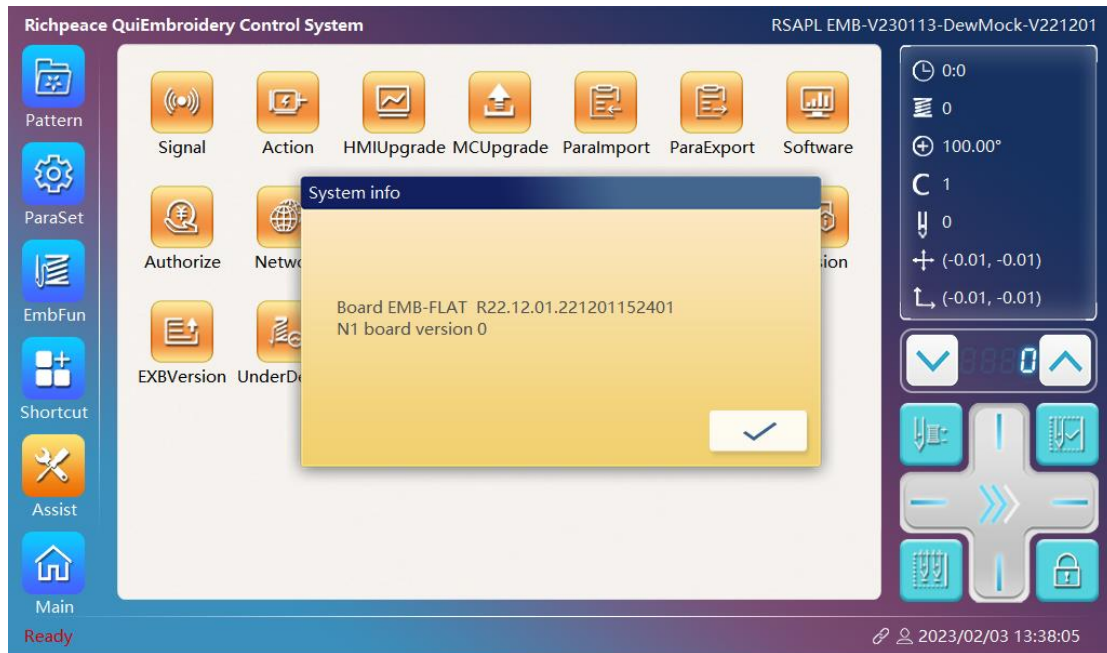
(Figure 14.0 version information)

Click the "Version Information" button for the interface as shown in Figure 14.0.
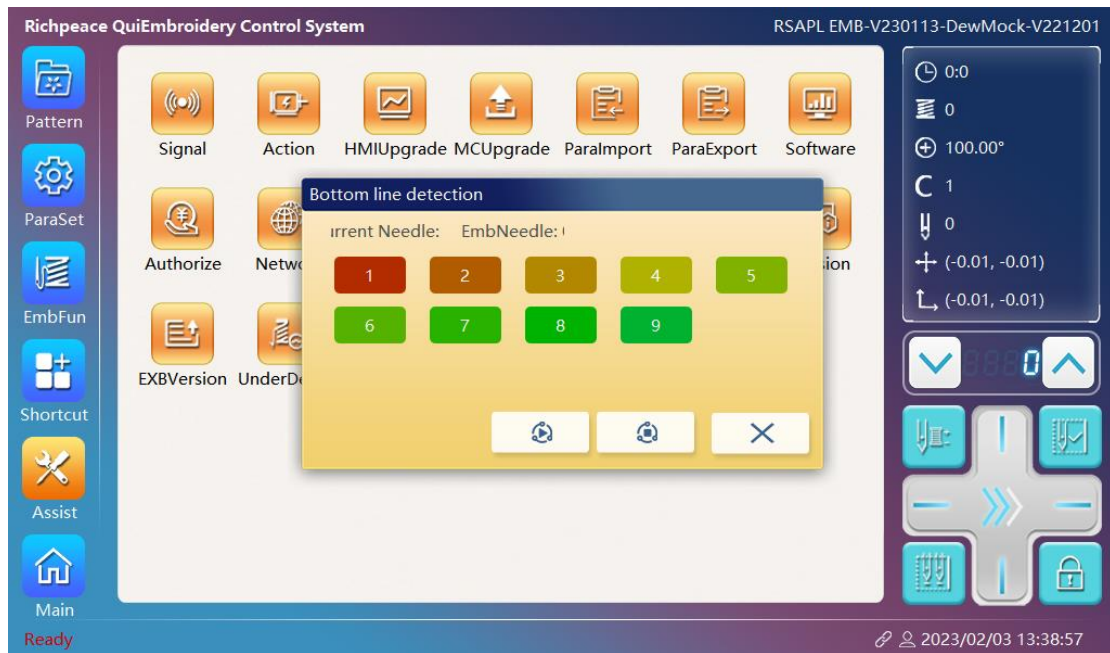
15. Peripheral plate information
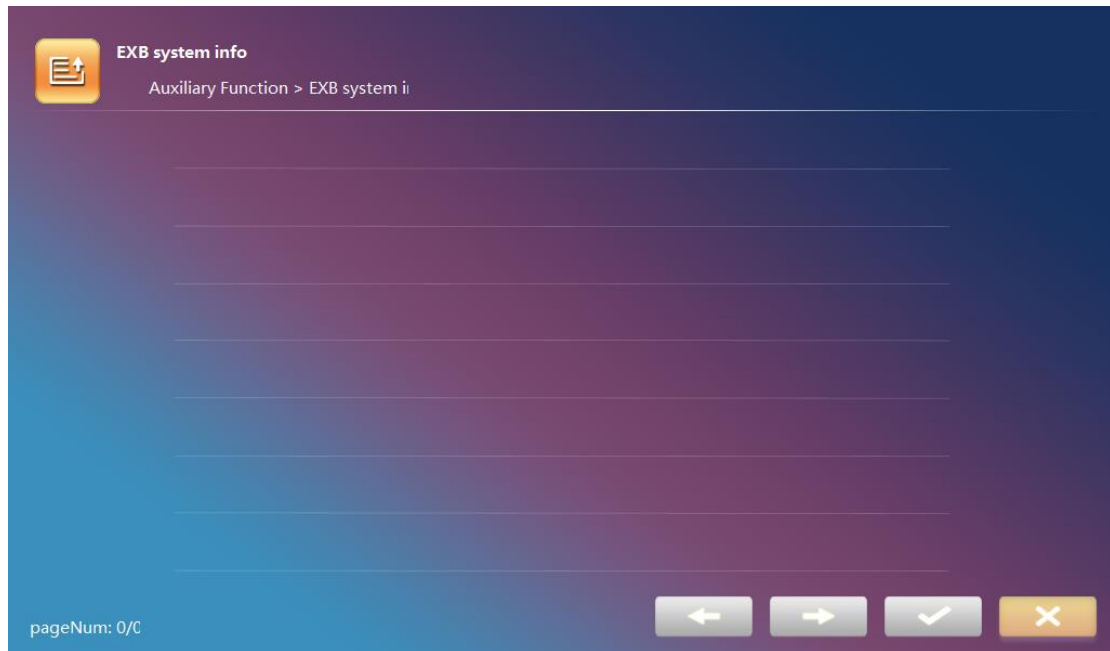
(Figure 15.0 Peripheral plate Information)

Click the "peripheral plate information" button, the interface shown in 15.0 will pop up.

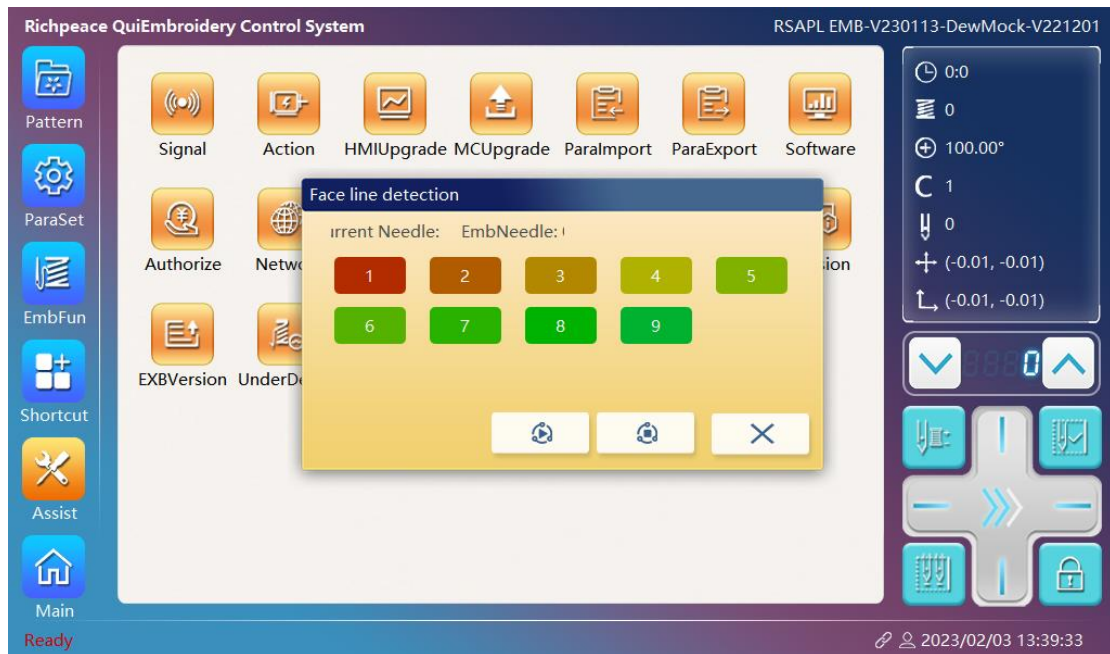## 16. Bottom line detection

(Figure 16.0 Bottom line detection)

When clicking the "Bottom line Detection" button, the interface will appear as shown in Figure 16.0.

17. Face line detection

When clicking the "Face detection" button, the following interface is displayed:

(Figure 17.0 Face Line Inspection)

When clicking the "Face line detection" button, the interface will displayed as shown in Figure 17.0.

18. Spindle test
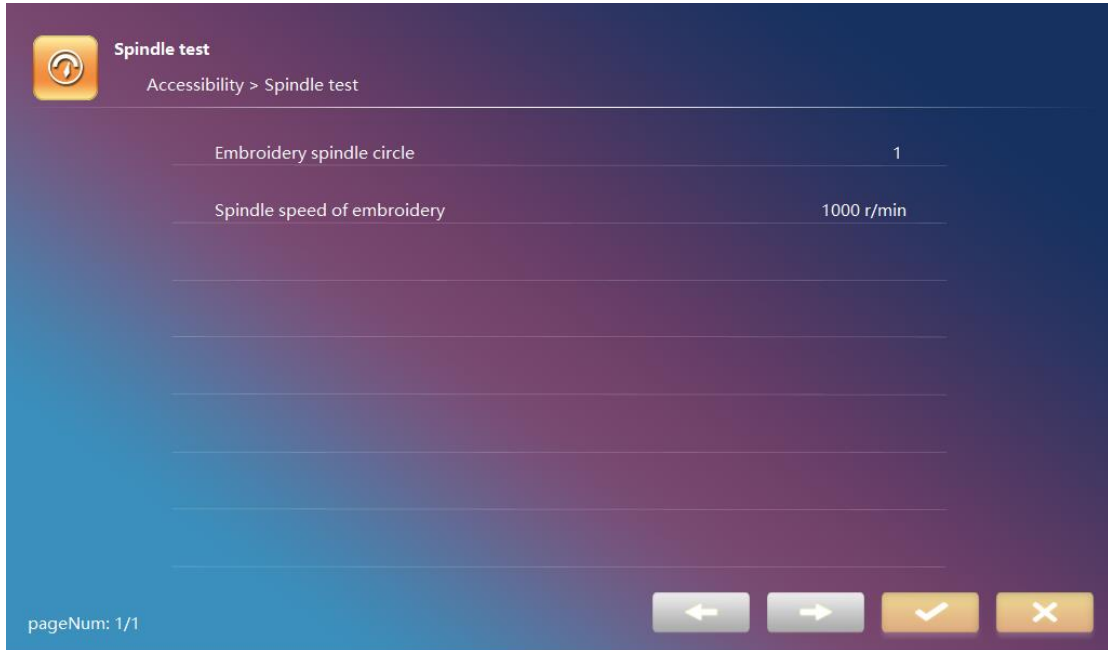
(Figure 18.0 Spindle test)

When clicking the "spindle test" icon, it will appear as shown in Figure 18.0.

The number of turns of the flat embroidery spindle and the speed of the embroidery spindle can be set. Click "number of spindle turns in plain embroidery", and the pop-up window as shown in Figure 18.1 will pop up; click "speed of spindle in plain embroidery", and the pop-up window as shown in Figure 18.2 will pop.
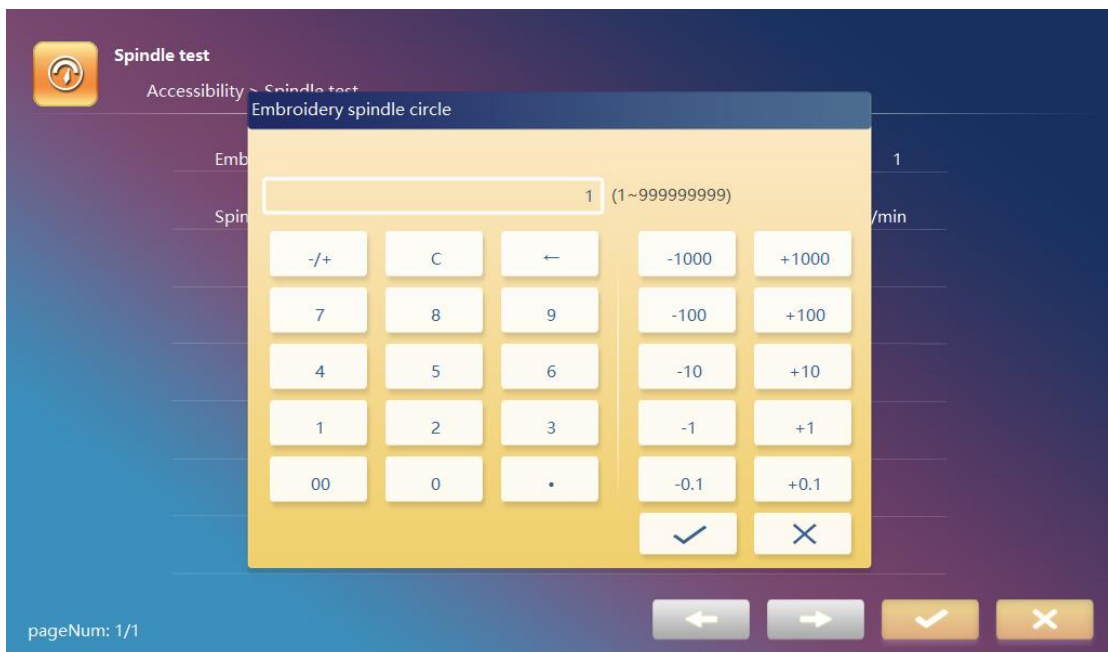
(Figure 18.1 Number of spindle turns in plain embroidery)

(Figure18.2 Flat embroidery spindle speed)

The significance of each parameter is shown in the following table.

| Parameter name	Instructions
Flat embroidery spindle circle number	The input values range from (1~999999999).
Flat embroidery spindle speed	The input values range from (1 to 3000) in r/min.
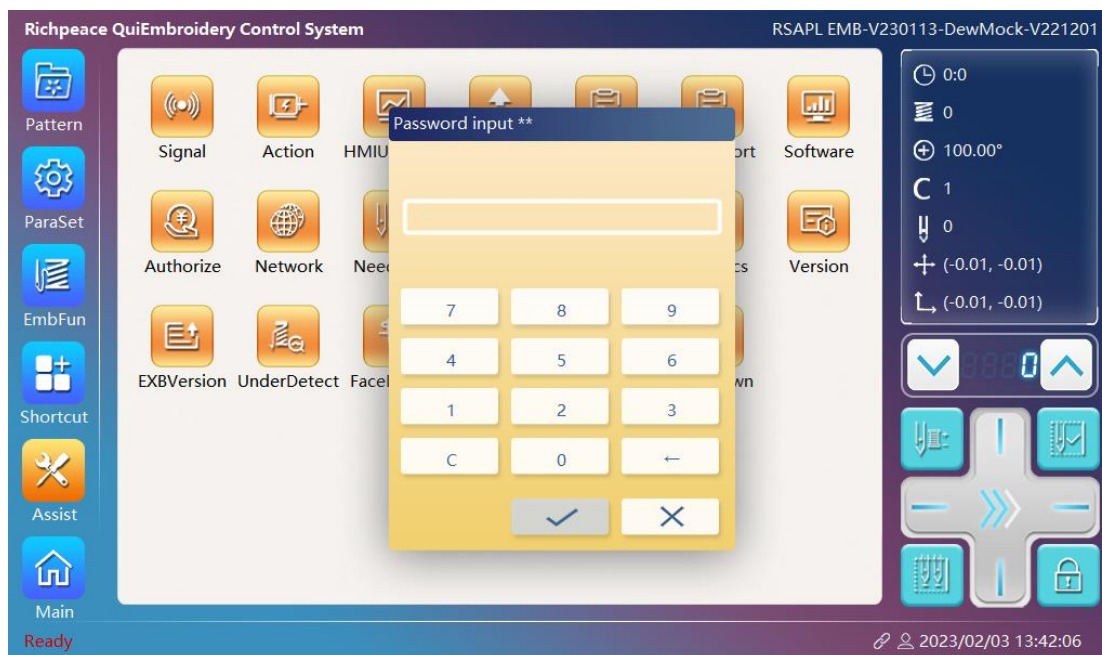
19. Super users

(Figure19.0 Super User)

Some commands that are not commonly used or can only be used by administrators can be operated by entering a password. The super user function is used by technical personnel of the manufacturer.

Click the Super User button, and the Password Input window is displayed. Figure 19.0 shows the page.

20. Shut down
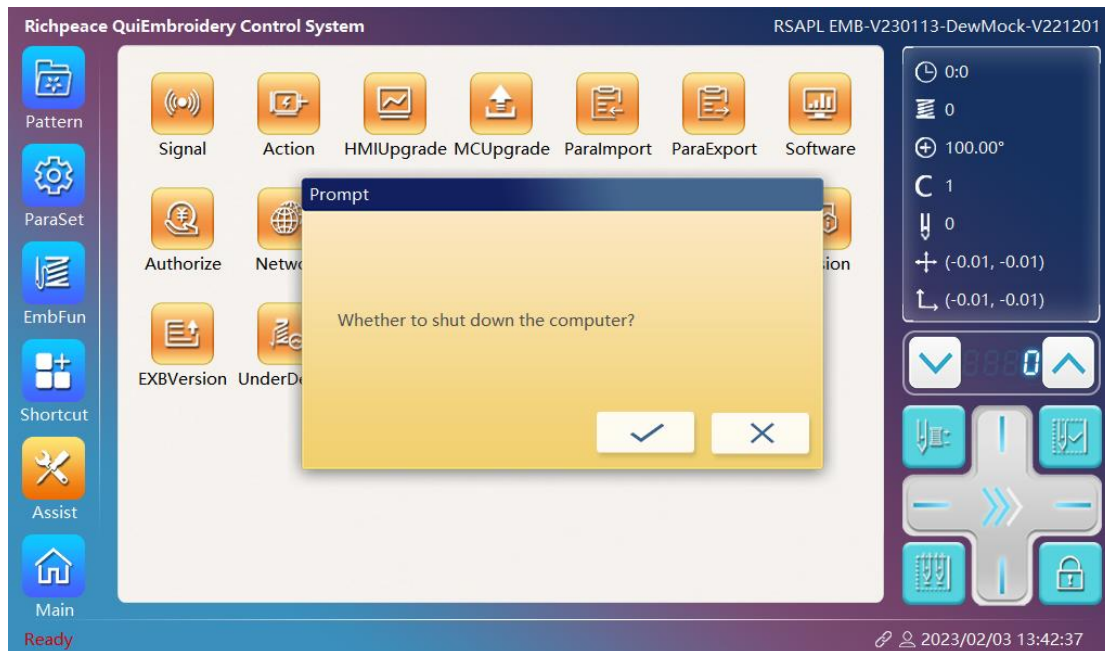
(Figure 20.0 Shutdown)

Click the Shutdown button. A dialog box is displayed, asking "Whether to shut down the computer? The interface shown in Figure 20.0 will appear. The shutdown function is available only in the windows operating system. The linux operating system does not have the shutdown function.

2.3.6 Main interface
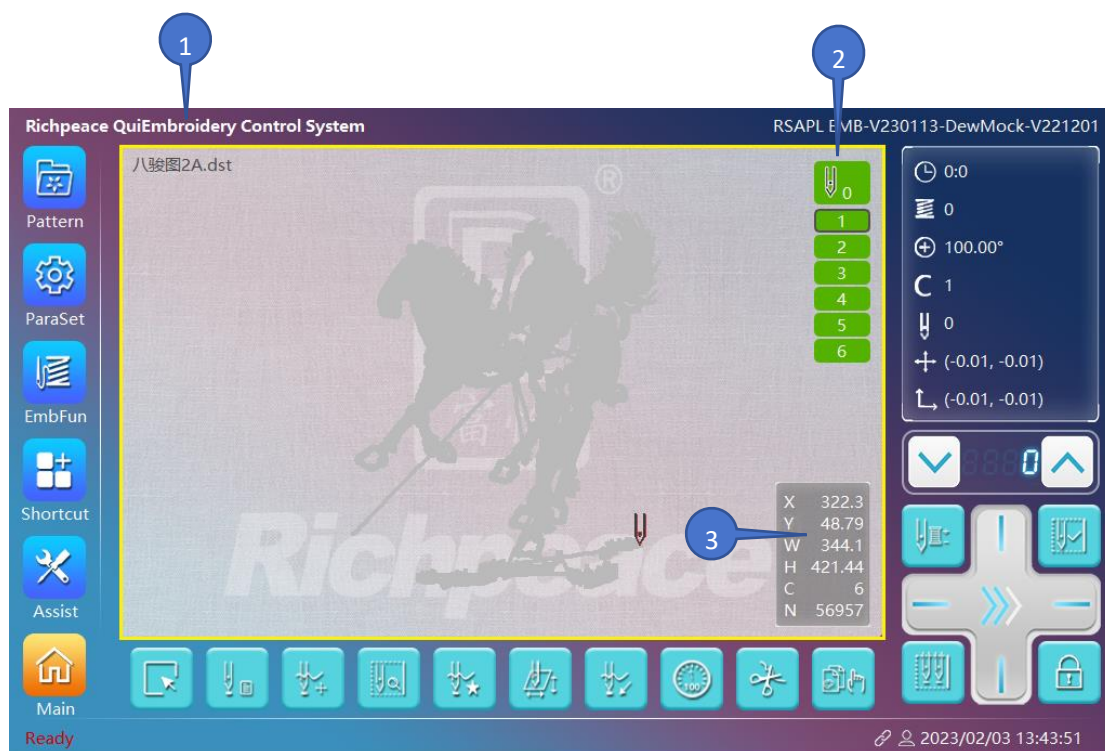
Press this key to quickly return to the main screen.

The main interface contains 10 common buttons at the bottom. The functions of each button are described in detail in "2.5. Bottom Menu".

Each common button in the bottom menu can be set and adjusted according to the frequency of use. You can set this parameter in "13. Common Settings" in "2.3.5 Auxiliary Functions".

2.4 Display area

(Figure 1 Display area)

When using the machine for the first time, the display area does not display any files.

You need to click "Pattern Selection" in the "Pattern Settings" menu to select the pattern you want to embroider. After selecting the pattern, the pattern parameter Settings will pop up, click "OK", and the pattern will appear in the display area. The interface is shown in Figure 1.
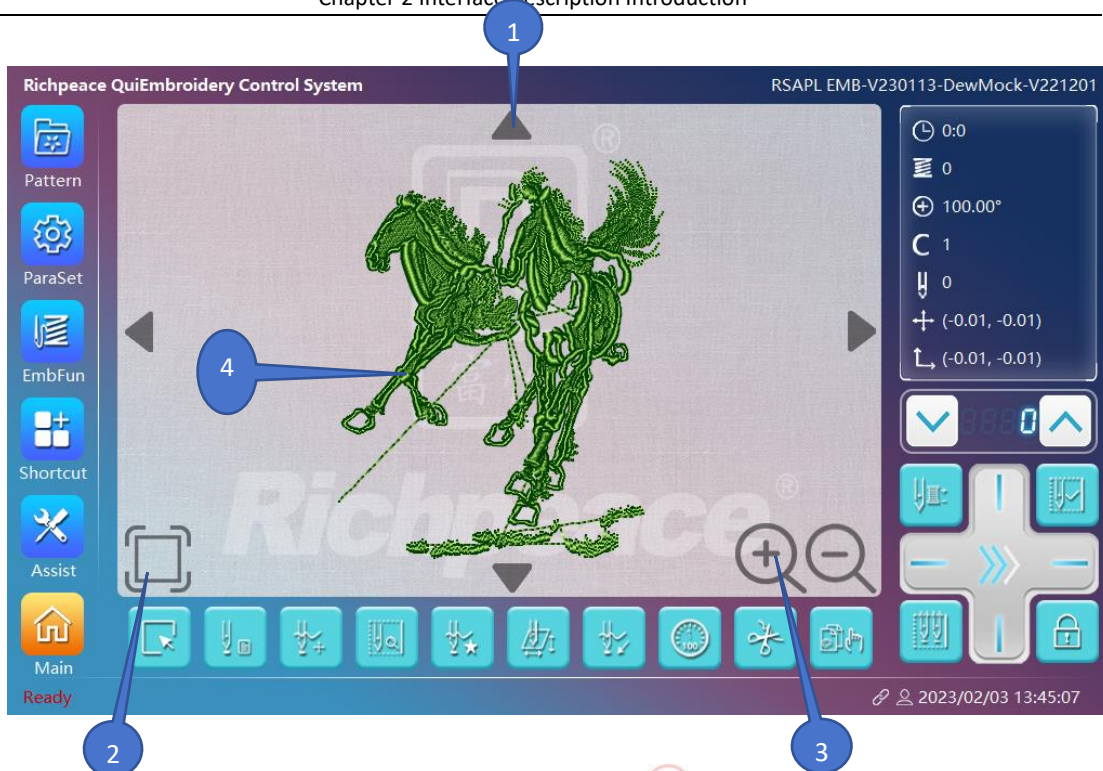
Each part of the display area is:

1. Display the name of the pattern

2. Display the color order used for the pattern.

Click the "Color Order Settings" icon to set the color order. (See Section 2.3.1, Section 3, "Color Order Settings" for details.)

3. Display the pattern information.

Pattern information includes: X coordinate, Y coordinate, width, height, color number, total number of stitches;

(Figure 2 Display area)

If you want to see the overall effect of this pattern, you can click the "富" word in the middle of the display area (where the mark 4 indicates), then the display area will display the interface shown in Figure 2.

1. The four directional keys in the display area can move the pattern from four directions.

2. The icon in the lower left corner says: Display the pattern in the original ratio 1:1.

3. The two ICONS in the lower right corner indicate: Zoom in and zoom out.

2.5Bottom menu (Common Settings button)

（Figure 2.5 Bottom menu）

The bottom menu includes the following information:

1. Pattern selection

2. Set the rust point

3. Return to rust spots

4. Check the border

5. Return to work

6. Return to the origin

7. Return to the offset point

8. Spindle move

9. Plain embroidery cutting thread

10. Manual color change

1

1. Pattern selection

Select the desired pattern. After clicking the "Pattern Selection" icon, the interface will display all the existing patterns on the machine. Clicking on the desired pattern file displays information about the pattern on the right.

(1) Click the pattern selection icon "" to enter the following screen:Click the pattern selection icon " " to enter the following screen:

(Figure 1.0)

(2) Browse the pattern by clicking the icon " " or " ", directly click the pattern. See the information and parameter setting on the right, as shown in Figure 1.1, click the OK icon " " to enter the interface shown in Figure 1.2:
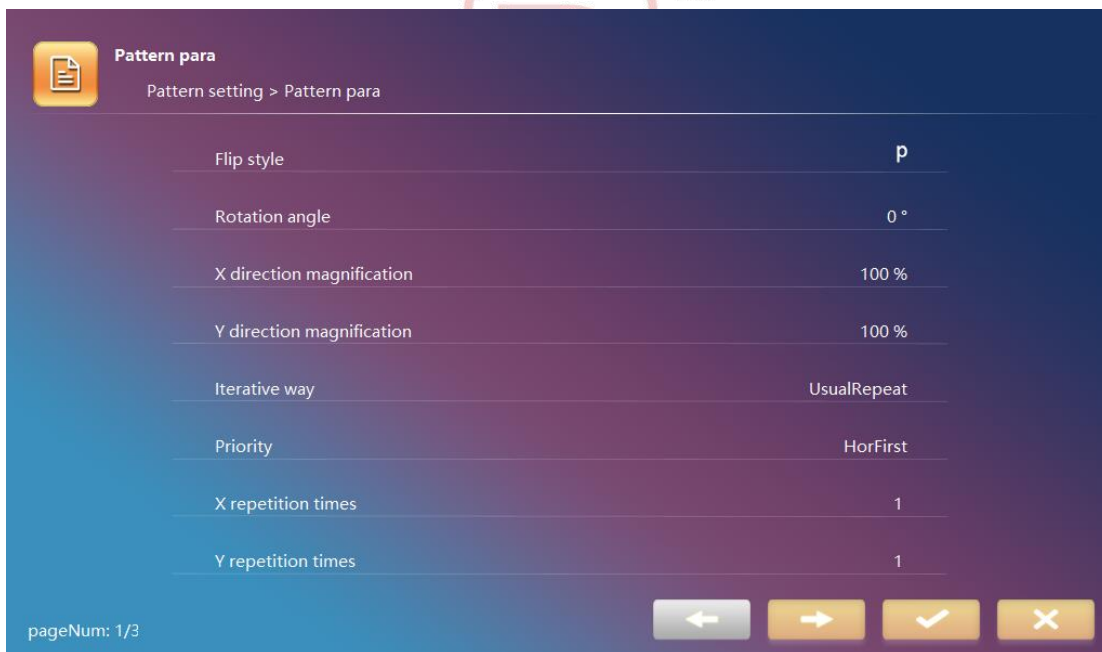
(Figure 1.1)

(Figure 1.2)

(3) Some default values of the selected patterns are listed on the interface. You can also click the item to be modified, and a dialog box will pop up to modify the parameter values (see Section2.3.1, Part 2 for the meaning of the parameters), as shown in Figure 1.3.
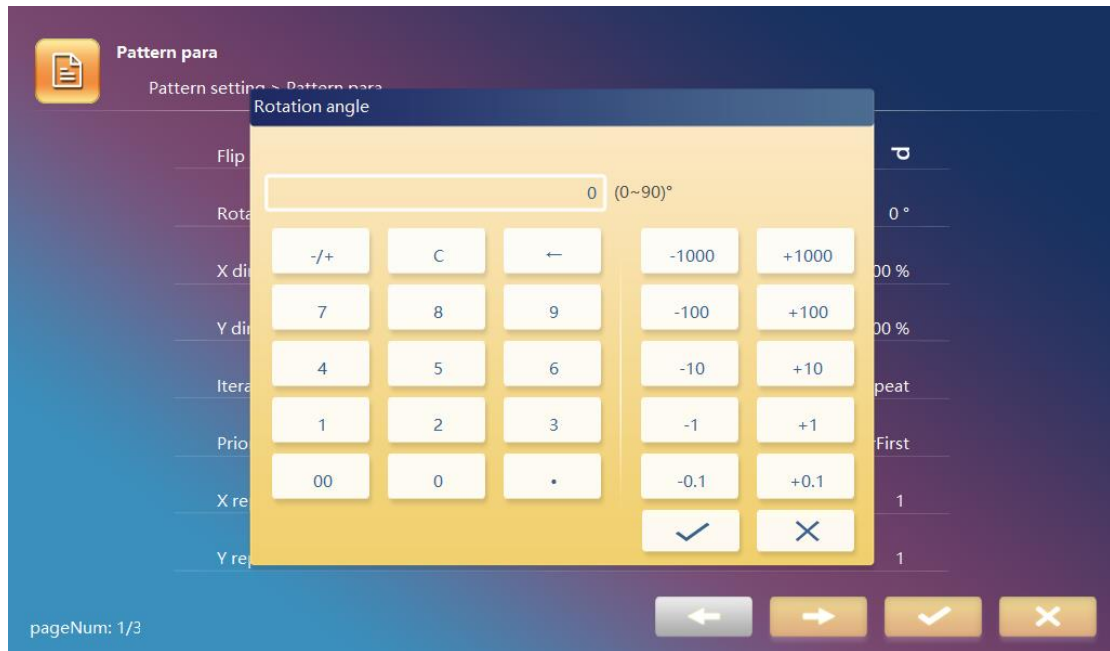
(Figure 1.3)

(4) Click confirm icon " ✓ ", the pattern information will be saved to memory; After saving, click confirm icon " ✓ ", and the screen returns to the main interface.
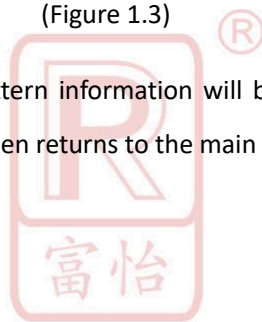
2. Set the rust point

After selecting the pattern in memory, before starting the embroidery, the operation of setting the rust point must be performed to determine the starting point of the pattern embroidery.

Before selecting the pattern file, the default icon of the rust point is " ", and it cannot be clicked. To enable this feature, you must first choose the pattern, and then choose the pattern icon to change.

（1）Click the rust point icon " ", a pop-up window of "rust point" will pop up, as shown in Figure 2.0.
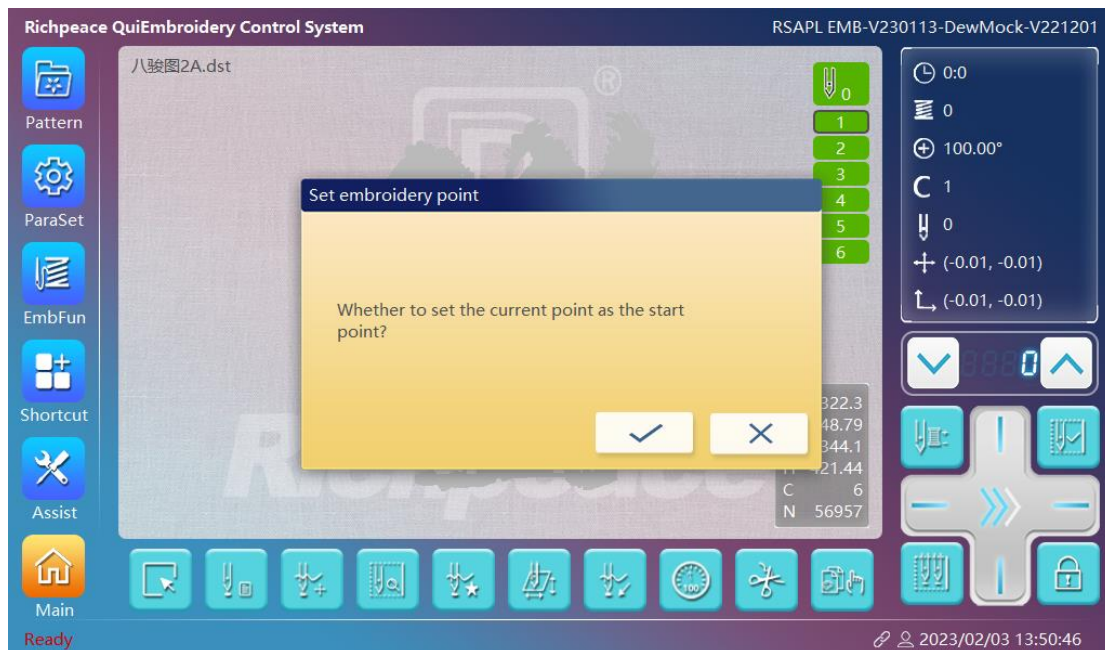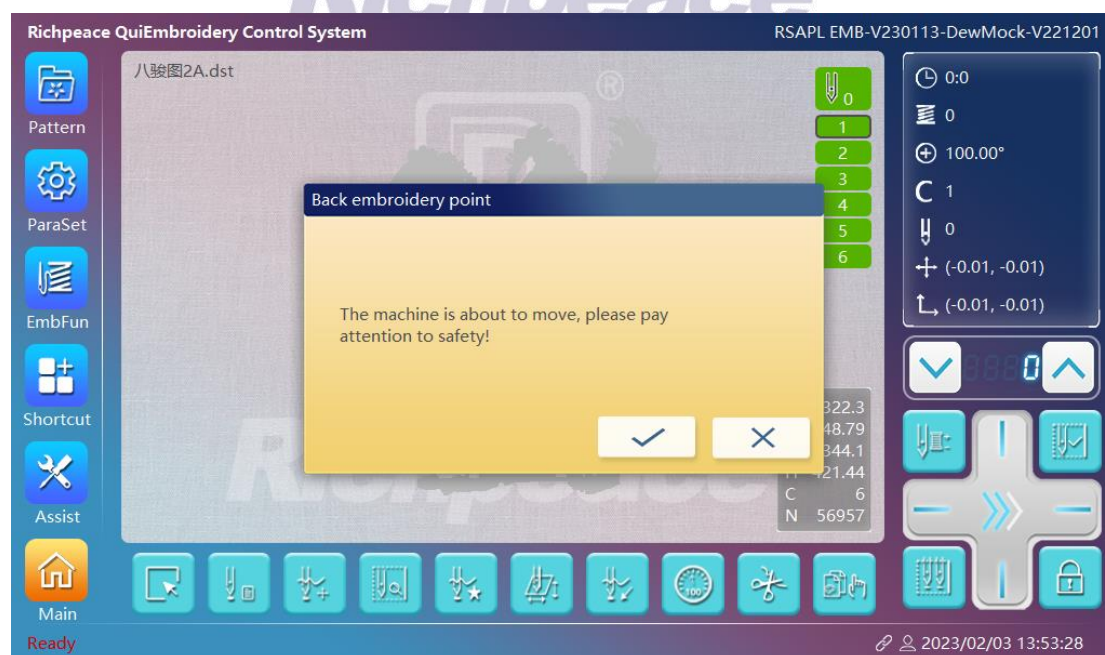

(figure 2.0)

(2) Use the frame button to move the frame to the appropriate position (can be well positioned under the low speed frame), click the confirm icon to perform the operation, click the cancel icon to exit.

3. Rust points back

Make the frame return to the starting point of pattern embroidery, and clear the X and Y coordinates. The computer has a memory function for the rust spots of the patterns. Under normal circumstances (such as no power off the embroidery frame, etc.), after re-selecting the pattern in the memory, the operation of "back to the rust point" will make the embroidery frame move to the rust point of the latest setting of this pattern; In abnormal cases, please pay attention to whether the limit switch works properly to prevent bumping the frame.

Before selecting the pattern file, the default icon of the rust point is " ", and it cannot be clicked. To enable this feature, you must first choose the pattern, and then choose the pattern icon to change.

（1）Under the main interface, directly click the bottom menu icon " " to return the rust point, and the pop-up window of the rust point will pop up, as shown in Figure 3.0 interface.

(figure 3.0)

(2) Press the determine icon " ✓ ", and cancel the icon " ✕ " to exit.

4.Check the border

When the pattern to be embroidered is selected and the rust point is set, this operation can be carried out to observe whether the rust point of the pattern is in the appropriate position of the embroidery frame, so as to ensure the reasonable use of the embroidery cloth and prevent the limit in the embroidery process.

Note: The limit switch must work properly to prevent the frame from hitting due to inappropriate rust points during the frame inspection.

Before selecting the pattern file, the default icon for the border check is " 〼 " and can not be clicked. To enable this feature, you must first choose the pattern, and then choose the pattern icon to change 〼 .

（1）Under the main interface, click the border check function icon " 〼 " to enter the "border check" interface, as shown in Figure 4.0.
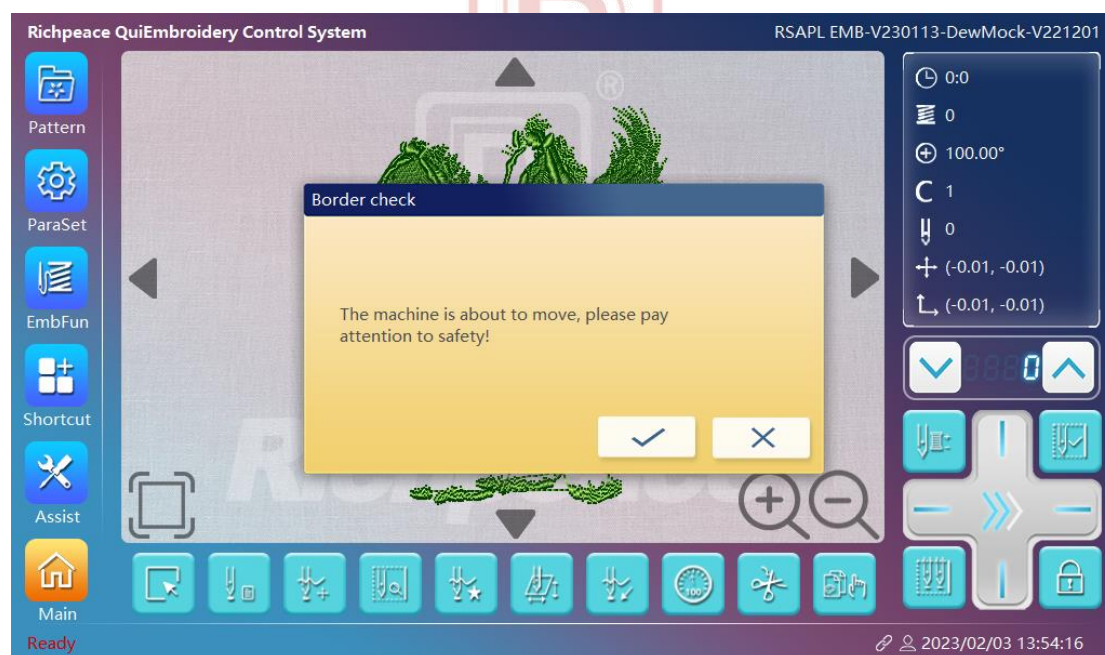
(figure 4.0)

（2）Click the OK icon to perform the operation, and click the Cancel icon to exit.

（3）After determining the border inspection, the embroidery frame moves left, right, up and down according to the border of the pattern to be embroidered to check whether the pattern will exceed the scope of the embroidery frame.

（4）If the pattern does not exceed the scope of the embroidery frame, it will automatically

return to the rust point after the completion of the inspection; If it exceeds the scope of the frame, the computer will automatically find a nearby point as a rust point and check the border with a new rust point; If the pattern is too large for the frame, an error message will be displayed :X positive limit /X negative limit /Y positive limit /Y negative limit.

5. Back to work

(1) In the main interface, click the icon " " at the bottom, and pop up the working point, as shown in Figure 5.0.
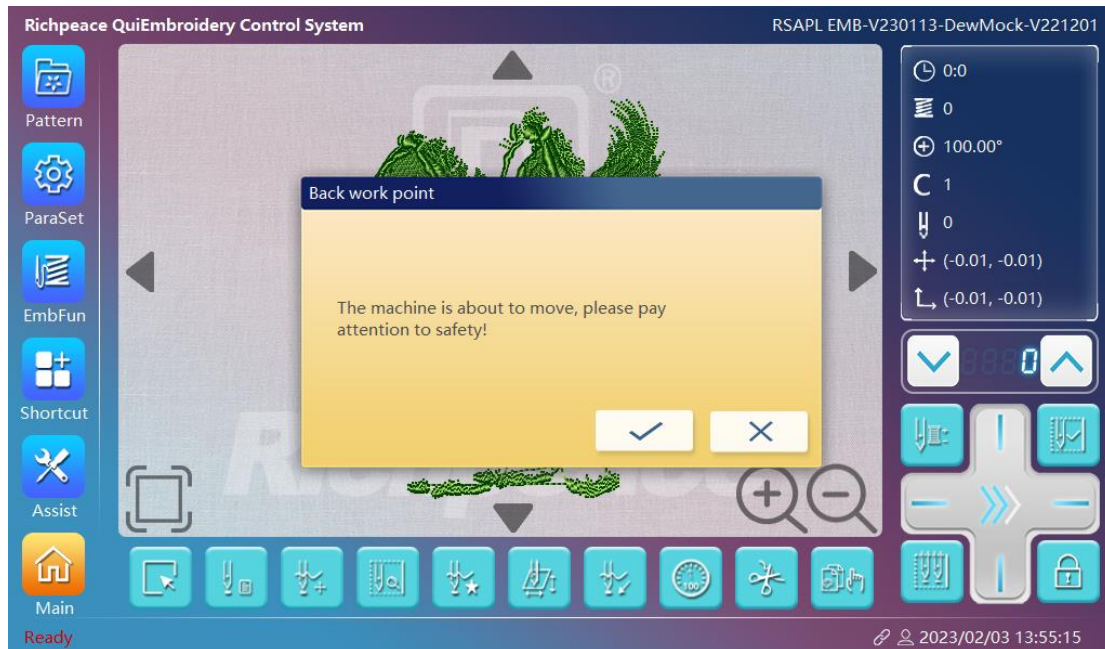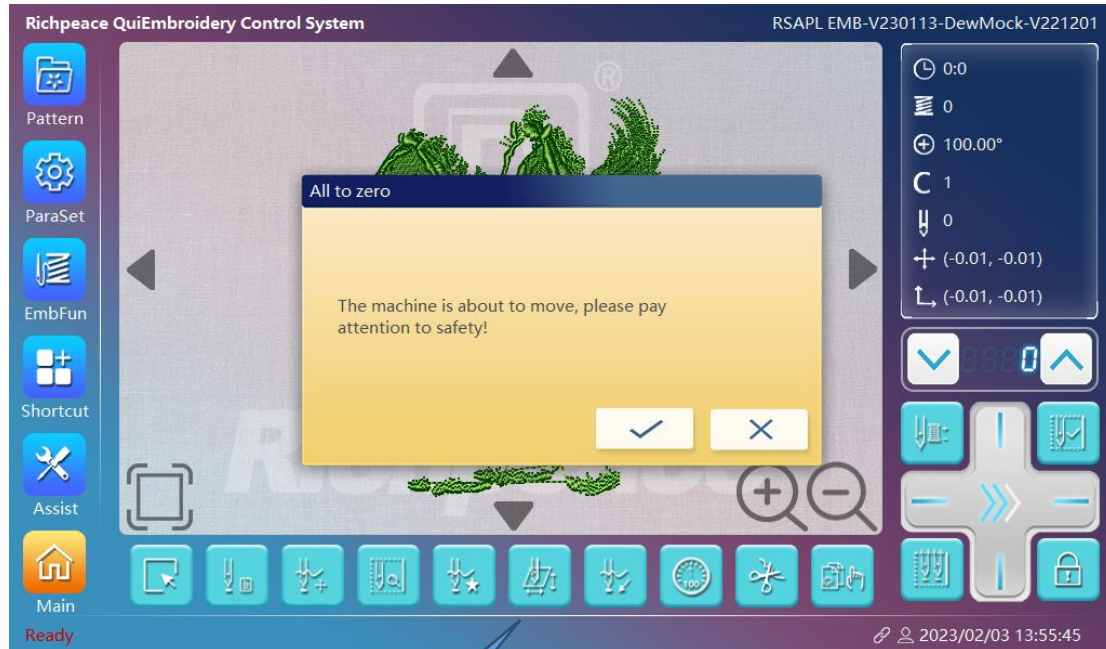

(figure 5.0)

(2) Click " " icon to perform the operation, and " " icon to cancel the operation.

6. All to zero

（1）Click the origin icon " " under the main interface, and pop up all zero. The interface is shown in Figure Figure 6.0.
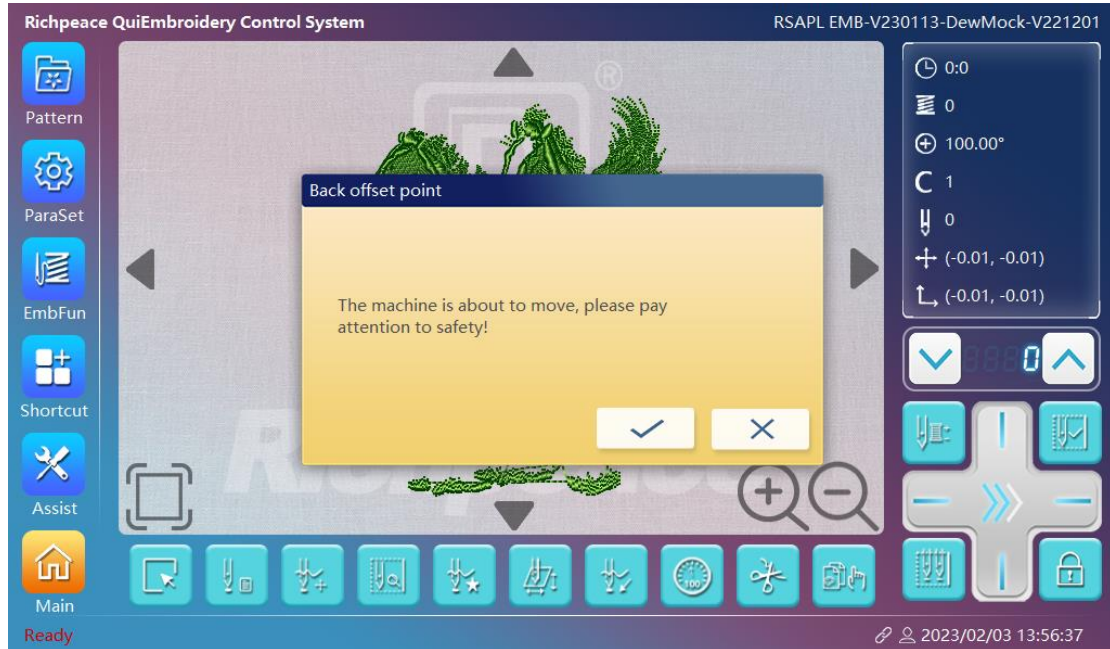

(Figure 6.0)

(2) When the " ✓ " button, the popup will disappear and the XY motor moves to the absolute coordinates (0,0).

When clicking the " ✕ " button, the popup will disappear and the machine will not move.

7.Back offset point

Let the frame quickly return to the offset point. This operation takes effect only after the offset point is set.
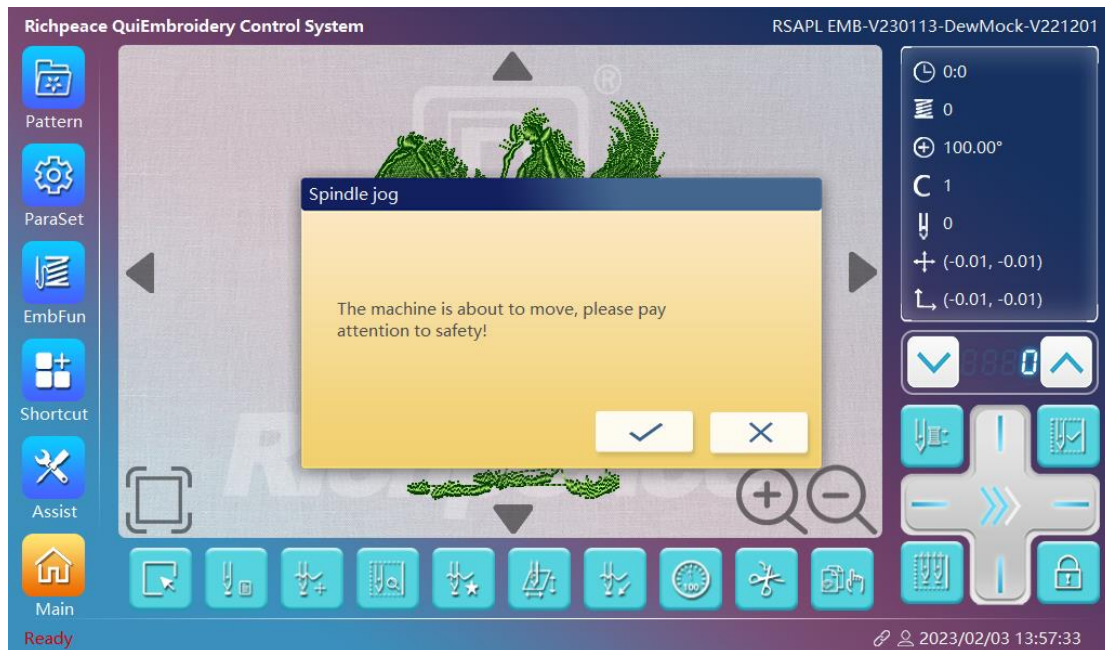

(figure 7.0)

（1） In the main interface, click the offset point icon " 🔽 ", the pop up of the offset point. The interface is shown in Figure Figure 7.0.When you click the" ✓ " button, the popup disappears and then quickly goes back to the offset point. When clicking the " ✕ " button, the popup will disappear and the machine will not move.

1

8. Spindle move

When the main shaft is not in place, the point of the main shaft can make it in place.

(figure 8.0)

（1） Under the main interface, click the spindle dynamic icon " 🌐 " to move the spindle popover. The interface is shown in Figure Figure 8.0.

(2) Click the OK icon " ✓ " to perform the operation, the popover will disappear, and then the spindle will rotate to 100 degrees. When you click the " ✕ " button, the popup will disappear and the spindle will not move.
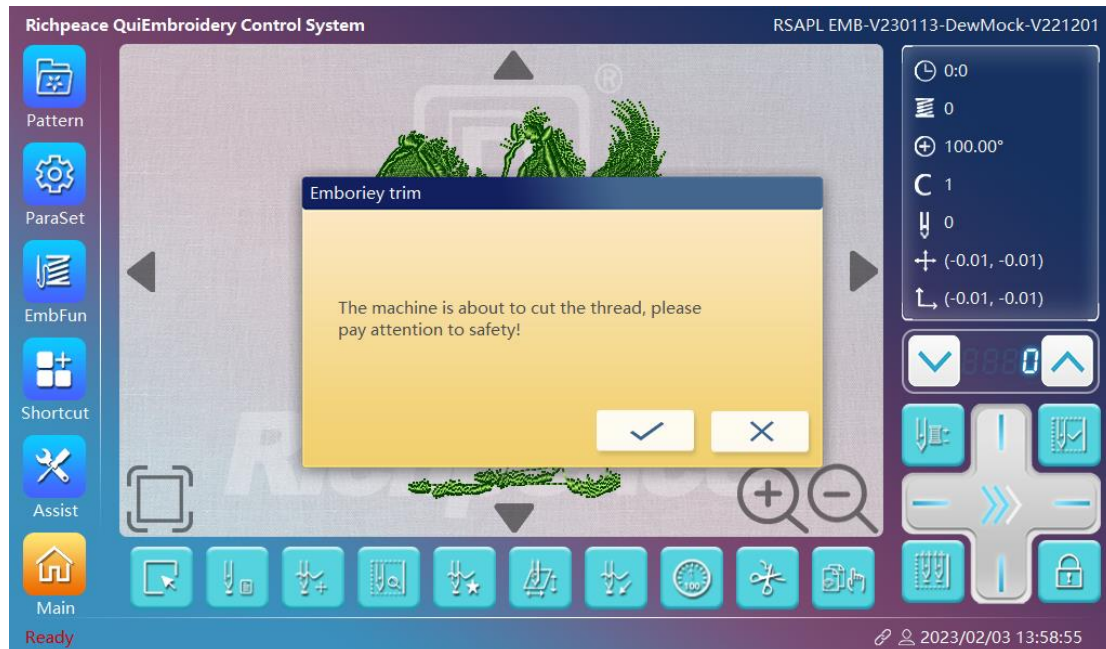
9. Flat embroidery and wire cutting

(1) Under the main interface, click the flat embroidery line cutting icon " ", and the pop-up window will pop up. The interface is shown in Figure Figure 9.0.

(figure 9.0)

(2) When clicking the OK button " ✓ ", the popup window will disappear, and then after the main shaft is running, the scissors cut the line, cut the line, hook the knife and hook the line. When clicking the button ✕ , the popup disappears without any action.

1

10. Manual color change

In some cases, a manual color change is required to select the embroidered needle position.

（1）Under the main interface (or under the shortcut function), click the manual color change icon " ", will move the pop-up window. The interface is shown in Figure Figure 10.0.
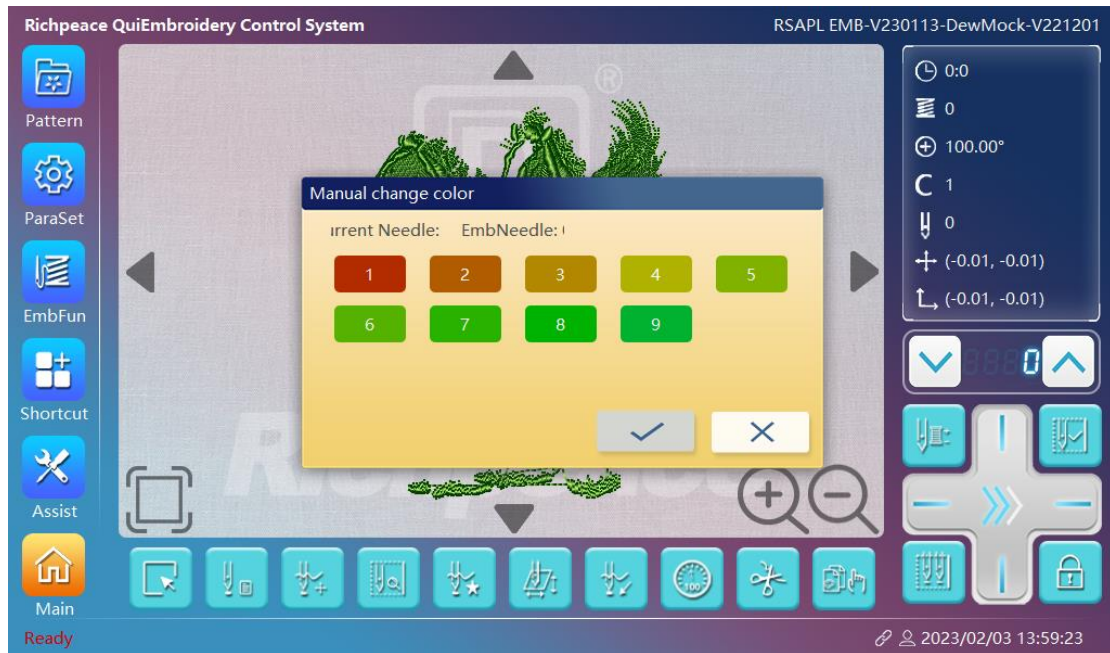
(figure 10.0)

（2） After selecting the needle rod, click the confirmation icon "　✓　" and change the color to the needle rod represented by the number.Click the icon "　✕　" to cancel the operation.

2.6 Top right menu
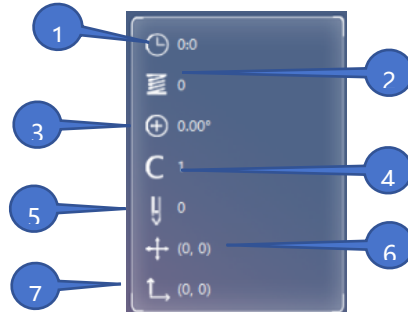
(figure 2.6)

1. Working time count: the minimum time unit is minutes. It is not saved after power failure.

2. Current pin position: Displays the current pin number.

3. Spindle Angle: The expression range of spindle Angle is 0~360. When the icon is displayed as a hollow circle, it means that the spindle is not in zero position; When the icon is displayed as a circle with a cross in it, such as "", it means that the spindle is in zero position;

4. Current color sequence: The serial number of the current color.

5. Stitch index: The number of stitches currently being embroidered.

6. Absolute coordinates: show the actual position of the current motor.

7. Relative coordinates: the embroidery position of the current flower board.

2.7 Right center menu

(figure 2.7)

Digital tube display value: indicates the current spindle speed. The speed of the spindle can be adjusted by the buttons on the left and right sides.

2.8 Right bottom menu (nine squares)

(figure 2.8)

In order from left to right:

1. Fast forward and fast back

2. Whether the machine is allowed to work

3. Current working status of the machine

4. Screen lock function

5. Direction keys

6. Manually adjust the motor moving speed level

1. Fast forward and fast back

(1) When you click the icon " [icon] " in the bottom menu on the right of the main interf ace, you can adjust the current pin position. The fast-forward and fast-back window is di splayed, as shown in Figure 1.0.
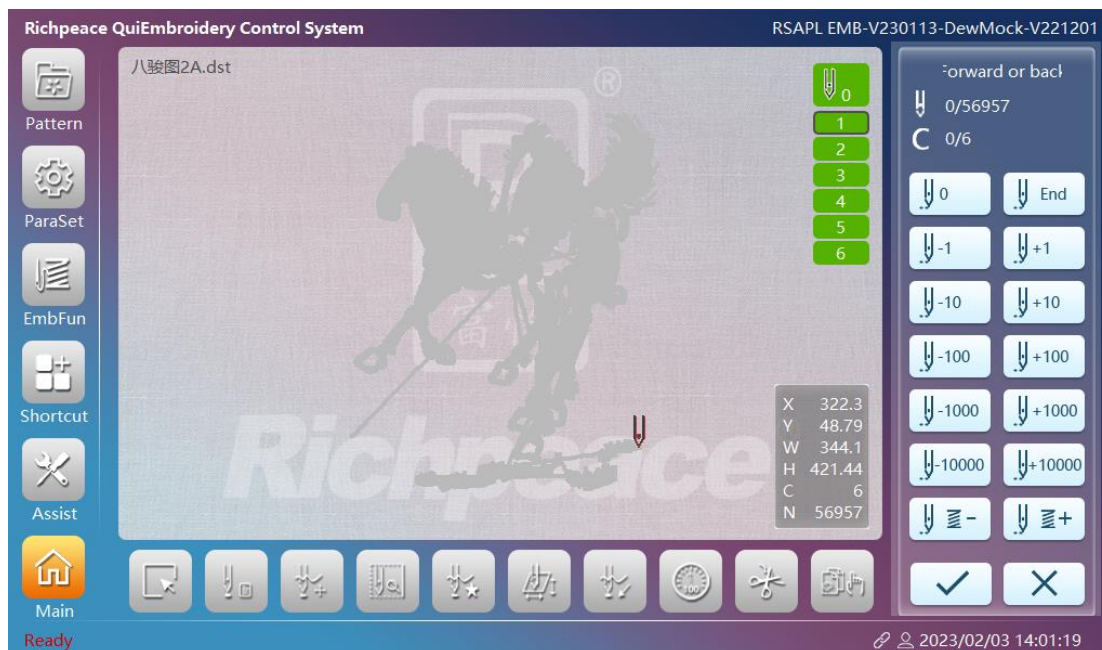
(figure 1.0)

(2) Click the needle position button in the yellow box on the right to add or subtract the needle position index. When you click Add Stitch 1000 steps, the pattern of stitching 1000 steps will appear in the display area, and the current stitch position will be displayed. The interface is shown in Figure.

Needle position

1000 step button

1
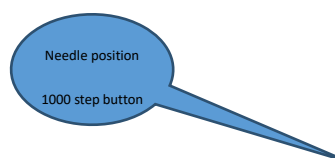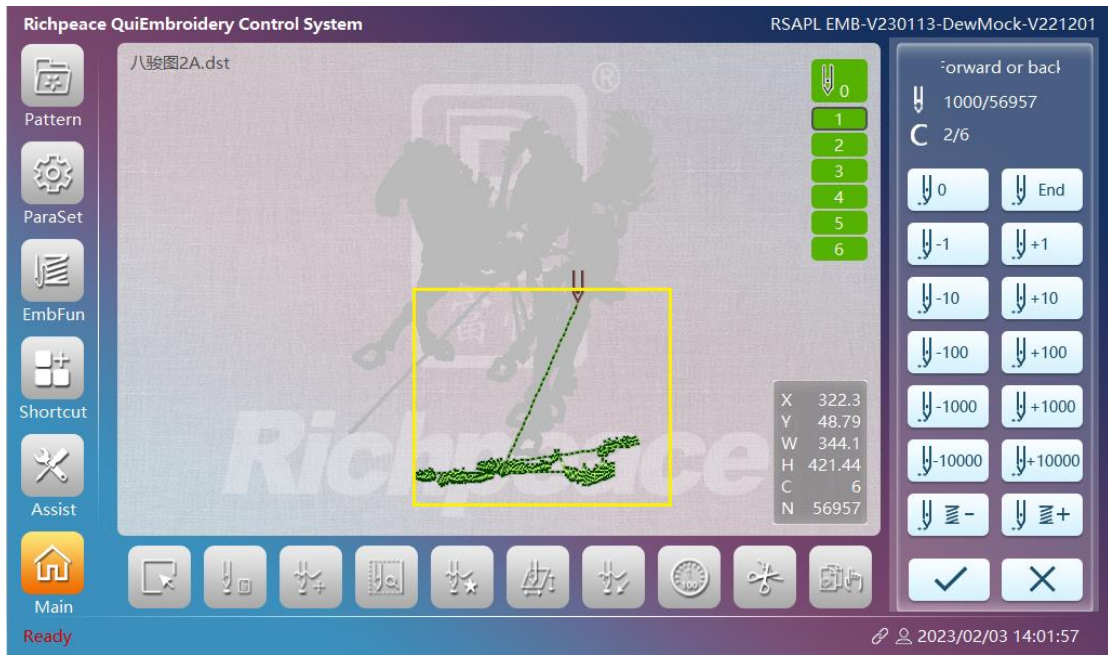
(figure 1.1)

2. Whether the machine is allowed to work

The default state icon is " [icon] ", indicating that the machine is currently allowed to work. The interface is shown in Figure Figure 2.0.
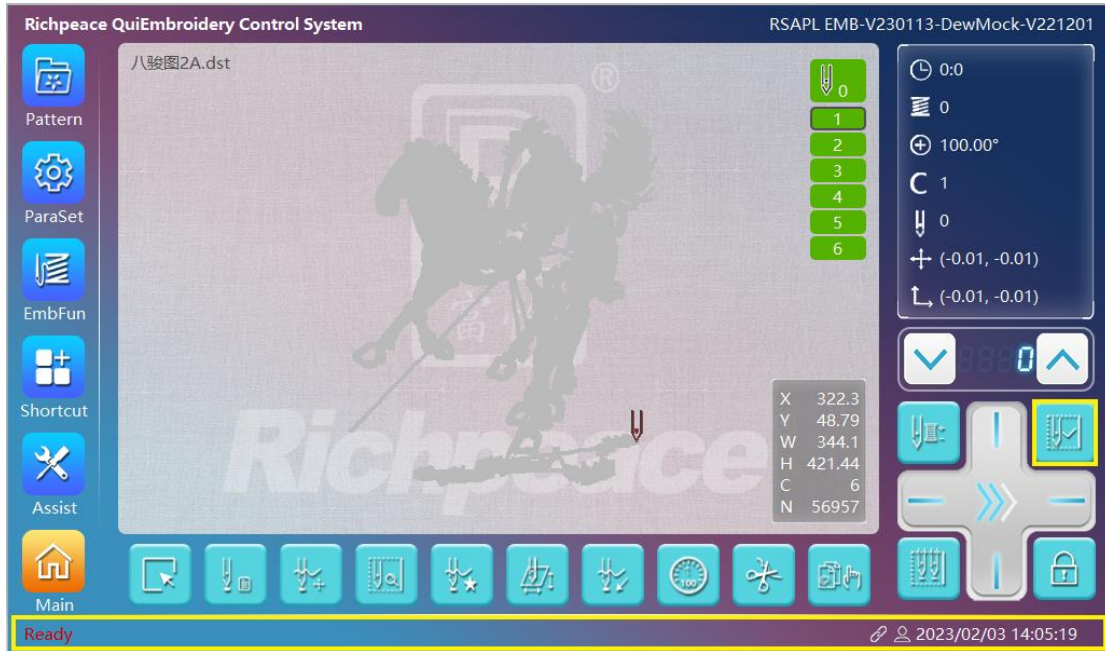
(figure 2.0)

When the button is clicked again, and the icon switches to " [icon] ", the " [icon] " icon appears under the status bar, indicating that the machine is not allowed to work. The interface is shown in Figure Figure 2.1.
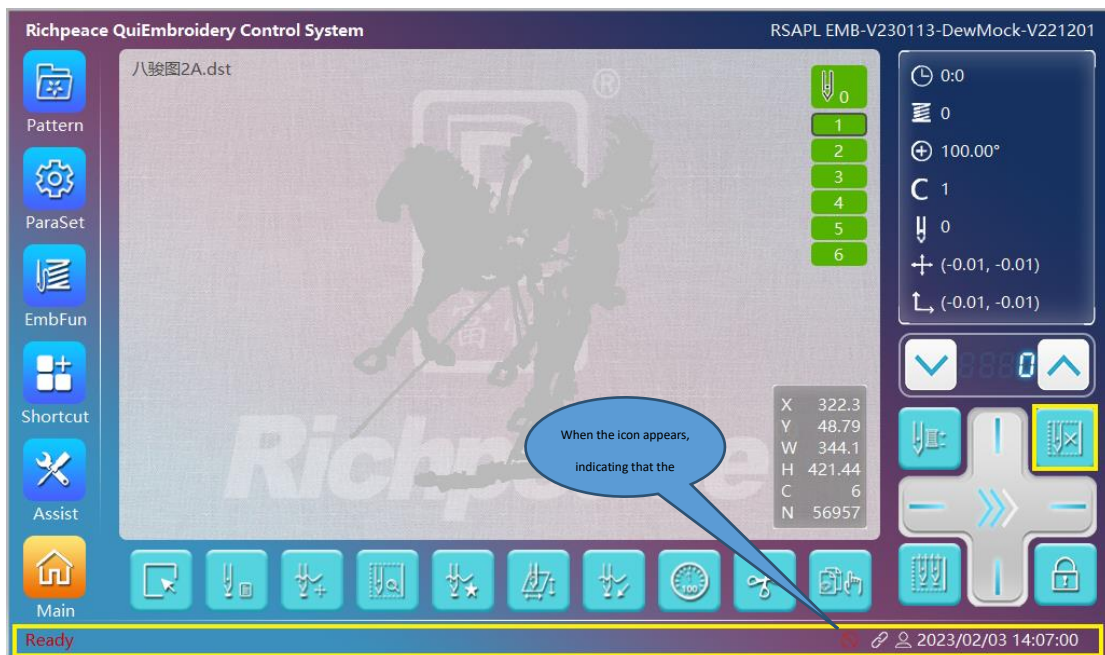
3. Current working state of the machine

The default state icon is " ", indicating the normal working status. After starting the work, the spindle and x and y can move, as shown in Figure 3.0 interface.
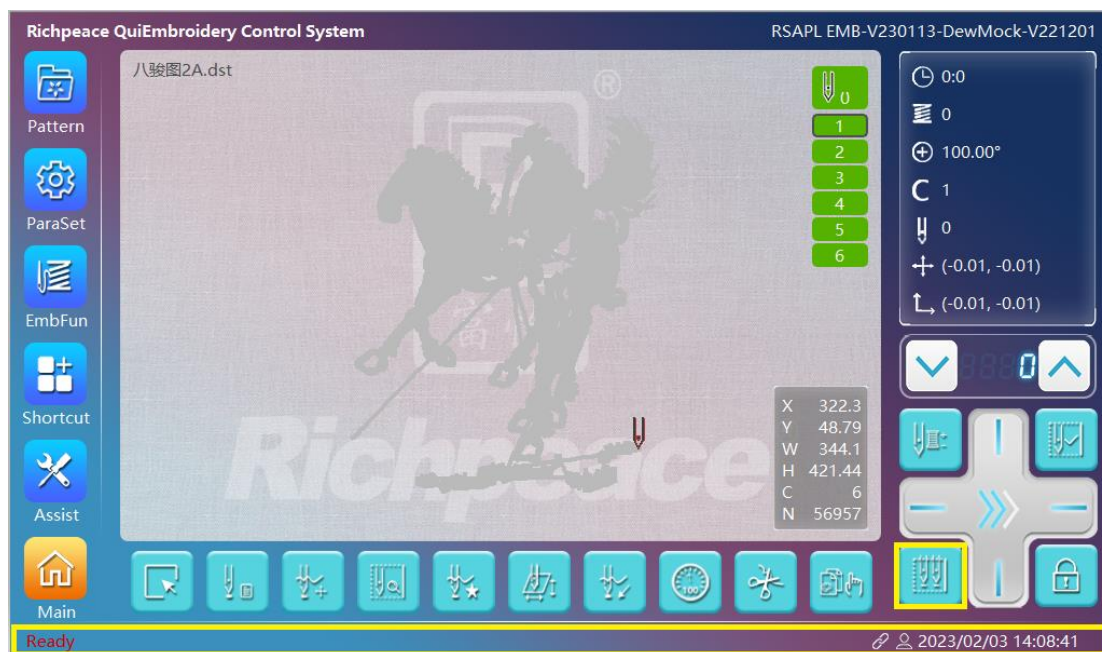
(figure 3.0)

When the button is clicked again, when the icon switches to " ", the icon " " will appear in the status bar, indicating that the current machine is in the simulated working state. In this state, the spindle will not move after starting the work, and x and y can move. The interface is shown in Figure Figure 3.1.

1
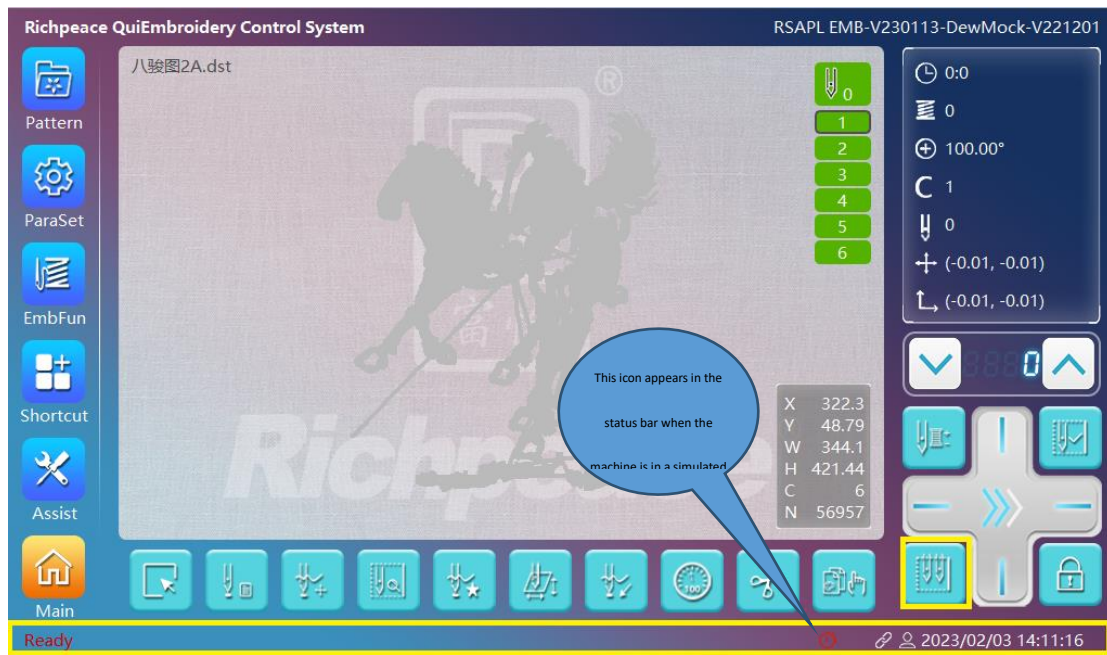
(figure 3.1)

4.Screen lock function

The default state is the unlocked screen, and the display icon is " 🔒 ", as shown in Figure 4.0 interface.
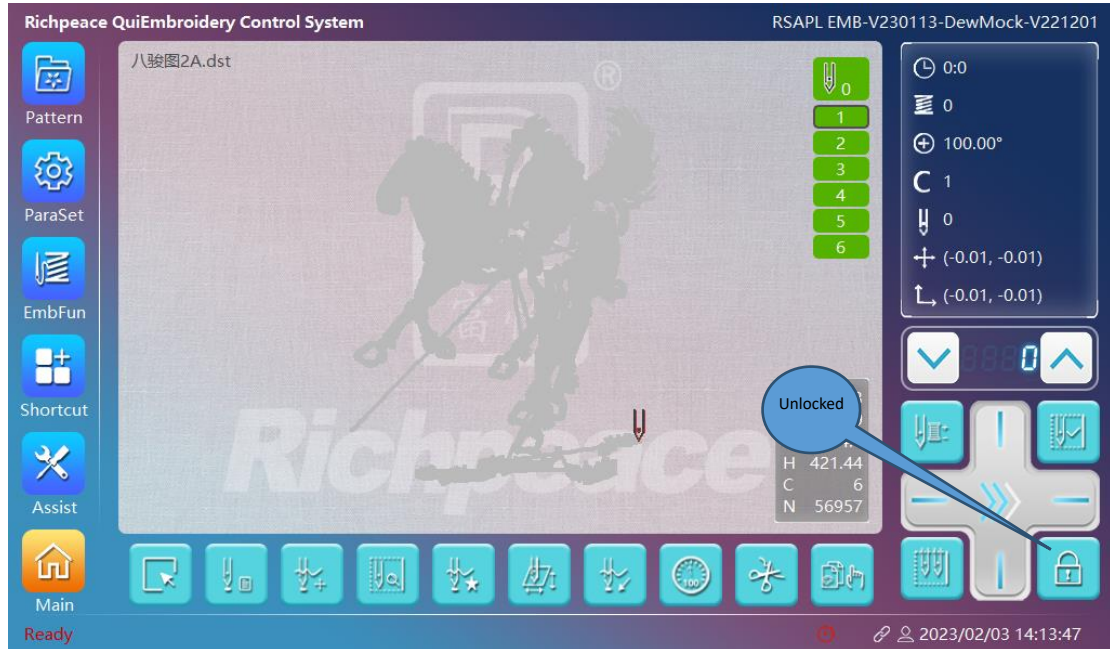
(figure 4.0)

When the button is clicked again, the icon switches to " 🔓 ", indicating the current lock screen state. As shown in Figure 4.1 interface.
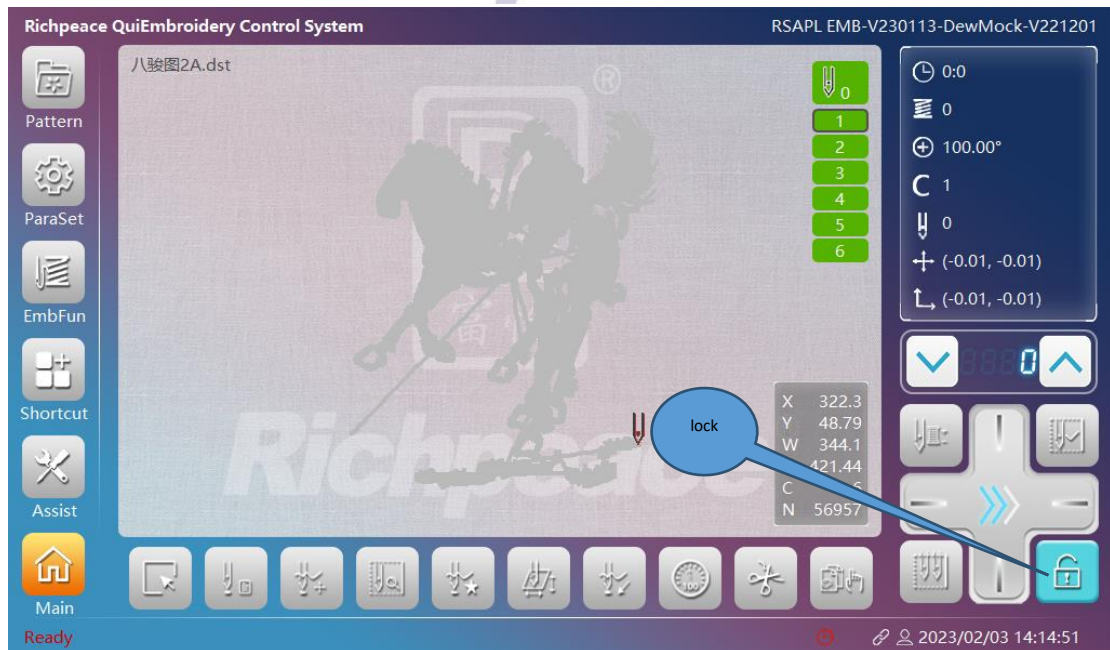
(figure 4.1)

In this state, no operation can be performed on the interface, and the system forcibly switches to the main interface. The display area displays the content of the main interface. To unlock, you need to click the button again, that is, exit the lock screen state.
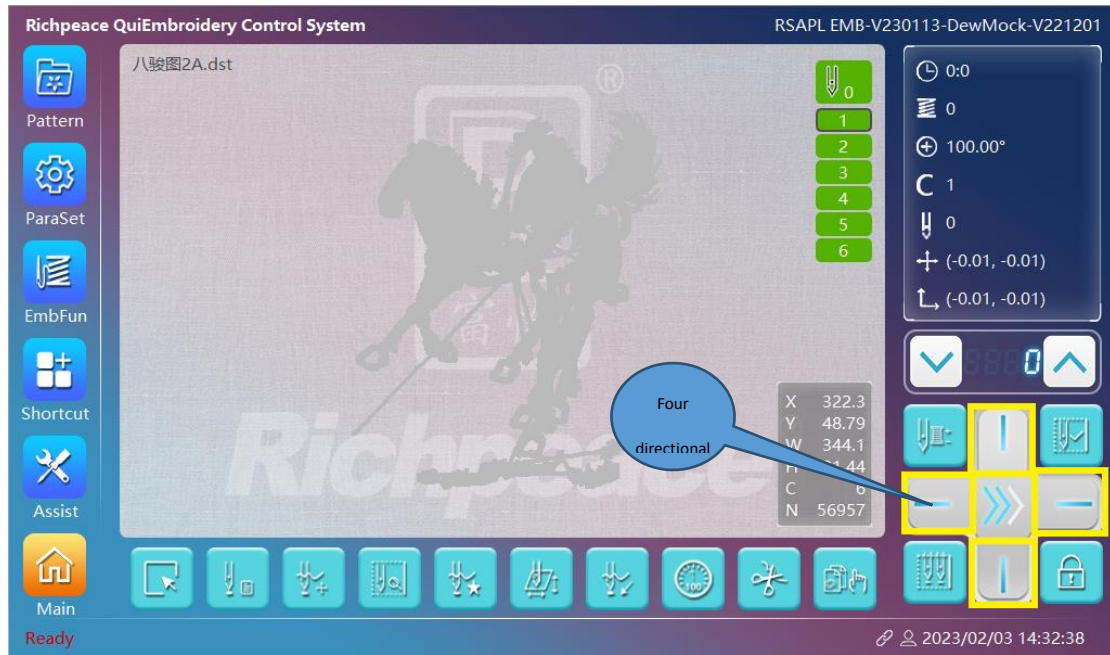
5.Direction key

(figure 5.0)

Four directional buttons can be used to adjust the position of x and y motors. The interface is shown in Figure 5.0.

1

6. Manually adjust the motor moving speed level
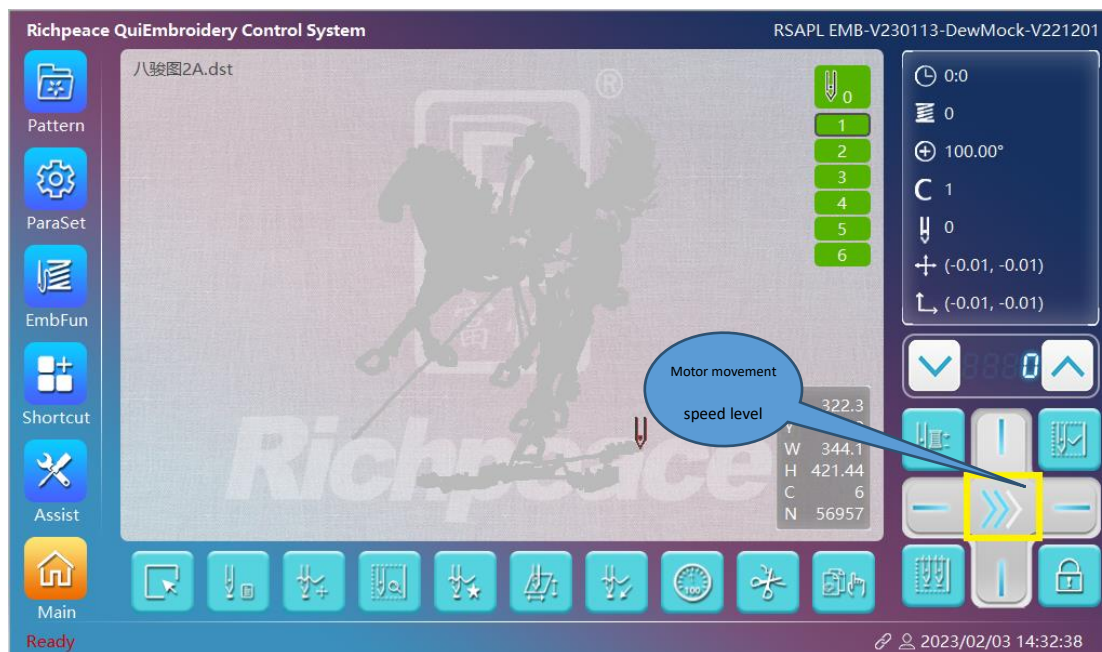
(figure 6.0)

The default motor speed level is level 2, the icon is displayed as "⟫", the icon button can be used to adjust the motor manual movement speed level. When you click the button again, the icon will switch to the state of "⟫", and the motor speed will change to level 3. When you click the button again, the icon will be displayed as"⟫", indicating that the current motor speed is Level 1. The interface is shown in Figure 6.0.

1

2.9 Bottom status bar
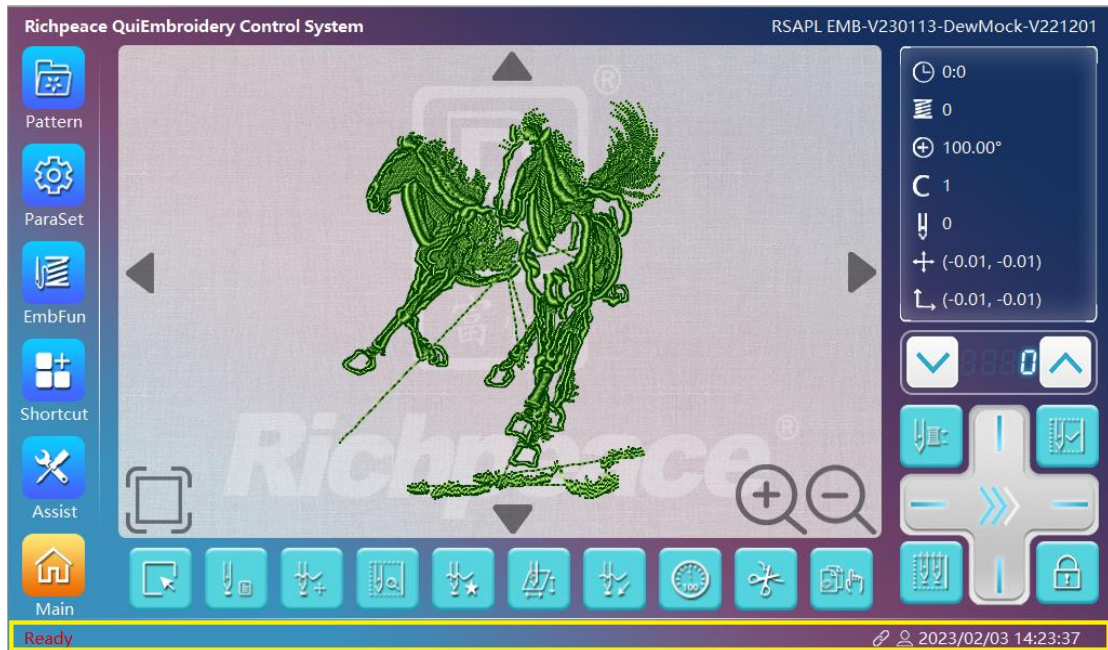
(figure 2.9 Bottom status bar)

The status bar at the bottom is shown in Figure 2.9.

1. Connection status: Indicates whether the device is connected to the network. There are three values: disconnected, connected, and ready.

Disconnected: When the machine is not connected to the network, it is displayed as disconnected.

Connection: When the machine is connecting but has not been successfully connected, the connection will be displayed.

Ready: When the machine is connected to the network, it appears ready.

2. System time: Displays the current system time

Chapter 3 How to Start Embroidery

3.1How to embroider for the first time

The embroidery of the computer embroidery machine is based on the patterns stored in its memory, and the following steps should be followed before you officially use the new motor for the first time:

Step 1: Import system parameters with U disk

Step 2: Import the pattern you need to embroider into the system memory with the USB flash drive, and select and determine the embroidery pattern from the memory. (See Chapter 2 2.3.1 Pattern Settings for details)

The third step: embroidery parameters are set, mainly:

(1) Set pattern changes repeatedly (see Chapter 4 Pattern changes repeatedly)

(2) Setting of rust point and offset point (see the bottom menu of Chapter 2 2.5 for details) 2. Set rust point 3. Return to rust point 7. Return to offset point)

(3) Check the border, confirm the embroidery scope of the pattern, and prevent the embroidery from colliding with the frame. (For details, see the bottom menu of Chapter 2 2.5. 4. Border check)

(4) Setting of color order and setting of startup mode after color change (see Chapter 2 2.3.1 Pattern setting 3 for details). Color sequence setting and color change starting mode in 2.3.2 Pattern parameters)

(5) When the color sequence is not set, you can manually change the color to select the working stitch position and embroidery mode (see Chapter 2 2.3.1 Pattern Settings 3). Color sequence setting and color change starting mode in 2.3.2 Pattern parameters)

Step 5: Finish the above work, pull the lever to the right, and begin to embroider the pattern.

3.2 How to boot

Connect the power grid input to the main power supply of the electric control cabinet, and then press the green start button on the front of the electric control box, the display on the operation box will start to display, and you can start to operate after entering the main interface.

If there is no main switch, after turning on the power, release all the emergency stop buttons, and then press the start button to start (green button).

off	on
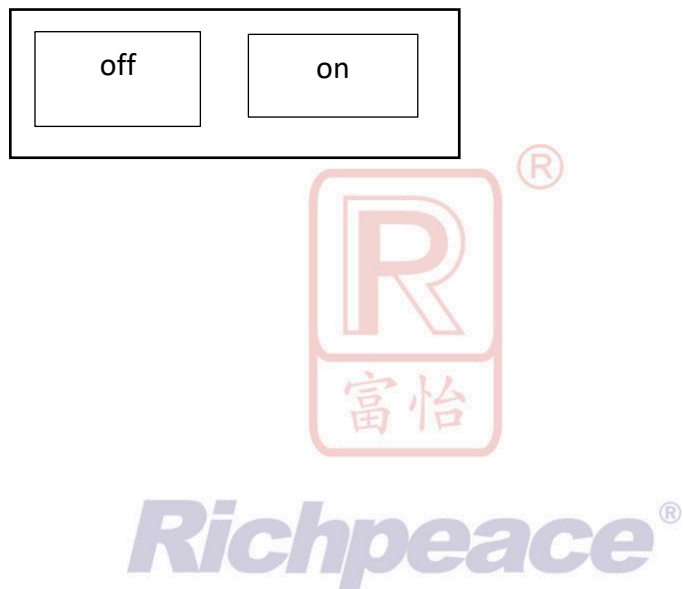
3.3The use of embroidery levers

Stop state: pull the rod to the right to start embroidery; Pull the rod to the left to start the frame;

Driving mode: to the right for low-speed embroidery, release to restore the original speed; Pull the rod to the left to stop the embroidery;

Reverse state: pull the lever to the left to reverse stop.

3.4The basic flow of embroidery

For the first time to use the machine, no operating experience of the user, you can refer to the following operation process instructions to operate; For users with experience, it also helps to re-confirm the operation method.

```
                    ┌─────────────────┐
                    │  Main power on  │
                    └────────┬────────┘
                             ↓
                    ┌─────────────────┐
                    │                 │
                    └────────┬────────┘
                       Power switch ON
                             ↓
                    ┌─────────────────┐
                    │                 │
                    └────────┬────────┘
                   Control the setting operation
         ┌───────────────────┤
         ↓                    │
   ┌ ─ ─ ─ ─ ─ ─ ─ ┐         │
     Parameter setting ───────┤
   └ ─ ─ ─ ─ ─ ─ ─ ┘         ↓
                    ┌─────────────────┐
                    │Pattern introduction│
                    └─────┬───────────┘
                          │        ┌ ─ ─ ─ ─ ─ ─ ┐
                          │          Pattern change
                          │        └ ─ ─ ─┬─ ─ ─ ┘
                          │               ↓
                          │←─────── ┌ ─ ─ ─ ─ ─ ┐
                          ↓           resetting
                    ┌─────────────────┐
                    │ Set rust points, offset points, do border │
                    └────────┬────────┘
                             ↓
                    ┌─────────────────┐
                    │Set the color change and boot mode│
                    └────────┬────────┘
                             ↓
                    ┌─────────────────┐
                    │                 │
                    └────────┬────────┘
                      Pull rod embroidery
                             ↓
  ┌──────────┐      ┌─────────────────┐      ┌──────────────────┐
  │          │←─────│                 │─────→│ Other manual operations: Cut │
  └──────────┘      └─────────────────┘      │ cables/move frames │
Broken thread sewing    Machine running      └──────────────────┘
```
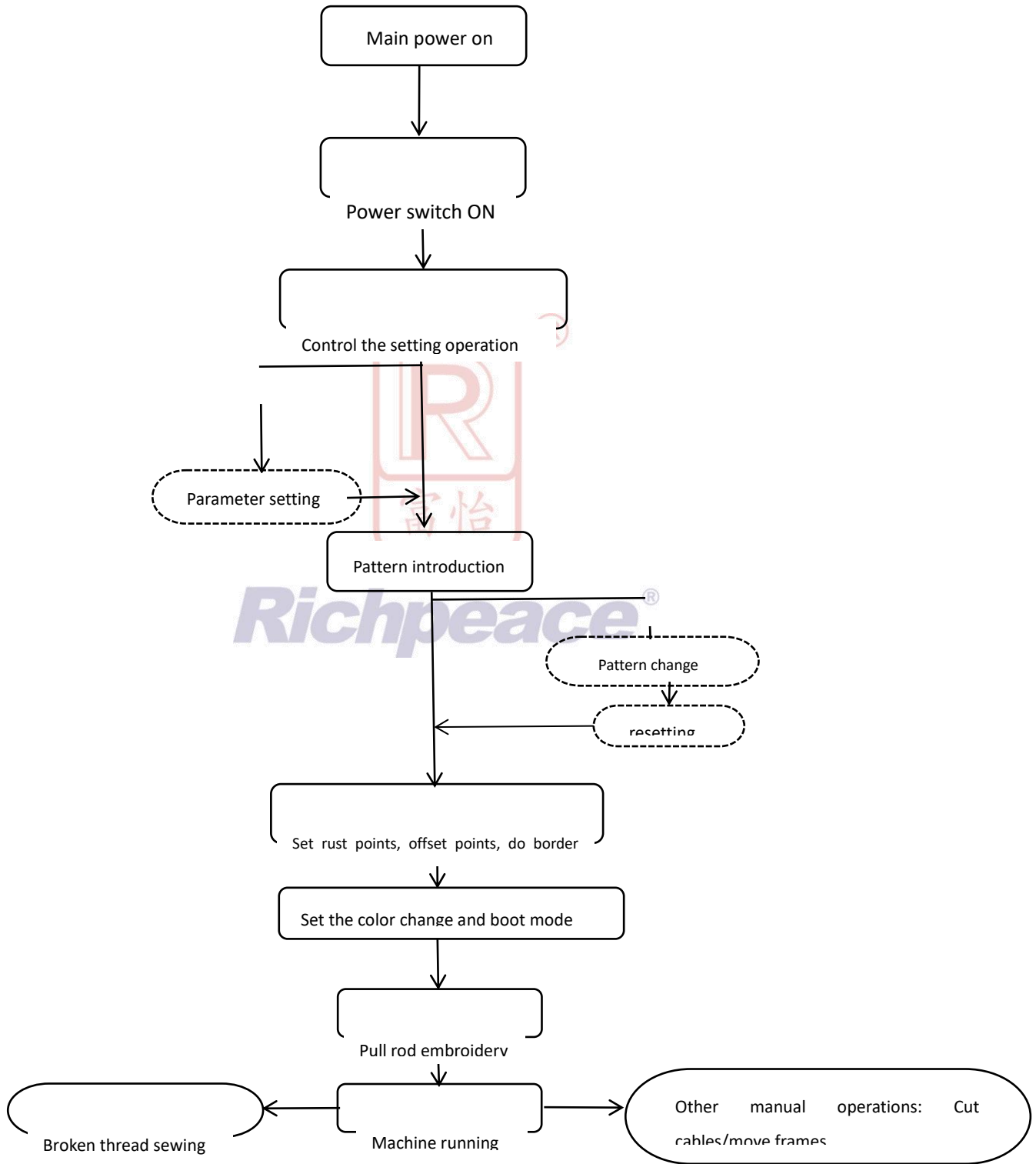
134   mid-run

Pull rod stop

【Note】: The dashed line box indicates the operation that is not required every time. You can skip it and proceed to the next step.

3.5 Choose the pattern of embroidery

Select the desired pattern. After clicking the "Pattern Selection" icon, the interface will display all the existing patterns on the machine. Clicking on the desired pattern file displays information about the pattern on the right.

1. Click the pattern selection icon " " to enter the following screen:
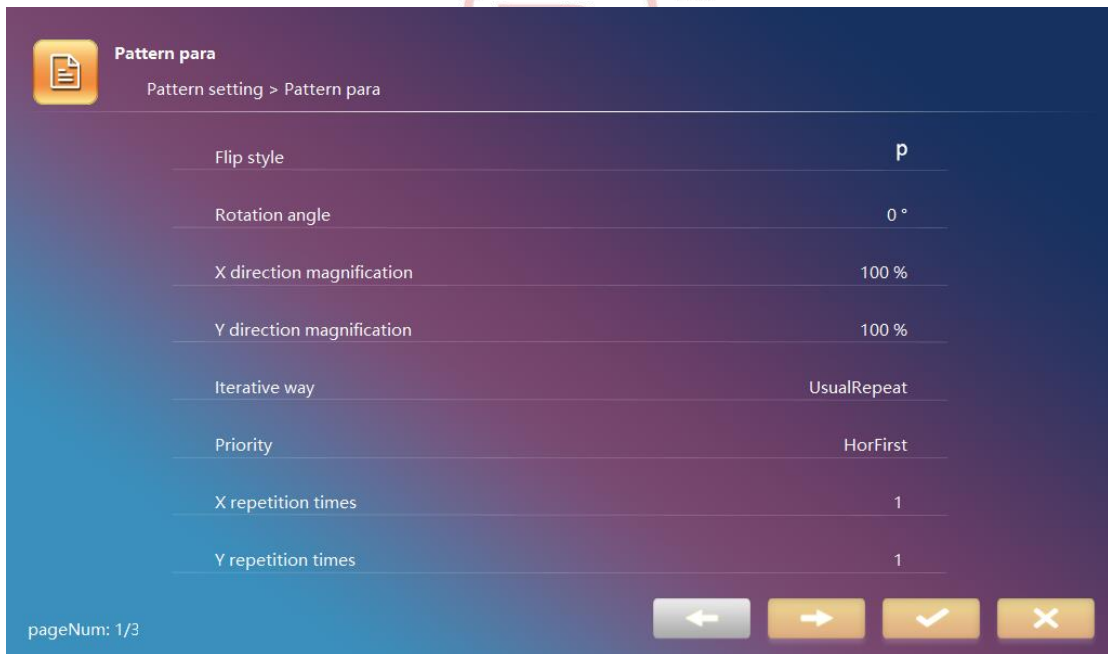

(figure 1.0)

2. Browse the pattern by clicking the icon " " or " ", directly click the pattern. See the information and parameter setting on the right, as shown in Figure 1.1, click the OK icon " " to enter the interface shown in Figure 1.2:
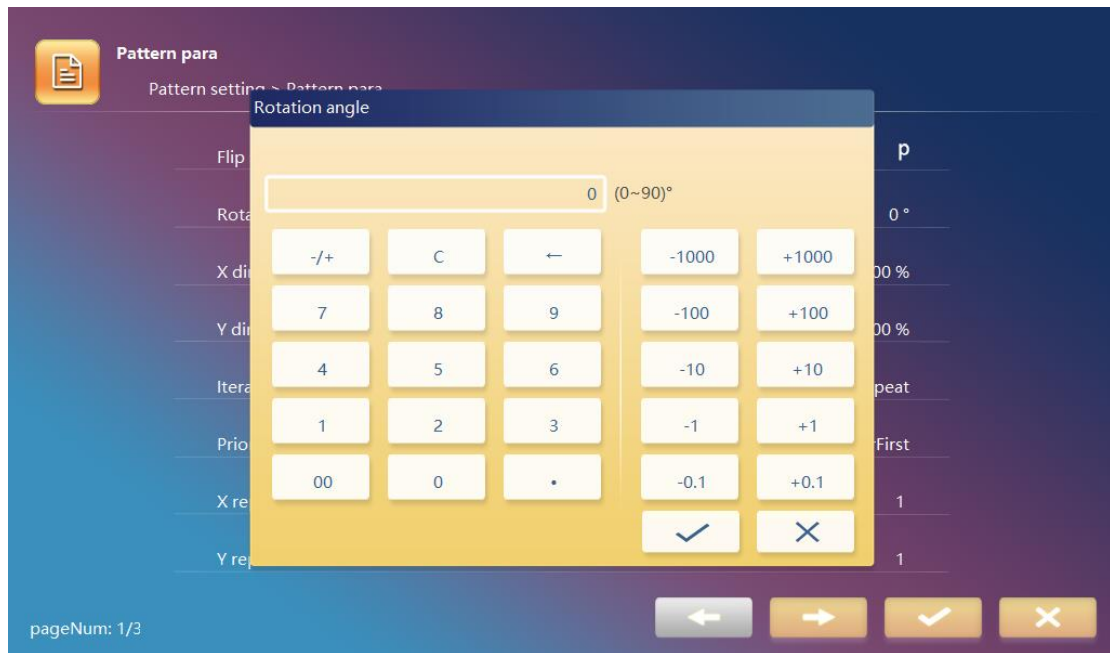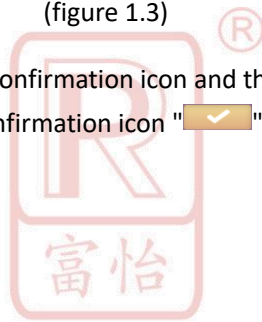
(figure1.1)

(figure 1.2)

3. Some default values of the selected pattern are listed on the interface. You can also click the item to be modified, and a dialog box will pop up to modify the parameter va lues (see Section 2.3.1, Part 2, Pattern parameters), as shown in Figure 1.3.

Pattern para				
Pattern setting > Pattern para				

Rotation angle

			0 (0~90)°	
-/+	C	←	-1000	+1000
7	8	9	-100	+100
4	5	6	-10	+10
1	2	3	-1	+1
00	0	.	-0.1	+0.1
	✓		✗	

pageNum: 1/3

(figure 1.3)

4.After the modification, click "✓" confirmation icon and the pattern information will be saved to memory. After saving, click confirmation icon "✓" and the screen returns to the main interface.
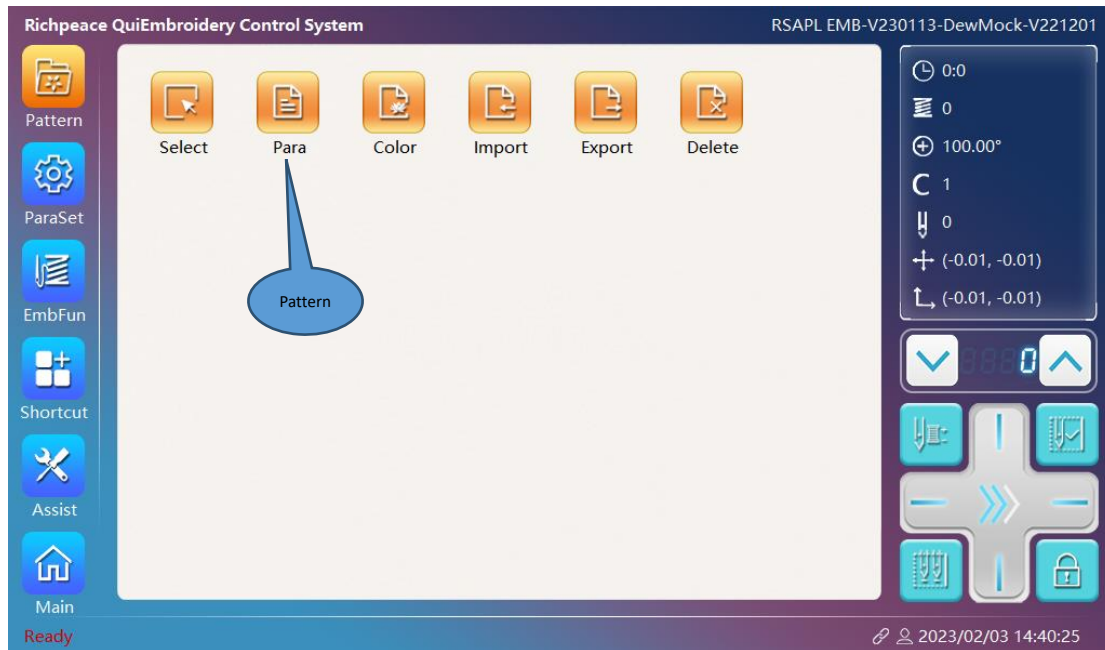
Chapter 4 The pattern changes Settings repeatedly

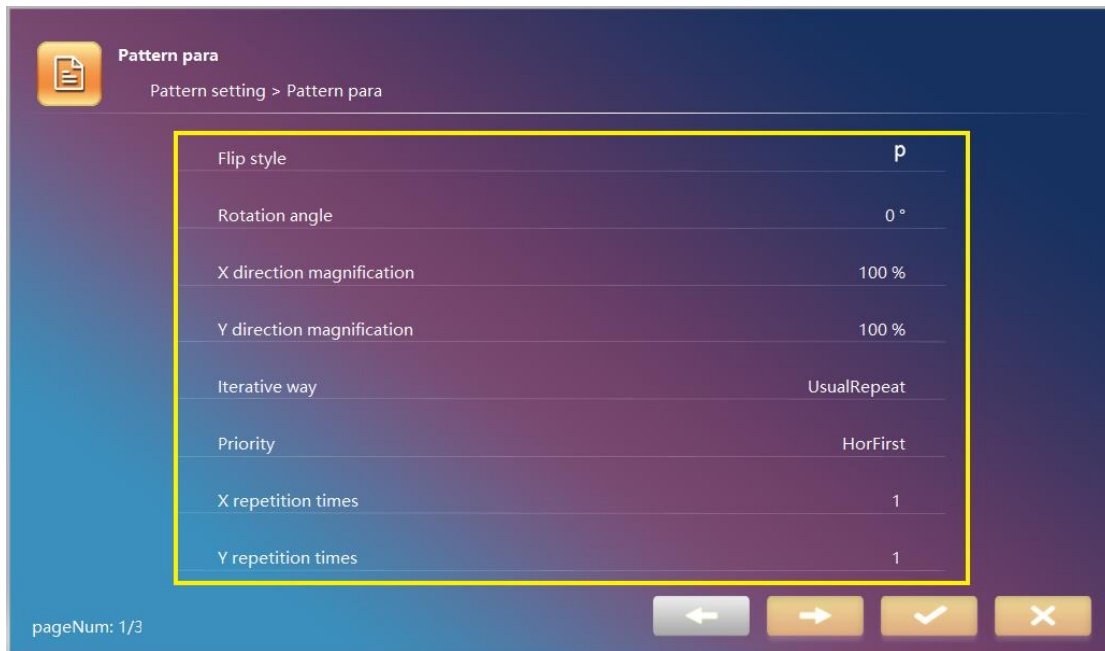"Repeated transformation" refers to the setting of repeated mode and transformed mode for the pattern

1. Click the pattern setting icon " 📝 ", and the interface will appear as shown in Figure 4.0.
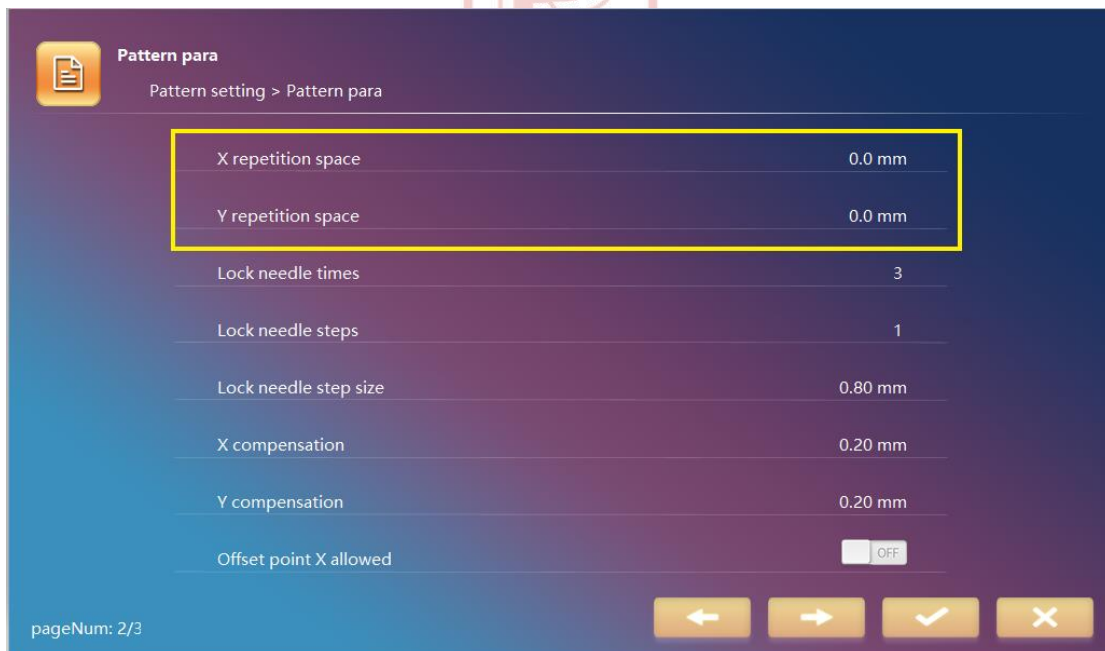

(figure 4.0)

2. Click the pattern parameter icon " 📄 ", and the interface as shown in Figure 4.0.1 will appear.

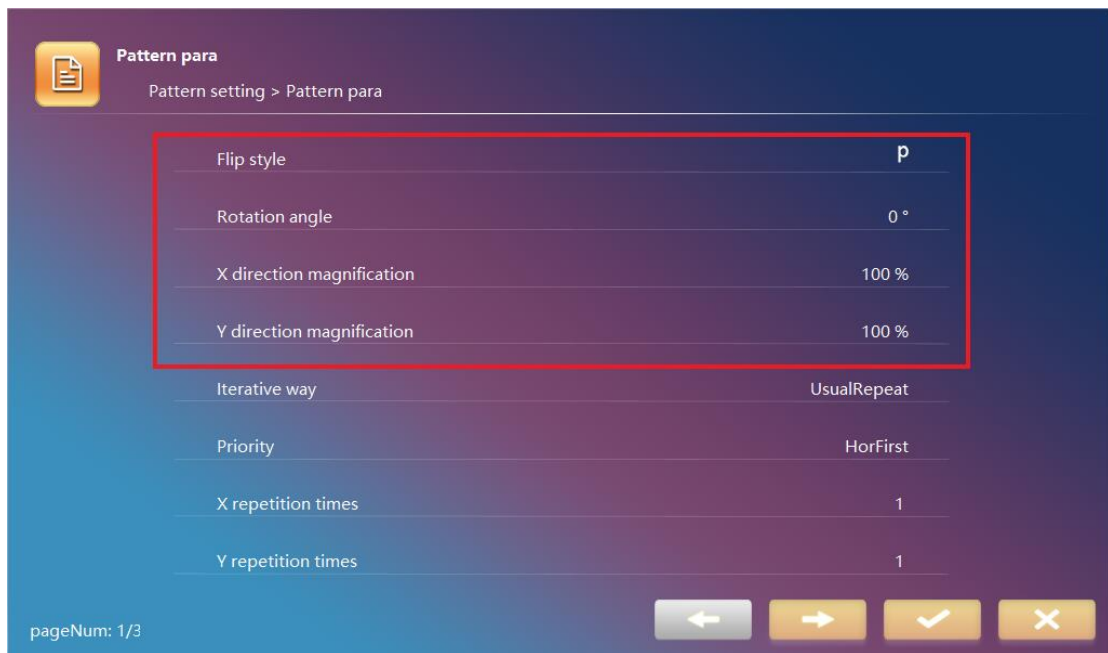The yellow area sets the parameters of the pattern embroidery work.

(Figure 4.0.1 Page 1 / 2)

(Figure 4.0.1 Page 2 /2)

4.1 Conversion Mode Settings

(figure 4.1)

The red area relates to the 4 parameters of the transformation mode setting.

1. Flip style: There are 8 commonly used rotation style options, through the number key 1~8 directly to choose. The following figure shows 8 kinds of ICONS represented by different directions of P.

2. Rotation Angle: When the usual rotation pattern can not be met with the rotation Angle to modify, the digital input range is 0~90 degrees, the modified effect is the pattern clockwise rotation of an Angle, with the numbers 0~9 direct input value.

3.X multiplier: The pattern is enlarged or reduced in the X direction. Enter the value directly with the number key, the input value is between 50 and 200, input 100 means the same as the original size, 50 means half the original size (50%), 200 is doubled (200%).

4. Y-direction magnification: Enlarge or shrink the pattern in Y direction. Enter the value directly with the number key, the input value is between 50 and 200, input 100 means the same as the original size, 50 means half the original size (50%), 200 is doubled (200%).

4.2Iterative mode setting
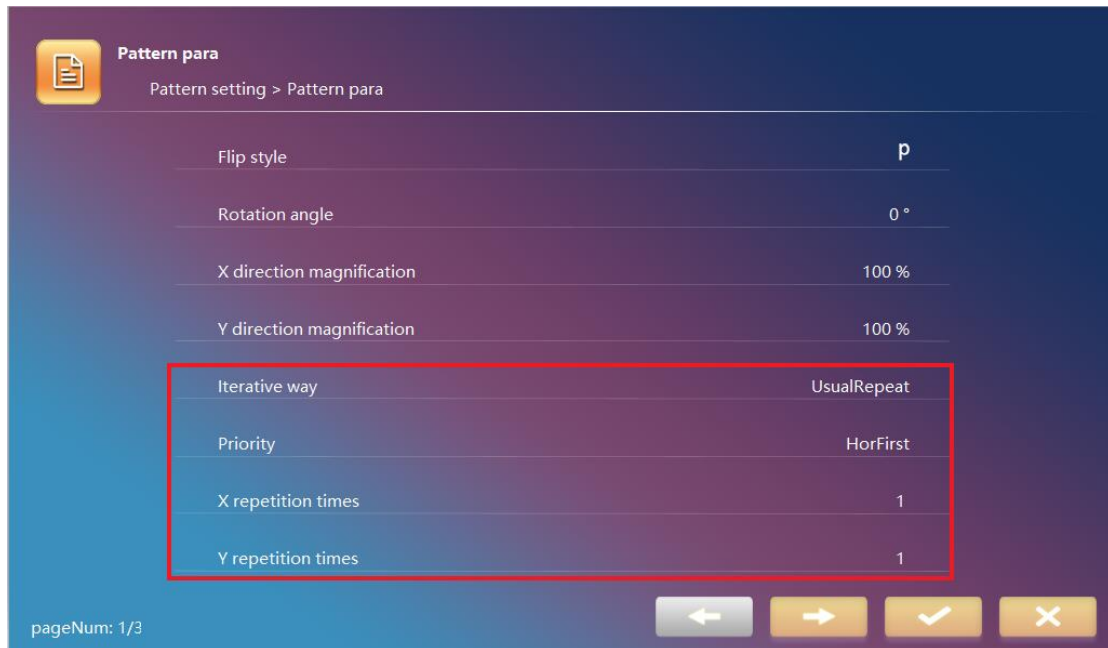
(Figure 4.2 Page 1 / 2)
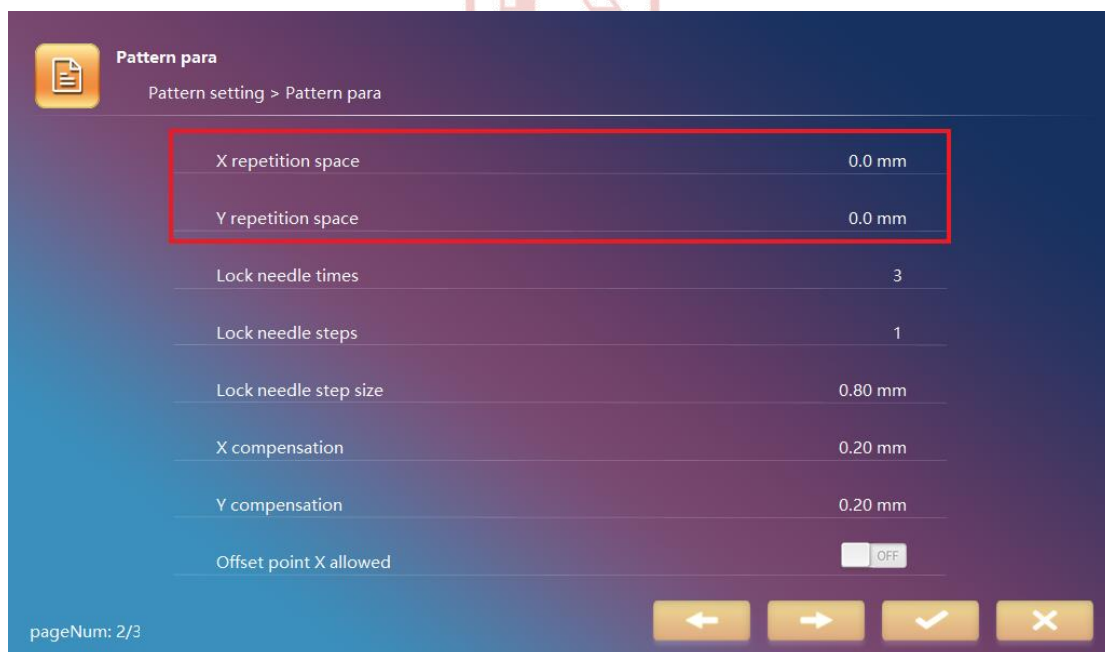
(Figure 4.2 Page 2 / 2)

The red area relates to 6 parameters that are set repeatedly.

1. Repeated mode: There are 4 options to choose from, usually repeated, X-axis symmetry, Y-axis symmetry, XY symmetry.

(1) Usually repeated: in the case of repeated times (referring to the value of the two parameters of "X repeated times" and "Y repeated times" is greater than 1), all the patterns produced by embroidery are the same;

For example, the original pattern displayed is p, the number of x-direction repetitions is 5, and the number of Y-direction repetitions is 3. The cluster array produced by embroidery is as follows:

P   P   P   P   P

P   P   P   P   P

P   P   P   P   P

(2) X-axis symmetry: in the case of repeated times (referring to the value of the two parameters of "x-direction repetition times" and "Y-direction repetition times" is greater than 1), the pattern produced by embroidery is p and q phases;

For example, the original pattern displayed is P, (X repetition times are 5,Y repetition times are 3), then the pattern array produced by embroidery is as follows:

p   q   p   q   p

q   p   q   p   q

p   q   p   q   p

(3) Y-axis symmetry: in the case of repeated times (referring to the value of the two parameters of "x-direction repetition times" and "Y-direction repetition times" is greater than 1), the pattern produced by embroidery is P and b phases;

For example, the original pattern displayed is p, (X repetition times are 5, Y repetition times are 3), then the pattern array produced by embroidery is as follows:

p   b   p   b   p

b   p   b   p   b

b   b   p   b   p

(4) XY symmetry: in the case of repeated times, the pattern produced by embroidery is p and d phases;

For example, the original pattern displayed is p, (X repetition times are 5, Y repetition times are 3), then the pattern array produced by embroidery is as follows:

p d p d p

d p d p d

p d p d p

2. Priority order: Set horizontal priority or vertical priority when repeatedly embroidering.

(1) First embroider horizontal: first embroider horizontal (X direction) pattern when repeatedly embroider, embroider one line and then embroider the next line;

(2) First embroider longitudinal: first embroider longitudinal (Y direction) pattern when repeatedly embroider, embroider one column and then embroider the next column;

The diagram is as follows:

First embroider horizontal	First embroider longitudinal
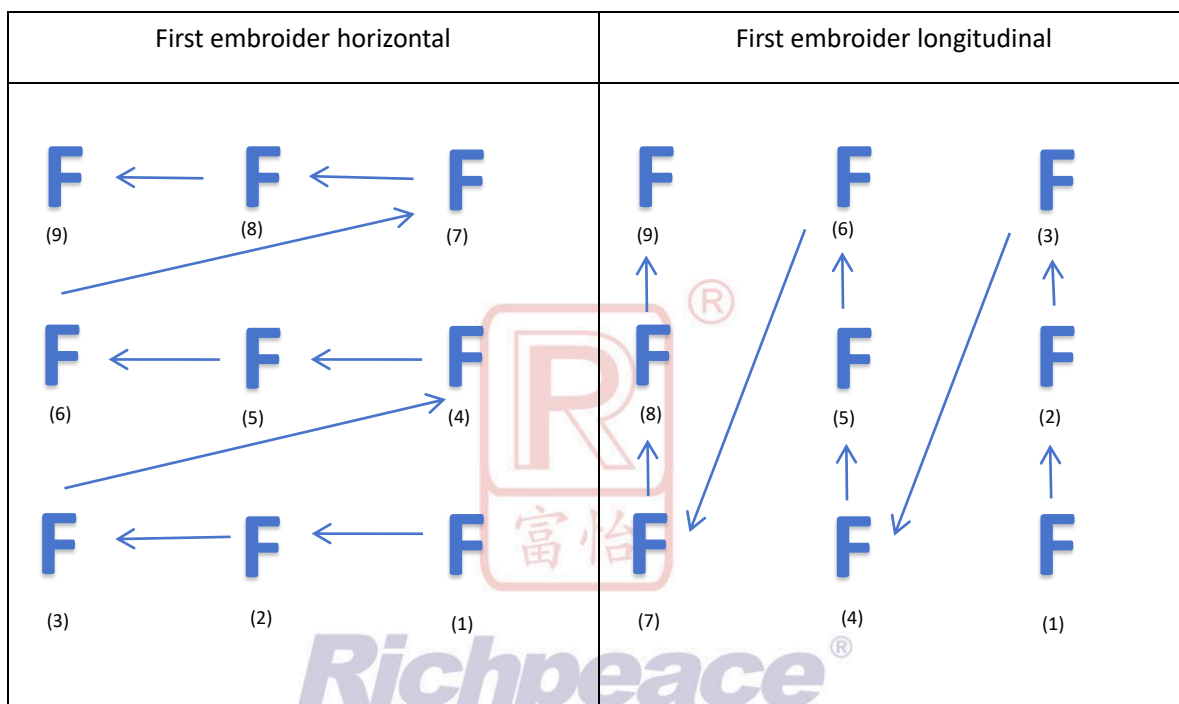
3.X repetition times: set the number of patterns repeatedly embroidered in the X direction, that is, the number of columns of patterns produced by embroidery, and the set value is between 1 and 200;

4. Y-direction repetition times: set the number of repeated embroidery patterns in the Y direction, that is, the number of rows of embroidery patterns, and the set value is between 1 and 200;

5.X direction repetition interval: When the number of repeats is greater than 1, the embroidery produces more than 1 pattern, and the distance of the rust points of the adjacent two patterns in the X axis direction. The value ranges from -30000 to 30000. The unit is 0.1mm, that is, 200 means 20mm. The X-direction repeat spacing diagram is as follows:

X-to repeated spacing + 10mm	X-to repeated spacing + 10mm
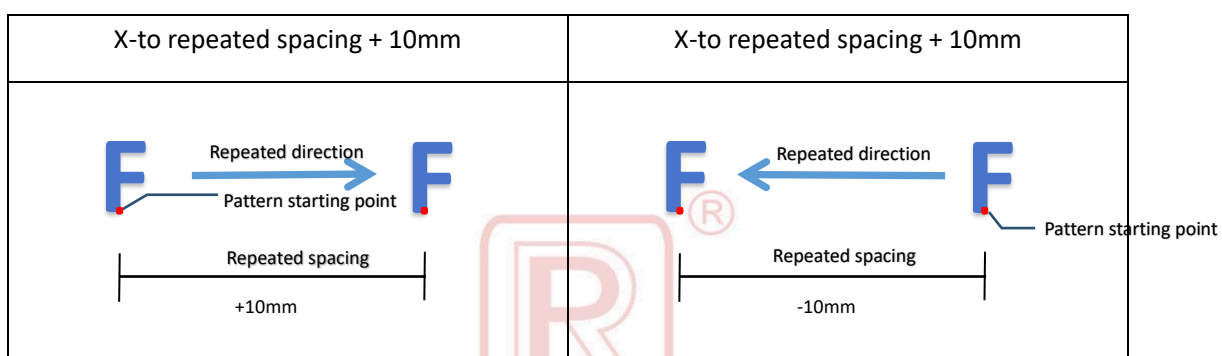
6. Y-direction repeat interval: When the number of repeats is greater than 1, the embroidery produces more than 1 pattern, and the distance of the rust points of the adjacent two patterns in the Y-axis direction. The value ranges from -30000 to 30000. The unit is 0.1mm, that is, 200 means 20mm. The diagram of y-direction repeated spacing is as follows:

Y direction repeated spacing + 15mm	Y to recurrent spacing-15mm