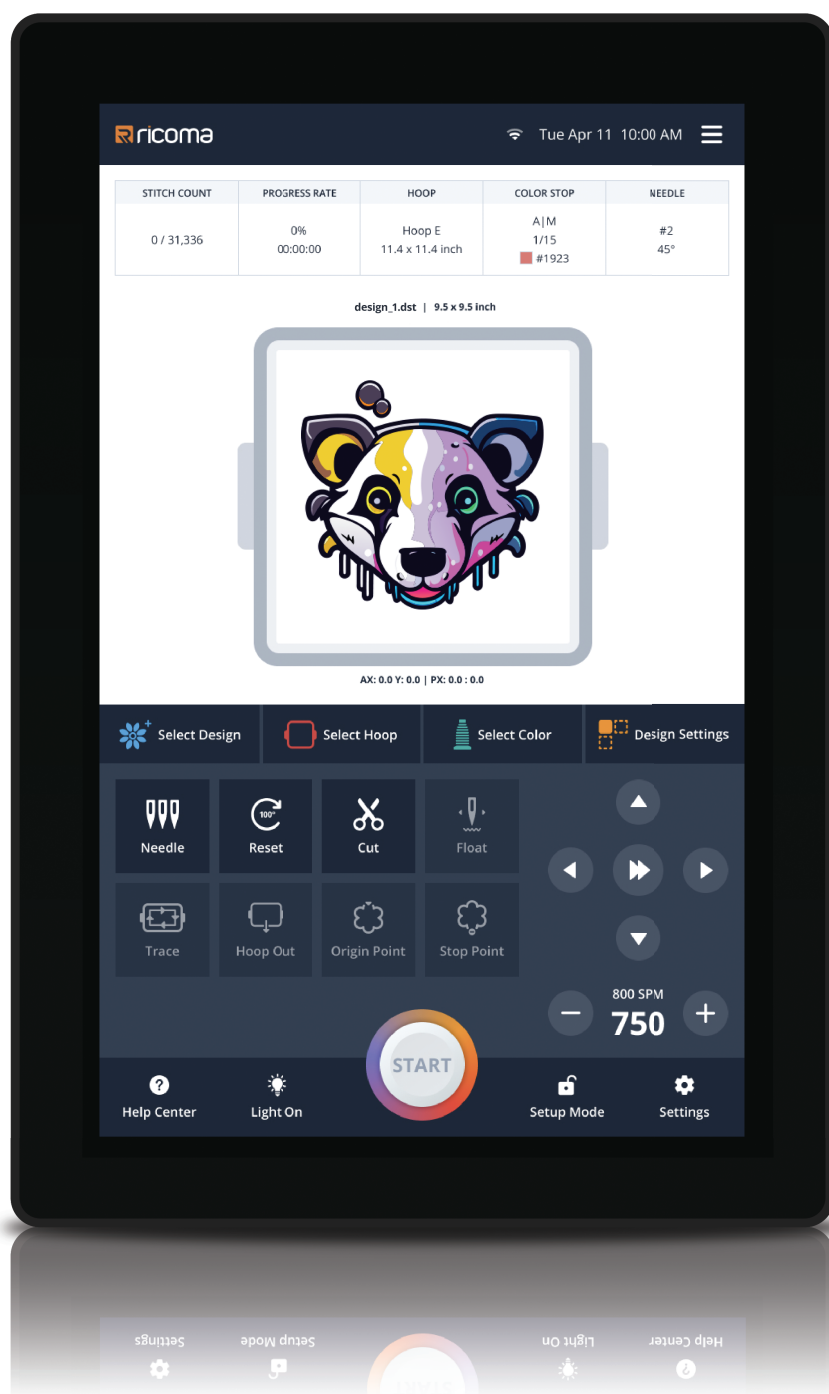


User's Manual

REX-10S



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Part 1 Overview

Thank you for using our computer embroidery machine control system!

Please read this Manual carefully before using the embroidery machine (the Machine), in order to handle it properly and avoid an accident. Meanwhile, please keep this Manual properly for further reference.

Note: Due to the difference of machine configuration, some functions in this Manual may not apply to some models of machine. The Machine's actual configuration and computer operation functions should prevail.

1.1 Precautions

Non-professional personnel are not allowed to repair nor debug the electrical system; otherwise, it may weaken the Machine's safety performance, increase the faults and even lead to personal injuries and property losses.

Do not dismantle the case cover plate after the Machine is powered on to ensure safety, for high voltage exists in some areas in the case.

Please replace the fuse in strict accordance with the product marks and specifications, in order to ensure safety.

The Machine's power switch supports overcurrent protection function. When overcurrent protection switch acts, wait for 3min before switching it on again.

Do not stack sundries around the Machine. Remove the dust on control box surface and filter regularly in use process, to ensure good ventilation and cooling of system.

Do not alter the product unless authorized by the Company. The Company does not bear any liability for any consequence caused by alteration of the product without authorization of the Company!

Warning

When the case cover plate needs to be opened, cut off power supply, wait for at least 5min and follow the guidance of professional technicians before touching the internal control parts.

Prohibited

Do not touch the moving parts or open the control box while the Machine is running, to keep safety and avoid affecting the Machine's normal functioning.

Do not use the Machine in places with moisture, dust, corrosive gas, inflammable/explosive gas; otherwise, electric shock or fire hazard may occur.

1.2 Working Environment

Good ventilation, sanitary environment, less dust;

Ambient temperature: 5°C-40°C;

Relative humidity of workplace: 30%-90%, no condensation.

1.3 System Power Supply and Grounding

The electric control system's power supply is as follows:

Single-phase AC1 00 - 240V/50 - 60 Hz

The power consumption varies between 0.1-0.4 kW depending on the machine configuration.

The Machine must be grounded reliably in order to avoid electric shock and fire hazards due to the faults such as electric leakage, overvoltage and insulation and keep safety.

The grounding resistance should be less than 100Ω; the conductor length should be within 20m; the conductor cross section should be above 1.0 mm².

1.4 Main Performance of System

The REX-10S embroidery system (the System) is furnished with 10.1" 800*1280 HD LCD to show clear-cut picture and bright colors; mounted with capacitive full-touch screen that supports multi-point touch and control function. Besides, the System's user-friendly HMI has similar operation habits with the mobile devices and easy learning, to greatly simplify the operation of users, improve the operation performance and efficiency.

Memory: 100 million stitches, 1,000 designs

Color change times: 1,000 times

Supported formats: DST / DSB / TBF

Max. rotation speed: 1000 or 1500 SPM

Language: Chinese, English, Spanish, Arabic, Portuguese, German, French, Korean, Russian, Dutch, Turkish, Vietnamese, Thai, Italian, Czech, Polish, Ukraine, etc.

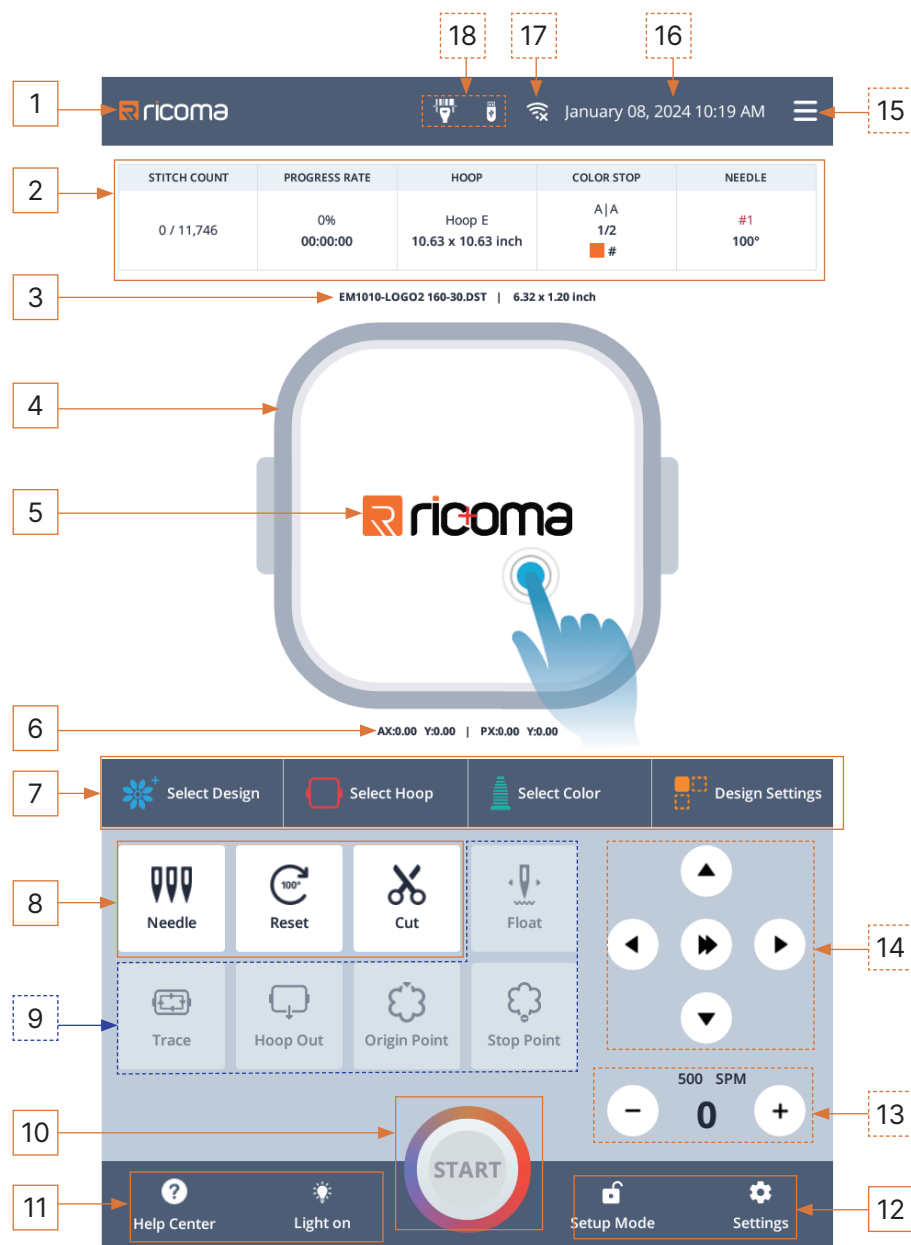
Networking: Online, WIFI

Software upgrade: Online upgrade, USB upgrade

The System supports auto memory of embroidery pattern parameters, auto saving of set or embroidered pattern data, including pattern original point, color stop step, function code; as well as setting of pattern parameters, rotation and repeat; so, this pattern can be applied directly in repeated embroidery of this pattern.

Part 2 Introduction to Homepage Functions

2.1 Introduction to Icons in Homepage

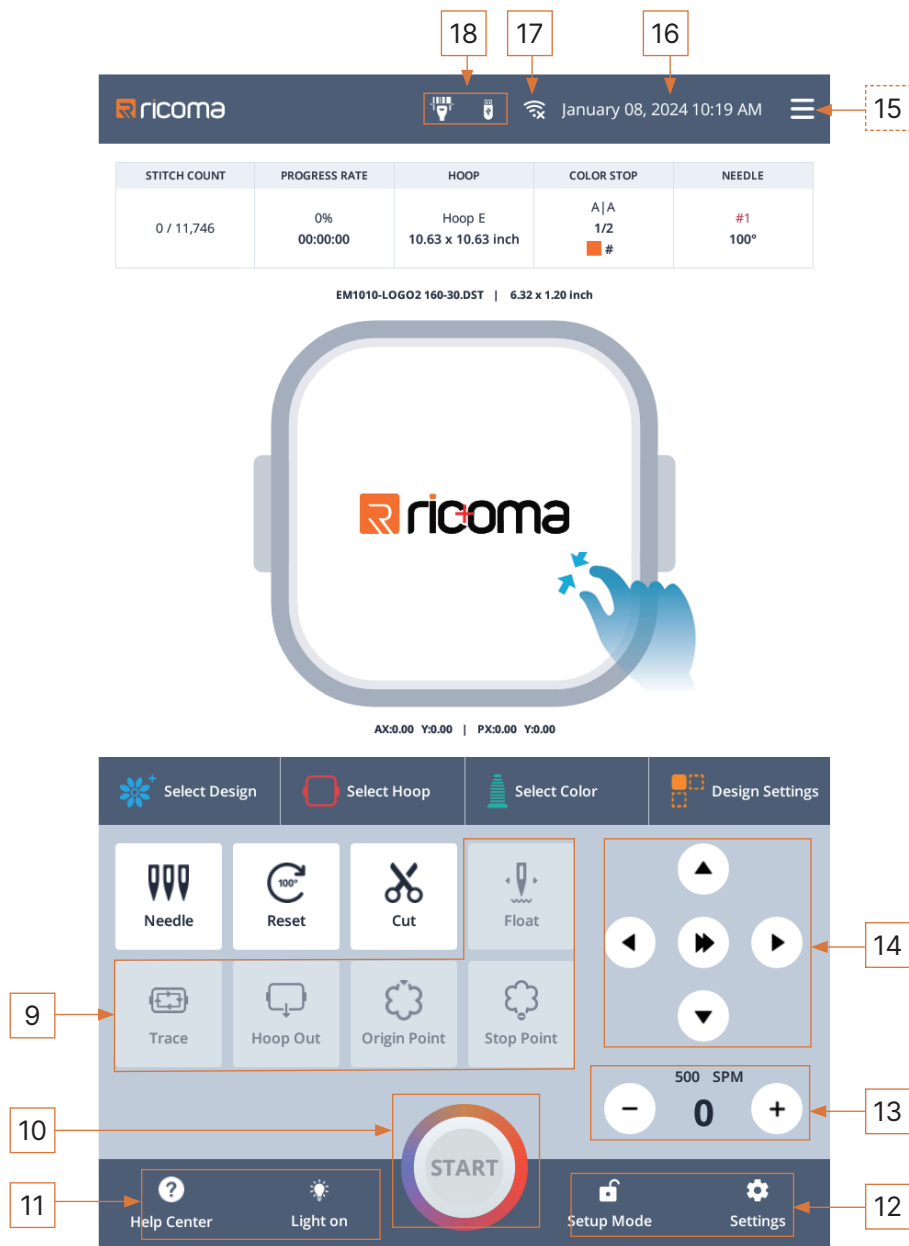


2.1.1 Set mode

Enter set mode to select design, select hoop and design settings;

the response of float, trace, hoop in/out, original point and enable embroidery function is prohibited, and the action execution can be responded under EMB mode;

1. Company LOGO
2. **Stitch count:** Current stitch count /total stitch count
Progress: Completion progress, remaining time
Hoop: Name and size of current hoop
Color stop: A| A auto color change and auto start
A|M auto color change and manual start
M|M manual color change and manual start
1/2: Current color stop/total color stops
#1923 Current color code
Needle:
#1 Current needle bar number
(red means needle bar is not in place)
Current needle bar number
(red means main axis is not at zero position)
3. Name and size of current pattern
4. Selected frame pattern
5. Current embroidery pattern
(double click to preview)
6. **AX / Y:** Original coordinates of pattern
PX / Y: Current coordinates of hoop
7. Design selection/check
 Hoop selection
 Color stop setting
 Design setting
8. Manual operation button
 Manual color change
(press and hold to take effects)
 Jog spindle 100°
(press and hold to take effects)
 Manual cut
9. Manual operation is valid under **EMB mode**
10. Start
(valid under EMB mode)
11. Help center
 Light on
12. Setup mode
 Settings



9. Manual operation is valid under **EMB mode**

Backward / forward

Design contour tracing

Hoop offset

Original point

Stop point

10. Start
(press and hold to take effects)

12. EMB mode

13. Embroidery speed setting and current speed

14. **Direction key:** Hoop move button

Hoop high / low speed switch

15. Shortcut menu key

16. Current date

17. WIFI signal

Access of wired network

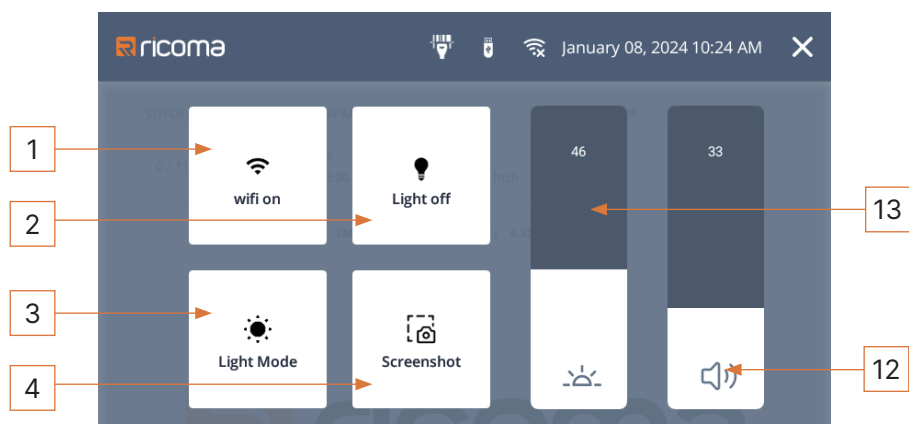
18. USB access

Access of barcode scanner

2.1.2 EMB mode

Select hoop and **Design settings** are disabled under **EMB mode**; other functions can be operated manually.

2.1.3 Shortcut menu



Enter menu Quit menu

1. WIFI on / off

2. Light on / off

3. Light mode / dark mode

4. Screenshot button (enabled when USB is inserted)

5. Screen brightness setting slider

6. System volume setting slider

2.1.4 Embroidery run

 In EMB mode, Press and hold  key under EMB mode to switch to embroidery run page.



  January 09, 2024 12:06 PM 

STITCH COUNT	PROGRESS RATE	HOOP	COLOR STOP	NEEDLE
2,047 / 23,278	8% 01:10:46	Hoop E 14.17 x 8.27 inch	A A 1/1 ■ #	#1

MT-1501-85180-200.DST | 7.09 x 7.87 inch



AX:15.40 Y:22.70 | PX:18.80 Y:24.60

 Needle

 Reset

 Cut

 Float

EMBROIDERY IN PROGRESS,
TO MAKE CHANGES, PRESS STOP

 Trace

 Hoop Out

 Origin Point

 Stop Point

 -

450 SPM

 +

 Help Center

 Light on

 STOP

 EMB Mode

 Settings

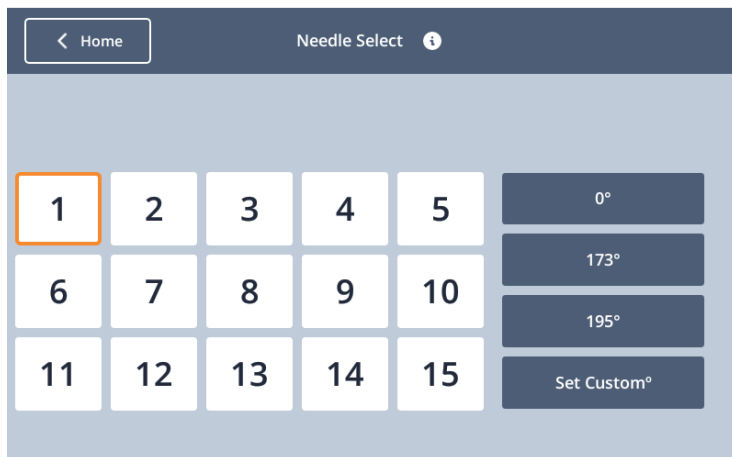
Real-time drawing along with embroidery progress

Support **embroidery speed** and light on or off under **embroidery run** mode. Embroidery is under progress! To make changes, press **stop**!

2.2 Manual Operation Functions

2.2.1 Manual color change

Click  needle key on homepage to enter color change page.



1. The left **Numeric key** is the target needle bar number. Click the number to change to the designated needle bar.

2. The right **Angle key** is the stop angle of target main axis. Click the common angle or enter any angle to stop the main axis at the designated angle.

2.2.2 Jog reset

Press and hold  key on homepage to move main axis to 100° position.

When main axis is not at zero position, use this function to move main axis to 100° position.

2.2.3 Manual cut

Press and hold  key on homepage to execute cut of bottom line and upper thread. Perform the relevant cut operation as required.

2.2.4 Backward / forward (effective under EMB mode)

Click  backward key on homepage to enter backward page.

STITCH COUNT	PROGRESS RATE	HOOP	COLOR STOP	NEEDLE
530 / 11,746	4% 00:00:00	Hoop E 10.63 x 10.63 inch	A A 1/2 #	#1 100°

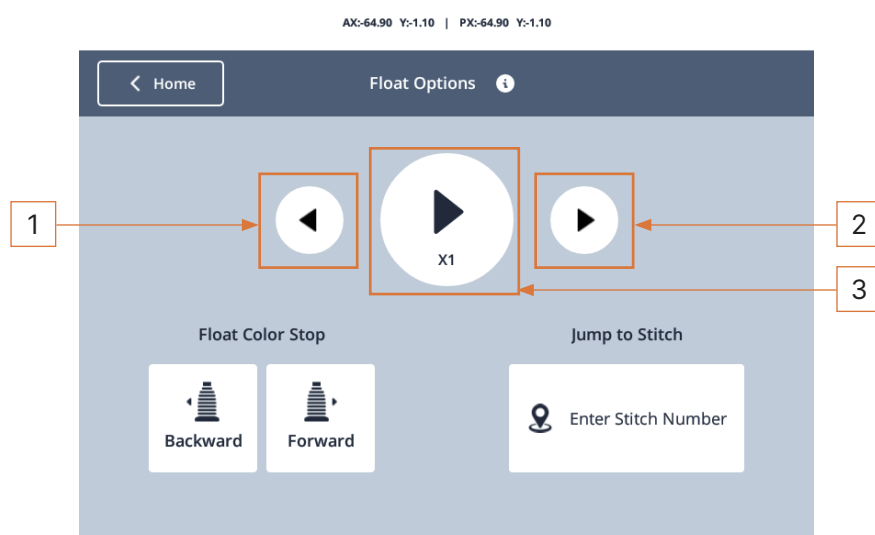
EM1010-LOGO2 160-30.DST | 6.32 x 1.20 inch

Backward / forward in progress:

The **current stitch count** and **current color stop** in **stitch count** and **color stop** column will change according to the operation value.



The design preview will have real-time change and drawing according to the operation of backward / forward.



 backward by color

The hoop will move backwards to the start position of current color, while the start position of current color will move backwards to the start position of the previous color.

 forward by color

The hoop will move forwards to the start position of the next color.

 Move hoop to the designated stitch count

Click and enter the stitch count, and the hoop will move to the designated stitch count position.

1. **Stitch backward key:** Press and hold it to move stitch backwards continuously

2. **Stitch forward key:** Press and hold it to move stitch forwards continuously.

3. **Stitch forward/backward speed key:** Click it to switch the speed between X1, X5 and X10.

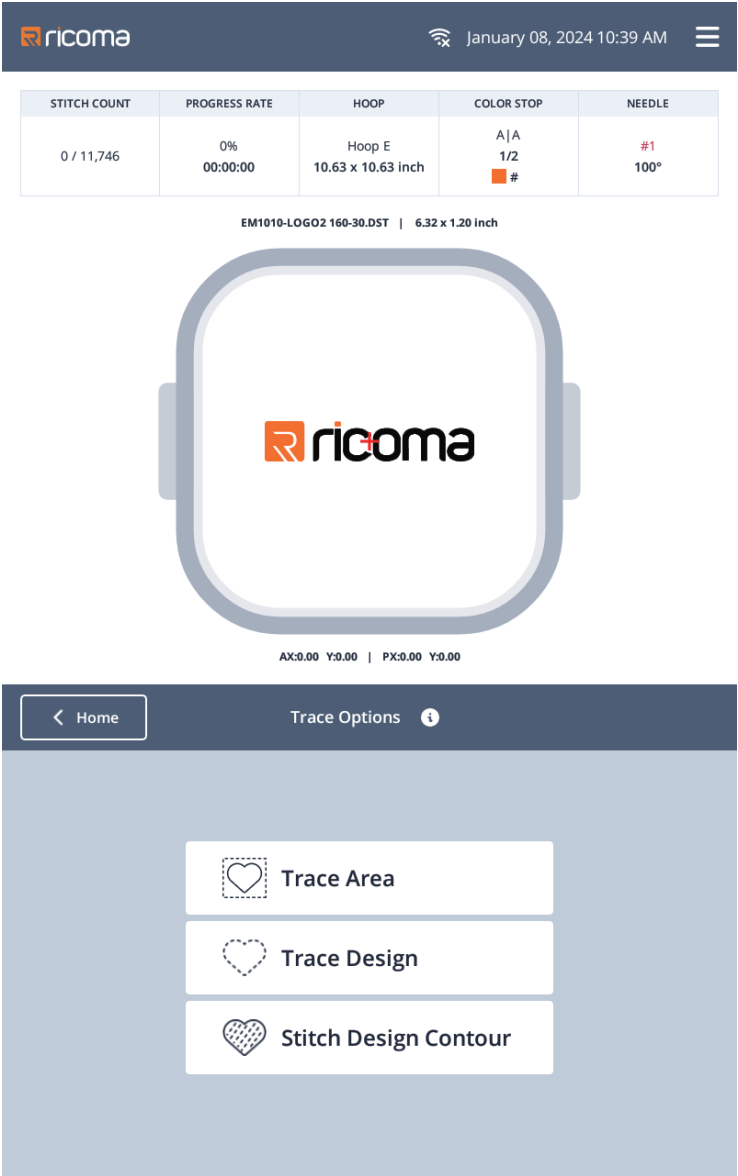
X1 mode  : Move stitch backwards/forwards in every 1 stitch, and the hoop will move forwards or backwards along with the needle;

X5 mode  : Move stitch backwards/forwards in every 5 stitches, and the hoop will start moving after stitch backward/forward key is uplifted;

X10 mode  : Move stitch backwards/forwards in every 10 stitches, and the hoop will start moving after stitch backward/forward key is uplifted;

2.2.5 Design tracing (valid under EMB mode)

Click  design tracing key in homepage to enter the design contour tracing page.

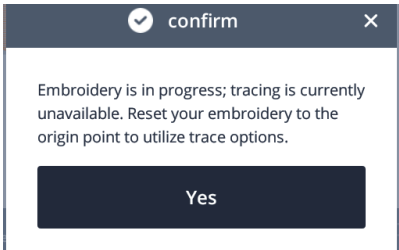


Make sure to execute **Trace area** or **Trace design** before starting embroidery, to make sure the embroidery design range is within the valid range of hoop.

2.2.6 Hoop in/out (valid under EMB mode)

Click  hoop output key, the hop will move to the top point of current hoop and stop, the status will become  hoop in; click hoop again to return to the previous stop position and continue embroidery.

This function applies to the operation such as applique, viewing of embroidery effects during embroidery, or removing hoop after embroidery is done.



Note: When "Trace design" is executed while embroidery is in progress, it will prompt whether stop current embroidery and enter the design contour tracing page.

Trace area

The hoop moves along with the four sides of design.

Trace design

The hoop moves along with the contour track of design.

Stitch design contour

The current stitch and design contour will generate a new design that has contour, it is commonly used in applique.

2.2.7 Original point (valid under EMB mode)

Click  original point key in homepage, the hoop will move to the original point position of current design, the original point position of design is determined by the previous embroidery, or after execution of trace area or trace design, and is recorded.

When original point is executed while embroidery is in progress, it will prompt whether return to the original point when current embroidery is completed, in order to avoid misoperation.

2.2.8 Stop point (valid under EMB mode)

When it is stopped and hoop is manually moved in embroidery progress, this operation can be performed to return to the stop position and continue the embroidery.

Click  stop point key in homepage and the hoop will move to the embroidery position when it is stopped.

Under hoop in  in embroidery process, it can also return to the embroidery position through stop point.

Part 3 Design Management

3.1 Design Management

Click  select design / view design in homepage to enter design management page.



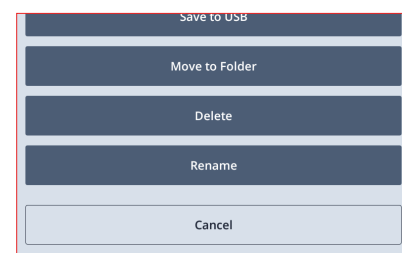
Design management function: Browse the design by sliding up / down, support design search, sorting and rename, deletion, new folder, display design in multiple modes, favorite function, multi select, image embroidery, USB embroidery; it can also show the embroidery format file and image file, letter embroidery, design combination, etc.

Embroidery format: Support the general DST, DSB and TBF embroidery formats in market.

Image format: Support the image formats of BMP, PNG, JPG, JPEG, WEBP and GIF.

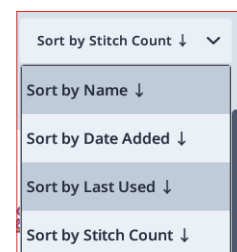
1.  Search key
2.  Images folder
3.  Favorite folder

4. Click the design to view the information, click the bottom selection key to select the embroidery design, or select the design, press and hold it to enter edit item.



5.  Click favorite key, click it again to cancel.

6. Drop-down menu of design sorting.



7. Display mode key It is large picture, thumbnail and list mode in turns.



8. Design combination function key.

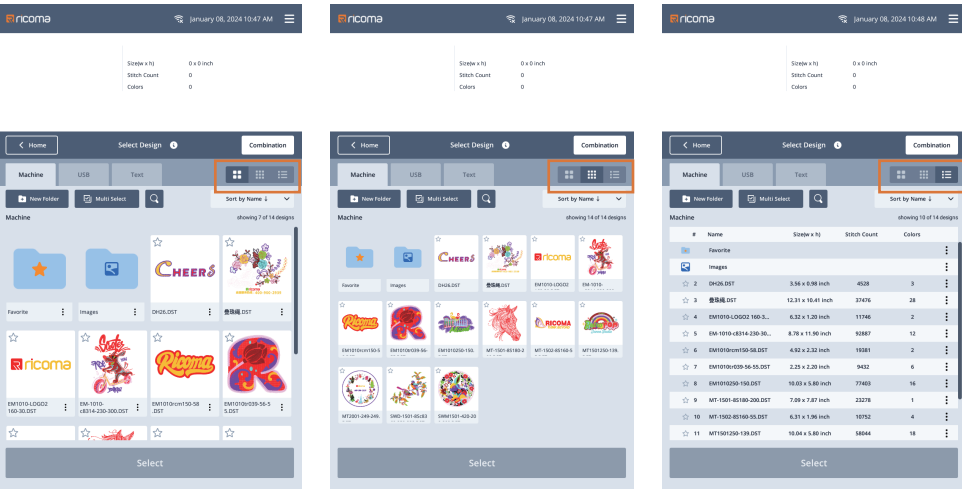


9. Click design to show the basic information of design.

Select the design requiring embroidery, and click select to issue the current design data and start embroidery.

3.1.1 Design display mode

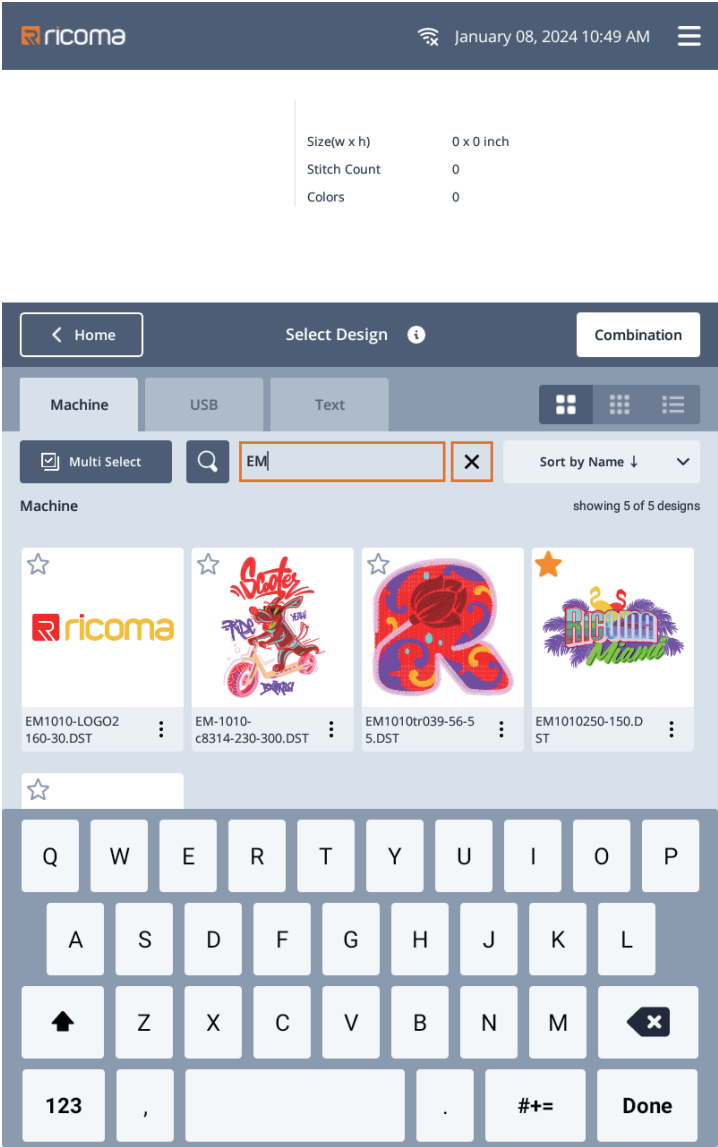
Click  display mode key based on the favorite design display mode, (large picture, thumbnail and list) and display according to the selected mode.



Both memory designs and USB designs can be displayed in big picture, thumbnail and list mode.

3.1.2 Design search

Click  to enter search mode, and enter content to display the related designs.



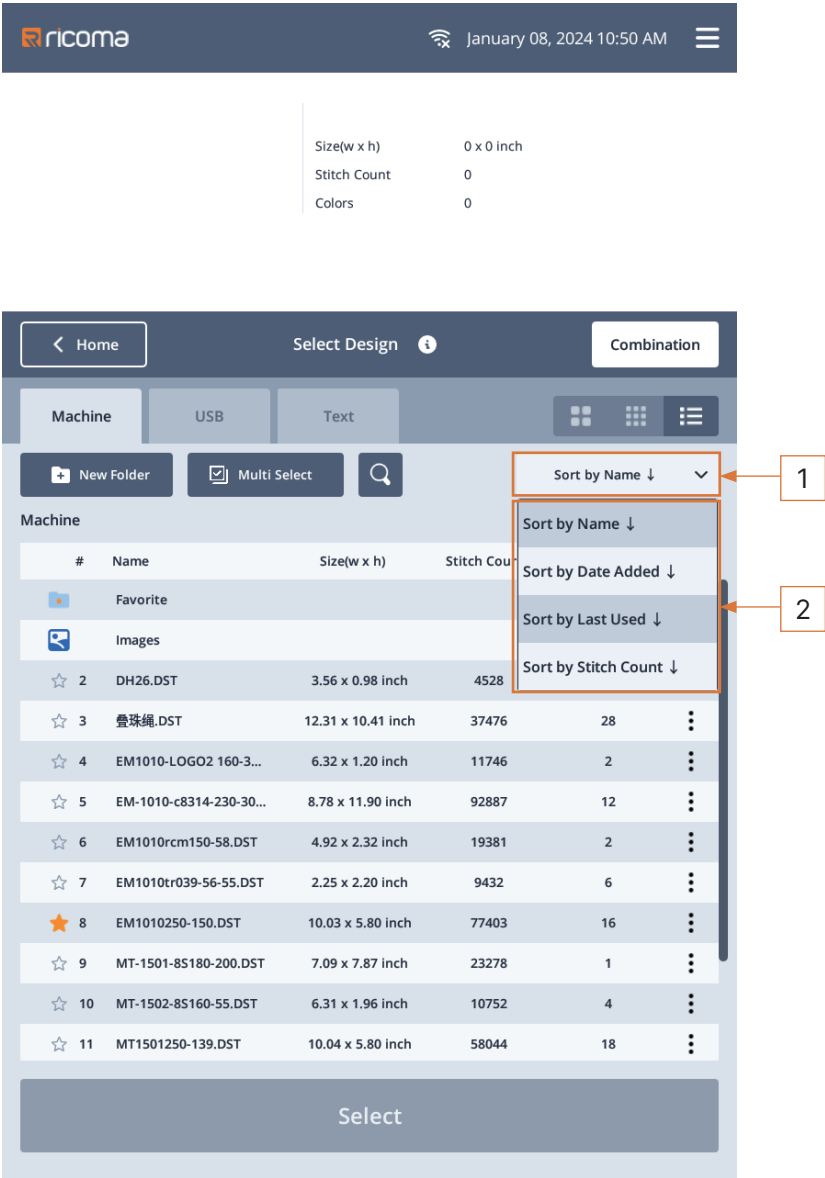
Both memory designs and USB designs support search by design name.

Support design search by letter and figure.

1. Click  search to show the input box, and enter "the design keyword or full name " to display the related designs.

2. Click  to quit search mode.

3.1.3 Design sort



[1] position shows the current sorting mode and it is also the drop-down menu key; click it to show [2] other sorting modes, and click the sorting modes required.

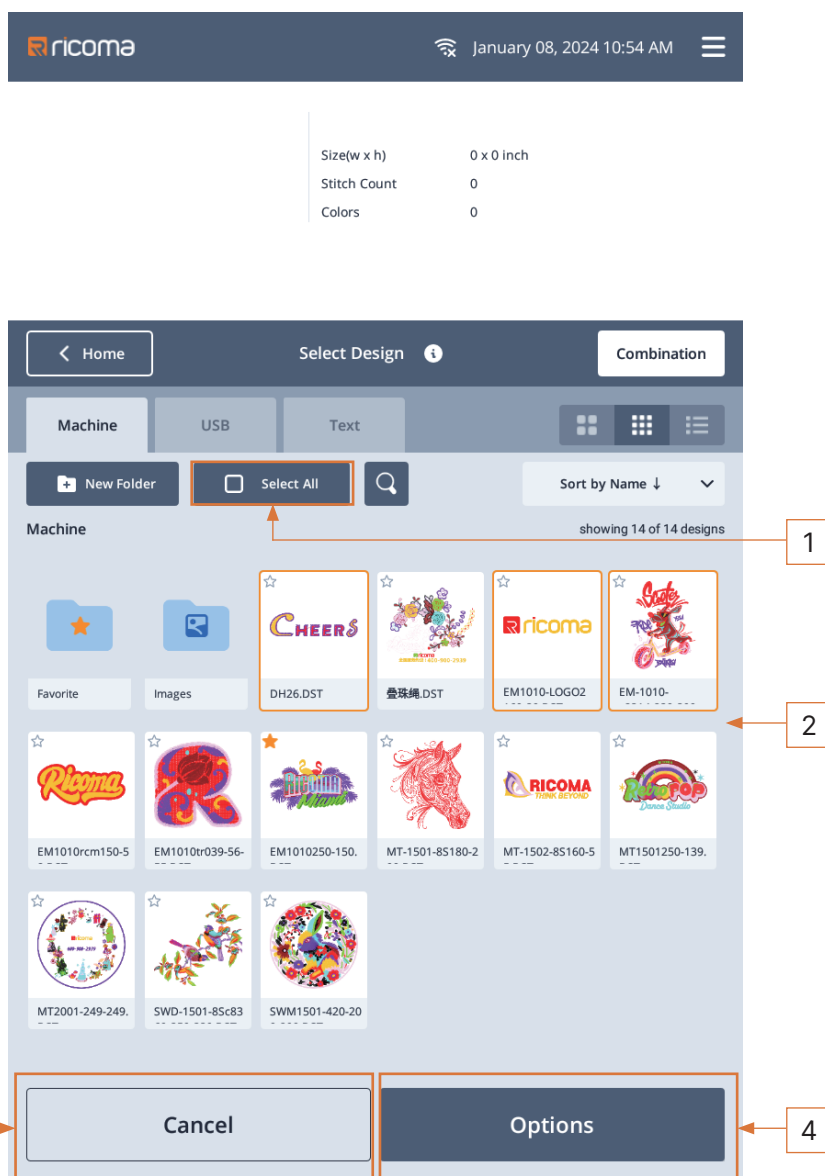
For example, when sort by **total stitch count ↑** is selected, the design will be displayed from large to small total stitch count, click sort by **total stitch count ↑** again and the design will be displayed from small and large total stitch count.

The **memory** designs support sorting by design name, import time, use time and total stitch count.

The **USB** designs supports sorting by design name and total stitch count only.

3.1.4 Multi-select function

Click  key to enter multi-select mode; meanwhile, the key will become select all function.



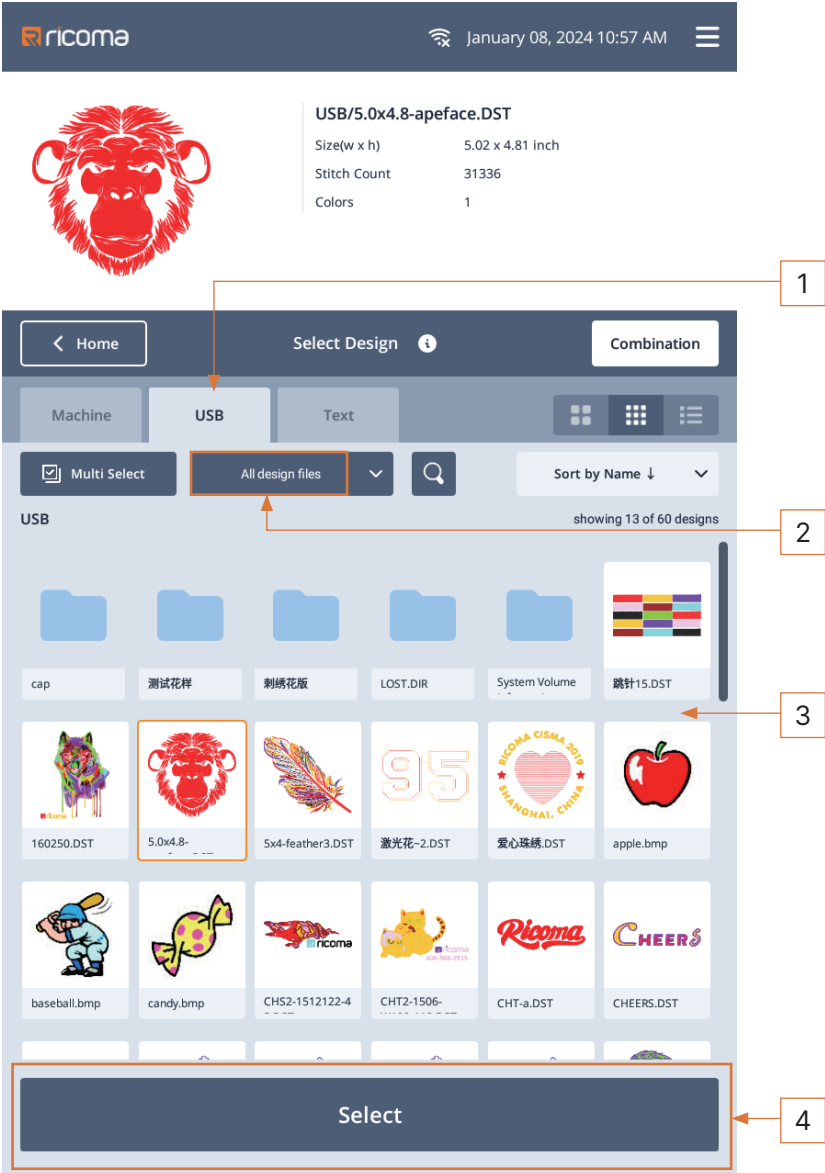
1. **Select all** key, click it to select all designs; click it again to deselect all.
2. Design display area, click design to **select** or **multi select**.
3. **Cancel** key, quit multiple select mode
4. **Edit** key, process the selected design.

Enter multi-select mode to have single selection, multi selection, or directly click the selected design for editing.

Memory design edit supports save to USB, move to file, delete, rename, edit letter embroidery (only letter embroidery generated by the machine supports reedit).

USB design edit supports save to memory and delete .

3.2 USB Design



USB design: Support **design search**, **sorting**, **multi-mode display** of design, design **single select** or **multi select** , **import machine memory** and **delete**, display **design file** and **image file** by type.

1. After inserting **USB** into machine in homepage, enter design anagement page and **USB** design will be entered by default; the **USB** design will also be entered automatically when inserting **USB** in design management page.

2. In view mode, click to select: **All design files**, **embroidery file** and **image file**.

3. Design display area supports browsing in the mode of large picture, thumbnail and list.

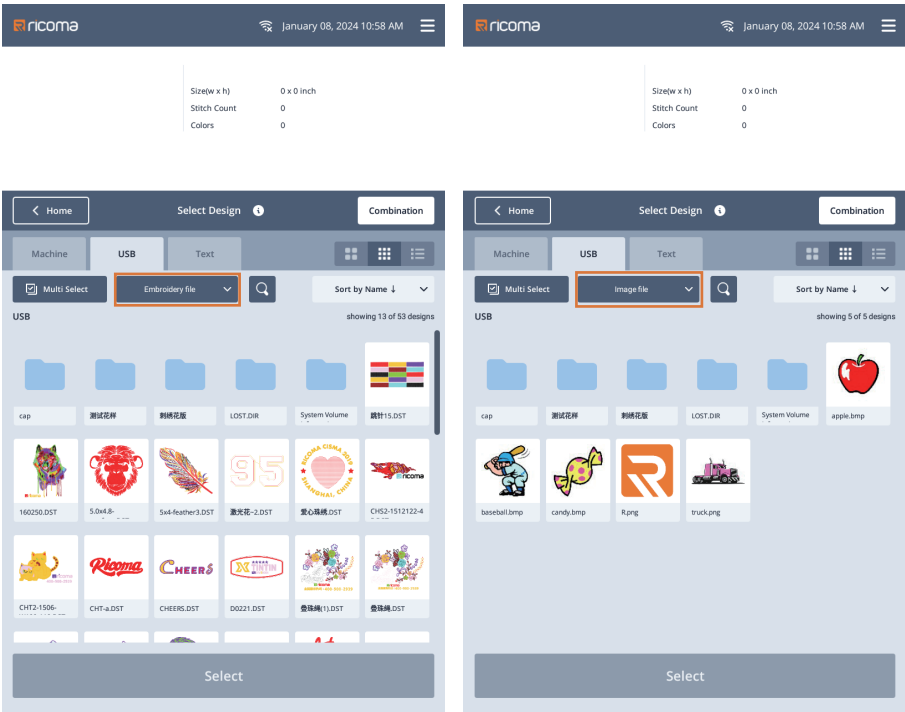
4. Select the design, click **select** key or **select the design**, **press and hold** to enter edit: **Save to machine**, **delete**.

Save to machine, select other assigned folder in memory for convenient management.

Embroidery file mode:
Display embroidery file DST, DSB and TBF.

Image file mode: Display BMP, PNG, JPG, JPEG, WEBP and GIF image file.

The image file is imported into the Images folder of machine memory by default.



3.3 Memory Design

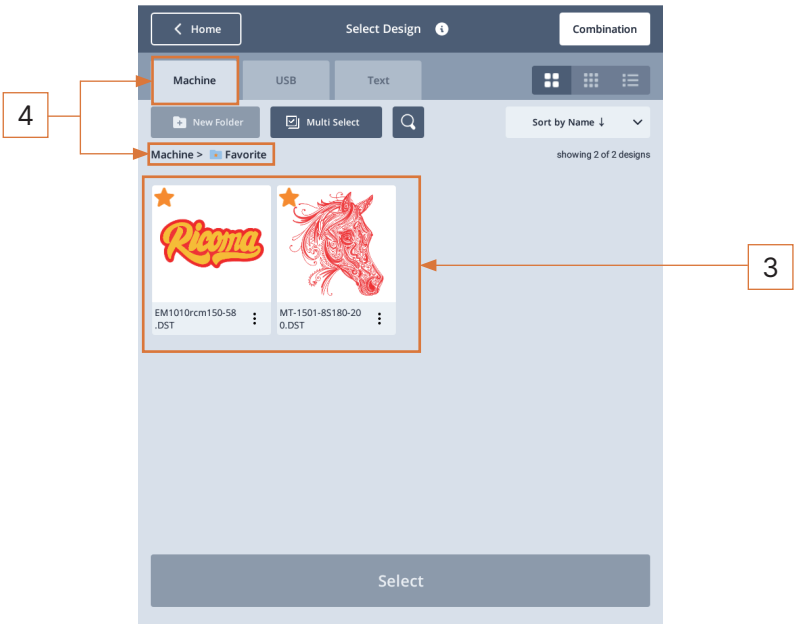
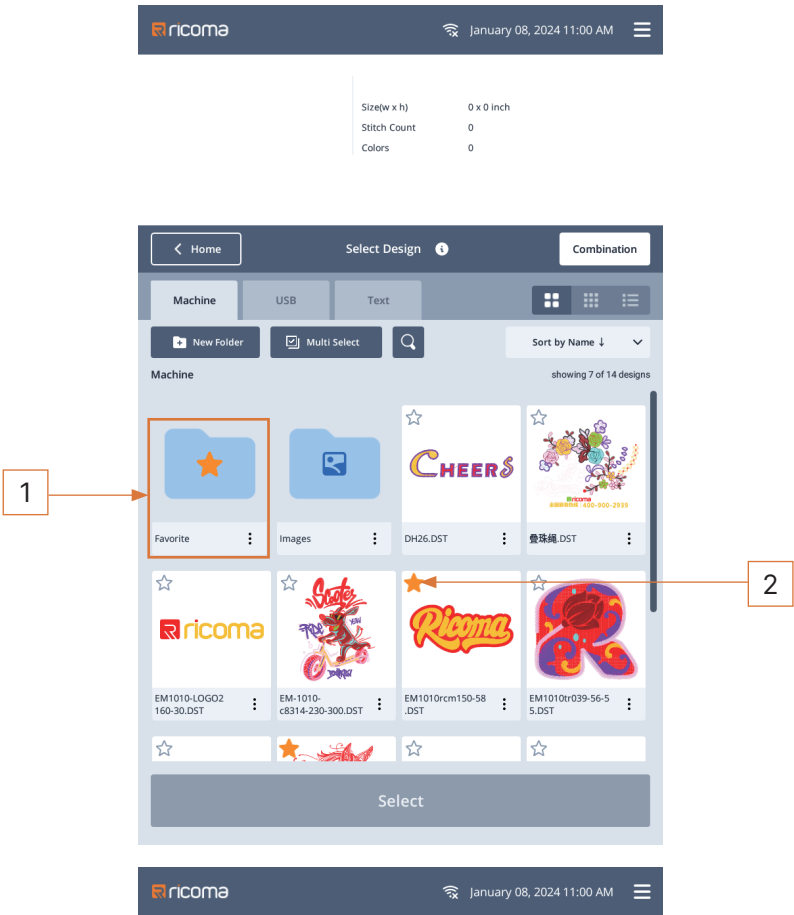
Memory design: Support save to **USB**, move to folder, delete, rename, search sorting, new folder, multi-mode display, favorite function, single select, multi select and image embroidery.

3.3.1 Favorites

In single select mode, **press and hold** image to enter edit item.

You can add the favorite or frequently used designs into the favorite holder for quick searching and management.

- 1.  Favorite folder
- 2. The star at the upper left corner of design means the favorite status; click it to add to favorite or cancel collection,  means added to favorite.

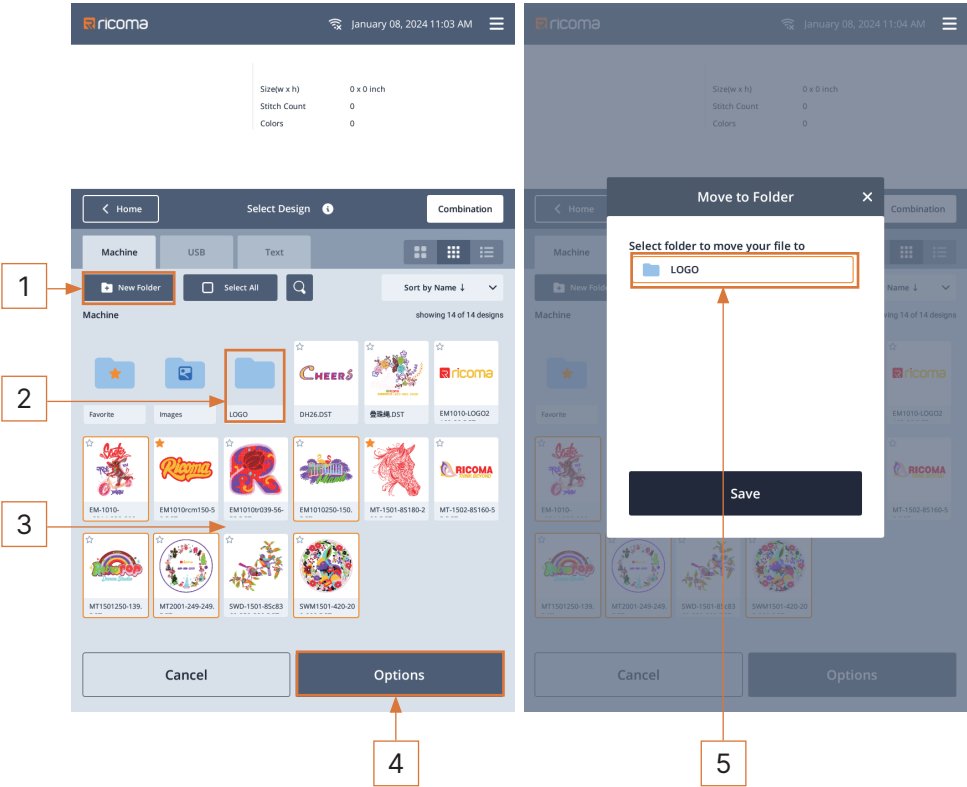


- 3. Click  **Favorite folder** to enter view or select the favorite designs.

- 4. Click **Memory** position to return to the memory designs.

3.3.2 New folder

New folder can realize **classified management of design** with higher efficiency,move the design to the designated folder; when **USB** design is imported in machine **memory**, it can also be saved in the designated folder for easy management.



1. Click **New Folder** key and the new folder dialogue box will pop up. Enter the name such as *LOGO* and save it.
2. Created **LOGO** folder
3. Design display area, select the design that needs to be moved(support multi select).
4. Click **Edit** and **select Move to folder**.
5. **Select folder** to move your file to, such as **LOGO** folder, and the selected design will be moved to the **LOGO** file.

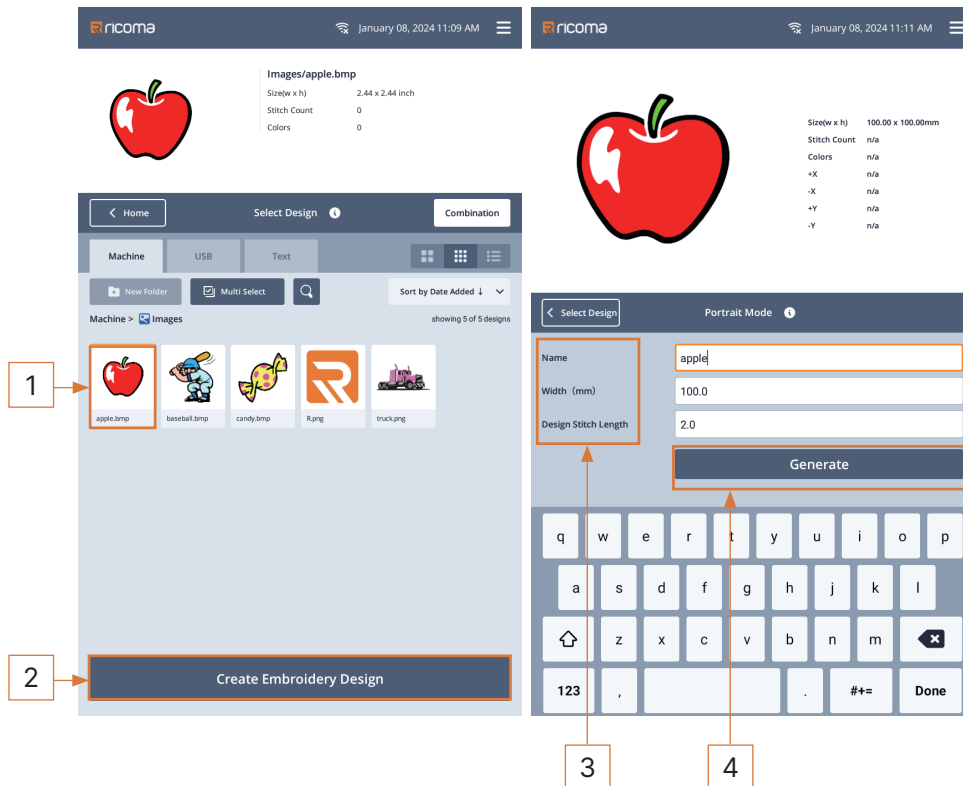
Note: When the corresponding folder is not selected, the design will be directly saved in **memory**, and it will prompt whether cover the existing designs (if any); click **cover to cover** the designs with the same name, click **not cover** to create one optional design.

The designs in **memory** directory has been moved to the *LOGO* folder.

3.3.3 Image embroidery

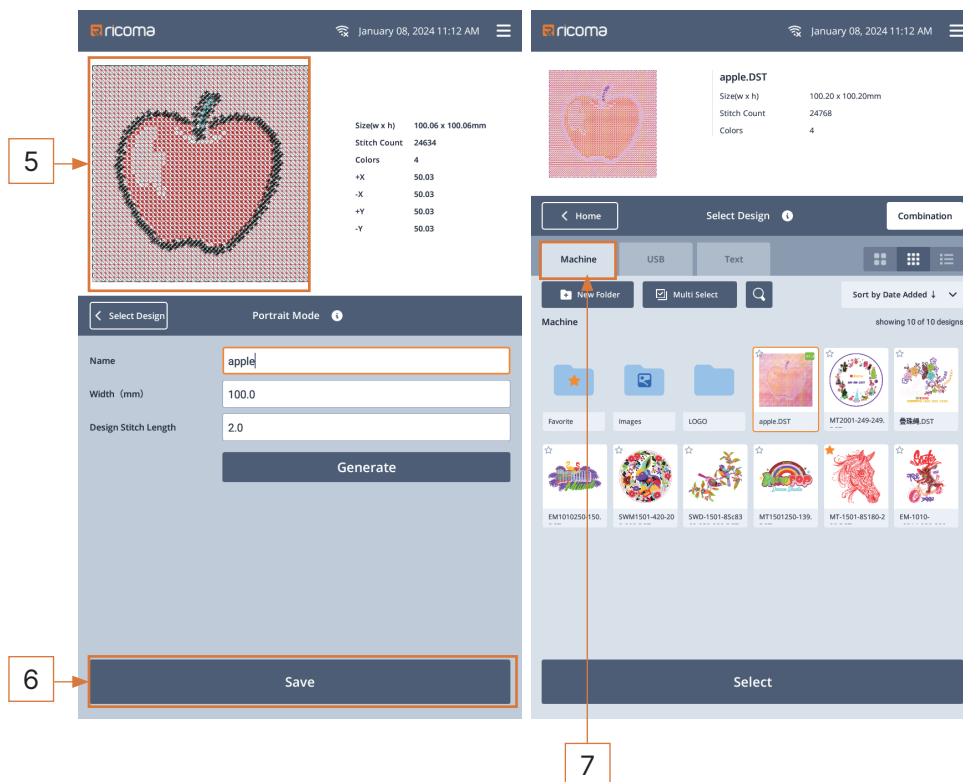
Image embroidery: Generate the image into 4 colored embroidery files by means of CMYK.

The image files imported by **USB** will be automatically saved in Images folder of **memory**.



Click **Images** in **memory** to enter image embroidery folder that saves the image files which are imported from **USB**.

1. Select the image that needs to generate embroidery
2. Click **generate embroidery** key to enter the page to generate image embroidery.
3. The name of generated design can be set
Embroidery width (10.0 - 1000.0mm)
Design stitch length (0.5 - 5.0mm)
4. Click **generate** to generate the preview.

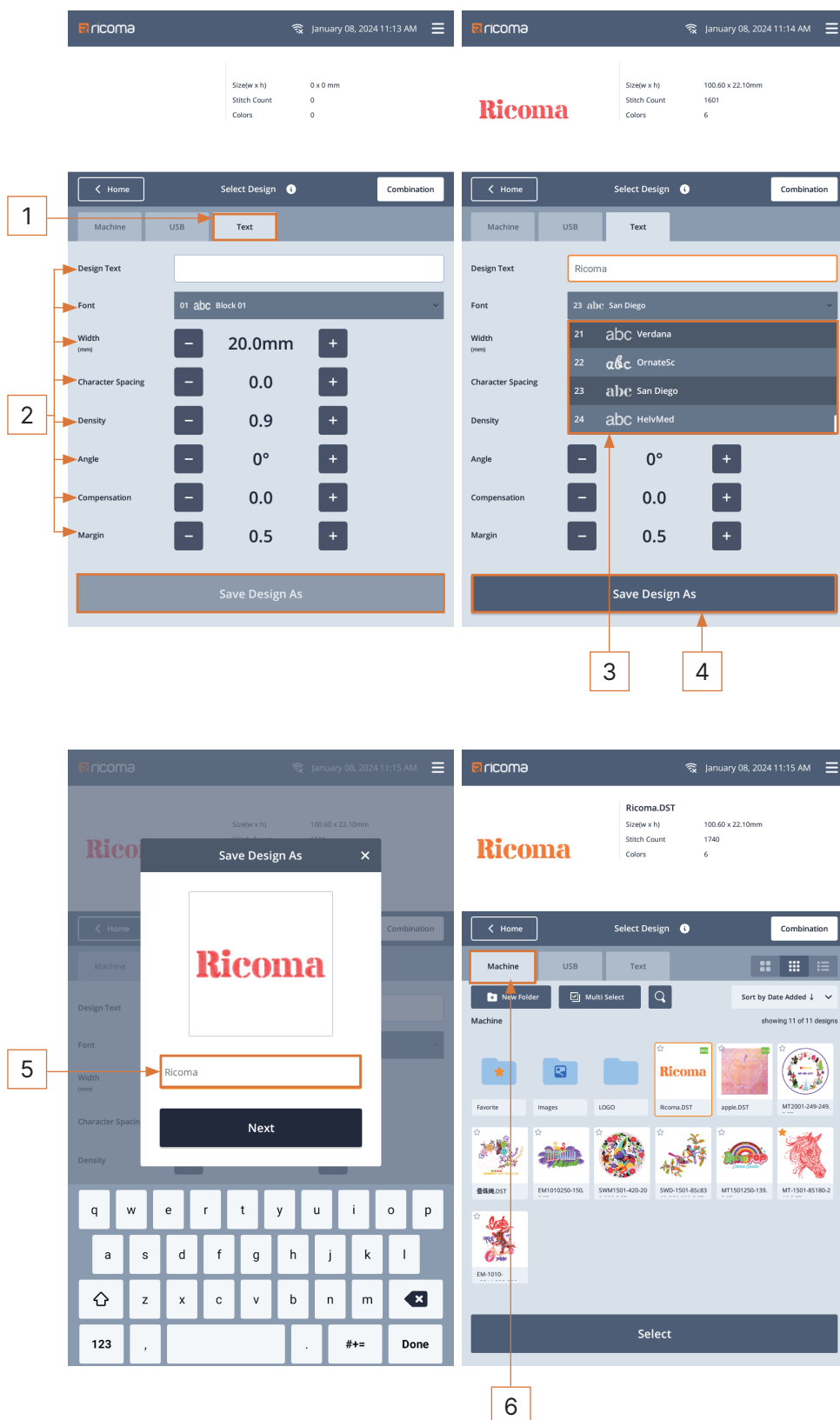


5. The image has generated embroidery preview.
6. Click **save** to save the generated embroidery file into **memory**.
7. Click **memory** to return to memory column, select the design and click **select** to issue data and start embroidery.

3.4 Letter Embroidery

Support **24 fonts**; support **input of capital and lower-case letter, figure, some special characters**; support **setting of parameters such as character width, stitch density, character spacing and tilt angle**.

Click **letter embroidery** column to enter edit page.



1. Click input character in input box, confirm (Done) to generate character preview.

2. Letter embroidery parameters
Font: (support 24 fonts)
Width: 5.0 ~ 100.0mm
Character spacing: 0.0 ~ 100.0mm
Density: 0.2 ~ 2.0mm
Angle: -45° ~ 45°
Compensation: -0.3 ~ 0.3mm
Margin: 0.5 ~ 5.0mm

3. Select font: Click it to show the drop-down menu and select the font required.

Other parameters: Click **-** **+** to make fine adjustment, or click the **middle figure** to pop up the input box and enter the value directly.

4. Click **save as** to save the the character file.

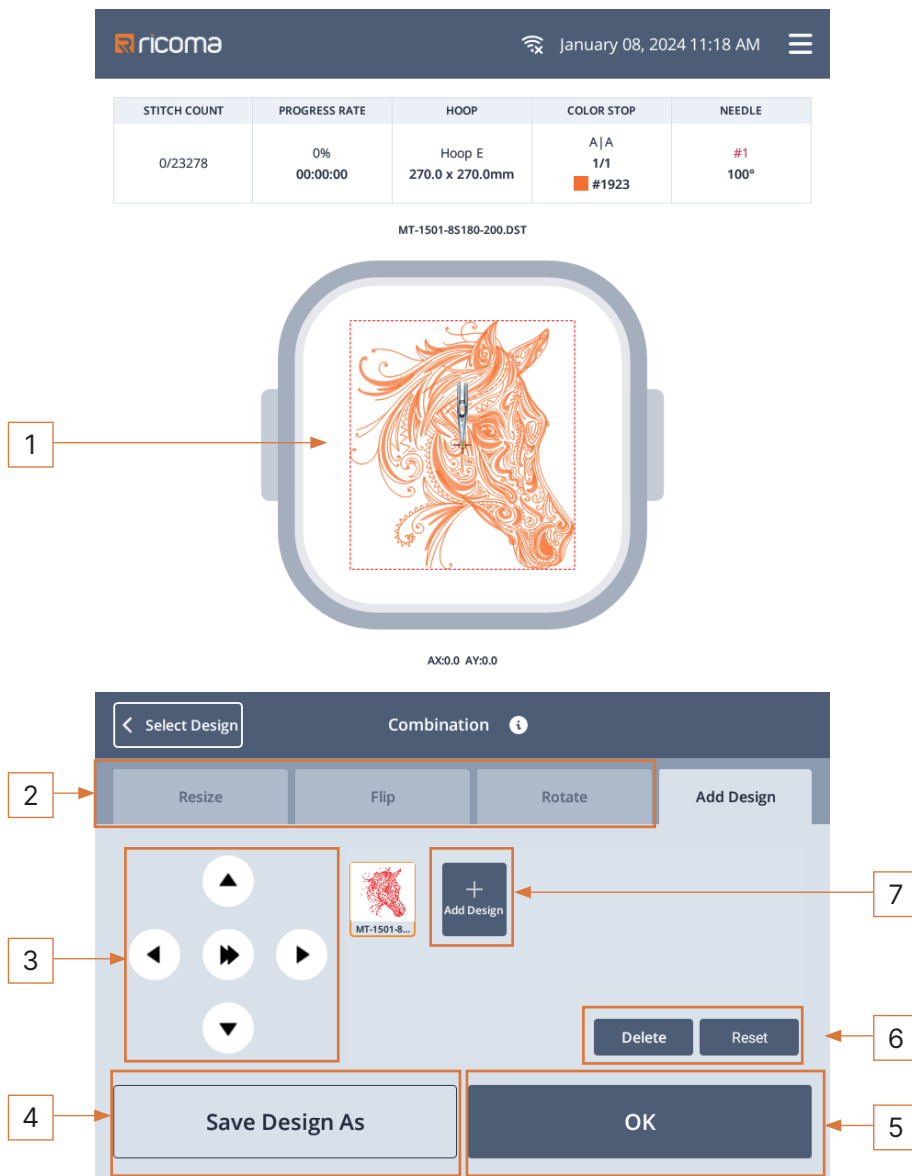
5. Enter the name of file to be saved, click **next** to select the saving position, **USB** or **memory**;

6. When file is saved to memory, click **memory** column to view the enered letter embroidery file, select the design, click **select** to issue the data and start embroidery.

3.5 Design Combination

Design combination, multiple different or the same embroidery files can be combined into one design file, and single design can be selected to realize resize, flip, rotate and move and have combination, in order to have flexible combination to realize the effects as required.

Enter **design management** page, click  key to enter edit page of design combination.

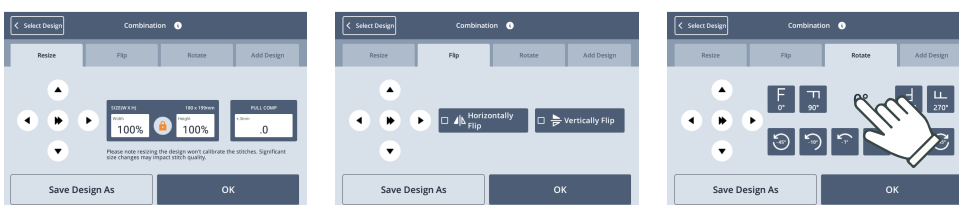


Application scenario, such as creative stitching, or add your mark on the favorite design.

1. Design preview area
2. Parameter column: Resize, flip, rotate
3. Move design direction key, the middle is switch key of move speed
4. Save as key: Save the combined key into USB or memory
5. Confirm key: Save the combined design into memory and directly jump to the homepage; meanwhile, send the embroidery data to start embroidery directly.
6. Delete and reset key
Delete: Delete the selected and added design
Reset: Select the added design, clear the related parameters, resize, flip and rotate
7. Add design key

3.5.1 Combination parameter

Realize resize, flip and rotate of single design.

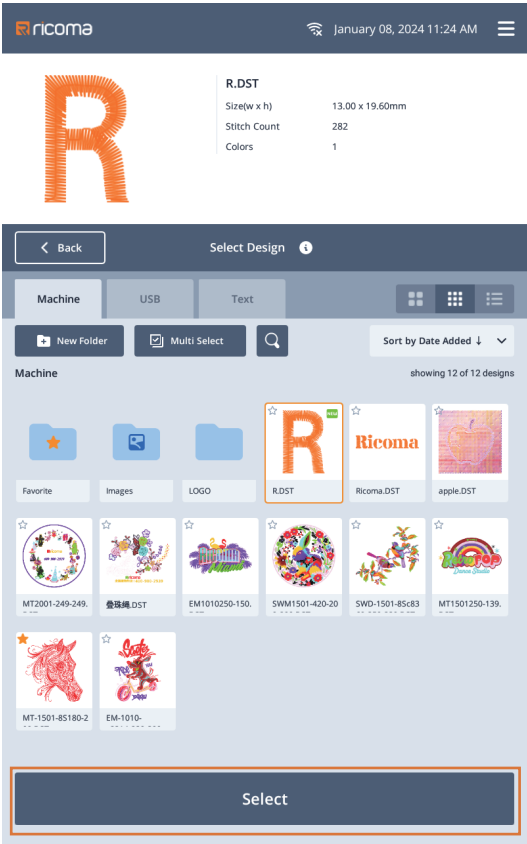


Resize: (50% ~ 200%)

Flip: (Horizontal, vertical)

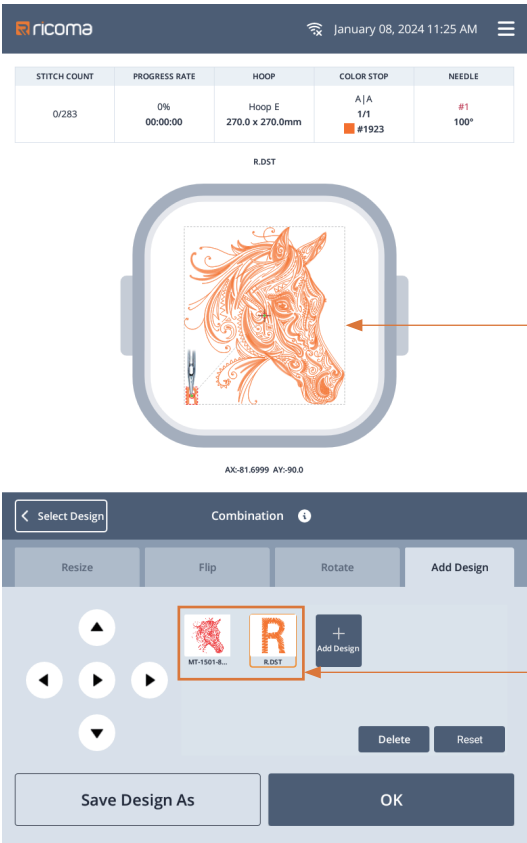
Rotate : (Common angle key, click the angle to pop up box to enter angle $0^{\circ}\sim 359^{\circ}$)

3.5.2 Add design



Click **add design** to jump to design selection - **memory** page.

Select the target design, click **select** to add design into combination page.



The **default** add **position** of design is the **start position of the previous design** ; use **hoop direction** key to move the design to the required position.

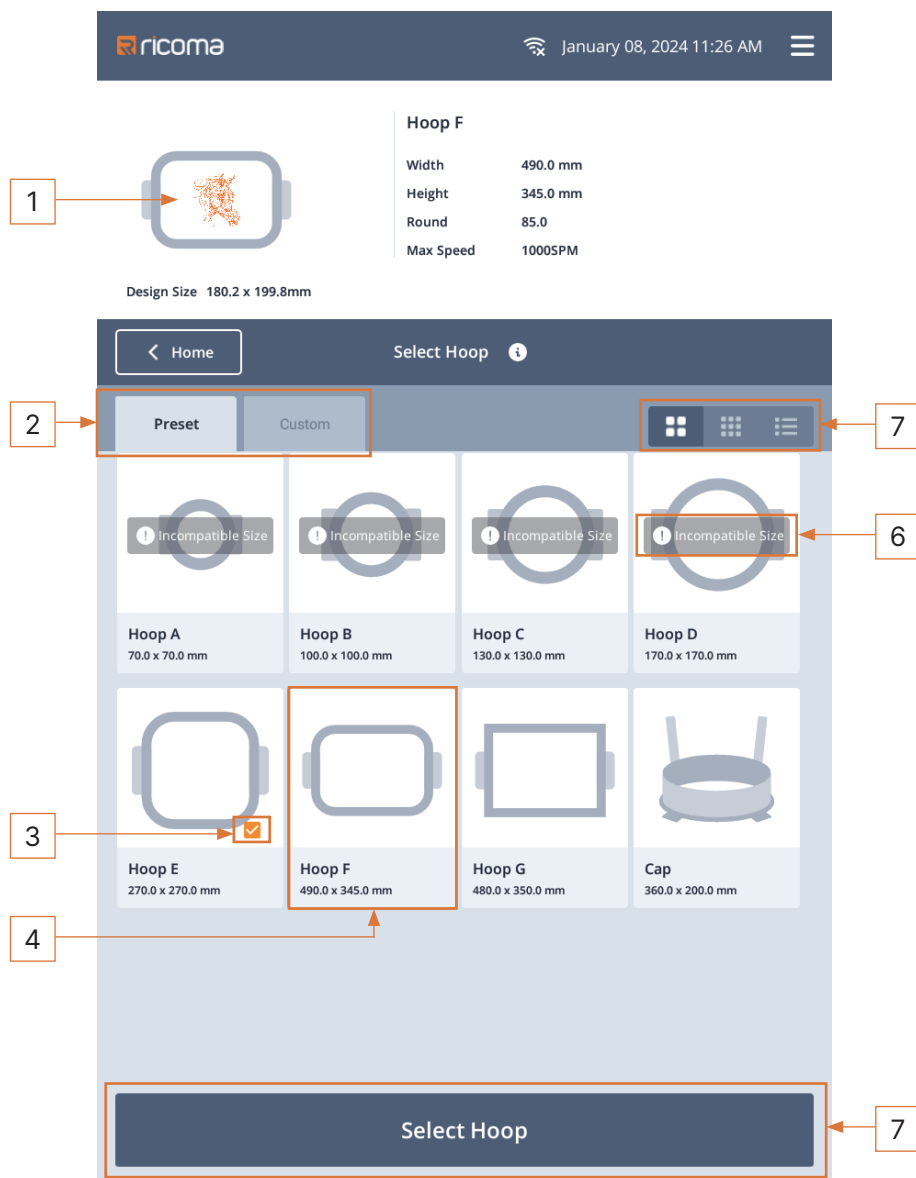
[1] Design preview area
[2] Design icon list

Click to select single design for parameter selecting, relocation, deletion or reset, to reach the required combination effects.

Part 4 Select Hoop

4.1 Select Hoop

Click  key in homepage to enter select hoop page, select the hoop as required.



1. Display the information of current hoop and design.

2. The hoop is divided into preset hoop and custom hoop.

3.  marks the current hoop

4. Current hoop

5.  The key of hoop display mode is large picture, thumbnail and list in turns.

6.  Incompatible size means the hoop size is smaller than the current design, it will give out warning when the hoop is selected.

7. Select the required hoop, click select hoop to return to the homepage and it will find the mechanical original point automatically; move the hoop to the middle point position and pay attention to hoop movement.

Prompt: When **Cap hoop** is selected, the selected design will have **auto setting of horizontal and vertical flip (i.e. rotation for 180°)** after returning to the homepage, while other hoops remain unchanged.

Preset hoop: The hoop count and size may vary along with machine; preset hoop supports **edit**; the **factory authority is required for importing/exporting hoop data**.

Custom hoop: Support **creation** and **deletion**, **sorting by name** and **creation time**; when the **first three characters** of custom hoop are **Cap** and the **latter character is figure (such as Cap1, Cap123)**, it will be recognized as cap hoop and current design will be automatically selected as 180°, in order to create cap hoop easily.

4.2 Edit Hoop

Factory authority is required for editing the preset hoop, while custom hoop has no restriction. **Press and hold the hoop** or **⋮** click to pop up **edit** key.



Preset hoop can be operated by professional technicians only Custom hoop has no restrictions.

[01] Long press the embroidery frame area or click the **⋮** button to enter edit mode.

(**⋮** Note: In thumbnail mode, **⋮** will not be displayed.)

[02 Import hoop, export hoop] key
They are available under factory mode only.

Edit hoop page

1. Hoop parameters (input parameters
Hoop name as required)

X size, Y size: Hoop size

Rounded: Rounded corner of hoop

Max. speed: The max. speed of hoop embroidery

2. Set center point of hoop, see schematic diagram below (it can be set through two methods).

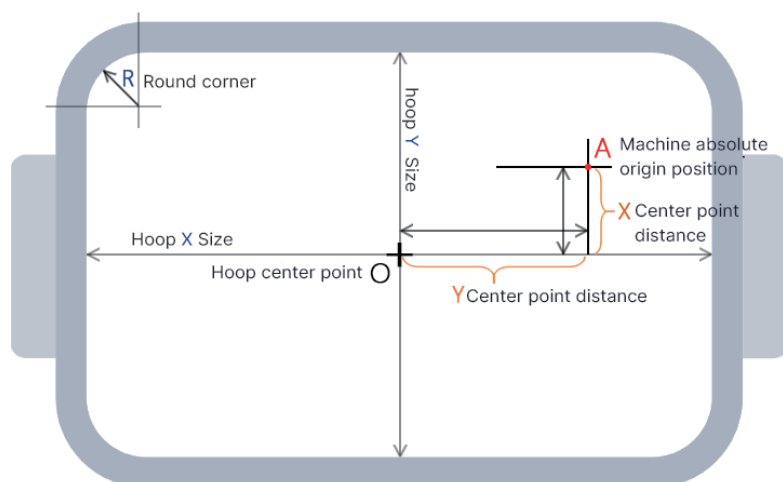
Method 1: Measure the distance from machine original point to hoop center point by using a ruler;

Method 2: Set the center point by moving the frame

3. Synchronize center point (factory authority is required)

Tick the hoop that needs synchronization, save them and the center points of corresponding hoops will be synchronized as the current center point.

Schematic diagram of setting hoop center point:

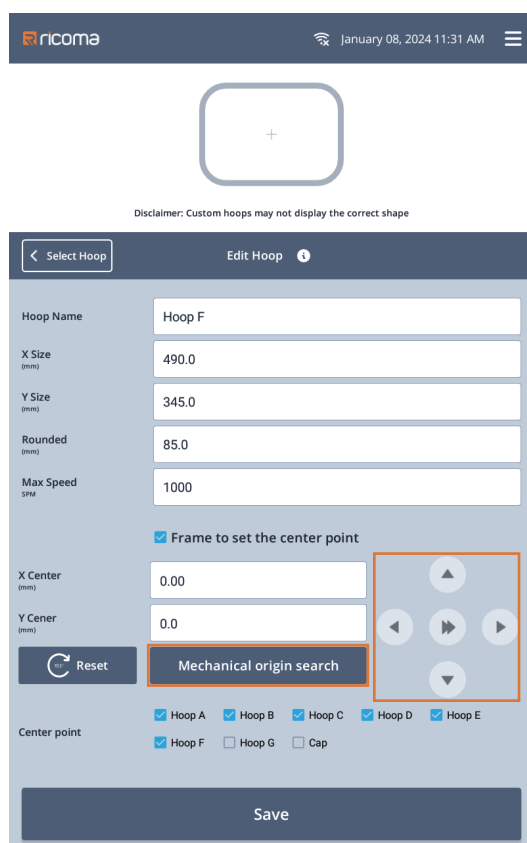


Direction of center point distance:

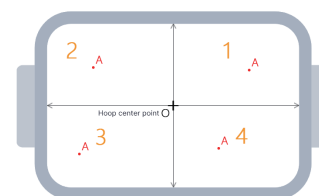
X direction: It is Negative (-)/positive (+) when the hoop center point is at the left/right of mechanical original point.

Y direction: It is Negative (-)/positive (+) when the hoop center point is at the lower/upper side of mechanical original point.

Frame to set the center point:



[**Point A** The position of hoop relative to mechanical original point] is related to the installation position of XY limit sensor.



1. Direction of center point distance: (+X, - Y)

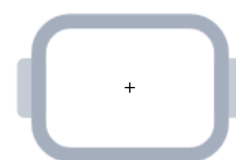
2. Direction of center point distance: (- X, - Y)

3. Direction of center point distance: (- X, +Y)

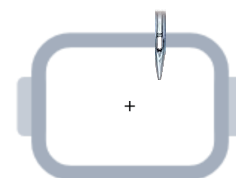
4. Direction of center point distance: (+X, +Y)

Steps of setting center of moving hoop:

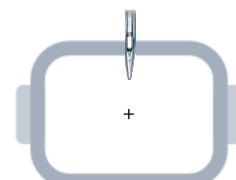
1. Firstly, **identify the position of hoop center point** in the hoop that is loaded with cloth, and install the hoop on the machine.



2. Click **search mechanical original point**, then **stop the hoop at the mechanical original position** (the mechanical original point is related to the position of mounted XY stopper)

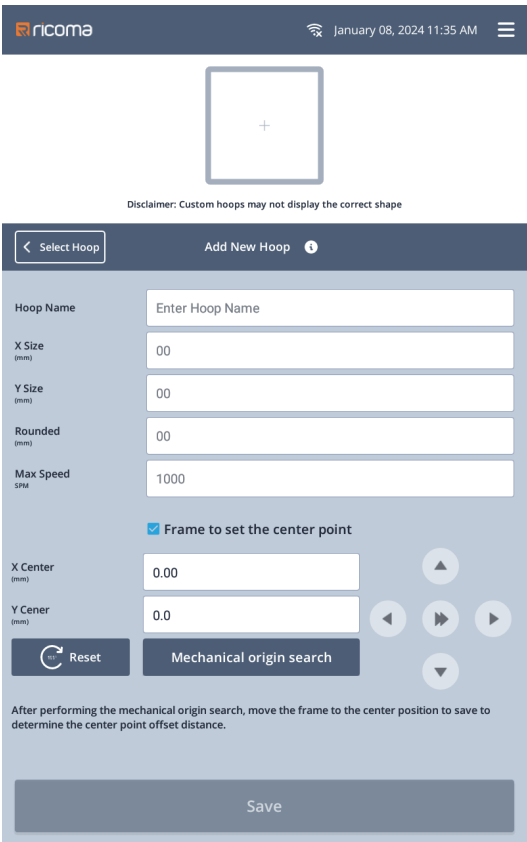


3. Use **direction key** to move the hoop until the **hoop center point** is overlapped with the **lower needle position** of current stitch (use reset key to observe the stitch hole); the **display value is X/Y center point value**, click **save** to finish.



4.3 New Hoop

Custom hoop: Support creation of hoop, create hoop as required.



Custom hoop: Support **creation and deletion, sorting by name and creation time**; when the **first three characters of custom hoop are Cap and the latter character is figure (such as Cap01, Cap123)**, it will be recognized as cap hoop and current design will be automatically selected as 180°, in order to create cap hoop easily.

Center point synchronization is not supported while editing custom hoop; other edit parameters are consistent with preset hoop and it supports frame to set the center point.

Part 5 Color Stop Setting

5.1 Color Stop Setting

Click  key in homepage to enter color stop setting page, set parameters according to design and embroidery thread arranged on the machine wire coil.

1. Design preview is used currently, and the current **color block** of current color stop has **dynamic display**.
2. Select the **preview of current color stop**.
3. Current **design name** and **total color stops**.
4. Return **homepage** key, click it and it will prompt whether save settings when color stop page has any modification.

5. Execution mode of color stops in embroidery process.

-  Full auto A|A
Auto color change and auto start
-  Semi auto A|M
Auto color change and manual start
-  Manual M|M
Manual color change and manual start

6. List of current design color stops and steps

S/N | Stitch No. | Color Block | Function Code

Select certain color stop, click the **right stitch number** key to set the stitch number as required. Or click the right stitch number in sequence and it will jump to the next color stop automatically. After setting, the corresponding **stitch number | color block and corresponding color block of preview** will be updated at the same time.

Function code: **P** stop code, **L** low speed code, **O** hoop-out offset code, click the **function** key at the right and lower side, to add or cancel the selected color stop.

7. Function code key

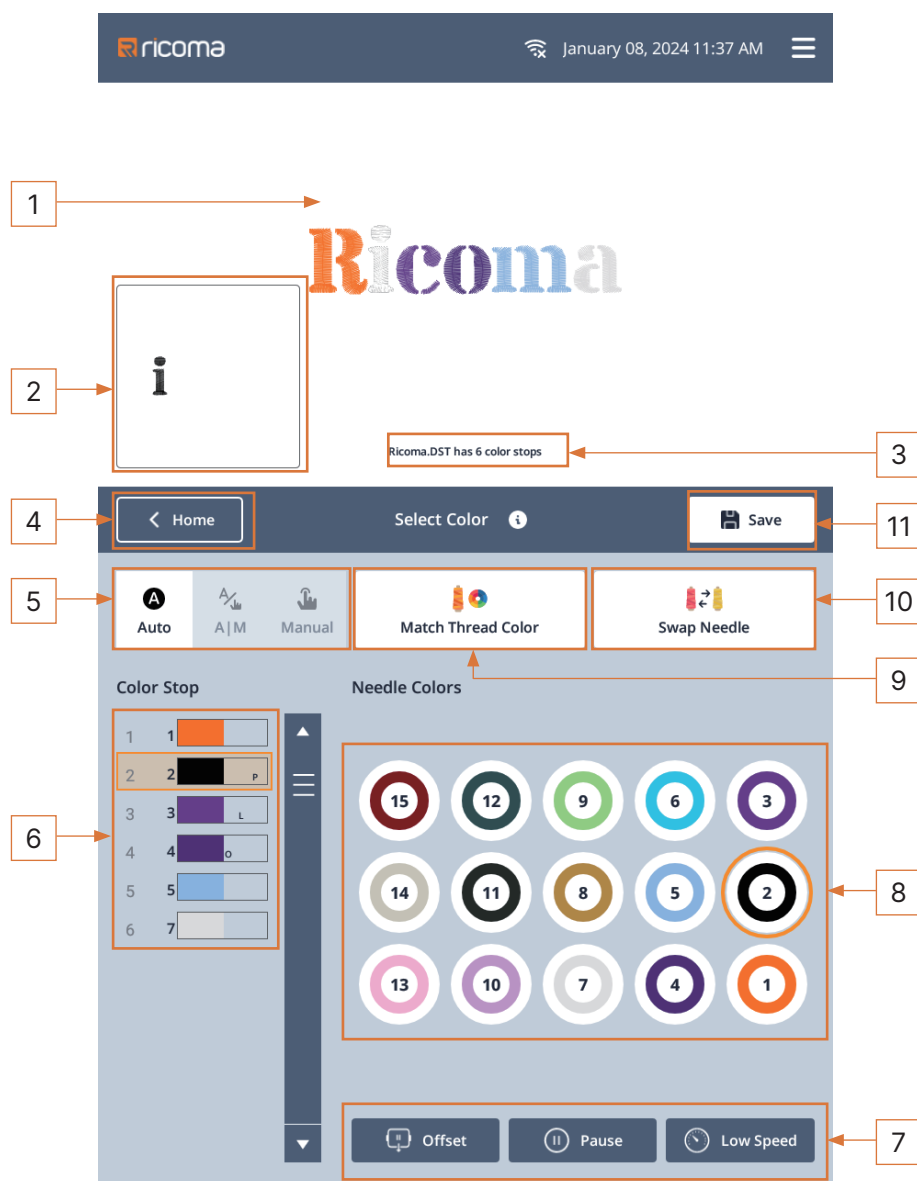
-  Hoop out offset (complete hoop-out by sequence of color stop)
-  Stop code (complete embroidery stop by sequence of color stop)
-  Low speed code (low speed embroidery by sequence of current color stop)

8. Stitch number key, show the corresponding color at the same time

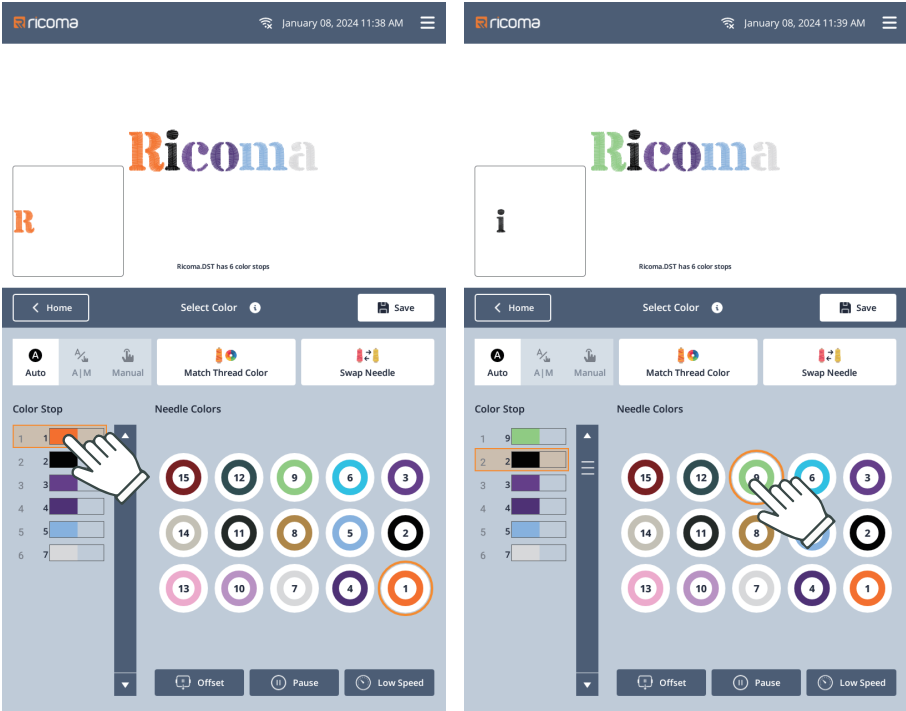
-  9. Match thread color, set the stitch color

-  10. Swap color, swap the stitch

-  11. Save key

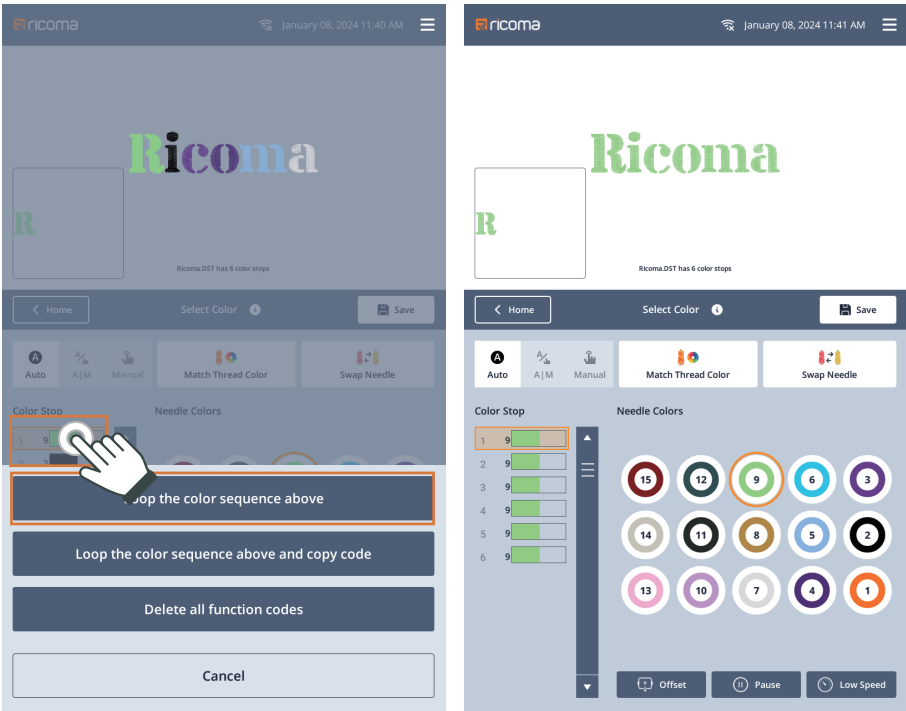


5.1.1 Stitch setting



Click to select the color stop requiring modification, then click the right **stitch number** key to complete settings; the corresponding color blocks will be updated to the color of stitch number; meanwhile, the selection status of color sequence will jump to the next color sequence automatically.

Set design through the same stitch embroidery.

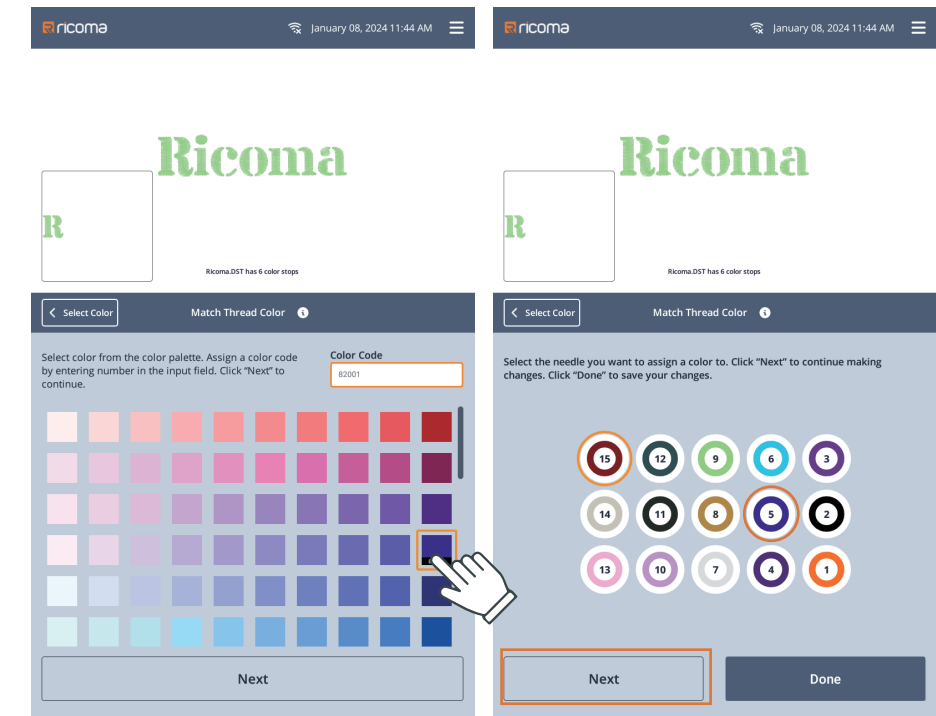
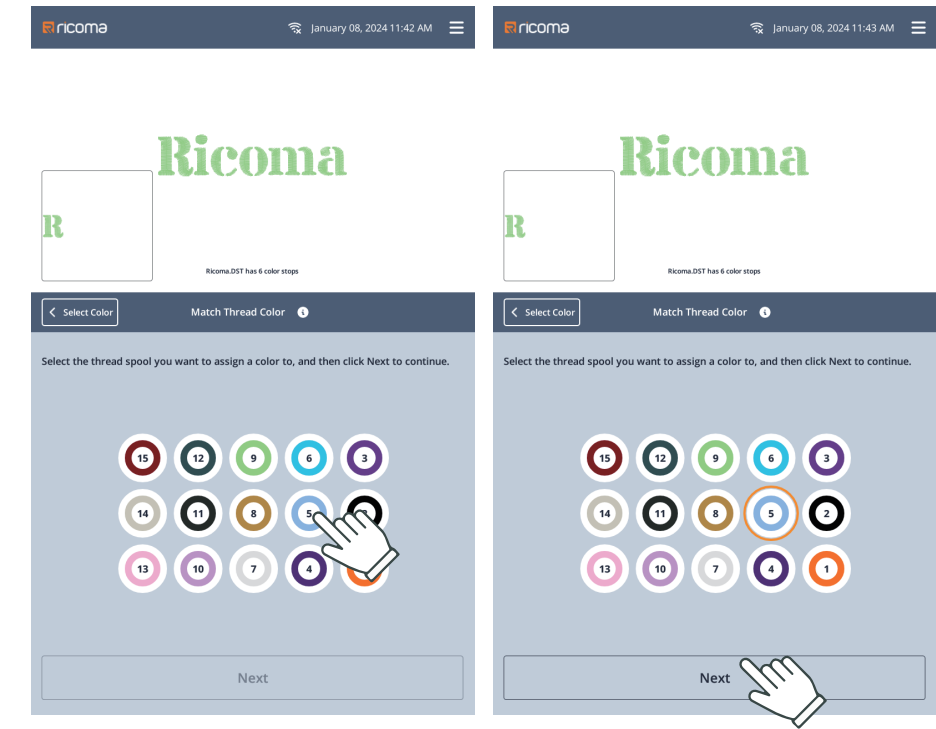


Enter **color sequence list**, select certain color stop, **press and hold it** to pop up the the **function** key: **Loop the color sequence** and **delete all function codes**.

When design requires one stitch embroidery only, set the first color sequence, return to the first color sequence, **press and hold it**, click **loop the color sequence above** to set all color as the same stitch (for example, the first color sequence is No. 9, click it, press and hold to select **loop the color sequence above**, and all color sequences will become No. 9 stitch).

5.1.2 Color match

Click  key to enter color match page, set the orresponding color of stitch as required.



The number can be defined by **color block** automatically; the match color can be selected easily according to the actual embroidery thread color.

Suggestion: Make sure the stitch color is consistent with the color of coil on machine; therefore, the design that is acquired through design color sequence can match the design configuration, in order to display the design effects directly.

Click the **target stitch number** (such as No. 5), then click **next**.

Click the **target color block**, click **next** and the corresponding stitch color has become the set color (for example, the color of No. 5 has changed), then click **complete**.

To set color (such as No. 15) of other stitches continuously, click **next** to return to **color block** page and continue setting.

5.1.3 Swap color

Click  to enter color swap page, select stitch swap according to actual requirements of embroidery.



This function is required when embroidery thread on coil has wrong placement, or the current stitch needs swap due to a fault.

- 1. **Swap from:** Select (the target stitch number), click the stitch number (such as No. 1) that needs swap in the **stitch number keyboard**.
- 2. **Swap to:** Select (the stitch number after swap), click the target stitch number (such as No. 6) in the **stitch number keyboard**.

- 3. Click  **swap** to swap all original stitch numbers to the current stitch number (for example, the No. 1 stitch in list of design color sequence becomes No. 6 stitch completely).

For any error in swap, click **reset** key to recover the color sequence to the original status.

5.1.4 Presser foot settings: SDM, SDP models

On the Color Sequence Settings page, tap the  button to enter Presser Foot Settings, then adjust the presser foot height according to the actual thickness of the embroidery fabric.

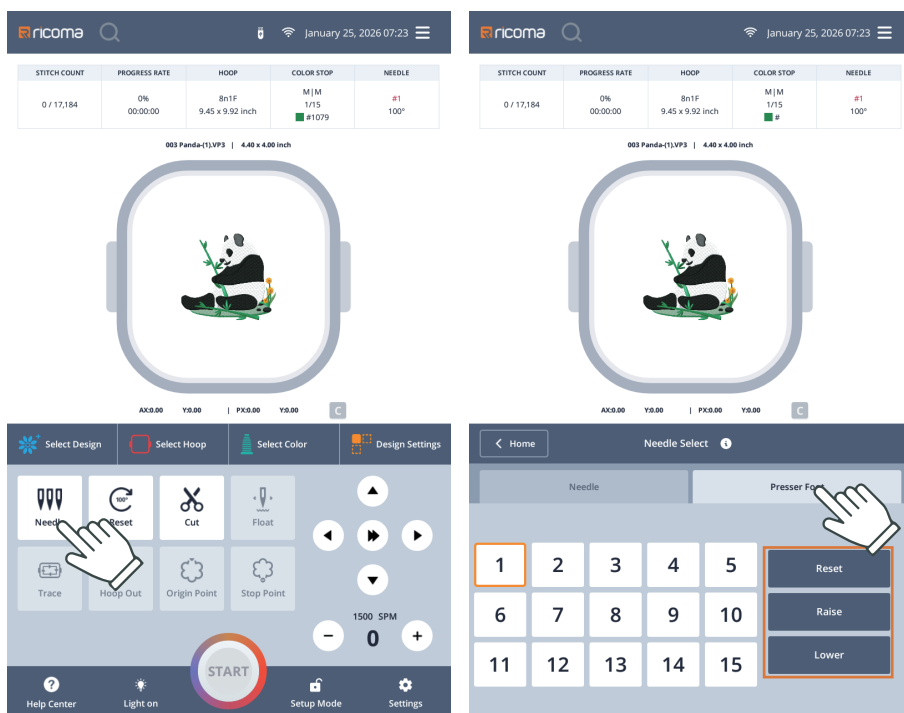


Presser foot height: The distance from the needle plate to the presser foot.

Presser foot stroke: The distance the presser foot moves up and down based on the set height.

The presser foot height and stroke can be independently set per color sequence step. Click the corresponding position—**orange** indicates the current selection—and use the numeric keypad on the right to enter settings, with support for selecting all.

Manual operation of presser foot lifting / lowering.



Manual operation of presser foot lifting / lowering

On the home screen, tap **Needle Position** to enter the needle bar selection page, then select **Presser Foot** Settings.

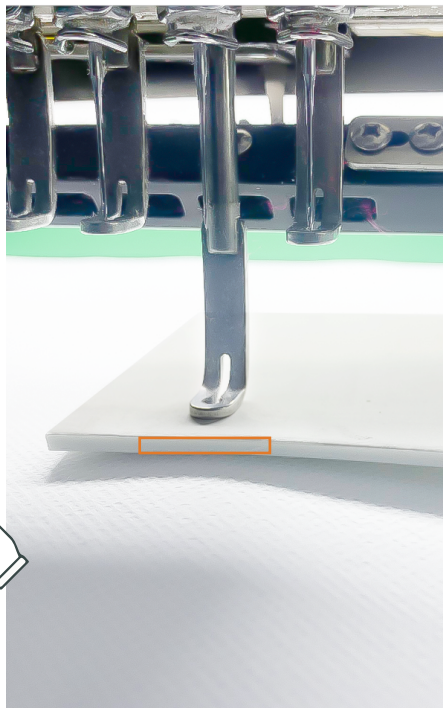
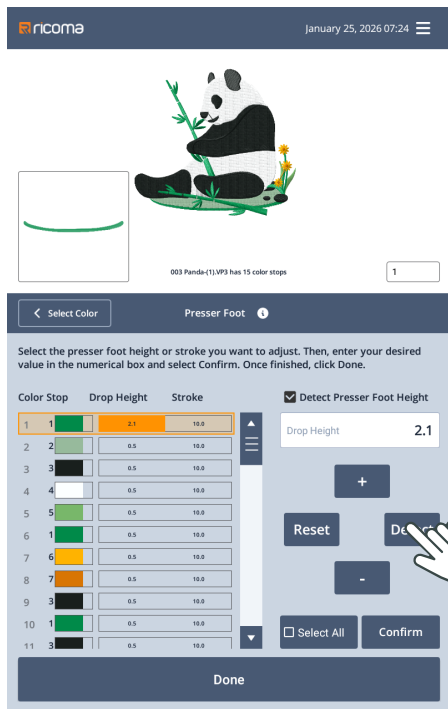
Reset: Returns the presser foot to its home position.

Raise: Moves the presser foot to the upper end of the stroke.

Lower: Moves the presser foot to the lower end of the stroke.

Automatic Presser Foot Height Detection

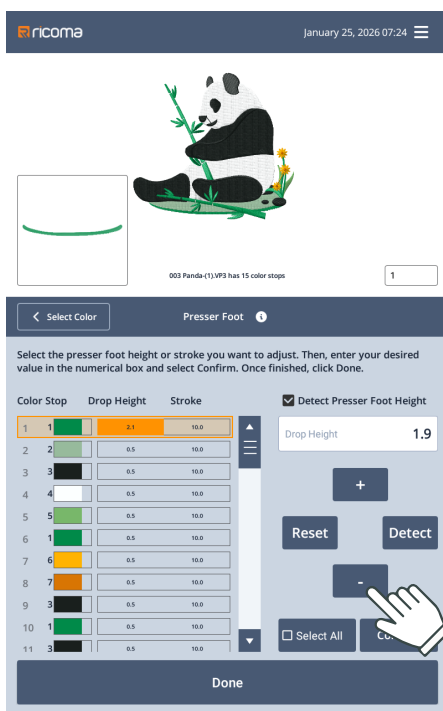
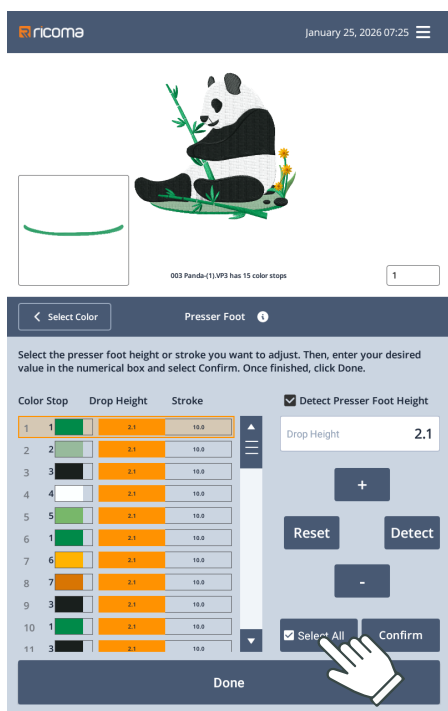
In some embroidery techniques, such as 3D puff embroidery, when the material thickness is uncertain during stitching, you can tap **Detect Presser Foot Height** to conveniently measure the thickness and quickly confirm the appropriate presser foot height setting.



Detecting presser foot height

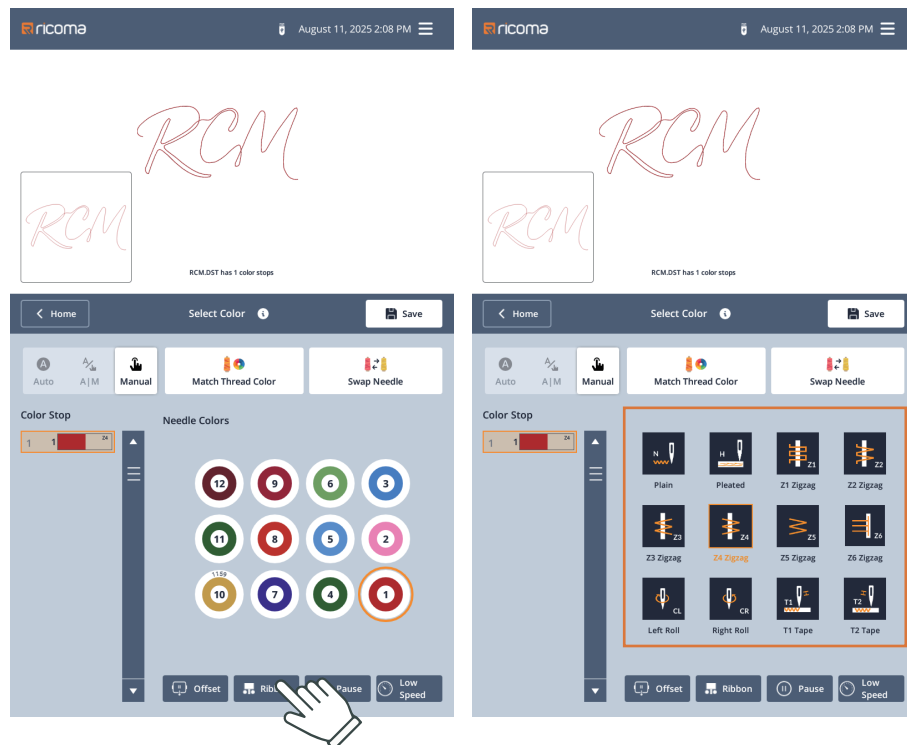
Place the material under the presser foot, then tap the Detect button. The corresponding presser foot height will be measured automatically. Use the +/- buttons to fine-tune the height as needed.

Select all color sequence settings (supported), then tap the Confirm button to apply the presser foot height data.



Coiling/taping embroidery setup: SMM models

On the color sequence setup page, select the color step for which the coiling/taping function is to be enabled, then tap the "Coiling/Taping" button to enter the coiling/taping function options page. Simply select the desired option according to your actual requirements.



Supports 12 coiling/taping embroidery modes:

N: Normal flat embroidery

H: Ruffle embroidery — inserts a jump stitch (pulling out a length of tape/ribbon), then moves to the next needle position for stitching.

Z1: During embroidering, the swing lever swings once every two stitches, and the presser foot lifts once per stitch.

Z2: During embroidering, the swing lever swings once every stitch and once every two stitches alternately.

Z3: During embroidering, the swing lever stays on the right side and swings once per stitch.

Z4: During embroidering, the swing lever stays on the left side and swings once per stitch.

Z5: Used in conjunction with the "Z-stitch frame swing amplitude" parameter. When the frame swing amplitude is set to 0, the action is the same as Z4 mode.

Z6: Used in conjunction with the "Z-stitch frame swing amplitude" parameter. When the frame swing amplitude is set to 0, three stitches are placed at the same needle point.

CL: Left coiling embroidery

CR: Right coiling embroidery

T1: Taping 1 — during embroidering, the presser foot lifts once per stitch, and the tape guide stays directly in front of the stitch direction.

T2: Taping 2 — during embroidering, the presser foot lifts once per stitch, and the tape guide stays behind the stitch direction, opposite to T1 taping mode.

针数	速度	规格	色序	针位
310 / 311	99%	qw	M M	Z4
	00:00:00	800.0 x 500.0mm	1:1	#1
			■ #	100°

RCM.DST | 119.0 x 54.1mm

The coiling/taping head adjustment station switch can be used to disengage or reset the M-axis drive.

For related parameter items, refer to the parameter list:

8.1.10 Coiling/Taping Embroidery Parameter Settings

Z-stitch (zigzag stitch) swing amplitude — can be set in the Z-stitch swing lever amplitude parameter according to specific requirements.

Z5 and Z6 are suitable for thick cord embroidery. The frame swing amplitude can be adjusted for coordination.

CL and CR (left/right coiling) — different effects can be achieved by setting the coiling rotation amount to 1/2/3/4 turns.

The coiling/taping embroidery mode used for the current step is displayed under the needle position on the **Home** page.

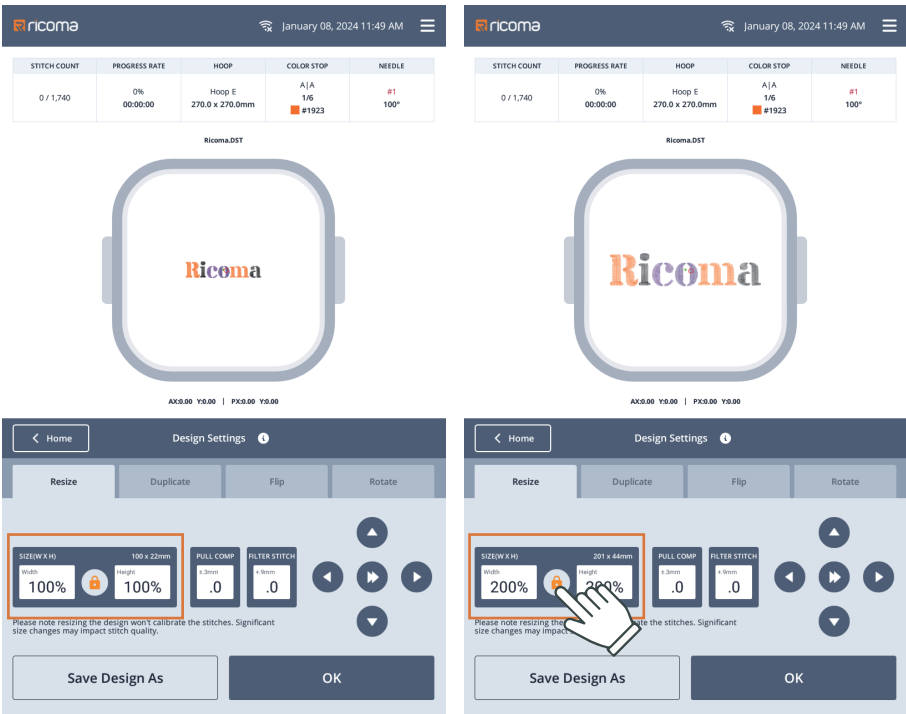
Part 6 Design Setting

6.1 Design Setting

Click  key in homepage to enter design setting page, perform **resize**, **duplicate**, **flip** and **rotate**, and also set **Pull Comp** and **Filter Stitch** to adjust the embroidery effects.

Note: The original stitch data of design will be changed by **Pull Comp** and **Filter Stitch**. Excessive adjustment may affect the actual embroidery effects. Please set it according to the actual embroidery effects.

6.1.1 Resize

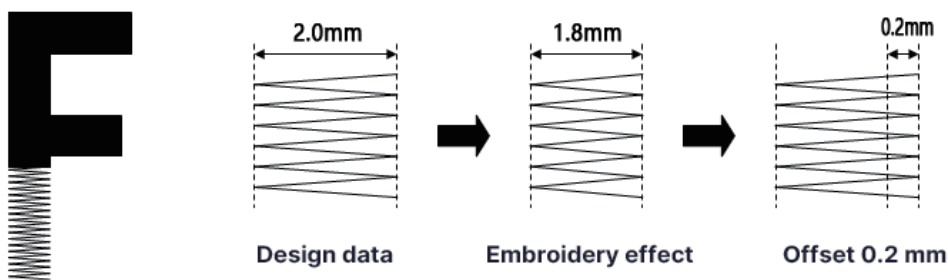


Resize rate: 50% - 200%, locking of aspect ratio supported

 Rate of width and height is changed simultaneously.

 Rate of width and height can be set respectively.

6.1.1.1 Pull comp



Schematic Diagram of Compensation

Pull Comp (flat wrapping stitch):
0~± 0.3 mm

Compensation can be made when the actual embroidery is smaller or larger than the design due to cloth shrinkage or other reasons.

6.1.1.2 Filter stitch

Filter the short stitch in design, reduce broken stitch due to short stitch.

Filter stitch: 0~0.9 mm

6.1.2 Duplicate



Duplicate (repeated embroidery):
Duplicate one design into multiple designs for arrangement and embroidery; the horizontal and duplicate direction can be set respectively.

Duplicate count: 1-99

Spacing: 0~ ± 999.9 mm

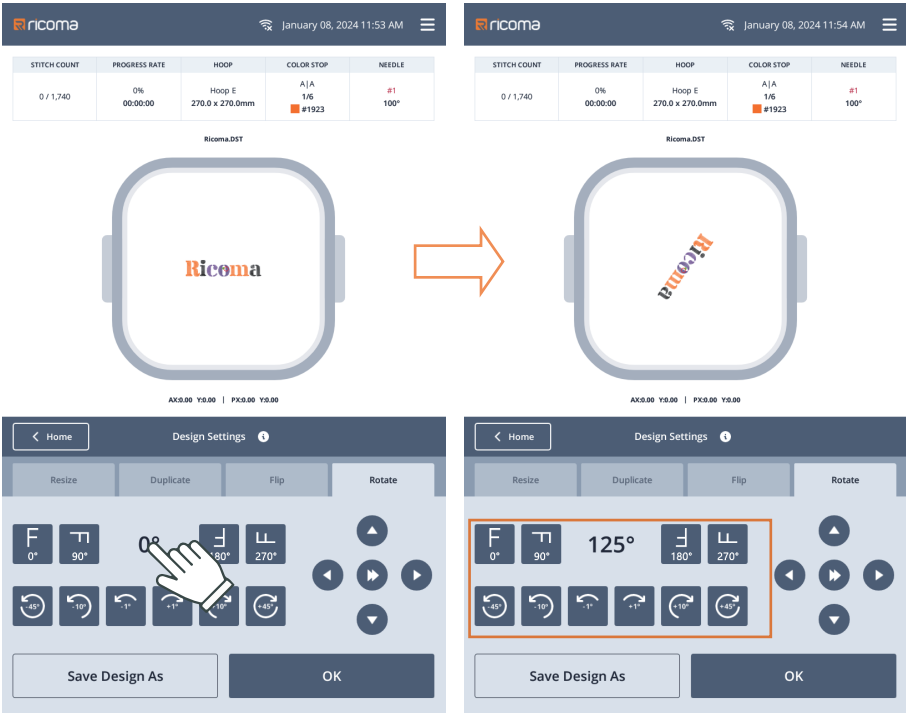
6.1.3 Flip



Set the embroidery as required.

Note: The **horizontal flip** and **reset flip** will be set automatically after **cap hoop** is selected.

6.1.4 Rotate



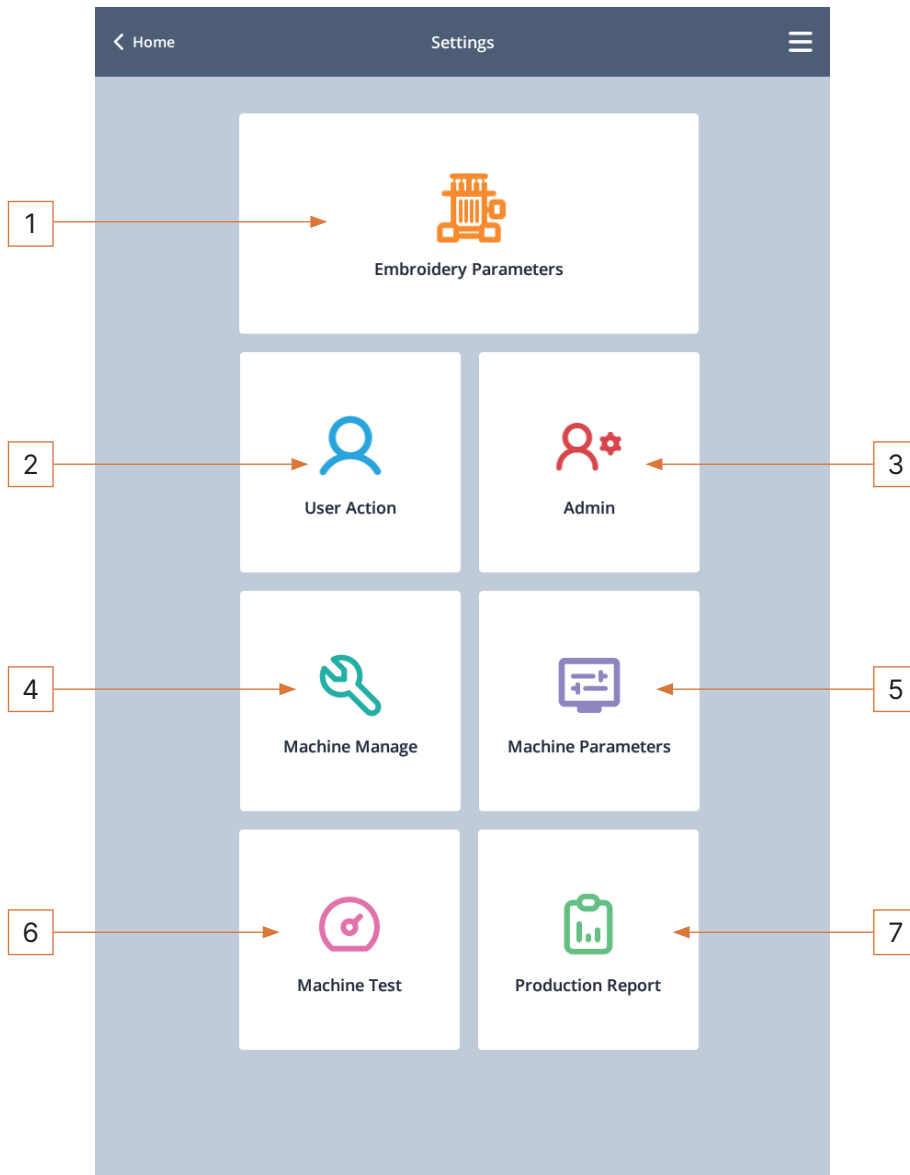
Rotate: 0° by default

Common keys: ±1°, ±10°, ±45°, 0°, 90°, 180°, 270°

Click the **middle display angle position** to pop up the angle input box, enter the target rotation angle directly.

Part 7 Setting Page

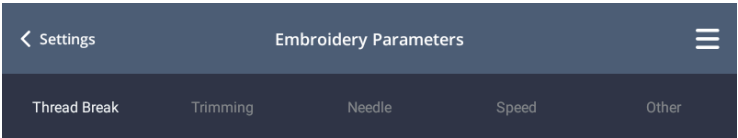
Click  in homepage to enter setting page.



1.  **Embroidery parameters:** Set the common parameters of embroidery.
2.  **User action:** Recover the mechanical original points and power failure.
3.  **Admin:** Set the common applications, such as display time, language, screen brightness, horn, machine lock and interface style.
4.  **Machine manage:** Software update, restore factory settings, system information, Front WiFi Transmission Design, etc.
5.  **Machine parameters:** the machine configuration and working parameters, authority is required for setting.
6.  **Machine test:** Used by maintenance personnel to see if machine functions and actions are normal.
7.  **Production report:** View production data and clear the statistics data (authority is required).

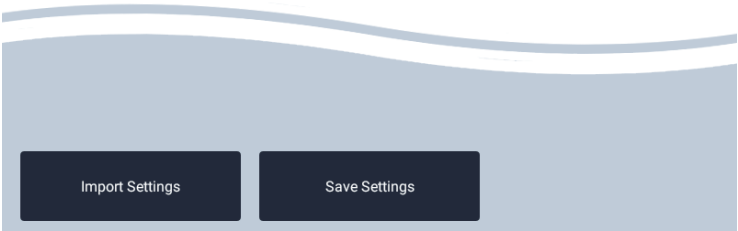
7.1 Embroidery Parameters

Click  to enter embroidery parameters and set the basic parameters of embroidery, export the parameters through USB, set the parameters according to actual demands of embroidery.

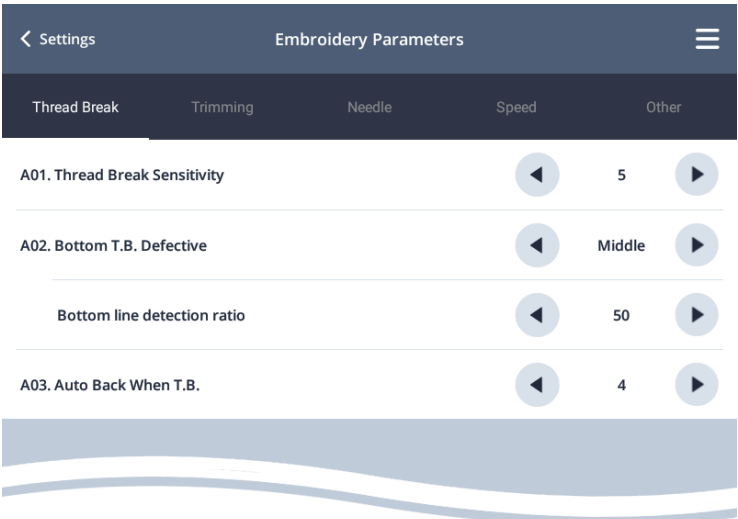


See Appendix: [List of Embroidery Parameters](#) for the definition and range of embroidery parameters.

- 1. Thread break: Set the thread break sensitivity
- 2. Trimming: Set jump to trim, trim top thread length, etc.
- 3. Needle: Related to needle use, machine needle count, same ST auto startup and special embroidery function (needle of boring, rope embroidery, gold sheet and bead embroidery), etc.
- 4. Speed: Set the main axis max. speed, main axis start speed, max. frame move speed, color change motor speed and low speed embroidery color change motor speed and low speed embroidery.
- 5. Other: Auto jump stitches, auto back to origin position, auto back offset, repeat embroidery, box movement, specify needle walk around/trace, etc.



7.1.1 Upper thread detection parameters



See Appendix: [8.1.1](#) for the definition and scope of thread break sensitivity in embroidery process.

7.1.2 Trimming setting

< Settings		Embroidery Parameters		
Thread Break	Trimming	Needle	Speed	Other
B01. Jump to Trim			3	
B02. Trim Top Thread Length			0.6mm	
B03. Length After Trim			5	
B04. L.S. Times During Trim			2	
B05. L.S. Number After Trim			2	
B06. Moving Frame After Trim			ON	
B07. Hook Motor Speed			2	
B08. Trim Function			ON	
B09. When the face clamp is locked			A	
B10. When the face clip is unlocked			A	

Set the needle parameters, such as Jump to Trim, Trim Top Thread Length, L.S. Times During Trim, times and clip. See Appendix: [8.1.2](#) for the definition and range.

7.1.3 Needle setting

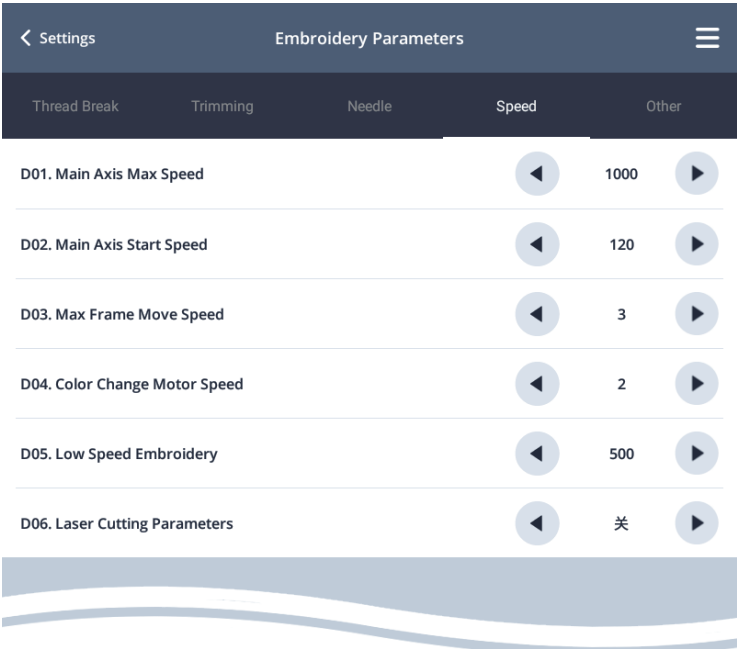
< Settings		Embroidery Parameters		
Thread Break	Trimming	Needle	Speed	Other
C01. Needles in a Head			15	
C02. Same ST Auto Startup			ON	
C03. Needle of Boring			0	
C04. Rope Embroidery Needle Rod			Off	
C05. Bead Embroidery Needle Position			Off	
C06. Left gold sheet embroidery needle position			Off	
C07. Right gold sheet embroidery needle position			Off	

Set the needle related parameters, such as Needles in a Head, Same ST Auto Startup and special embroidery functions (needle of boring, rope embroidery, gold sheet and bead embroidery).

See Appendix: [8.1.3](#) for the definition and range.

See Appendix: [8.1.4 ~ 8.1.7](#) for special embroidery.

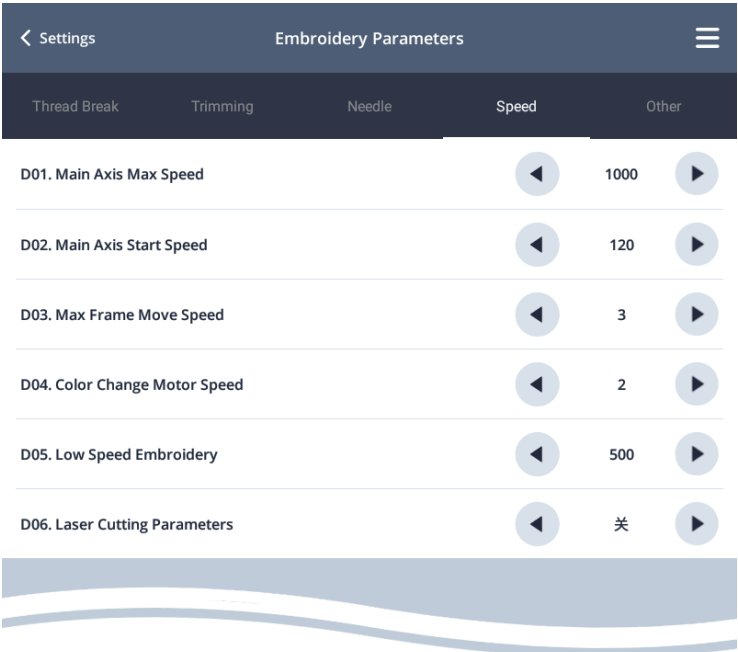
7.1.4 Speed setting



Set the machine speed parameters, such as main axis max. speed, main axis start speed, max. frame move speed, color change speed, slow embroidery speed, as well as laser cutting parameters.

See Appendix: [8.1.8](#) for the definition and range.

7.1.5 Other

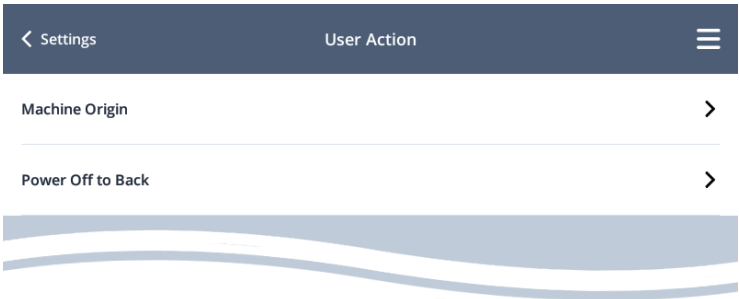


Set the parameters such as Auto Jump Stitches, Auto Back to Origin Position, Repeat Embroidery, Auto Back Reset, Specify Needle Walk Around/Trace and positioning red light mode.

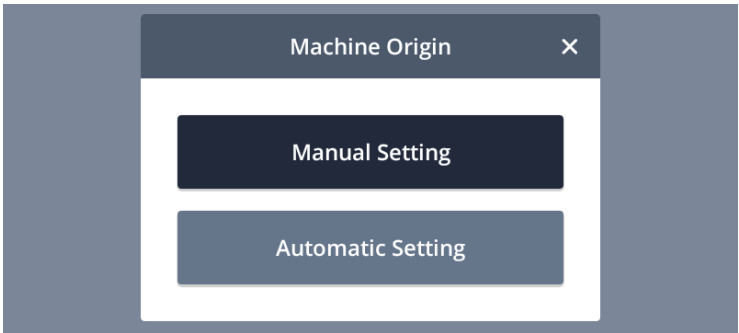
See Appendix: [8.1.9](#) for the definition and range.

7.2 User Action

Click  to enter user action, to set machine origin and power off to back.



7.2.1 Machine origin

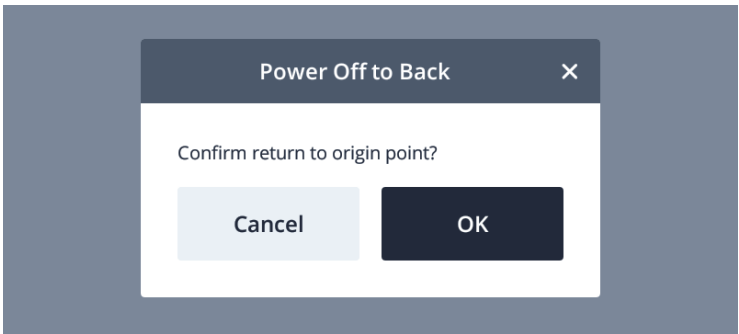


Note: Make sure hoop limit sensor is normal before executing automatic setting; otherwise, mechanical damage may occur.

Manual setting: Set the current position of hoop as mechanical origin, change PX/PY coordinates into 0.0 (operated by professional technician only. Note: Any misoperation may lead to mechanical damage).

Automatic setting: The absolute origin of machine is to detect and determine the absolute position through hoop limit sensing, to find the embroidery position and continue embroidery through power off to back function when a fault occurs during embroidery (such as hoop offset due to hoop movement after sudden power failure or shutdown).

7.2.2 Power off to back



The hoop offset due to hoop movement after sudden power failure or shutdown can be recovered through power off to back function.

7.3 Admin

Click  to enter **admin**, to set the parameters such as time/date, language, units, screenshot, alert settings, light settings, machine lock, maintenance tasks, network settings, interface style settings and set embroidery frame background.

< Settings

Admin

≡

Time/Date

>

Language

>

Units

>

Screenshot

>

Alert Settings

>

Light Settings

>

Machine Lock

>

Maintenance Tasks

>

Network Settings

>

Screen Settings

>

Interface Style Settings

>

Set embroidery frame background

>

7.3.1 Time/date

< Back

Time/Date

≡

Use 24—hour format

☐

Time Zone

China Standard Time >

Time

^

11

↓

^

:

↓

^

49

↓

AM

Date

^

Jan

↓

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09

↓

^

2024

↓

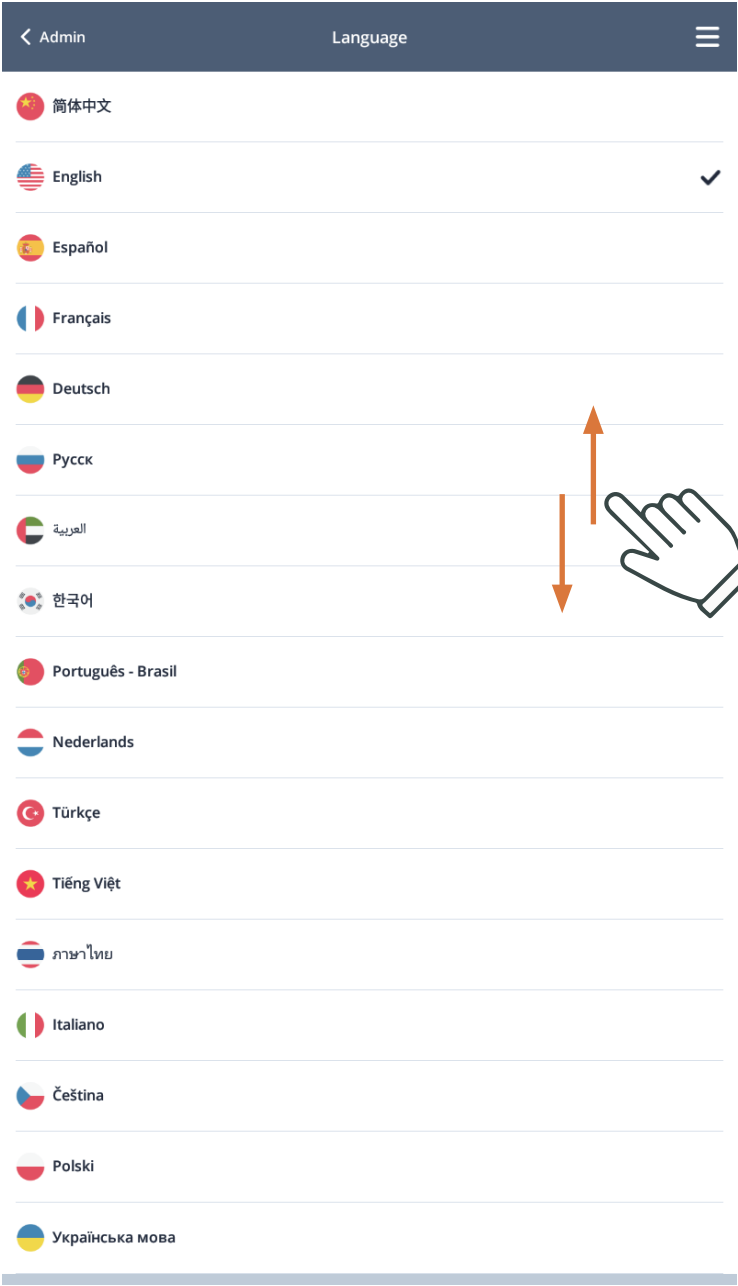
Save

Note: It is forbidden to modify the time/date when the machine has limitation of use time.

40

7.3.2 Language

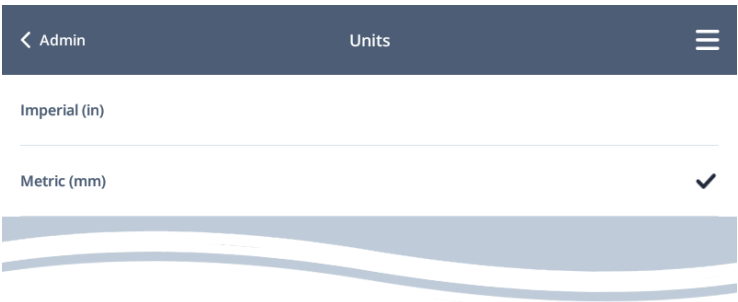
Multiple languages are supported. The user can change the language as required. Click the language, the system will prompt auto reboot dialogue and it will take effects after confirmation and reboot.



✓ means the current language

Slide up / down to browse it

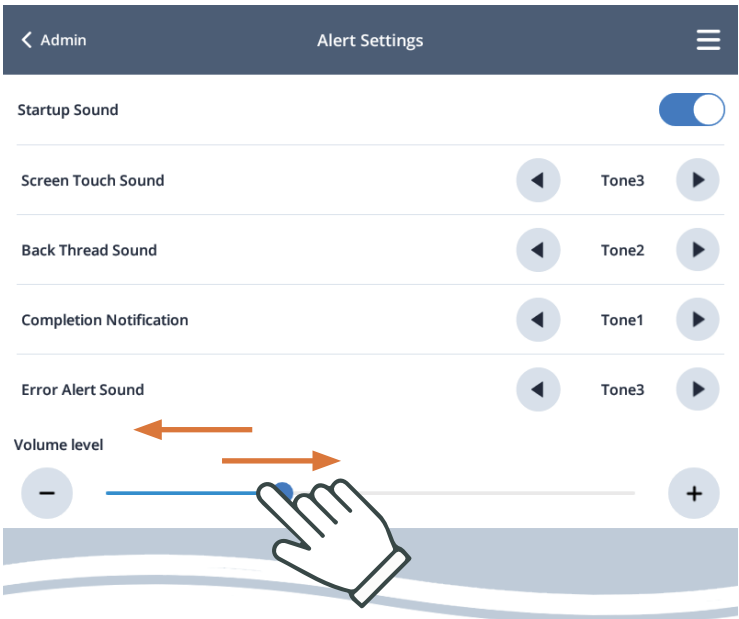
7.3.3 Units



Support **inch (in)** and **millimeter (mm)**, click it to take effects immediately;

7.3.4 Alert settings

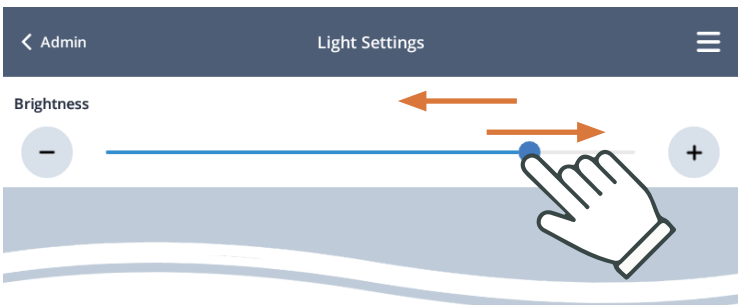
The screen **touch sound**, **back thread sound**, **completion notification** and **error alert sound** can be set; the alert can have different tones. The user can set the favorite tones as required.



Slide to the left / right to adjust the volume

7.3.5 Light settings

The auxiliary light can be adjusted to reach the most comfortable brightness according to the environment and light reflection of cloth.



Slide to the left / right to adjust the brightness

7.3.6 Machine lock - Decrypt

The system will have auto lock (prohibit embroidery) after reaching the **expiration time** of machine, and it will prompt user to input machine lock - **password**.

< Admin Machine Lock

Customer ID: 000000

Agent ID: 000000

Encrypted Serial Number: 3892 9568 8667

Encryption

Encryption days: 158 Day

The encryption time: October 31, 2022 11:01 AM

Encryption

Decrypt

Password:

Use Days: 22 Days | Remaining Days: 158 Days | Expiration Time: June 15, 2024

Decrypt

Please send the **encrypted serial number** to the supplier, to provide the decryption password.

Click the **password** from the supplier for **decryption**, enter the password correctly to unfreeze and continue the embroidery of machine.

The QR code is used for recording the encrypted serial number. The user can scan the code directly with a mobile device to read the encrypted serial number, and send it to the supplier.

When starting the machine and embroidery 3 days before expiration date, it will prompt to make arrangement, to avoid affecting the use.

Or you can acquire password and decrypt it in advance as required.

7.3.7 Maintenance tasks

Carry out reasonable maintenance according to the machine running period and maintenance prompts of different parts, to reduce the machine's wear and increase its service life.

Your machine needs oiling.

Complete Now

Remind Me Later

STITCH COUNT	PROGRESS RATE	HOOP	NEEDLE
0 / 23,278	0% 00:00:00	Hoop E 270.0 x 270.0mm	#1 100°

MT-1501-8S180-200.DST | 180.2 x 199.8mm

Enter the prompt of **maintenance tasks** in title bar of homepage, select **complete now**, enter the page and carry our maintenance task according to prompt, then click **mark as complete** when the task is done. Or you can select **remind me later**.

< Home

Maintenance Tasks

Complete tasks according to timeline

DAILY

Oil rotary hook

Suggested oil: White #22 machine oil

Last Completed: 2024-01-10 09:27 AM

Completed

Oil needle bar

Suggested oil: White #22 machine oil

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

WEEKLY

Front shaft brushing

Suggested oil: White #22 machine oil

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

Back shaft brushing

Suggested oil: White #22 machine oil

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

Arm drive shaft

Suggested oil: White #22 machine oil

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

Needle plate base cleaning

Suggested oil: n/a

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

MONTHLY

Oil needle bar

Suggested oil: Lithium grease (NLGI#2)

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

Needle bar lower rail

Suggested oil: Lithium grease (NLGI#2)

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

Color change cam

Suggested oil: Lithium grease (NLGI#2)

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

Shuttle box gear

Suggested oil: Lithium grease (NLGI#2)

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

X-rail

Suggested oil: Lithium grease (NLGI#2)

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

V-rail

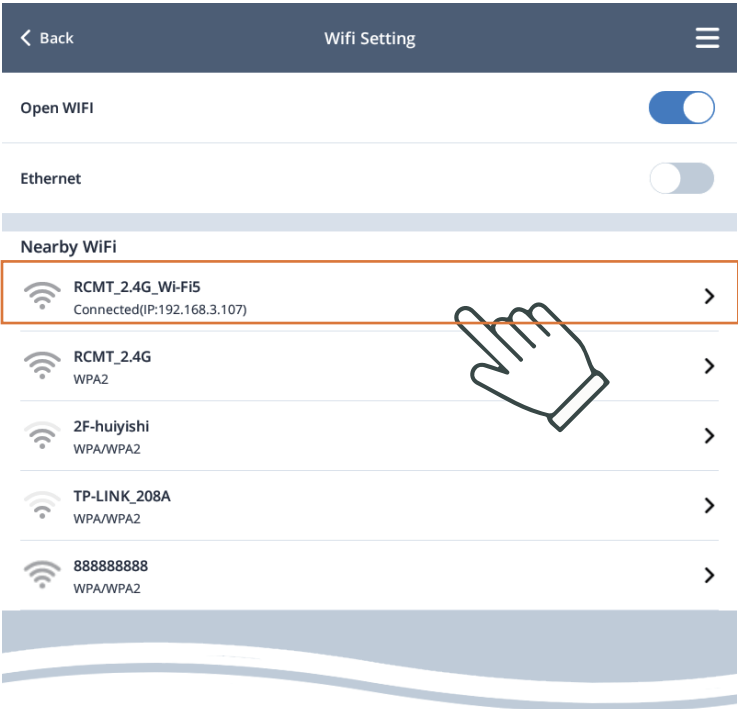
Suggested oil: Lithium grease (NLGI#2)

Last Completed: 2024-01-09 09:24 AM

Mark as Complete

44

7.3.8 WiFi setting

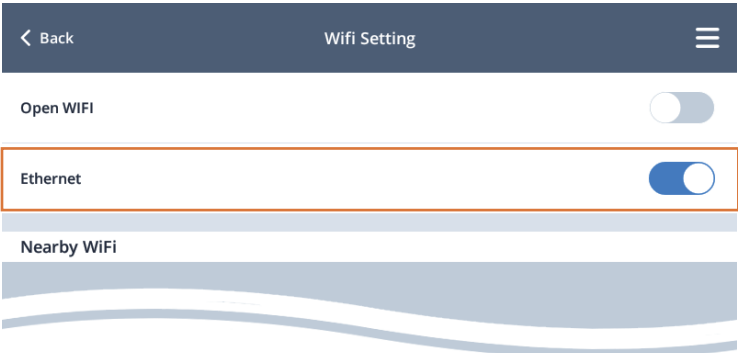


When WIFI is enabled, it will search the WIFI signals of accessories nearby, display the searched name, click the target WIFI, enter the password and click save.

Normal connection status

The WIFI icon in homepage will become 

7.3.9 Ethernet



Click **Ethernet** to enter the Ethernet setting page.



The wired network has two modes:

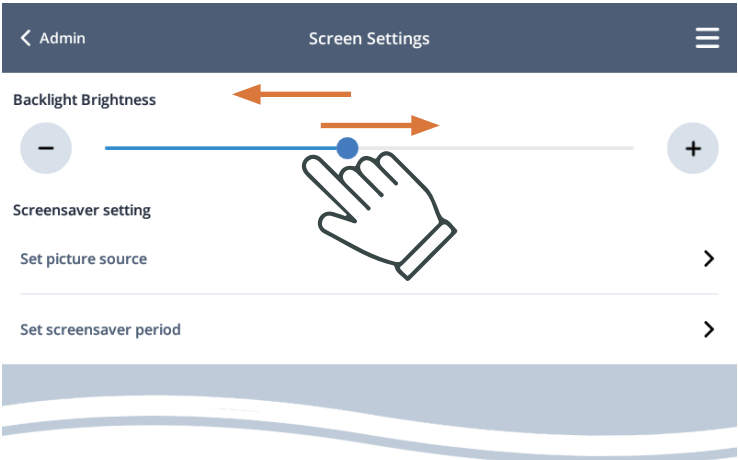
Dynamic acquisition: Use DHCP service to connect the router, to acquire the IP address and other parameters automatically.

Static mode: Connect the wired network as required, enter the related network address and other parameters, confirm it and click connect;

when connection is established, the icon at WIFI position in homepage will become 

7.3.10 Screen settings

Support backlight brightness adjustment and screensaver setting function.

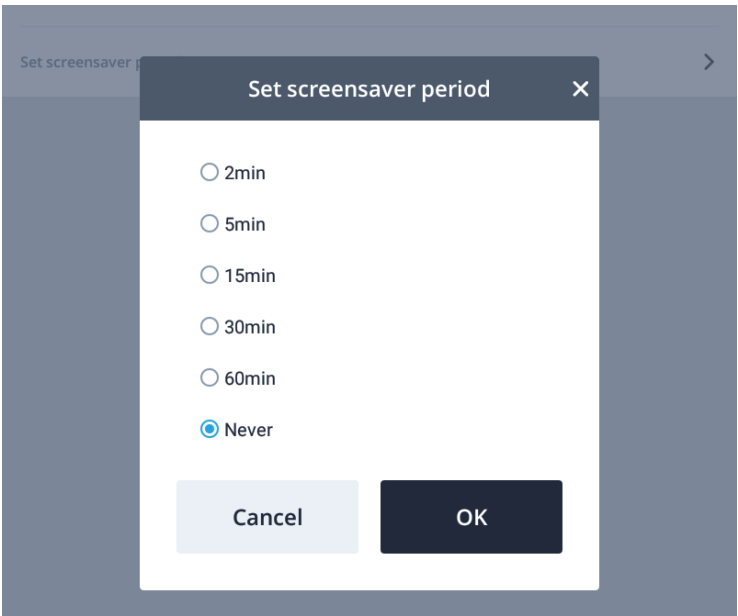


Slide to the left / right to adjust the backlight brightness



Set picture source, the attached picture of machine can be used or be imported from USB.

Note: The resolution of imported picture should be 800 × 1280; otherwise, it may affect the display effects.

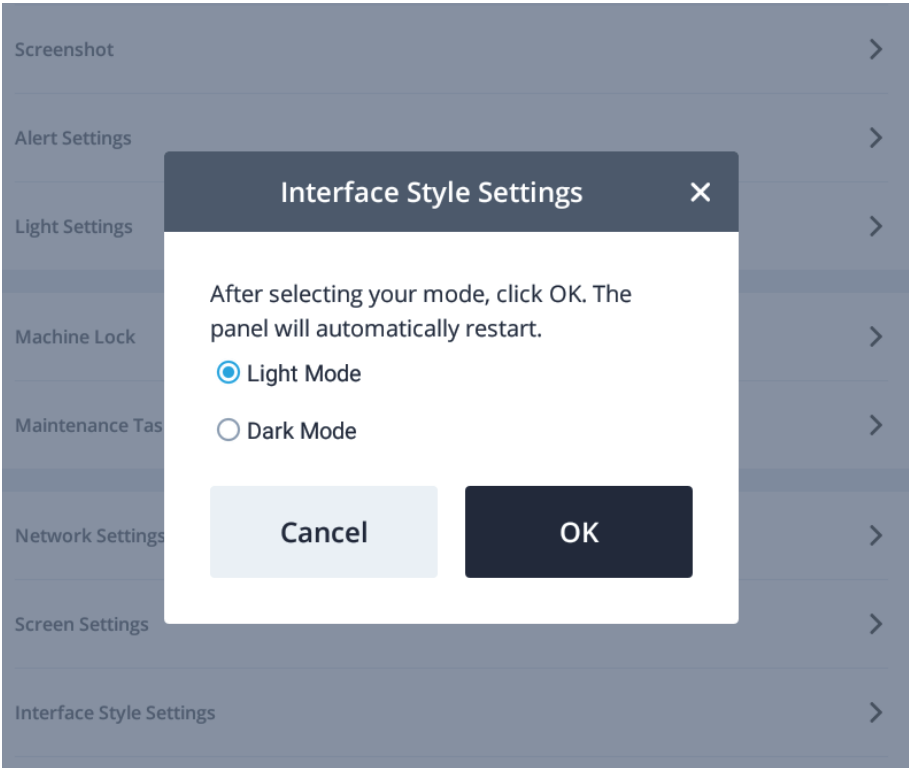


Set screensaver period:
Support 2min, 5min, 15min, 30min and 60min (enable screensaver), and never (disable screensaver).

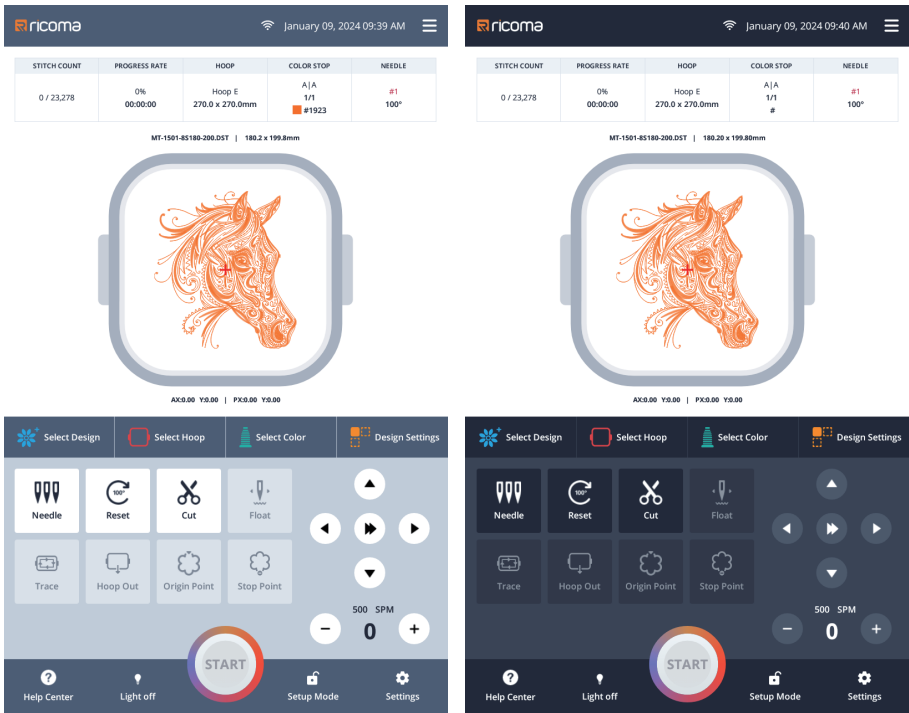
When screensaver is enabled, it will take effects when the machine is under non-operation status and there's no operation.

7.3.11 Interface style settings

Support light mode and dark mode, which can be selected as required.

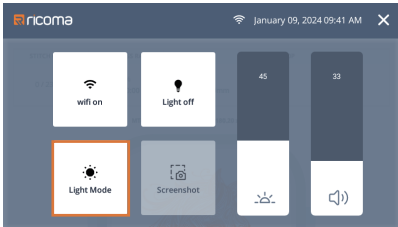


After switching mode, it will restart automatically and take effects



light mode

dark mode

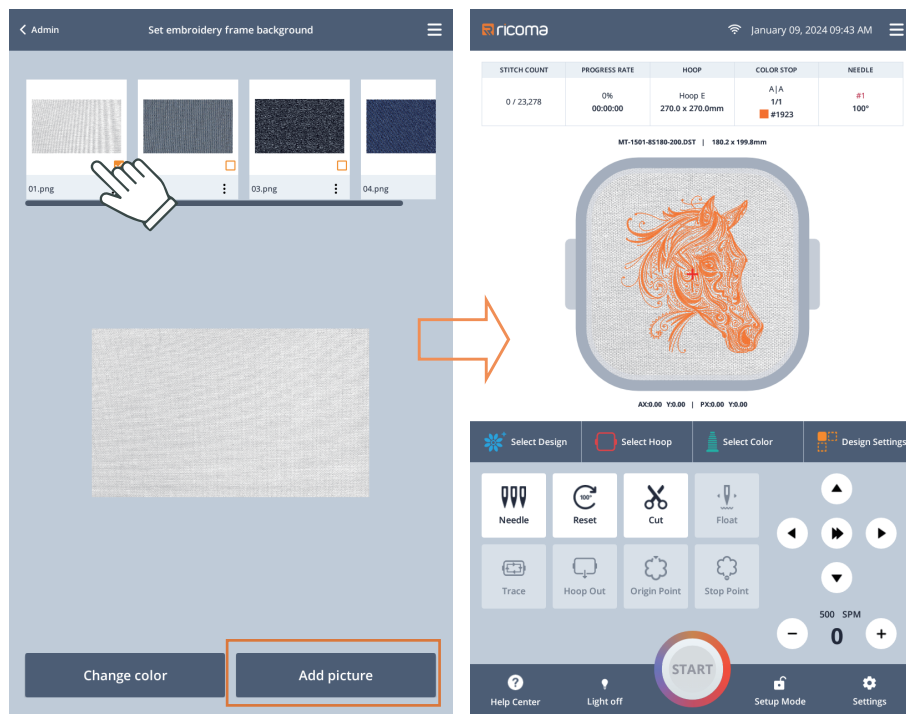


Use shortcut menu in homepage, to enter setting:

- light mode and
- dark mode quickly

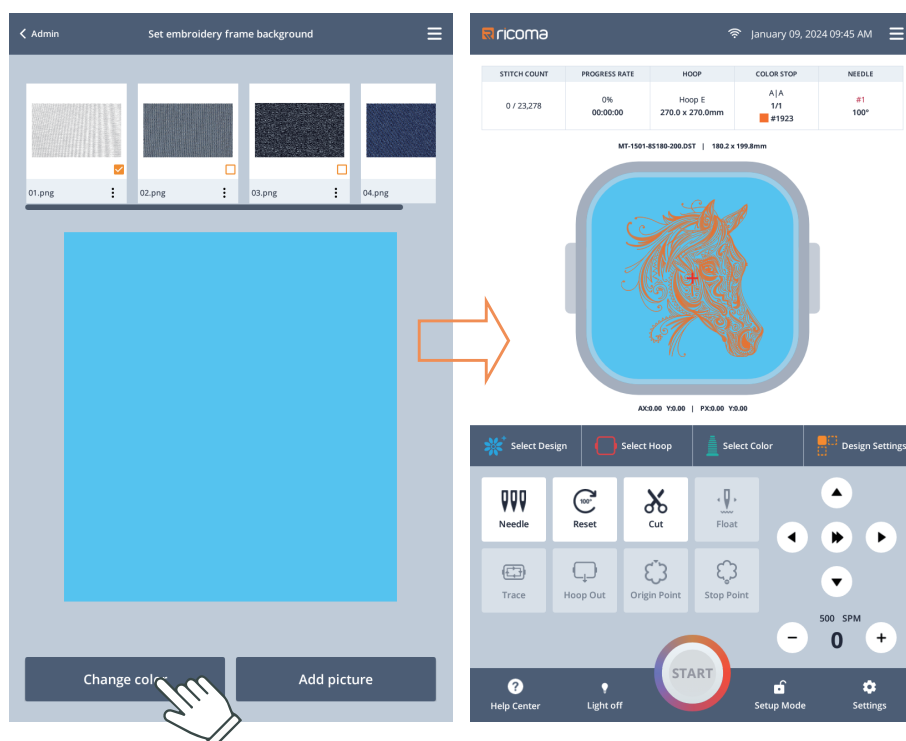
7.3.12 Set embroidery frame background

Importance of setting embroidery frame background: It can avoid unclear presentation of embroidery pattern during preview when the embroidery thread color is similar with background color. Besides, the embroidery frame background can also use the uploaded picture as background; the embroidery color effects can be previewed when the picture selected is close to the cloth.



Select the picture and set it as embroidery background, or click **delete** to delete the pictures not required; besides, the user can click **add picture** to select picture from USB as the background.

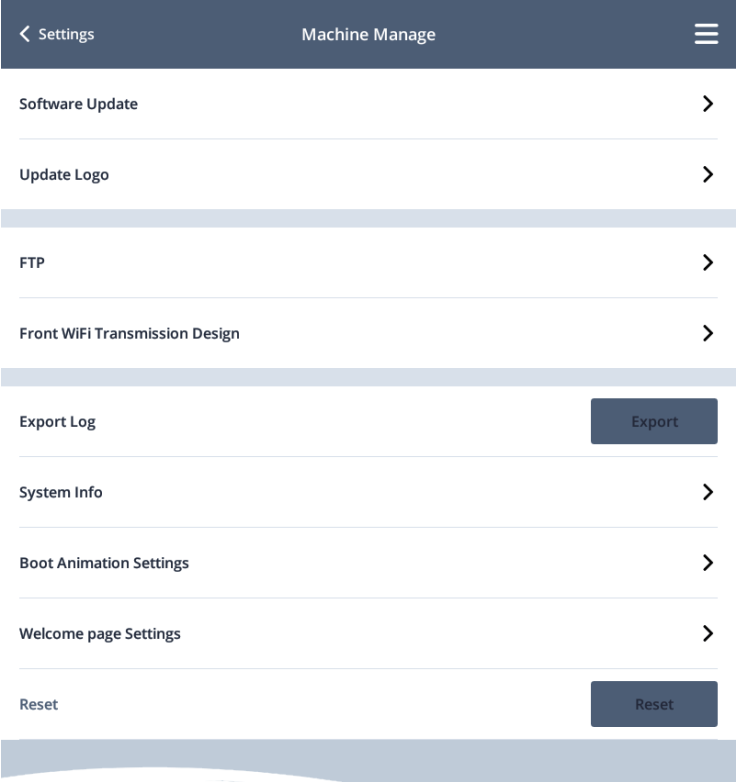
Note: The resolution of imported picture should be 800×487 ; otherwise, it may affect the display effects.



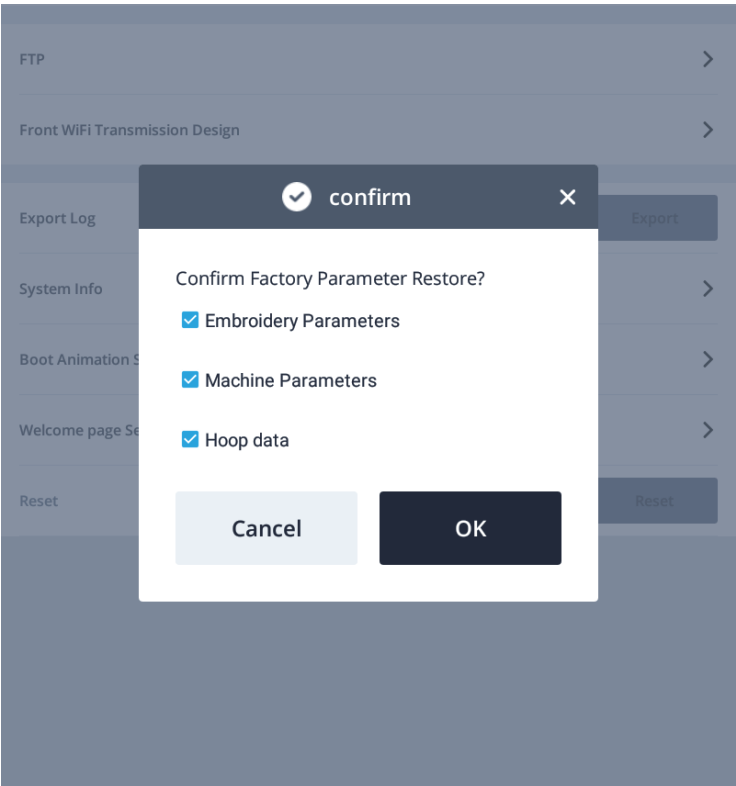
Click **change color** key to set the pure-color embroidery background.

7.4 Machine Manage

Click  to enter **machine manage**, to operate or check software upgrade, update logo, front WiFi transmission design, export log, system info, boot animation settings and factory parameter restore.



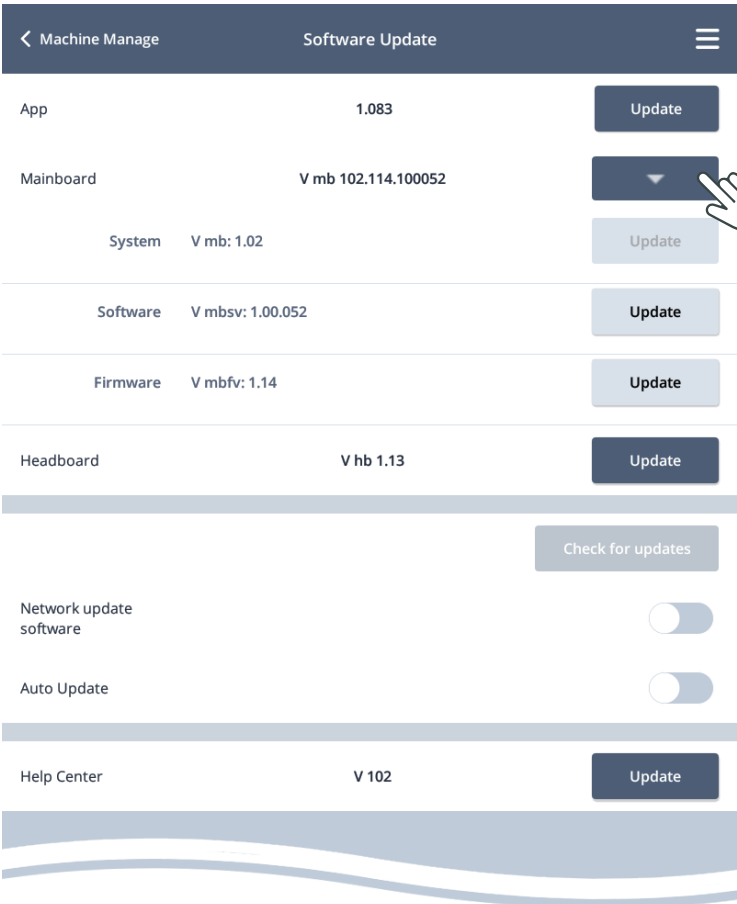
7.4.1 Factory parameter restore



Please restore the corresponding parameters as required, such as **embroidery parameters, machine parameters and hoop data.**

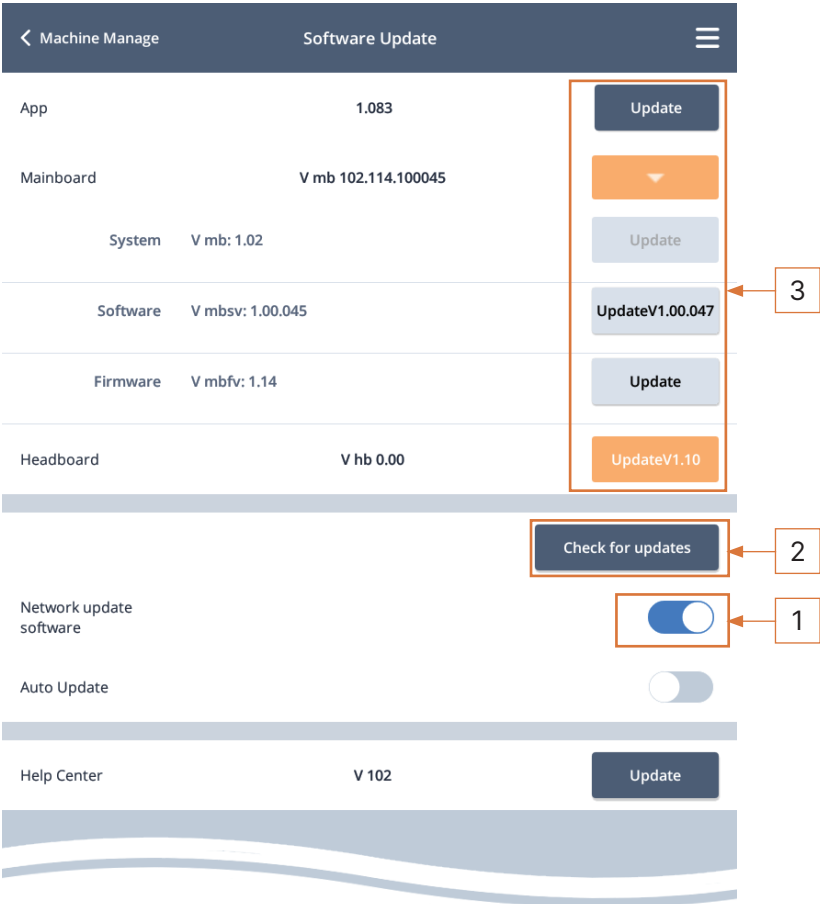
7.4.2 Software update

Support USB update and online network update.



Mainboard update: Click unfold to operate mainboard software and mainboard firmware.

USB update: the root directory of USB, insert the USB into the machine, click the corresponding keys for update. When update is done, it will prompt **reboot**, click it to confirm.



Online network update: (Normal networking is required)

1. Open **network update**
2. Click **check for updates**
3. When new version is detected, the corresponding keys will turn **orange** or the **key will show the new version number**, click the corresponding update key; after download or update succeeds, it will prompt reboot, click it to confirm.

Or **auto update** can be enabled; click **check for updates** and when new version is detected, it will be downloaded and updated automatically, and it will reboot automatically.

7.4.3 Front WiFi transmission design

When network service mode is adopted, the remote transmission of design can be realized through the network browser without installing other software at the transmission end. The upload end devices include but not limited to the mobile devices, such as laptop, mobile phone and tablet PC.

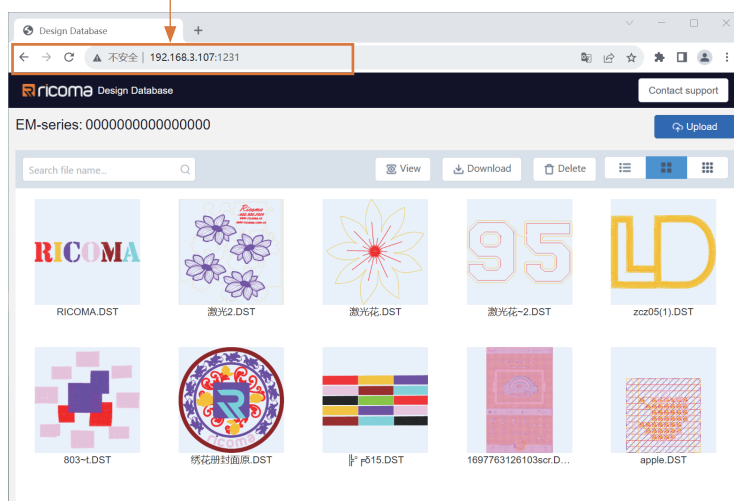
Make sure network is connected normally before using front WiFi transmission design.



Enable front WiFi transmission design.

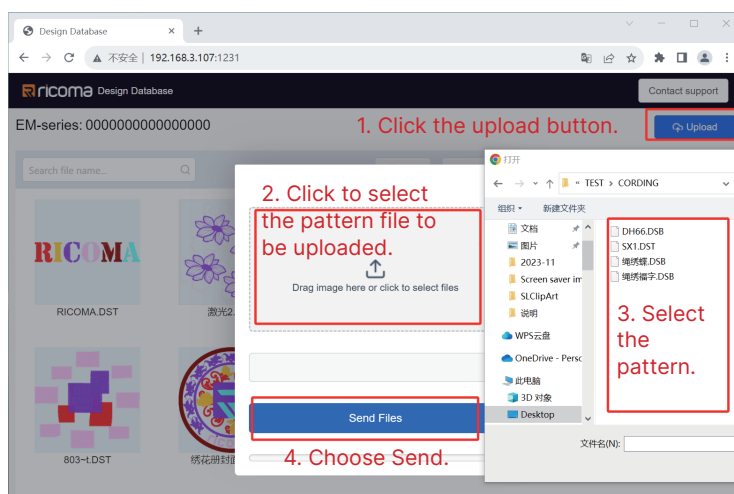
The dynamic terminal can be enabled when it prompts that terminal is being occupied when enabling it.

The user can directly scan the WiFi design management using mobile device through the **QR code**.



Enter the machine's address on the web browser of laptop to enter the WiFi design management page, such as:
<http://192.168.3.107:1231>

The front WiFi transmission design page supports **upload, download, delete** and **preview details**.



1. Click  Upload design key
2. Click the file area that needs upload
3. Select design
4. Click send

7.5 Machine Parameters (read only)

Click  to enter machine parameters (read only) for reviewing; this parameter is used by professional technicians only and should not be modified by other personnel, to avoid a malfunction.

Settings

Machine Parameters

Machine Parameters

Machine Configuration

Laser Config

G01. Machine Type

◀

SWM

▶

G02. Number of Heads Used

◀

1

▶

G03. Number of needle bars of machine head

◀

15

▶

G04. Embroidery Frame Limit Method

◀

NP

▶

G05. Lock Mode

◀

Motor

▶

G06. Upper Thread Detection Method

◀

Head Board Inspection

▶

G07. Thread Break Detection Type

◀

Raster Single Point

▶

G08. Motor Function Switch

◀

Lock

▶

G09. Spindle Encoder Signal

◀

BA

▶

G10. Spindle Zero Signal Reverse

◀

OFF

▶

G11. Main Driver Ratio

◀

1:2

▶

Color Change Parameters

G12. Color Change Detection Method

◀

Photoelectric Sensor

▶

G13. Color Change Reduction Ratio

◀

1:1

▶

Import Settings

Save Settings

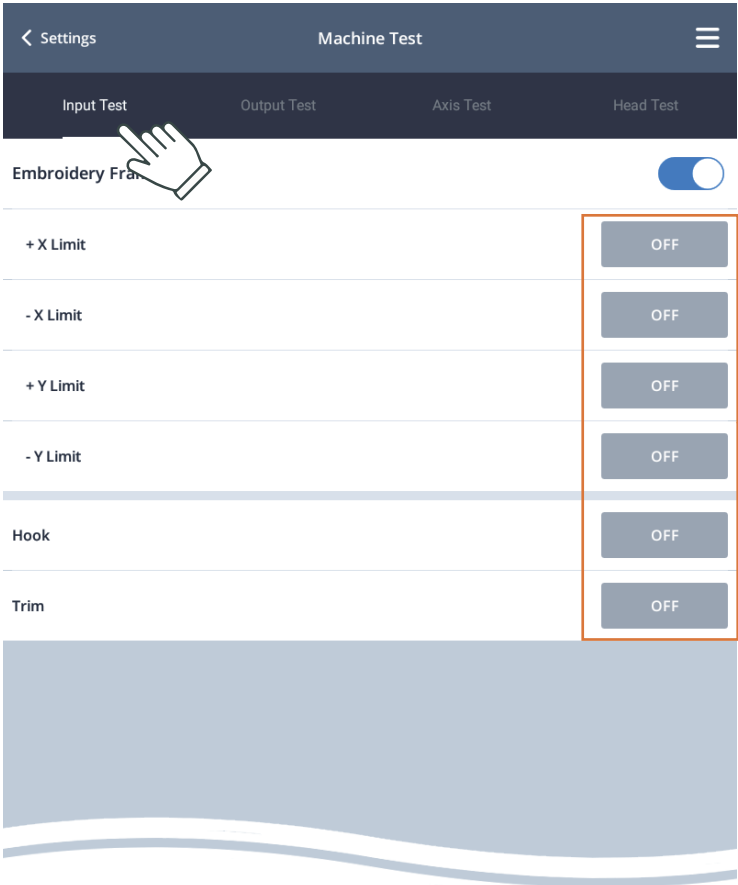
Save Factory Parameters

7.6 System Test

The system test function is mainly used by maintenance personnel to see if the machine is normal.

Click  to enter **system test**, including **input test**, **output test**, **axis test** and **head test**.

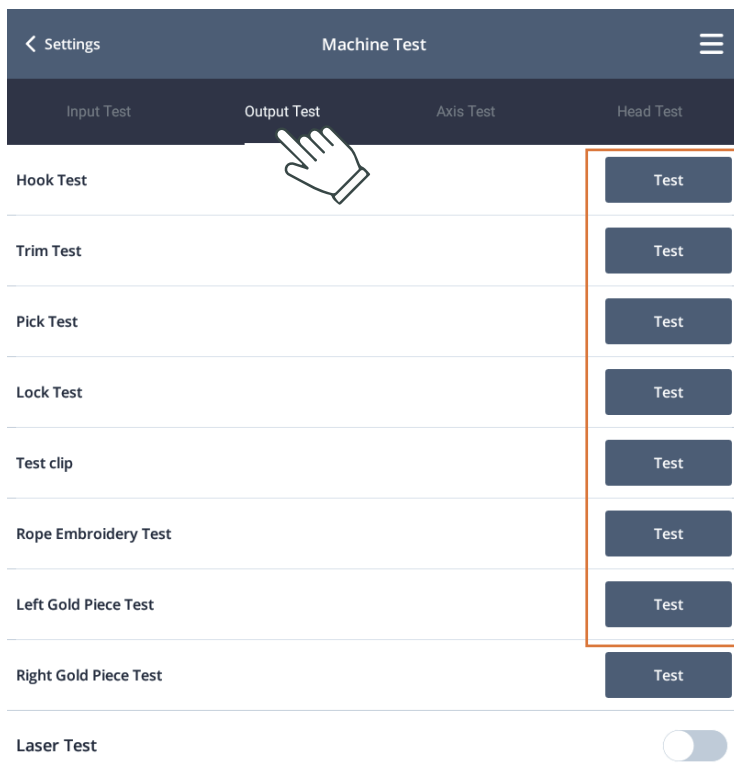
7.6.1 Input test



Disable Embroidery Frame Lock as required; it will be enabled automatically after quitting this page.

Check if the **on/off** of each item changes when sensor input status is changed during the test; if not, the sensor input signal is faulty, please inspect and handle it.

7.6.2 Output test



Press **test** key of corresponding items as required, to see if output is effective; when output function module has no action, the current function module is faulty, please inspect and handle it.

Hook test: Tick test key once, the hook will stretch and retract alternatively.

Trim test: Click test key once and the trimming motor will rotate, stretch or retract the needle alternatively.

Pick test: Click test key once, the pick electromagnet will be connected for 3s and then disconnected automatically.

Lock test: Click test key once, the lock motor or lock electromagnet will retract or withdraw the lock black adhesive alternatively.

Test clip: Click test key once, the two-way clip electromagnet will have downward/upward connection alternatively.

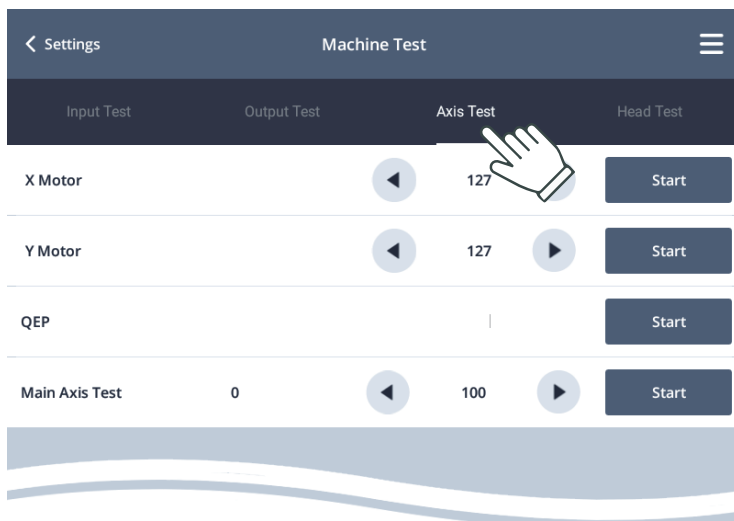
Rope embroidery test: Click test key once, the rope will descend, rotate for 1 circle and uplift the device.

Left gold piece test: Click test key once, the gold piece will descend, send out piece for 3 times and then ascend the device.

Right gold piece test: Click test key once, the gold piece will descend, send out piece for 3 times and then ascend the device.

Laser test: For machine with laser cutting function, enable the laser test switch on the test page in order to enter the laser test mode.

7.6.3 Axis test

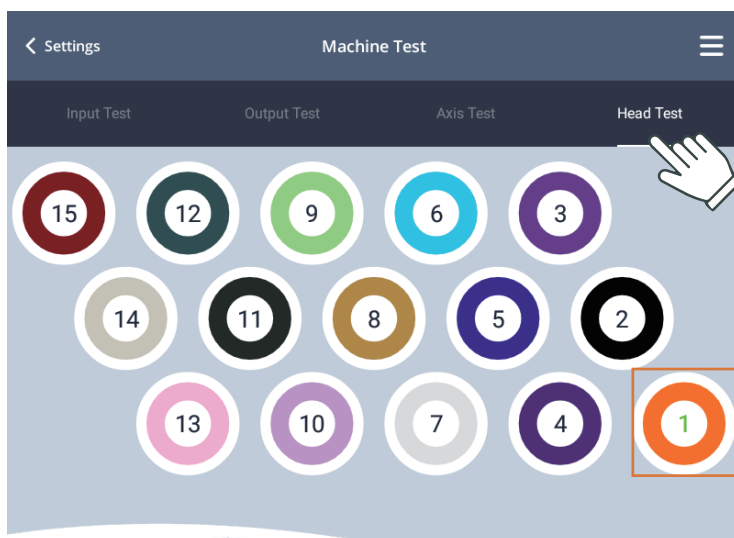


X/Y axis test: Press the left/right key to modify the hoop movement distance (1-127mm) and the default distance is 127mm; click start key to move the hoop back and forth, click the key again to stop inspection.

QEP test: Check the thread count and zero position width of main axis encoder; the normal value is 22 /1000 ± 5 ; otherwise, the encoder has error and needs inspection and reconfirmation.

Main axis speed: The default speed of main axis is 100 rpm; click the left/right key to change the rotation speed; the front figure is actual rotation speed, while the back value is target speed. Check if the actual speed and target speed is consistent (the difference should be within 8 rpm).

7.6.4 Head test



It is mainly used for detecting whether thread break sensor on the head is normal.

The **stitch keyboard** corresponds to the head stitch; click the figure to switch to the corresponding stitches (the green figure means the current stitch); dial the detection wheel or spring according to the machine configuration, observe the head lamp to see if the sensor has a fault;

Pure wheel configuration detection: Dial the detection wheel, it is normal when head machine indicator flickers in green.

Spring configuration detection: Dial the detection spring and it is normal when red indicator flickers in red.

When one indicator is normally on or off during detection, please inspect and handle it.

7.7 Production Report

← Settings

Production Report

≡

Total Stitches	0	Empty
Number of Embroidery Workpieces	0	Empty
Number of Threadbreaks	0	Empty

This function is used for viewing and clearing the embroidery statistics (authority is required).

Part 8 Appendix

8.1 List of Embroidery Parameters

8.1.1 Thread break detection

Parameter name	Parameter function	Default value	Scope
Thread break detection	Tread break sensitivity (the sensitivity increases along with value decrease)	5	3~9, no detection
Bottom thread break detection	Sensitivity of bottom thread break detection	Medium	High, middle and low, no detection
Bottom line detection ratio	Bottom line detection percentage (the sensitivity increases along with value increase)	50	30~100
Auto Back When T.B.	Auto back count when T.B.	4	0~9

8.1.2 Trimming

Parameter name	Parameter function	Default value	Scope
Jump to Trim	Carry out jump of several stitches to see if trimming is required	3	1~9. Off
Trim Top Thread Length	Stitch length of trip font thread	0.8mm	0.4~2.0mm
Length After Trim	Residual length of thread after trimming (the residual length increases along with the value)	5	1~7
L.S. Times During Trim	Times of lock stitch before trimming	1	0, 1, 2
L.S. Number After Trim	Lock stitch count after trimming	2	0, 2, 4
Moving Frame After Trim	Whether move the frame after trimming	On	On, off
Hook Motor Speed	Speed of hook motor during trimming (the speed increases along with the value)	2	1, 2, 3
Trim Function	Whether use auto trimming function during embroidery	On	On, off
Clip lock mode	Surface clip has action during trimming	A	A, B
Clip unlock mode	Surface clip has action after trimming	A	A, B

8.1.3 Needle

Parameter name	Parameter function	Default value	Scope
Needles in a Head	The number of needles used in current embroidery machine (set according to actual configuration)		1~20
Same ST Auto Startup	Whether have auto start when the same stitch has 2 and more color changes continuously	On	On, off
Position of carving knife and needle	Number of stitch that uses carving knife (not conduct thread break detection) 0 not use	0	0~20

8.1.4 Rope embroidery parameters

Parameter name	Parameter function	Default value	Scope
Rope Embroidery Needle Rod	Position of stitch that installs rope embroidery	Off	Off, right, left, left + right
Cording Lifting Speed	Ascending/descending speed of rope embroidery device (the speed increases along with the value)	3	1~5
Cording Shelf Type	Model of rope embroidery device manufacturer	JY	JY, GJ, RKM
Cording Lifting Methods	Ascending/descending control mode of rope embroidery	Motor	Motor, air valve
Cording Swing Amplitude	The swinging amplitude during embroidery (the swinging increases along with the value)	20	0-20
Cording Slack Adjuster	The rope feeding length of rope feeding motor (the feeding length increases along with the value)	0	0-9
Rope Embroidery Speed Limit	The max. speed limit of rope embroidery	800	400~1000

8.1.5 Bead embroidery parameters

Parameter name	Parameter function	Default value	Scope
Bead embroidery stitch position	The position of stitch that is mounted with bead embroidery Reuse of other parameters and gold piece embroidery parameters	Off	Off, right, left, left + right

8.1.6 Stitch position of right gold piece needle

(reuse of bead embroidery)

Parameter name	Parameter function	Default value	Scope
Position of left gold piece embroidery stitch	Installation type of left gold piece embroidery device; A: Single gold piece; AB: Double gold piece	Off	Off, left A, left AB
Sequin Max Speed	Max. speed of gold piece embroidery	800	400~1000
Piece Speed	Ascending/descending speed of gold piece embroidery device (the speed increases along with the value)	3	1~5
Type Of Lifting Device	Control mode for ascending/descending of gold piece embroidery device	Motor	Motor, air valve
Gold piece discharge mode	Discharge sequence of Piece A and B in double gold piece embroidery	AB	AB, BA
Left A Sequin Size	Left A Sequin Size	2mm	2~9mm
Left B Sequin Size	Left B Sequin Size	5mm	2~9mm
Break Thread Up	Whether ascend the left gold piece device automatically after thread break	No	No, yes

8.1.7 Right sequin needle position

(Shared with Bead Embroidery)

Parameter name	Parameter function	Default value	Scope
Right gold sheet embroidery needle position	Installation type of right gold piece embroidery device; A: Single gold piece; AB: Double gold piece	Off	Off, right A, right AB
Sequin Max Speed	Max. speed of gold piece embroidery	800	400~1000
Piece Speed	Ascending/descending speed of gold piece embroidery device (the speed increases along with the value)	3	1~5
Type of lifting device	Control mode for ascending/descending of gold piece embroidery device	Motor	Motor, air valve
Gold piece discharge mode	Discharge sequence of Piece A and B in double gold piece embroidery	AB	AB, BA
Right A Sequin Size	Right A Sequin Size	2mm	2~9mm
Right B Sequin Size	Right B Sequin Size	5mm	2~9mm
Break Thread Up	Whether the right sequin device automatically rises after thread breakage.	No	No, yes

8.1.8 Speed setting

Parameter name	Parameter function	Default value	Scope
Maximum Speed Limit	Maximum spindle speed setting (limited by machine's max speed and embroidery frame's max speed)	750	400~1200
Start Main Motor Speed	Speed when starting embroidery	120	80, 100, 120, 140
Maximum Frame Moving Speed	Manual frame moving speed (higher value = faster)	3	1, 2, 3, 4, 5
Step Motor Color Change Speed	Color change speed setting (higher value = faster)	2	1, 2, 3
Needle Bar Low Speed Embroidery	Embroidery speed for needle bar low speed function code	500	400~600
Laser Cutting Parameters	Laser cutting related parameter switch (enabling is subject to machine configuration limitations)	Off	Off, On
Laser Parameter Selection	Preset 8 sets of laser parameters	1	1~8
Laser Maximum Intensity	Laser emission intensity (higher value = stronger intensity)	30	1~100
Laser Minimum Intensity	Same as above	5	1~00
Laser Maximum Speed	Frame moving speed during laser cutting (higher value = faster)	50	10~100
Laser Minimum Speed	Same as above	10	10~100

8.1.9 Other

Parameter name	Parameter function	Default value	Scope
Spindle Excitation	Whether the spindle maintains holding force when stopped	On	Off, on
Long Stitch Embroidery Mode	Long stitch embroidery method; can only be modified when embroidery is in setting mode	Slow	Slow, jump
Auto Jump Stitch Length	Stitch length condition for automatic stitch jumping (only effective when Long Stitch Embroidery Mode is set to Jump)	6.5mm	2.0~9.0mm
Auto Speed Change Rate	Transition speed when changing speed during embroidery (higher value = faster speed change)	40	10~50
Auto Return to Start Point	After design embroidery is completed, automatically return to the design's starting point	On	Off, On
Design Cycle Embroidery	Cycle embroider the currently selected design	Off	Off, On
Filter Zero-Stitch Data	Filter out stitches with zero step length	Off	Off, On
Power-On Reset Frame	Each time the machine is powered on, prompt the power failure recovery dialog. When off, if power fails during embroidery, the dialog will automatically pop up on next power-on	Off	Off, On
Frame Jump Movement Mode	Frame jump refers to the way the machine stops and moves to the next embroidery position during embroidery, e.g., after thread trimming, if there are multiple jump codes, then move to the next stitch position	Combine	Combine, Single Stitch
Auto Return Offset	After design embroidery is completed, automatically offset out of the frame to the highest position of the embroidery frame	Off	Off, On
Start Slow Motion Stitch Count	Number of slow stitches before accelerating when starting embroidery	0	0~5
Specify Needle Bar Number for Contour Tracing	When performing design outline and contour tracing, set the specified needle bar number. 0: current needle bar. (Other values are limited by machine needle bar parameter settings)	1	0~20
Red Light Positioning Mode	Red light positioning point activation mode	Auto	Auto, Constant On

8.1.10 Coiling / taping embroidery parameter settings

Parameter name	Parameter function	Default value	Scope
Coiling/Taping Embroidery Switch	Located in the list under Machine Parameters → Additional Devices		
Frame Origin Position		Left	Left/Right
Coiling/Taping Head Spacing		400 mm	Max. 800 mm
Coiling/Taping Embroidery Parameters	Located in the list under Embroidery Parameters → Needle Bar Settings		
Maximum Embroidery Speed	Sets the maximum embroidery speed of the coiling/taping head	800	250–850
Coiling/Taping Head Trimming Mode	Sets the trimming mode of the coiling/taping head	Trim bottom thread	No trimming, Trim bottom thread, Trim top and bottom threads
Presser Foot Working Height	Sets the height of the coiling/taping head presser foot from the needle plate	0.5 mm	0.5–6.5 mm
Presser Foot Working Stroke	Sets the up-and-down stroke of the presser foot during coiling/taping embroidery	2.0 mm	0.0–15.0 mm
M-axis Origin Offset	Compensates and sets the M-axis origin	0°	0°–180°
M-axis Retraction Angle	Sets the orientation of the M-axis when the machine stops	0°	0°–360°
M-axis Retraction During Frame Backtrack	Whether the M-axis retracts during frame backtracking	No	Yes/No
M-axis Retraction During Head Change	Whether the M-axis retracts during head change	No	Yes/No
M-axis Return to Origin on Thread Break Stop	Whether the M-axis returns to origin upon thread break stop	No	Yes/No
M-axis Return to Origin on Machine Stop	Whether the M-axis returns to origin upon machine stop	No	Yes/No
Z-stitch Swing Lever Amplitude	Sets the swing amplitude of the swing lever. A larger value results in greater amplitude	10	1–20
Z-stitch Frame Swing Amplitude	Applicable for thick cord embroidery. In Z5/Z6 modes, the frame movement compensates for the swing lever amplitude	0	-10.0–+10.0 mm

8.2 List Of System Prompt Information and Handling

No.	Information	Processing mode
E102	Communication data error: 01	Turn off power, wait for more than 5 seconds, then turn on power. If not restored, contact technician.
E103 E104	Communication data error: 02	
E106 E108 E109	Communication data error: 03	
E105 E107 E110	Communication abnormality, please check!	Turn off power, check the operation head connection, then turn on power. If not restored, contact technician.
E201	Update failed	Try updating again. If not restored, contact technician.
E202	Failed to send design data	Reselect the design to be embroidered, or turn off power, wait more than 5 seconds, then turn on power; if not restored, contact technician.
E203	Failed to send total stitch count	
E204	Failed to send	
E205	Failed to send parameters	Go to parameter page then return to home page, or reselect the desired embroidery design; if not restored, contact technician.
E206	Failed to send color sequence	Go to color sequence settings, reselect and save the color sequence, then return to home page, or reselect the desired embroidery design; if not restored, contact technician.
E301	Unit not in position	Check whether the special embroidery unit has risen/lowered into position.
E302	Unit not in position	Check whether the special embroidery unit has risen/lowered into position.
E401	Embroidery abnormality!	Try starting Embroidery again. If not restored, contact technician.
E801	Time setting failed	Turn off power, wait more than 5 seconds, then turn on power and reset the time. If not restored, contact technician.
E802	APK information is empty, file may be corrupted	Contact technician.
E803	APK shared user ID name mismatch	Contact technician.
E804	File error, please check if the file exists	Troubleshoot the file according to the prompt.
E805	Recovery failed	Try recovery again. If not restored, contact technician.

No.	Information	Processing mode
E806	File abnormality	Contact technician.
E807	Type abnormality	Contact technician.
E808	Export failed	Contact technician.
E809	File does not exist	Check whether the corresponding file exists.
E810	Import failed	Contact technician.
E811	Save failed	Contact technician.
E812	Operation failed	Contact technician.
A902	Embroidery frame has been reset, please reselect the frame	Please reselect the embroidery frame to be used according to the prompt.
A903	Insufficient storage space	Clear some designs from memory and retry. If not restored, contact technician.
A904	Design maximum stitch count cannot exceed 1,000,000 stitches	
A905	Design combination maximum stitch count is 1,000,000	
A906	Design combination maximum color sequence count is 1000	
137	Upper thread break detected	Check embroidery thread.
	Upper thread / bobbin thread break detected	
133	Color change abnormality	Try manual color change or turn off power, wait more than 5 seconds, then turn on power and try color change again. If not restored, contact technician.
130	Color change not in position!	1. Perform manual color change to another needle position. 2. Or manually turn the color change motor to move the color change into position. If not restored, contact technician.
138	Thread trimmer not in position!	After the prompt dialog, tap the Confirm button (if thread is jammed in the trimmer, clear it first). If not restored, contact technician.
131 140 141 142 143 144	Main shaft not at zero position!	Press 100 degree button, or manually turn the main shaft to 100 degrees.
139	X-axis left direction software limit!	Manually move the embroidery frame in the opposite direction.
13A	X-axis right direction software limit!	Manually move the embroidery frame in the opposite direction.

No.	Information	Processing mode
13B	Y-axis upward direction software limit!	Manually move the embroidery frame in the opposite direction.
13C	Y-axis downward direction software limit!	Manually move the embroidery frame in the opposite direction.
132	Embroidery data not ready!	Reselect the desired embroidery design.
136	Power failure recovery not performed	
14A	X-direction sensor not found	Contact technician.
14B	Y-direction sensor not found	Contact technician.
14E	Power failure recovery abnormality	Contact technician.
145	Trimming action abnormality	Check whether the thread trimmer is jammed by thread. If jammed, clear it first. If not restored, contact technician.
146	Thread hooking action abnormality	Check whether the hook is jammed by thread. If jammed, clear it first. If not restored, contact technician.
147	Head communication abnormality	Turn off power, check the head board communication cable, then turn on power. If not restored, contact technician.
148	Device abnormality shutdown	Check additional devices such as: cord jamming, bead embroidery device abnormality, clear and troubleshoot. If not restored, contact technician.
584	Hook not in position!	After the prompt dialog, tap the Confirm button (if thread is pulling the hook, clear it first). If not restored, contact technician.
585	Embroidery frame driver abnormality!	Turn off power, wait more than 5 seconds, then turn on power. If not restored, contact technician.
587	Main shaft driver abnormality!	
58D	Firmware communication abnormality	Update the main board firmware program, turn off power, wait more than 5 seconds, then turn on power. If not restored, contact technician.
58E	Needle position board communication abnormality	Contact technician.