ALFA

INSTRUCTION MANUAL

Embroidery machine 12 threads

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Attention:
Specifications of this product are subject to change without prior notice.

Chapter 1 Overview

1-1 Precautions on Product Use

Welcome to use Raynen computerized embroidery machine control system. Please read and understand this operation manual carefully before using this product to ensure you use and operate the computerized embroidery machine correctly. Please keep this operation manual in a safe place for reference at any time.

This product is a mechatronic product. In order to reduce the risk of accidental fire, electric shock and personal injury that may occur during use, the following basic safety precautions should be observed.

- When using the equipment, keep the equipment reliably grounded, or use a power input with a ground wire.
- Please carry out electrical installation and wiring according to the technical requirements, try to make the strong and weak electricity separate wiring, not tied together.
- All kinds of installation and connection cables should be well insulated, and the jacket and plastic skin should be free from damage. The connector should not expose the stripped copper wire to avoid short circuit and wire contact during pulling.
- For the parts with radiators, keep the radiator and exhaust port ventilated smoothly and do not block.
- Before powering on for the first time, be sure to confirm that the external power supply specifications meet the specifications.
- If you need to power on immediately after power off, please keep the power off for at least 30 seconds and then power on.
- At the start of power-on for 30 seconds, it is the initialization process of the power-on system, and try not to operate.
- The LCD screen and touch screen on the operation box are fragile items. Do not use sharp and hard objects for operation and click to ensure the normal function of the LCD screen and touch screen and prolong the service life.

- When inputting or outputting the pattern via USB disk, please pay attention to the insertion direction of the USB disk. Do not squeeze hard when the insertion direction is wrong. When reading or writing a USB flash drive, do not dial the USB flash drive to avoid damaging the USB flash drive and data.
- Do not open the cover of the electronic control cabinet during the power-on of the product. The chassis may contain fatal high voltage, which may cause accidental personal injury.
- If you really need to open the chassis for some tuning or inspection, you should turn on the power supply after the power socket is turned off or the power is turned off for 3 minutes to aviod some internal energy storage capacitors still exist dangerous high voltage, which may cause electric shock and personal injury.
- Do not touch the moving parts on the machine while the machine is running, otherwise it may cause personal injury.
- The product is forbidden to be placed in places with moisture, dust, corrosive gas, flammable or explosive gas, otherwise it may easily cause accidental fire, electric shock and personal injury.
- When using this product, in order to prevent fire, electric shock and personal injury, the following basic safety precautions shall be observed at all times.
- It is not recommended that disassemble the cover of the machine. If it is necessary to disassemble, please check if all the screws are removed.
- When the power is on, the color-changing motor will lock the shaft, please do not force the color-changing motor knob to change the color.

1-2 Technical Specifications

1. Display Screen：7inch touch screen
2. Screen resolution: 7inch (1024X600)
3. Operating Type: Touch screen (Capacitive screen)
4. Maximum speed: 1200 rpm
5. Maximum Memory Capacity: 100,000,000 stitches
6. Maximum Stitches of the Single Design: 4,000,000 stitches
7. Stepping Precision: Minimum stitch from 0.1mm
8. Stitch range：0.1mm～12.7mm.

9. Automatic Color Changing：3000 times

10. Lock Encryption: Yes

11. Multi-Language Support：Chinese, English, Italian, French and Russian

(optional: German, Spanish, Turkish, Portuguese, Arabic and Thai)

1-3 Main Features

1.design input, output and system software upgrade	1) This machine can connect to the USB disk. It can read the designs of Tajima binary, Tajima ternary, Belinda FDR format (including binary, ternary and Z-ary) and ZSK disk into the memory of the embroidery system. 2) This model can be connected to a USB flash drive via a USB interface, and the patterns stored in the system can be output in the Tajima binary format or Rayhong format and stored in the USB flash drive. 3) JD series models can use USB flash disks, upgrade system software, or perform online software upgrades for machine head plate and special embroidery control boards.
2.Multi-Language support	The system supports to display in Chinese, English, Spanish and Turkish, French and Portuguese.
3. Multiple embroidery process options	This model can choose to use different embroidery techniques such as “repetition embroidery”, “combination embroidery”, “letter embroidery” and “photo embroidery” etc.
4.Powerful pattern compilation function	This machine can compile the parameters of the “Repetition Embroidery” pattern or “Combine Embroidery” pattern to generate a new pattern, and store it in the memory.
5.Plenty assistant embroidery functions	This model can “automatically find the origin of embroidery patterns” and add functions such as “applique embroidery”, “border embroidery”, “cross embroidery” and “along the pattern range embroidery”. Enriched the function of pattern embroidery, greatly improved the embroidery process and efficiency.
6.Convenient machine maintenance and debugging functions	This model includes: machine self-test, encoder self-test, Main shaft motor speed self-test, machine components test functions. The use of these functions makes the debugging, maintenance and fault judgment of the embroidery machine more convenient.
7.Powerful embroidery parameter memory	This model can associate the selected embroidery parameters such as

function	the starting point of the pattern, the color changing order, the pattern direction, the rotation angle, and the number of repetitions with the embroidery pattern, and save this set of parameters. When embroidering this pattern again, you can call this group of parameters without resetting, which improves the embroidery efficiency.

Chapter 2 Description of Operation box

- **Touch Screen**

This machine adopts high-brightness LCD display and touch screen as the operation interface, which is easy and convenient for learning and using.

- **USB Data Transmission Interface**

This machine adopts universal USB data interface, which is convenient for inputting and outputting patterns and stored data via USB interface.

Attention:

The LCD screen and touch screen on the operation box are fragile items. Do not use sharp and hard objects for operation and click to ensure the normal function of the LCD screen and touch screen and prolong the service life.

When inputting or outputting the pattern via USB disk, please pay attention to the insertion direction of the USB disk. Do not squeeze hard when the insertion direction is wrong. When reading or writing a USB flash drive, do not dial the USB flash drive to avoid damaging the USB flash drive and data.

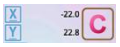
Chapter 3 Description of interface icons

3-1 Description of the main interface screen

The main interface screen of the system for embroidering confirmation is shown below:

3-2 Description of the Icons on the Screen

No.	Icon and status	Description
1	Control Cable Connection Status (i.e. the network cable between the main control box and the operation box)	：The control cable is connected properly; ：The control cable is not connected or the contact is abnormal.
2	Cyclic embroidery / Non-Repeat Embroidery Icon	：The current pattern is embroidered by cyclic embroidery mode. ：The current pattern is not embroidered by cyclic embroidery mode.
3	The Main Shaft at Right Position /The Main Shaft at Improper Position Icon	：The Main Shaft is at Right Position。 ：The Main Shaft is at Improper Position Icon, press the icon “100”or directly press the icon” ” to perform inching operations to stop in place.
4	Head Light Off/Head Light On	：Turn off the head light. ：Turn on the head light.

5	The Current System Time	This icon shows the current system time, press it to modify the system time.
6	Percentage of the embroidery progress	This icon shows the progress of the currently embroidered work piece.
7	Speed of Main Shaft in Actual Embroidery (i.e. Speed of Actual Embroidery)	Numbers above the dashboard indicates the actual main shaft sewing speed, the number below indicates that the highest main shaft sewing speed is 1000r/min. During the actual embroidery process, the sewing speed will be automatically switched according to the different needle length of the pattern.
8	The number represents machine head at No.3 needle position. If the machine head is not in position, it is displayed as " "。	When color-changing is incorrect, press icon to enter the manual color-changing interface, click the number icon at the bottom of the interface to make the machine head in position.
9	The 4 value with yellow shade indicates the current color number, and the lower value indicates the color order when the auto color-changing state.	"0012" indicates that the current embroidery is to the 12rd color. This value increases with the number of color changes. Press the icon of color changing order " " enter and select "Set All Color" item, which can set the color order of the pattern embroidery.
10		Display the current embroidered pattern information, including the pattern number, the pattern name, the current and total number of color-changing, the current and total number of needles, etc.
11	 Display the displacement of X, Y relative to the origin of the pattern in millimeters (mm)	After machine stops，press the icon " " to clear the X, Y displacement value，And re-evaluate with the current position as the origin.
12	Speed Setting	Click this icon to enter the speed setting interface, press " "or "" to change the value size of the highest main shaft sewing speed.
13	Normal embroidery Low-speed Idling High speed Idling	Press the icon "" to switch idling status.
14	: Pattern Memory Icon	Press this icon to enter the pattern memory menu.
15	: Manual Color Changing Icon	Press this icon to enter the manual color changing menu.
16	: Next Menu Icon	Press this icon to enter the next menu.
17	: Setting Icon	Press this icon to enter the setting page.

18	Automatic Color Changing and Automatic Start Automatic Color Changing and Manual Start Manual Color Changing and Manual Start	Press the icon“”to switch the color-changing mode.
19	Embroidery **Preparation** Status Embroidery **Confirmation** Status	Press the icon“ ” to switch embroidery status.
20	Temporary Embroidery Status	In the process of trace operation, machine automatically enters the temporary embroidery mode. When the embroidery operation is completed around the pattern and press the icon “ ”again, the system performs a normal embroidery confirmation operation.
21	: Inching Operation	Press this icon to enter the main shaft inching operation.
22	: Thread Trimming Operation	Press this icon to enter the thread trimming operation.
23	: Frame-Moving Related Operation	Press this icon to enter the operation related with frame-moving.
24	Manual Low Speed Frame-Moving Status Manual High Speed Frame-Moving Status	Press “” to switch the frame-moving status.
25	: Start the Embroidery	During the embroidery confirmation status, press this icon to start the embroidery.
26	: Stop the Embroidery	During the embroidery confirmation status, press this icon to stop the embroidery.
27	: Find Origin Operation	Press this icon and the system will move the frame automatically and set the zero point according to the limit switch. The premise of this operation is that the machine has been set frame protection when sudden power-off happens.
28	: Move Frame Along Pattern Outside	This function is to move the frame along the pattern range to check if the pattern exceeds the limits.
29	: Save Pattern Origin	This function saves the current frame position as the starting point of the current embroidery pattern.
30	: Recover Pattern Origin	If the start position of current pattern is saved before the current pattern embroidered, press this icon to locate

		back to the saved position, make it easier to embroidery the same pattern once again.
31	: Frame Setting Operation	Press this icon to enter the frame setting operation interface.
32	: Single Selection Mode	Single selection mode, only one pattern can be selected at a time.
33	: Multiple Selection Mode	Multiple selection mode, multiple patterns can be selected at one time.
34	: All Selected Mode	Select all mode, select all patterns in the current directory at one time.
35	: Pattern Sort Operation	Press to enter and the patterns in the current directory can be sorted in different ways.
36	: Display Patterns in Full Screen or View Pattern Information	Press this icon in the memory directory to display the currently selected memory pattern in full screen. Press this icon in the USB disk directory to display the basic information of the pattern in currently selected USB disk.
37	: USB Disk Related Operations	Press to enter USB disk related operations.
38	: Delete Directory	Delete USB drive directory
39	: New Directory	New USB drive directory
40	: Back to Previous Directory	Back to previous directory
41	: Input Patterns from USB Flash Drive to Memory	Press this icon to input the patterns in the USB flash drive to the memory.
42	: Output Patterns from Memory to USB Flash Drive	Press this icon to output the patterns in the memory to the USB flash drive.
43	: Letter Embroidery Operation	Press this icon to enter the letter embroidery operation interface.
44	: Choose the Embroidery Pattern	Select the embroidery pattern from memory then press this icon to confirm the embroidery pattern.

Chapter 4 Basic Operation Instruction

4-1 Basic Work Status and Processes

The software interface be provided with the following three operating states:

①Embroidery Preparation State➔

➔②Embroidery Confirmation State➔

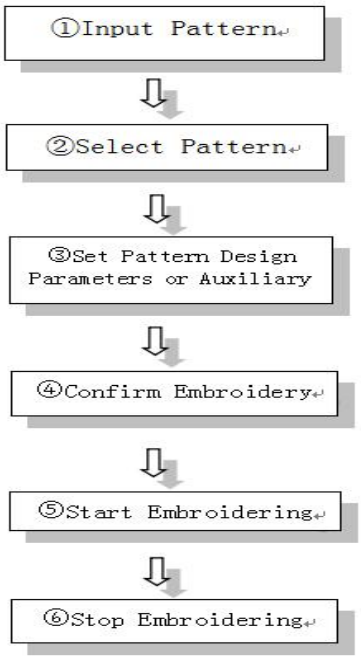
➔ ③Embroidery Running State➔

1. Embroidery Preparation State -- For embroidery work ， the process of preparing the input or selection of embroidery patterns and setting various embroidery control parameters and embro in advance. When the machine stops, “ ” icon will be displayed in the lower right corner of the main function screen. In this state, the “Start” or “Stop” operation is invalid.

2. Embroidery Confirmation State--Select the “embroidery design” in the computer, and set various embroidery control parameters and embroidery parameters, then press “ ” to confirm the embroidery before the machine enters the quasi-operation mode. When the embroidery is confirmed, the “ ” is displayed in the lower right corner of the main function screen. Press the “Start” icon in this state and the frame start embroidering with the current position as the origin.

3. Embroidery Running State--When the “ ” is displayed in the lower right corner of the main function screen, press the “Start” icon and the machine enters the running state, and the main function screen displays the dynamic embroidering status.

4. Basic Embroidery Operation Processes



4-2 How to Input and Choose a Pattern

4.2.1 Input the pattern via USB to Memory

All of the following 'Design' maybe refers to embroidery pattern

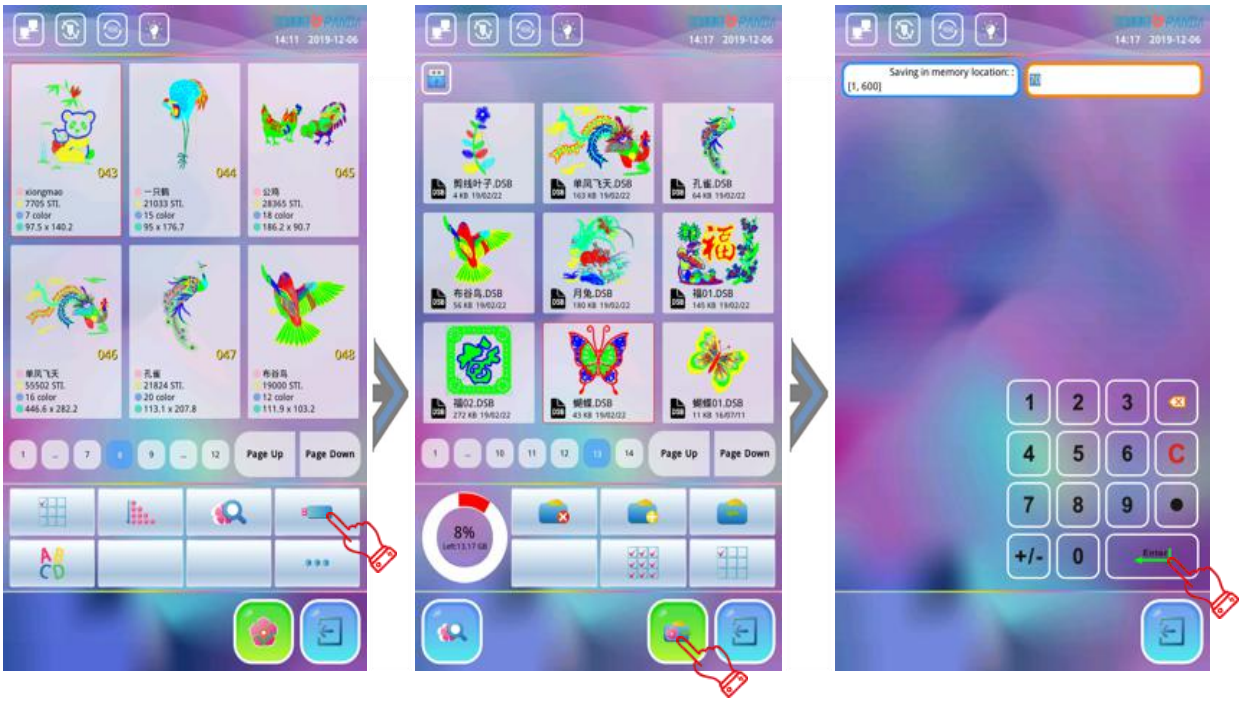
1.Insert USB flash drive with patterns into the right side of the operating box.

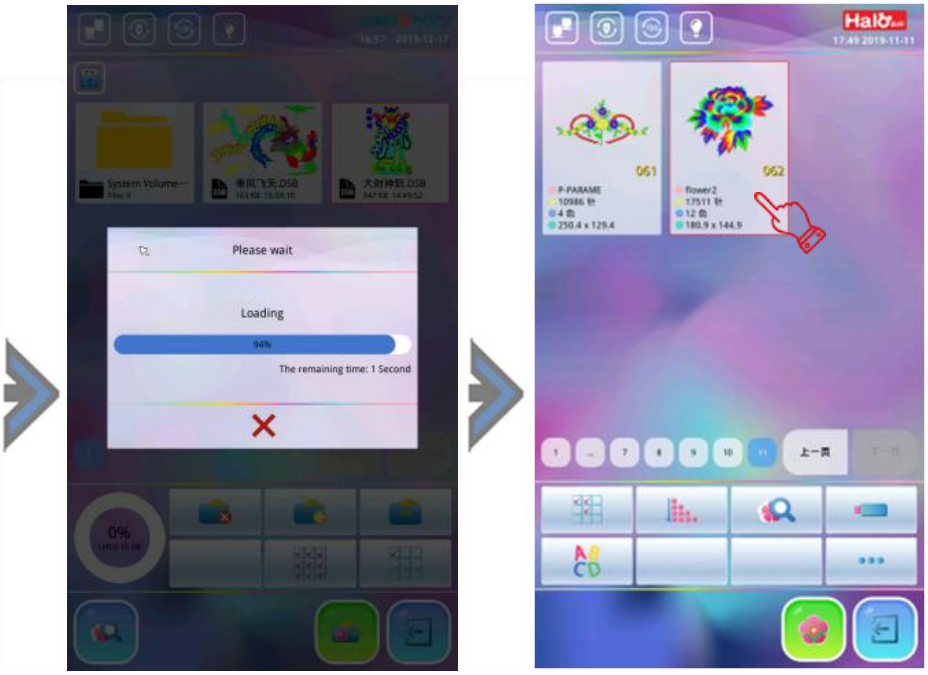
2.Press the "" to enter the "Design Memory Menu" interface, and press the "". The system will read the design information under the root directory of USB flash drive, select the pattern which needs to be inputted and then press "".（Note: If the design is stored in other directories of the USB flash drive, press on the stored directory icon to enter and select the design to be input, then press "". If you need to return to the previous directory, press "" to go back； If you need to return to the "Design Memory Menu" interface, press the "" icon in the lower right corner.）

3.After pressing the ""icon, the "Enter Pattern Number" interface pops up, and the system will automatically assign the smallest available pattern number. Press "Enter" directly if you don't modify it, and system enters the pattern number arranged by default. If you need to modify the pattern number, use the number icon to input the wanted number and press "Enter"to confirm.

Attention:

When inputting or outputting the pattern via USB disk, please pay attention to the insertion direction of the USB disk. Do not squeeze hard when the insertion direction is wrong. When reading or writing a USB flash drive, do not dial the USB flash drive to avoid damaging the USB flash drive and data.





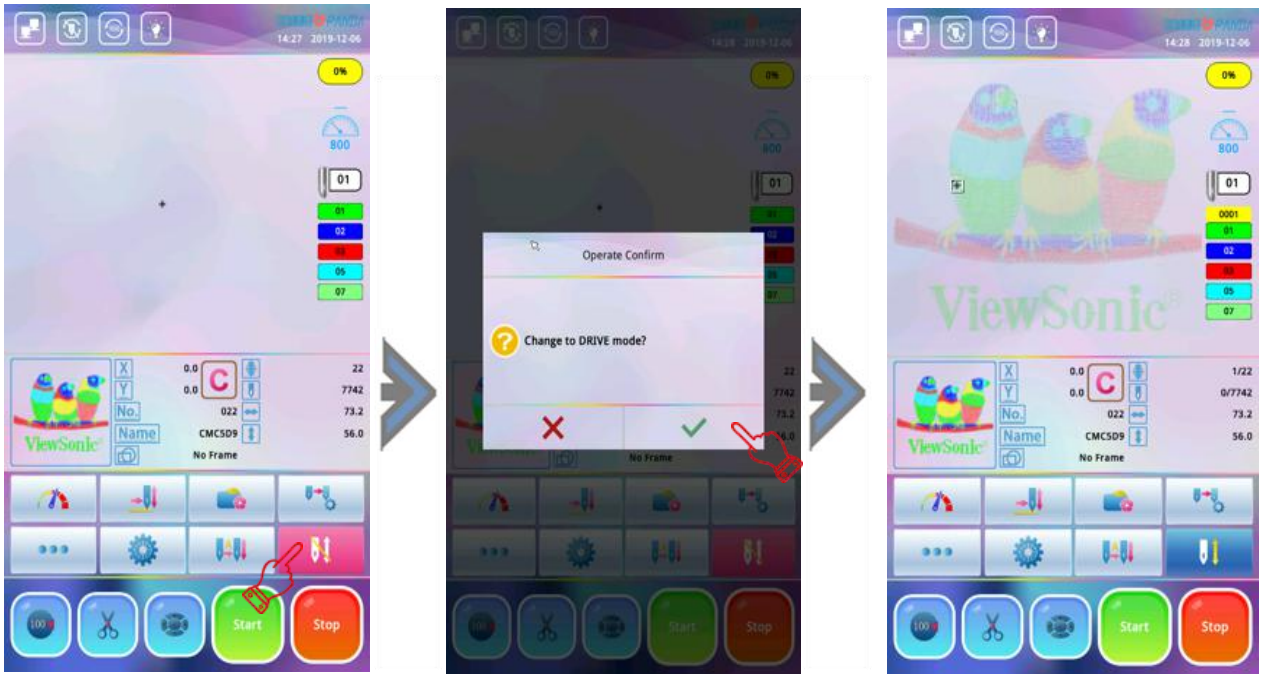
4. Wait for the design input to complete. The screen stays in the USB flash drive operation window. If you want to continue input patterns design, repeat the above steps.

4.2.2 Patterns Selection

1.Press the " " icon to enter the "Design Memory Menu" interface, press on the pattern design to be embroidered, and press the " " icon.

2.The window of "Design Parameters Setting" interface pops out, if you embroider according to the default parameters, press "✓"to confirm. (In general, embroider according to the default parameters.) To modify, press on the item directly. After all the parameters that need to be modified have been modified, press the"✓"icon and the system will save the current parameters automatically and return to the main function screen. At this moment,

the design information bar displays the selected design number, design name, color change number, total number of stitches, and displays the border range value of the design. Embroidery confirmation must be performed to start embroidering. (After the setting of "Frame Origin Setting" in the design, if it is the first time to embroider or change the origin position of the embroidery, the system will prompt "Save pattern origin to file").



4-3 Setting of Color-Changing Mode and Order

4.3.1 Setting of Color-Changing Mode

Press "" in the main function screen to enter the color-changing screen.

Mode 1： Manual Color-changing and Manual Start； Before the embroidery starts, click the "" icon to enter the manual color change window, click the number icon at the bottom of the screen to input the needle numbers and press "Start" icon to begin embroidery. When color-changing occurs, the machine stops automatically. Click "" to change a needle number in the color-changing order, the user can choose the new needle number at the bottom of the screen and then press "Start" icon to start embroidery again.

Mode 2： Automatic Color-changing and Manual Start; the color-changing order should be set first if the machine is on automatic color-changing mode, then press the "Start" icon to start embroidery. The machine changes colors before the embroidery work according to the needle numbers set in the color-changing order. If color-changing occurs during embroidery, the machine will automatically change to the specified needle number according to the set order, and stop to wait for operator to press the "Start" icon.

Mode 3： Automatic Color-changing and Automatic Start; when color-changing occurs during embroidery work, the machine will automatically shift to specified needle according to the set order and start embroidery work again. If the machine is set to change color automatically, the color-changing order should be set and operator should do the embroidery confirmation before the embroidery work begins. While the operator press the "Start" icon to start embroidery, no matter where the current needle bar stops, the needle will be changed according to the needle number set in the automatic color-changing order

(Note: except when the current needle number is the same as the needle number set by order), and then start the embroidery again.

4.3.2 Setting the Color-Changing Order

Automatic color-changing order is to provide preset list when the machine is set to automatic color-change mode. The maximum number of color changes is 3000 times. The steps are as follows:

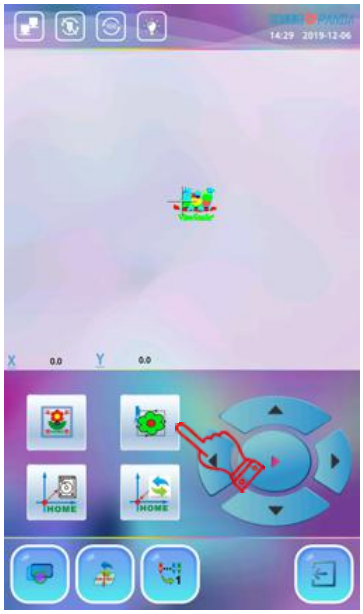
1.In the non-confirmation state, press "" to enter the "pattern color-changing setting" window. Use the number icon below to input the required color-changing needle number by order then press "✓" to confirm. For example, if you input "1, 2, 3" and press the ""icon, the color-changing order is repeated by: 1, 2, 3, 1, 2, 3, 1, 2, 3...as set, and press the "✓" icon, the system automatically saves the current color order.

2. If you want to modify the set color order, press the corresponding needle position icon which is to be modified or press the "Previous Page" and "Next Page" to find and press the needle position icon that need to be modified, then press the needle position icon below to modify. After editing work press "✓" icon to confirm and the system will save the currently modified color order.

4-4 Setting Pattern Start Point

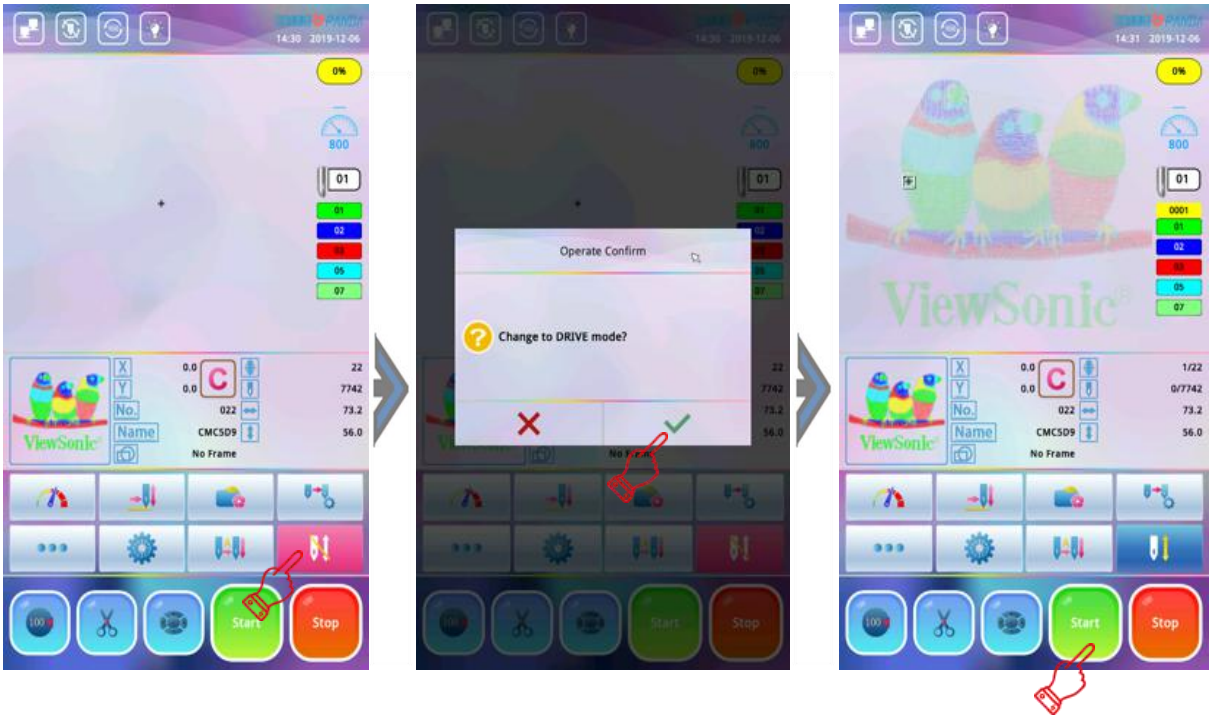
1. In the main function screen, press icon to enter the Frame-moving interface and press the arrow key "" icon to move the frame and select the appropriate starting origin point.

2. Press the " " icon to move the frame along pattern outside, this operation is to detect whether the periphery of the design exceeds the embroidery range of the embroidery frame. If the design range exceeds scope of the embroidery frame, the computer will automatically prompt the "Frame limit over". The position of the embroidery point must be reset to ensure that the design does not exceed the embroidery range of the frame.



4-5 Confirmation of Pattern

After the setting operation of pattern selection, embroidery parameter, color-changing order, frame origin, operator should press the “ ” icon at the embroidery preparation state, the screen prompts: “Change to DRIVE mode?” press “ ” to confirm the embroidery (the embroidery status icon is green “ ”） then press “Start” icon to run the machine.



Note: If the system does not save the origin of design, or the current position is not the saved origin of the design (the frame origin protection is set).the system will prompt: “Save pattern origin to file?”, press “ ” icon (Saved by default).

4-6 Thread Break ,Returning and Patching

4.6.1 Head control

In embroidery confirmation status, the patching switch of machine head should be pushed to the normal embroidering mode (the machine head is green) and press the “Start” icon, the machine will start normal embroidery. If the “Stop” icon is pressed during working, the machine will stop embroidery immediately.

4.6.2 Thread Break Detect

In case of thread break, machine stops and status light on that particular head turns out red. At this time, the machine won’t start embroidery again until operator wear the broken wire head and press the “Start” icon.

4.6.3 Returning

In the process of embroidering, due to thread break or no bobbin thread, it may cause leaky embroidery. The machine needs to return to the missing point to make it complete. Under these circumstances the operator should stop the machine first, lower the presser foot to see where the missing stitches are aligned, press “Stop” icon and the frame will roll back. Press once to go back a stitch, press and hold to return several stitches then Release the “stop” icon, the machine will roll back automatically and continuously, keep observing until the frame reach the leaky point then press the “Stop” icon to stop rolling back.

4.6.4 Patching

(Patching mode：Manual patching mode. Automatic patching mode)

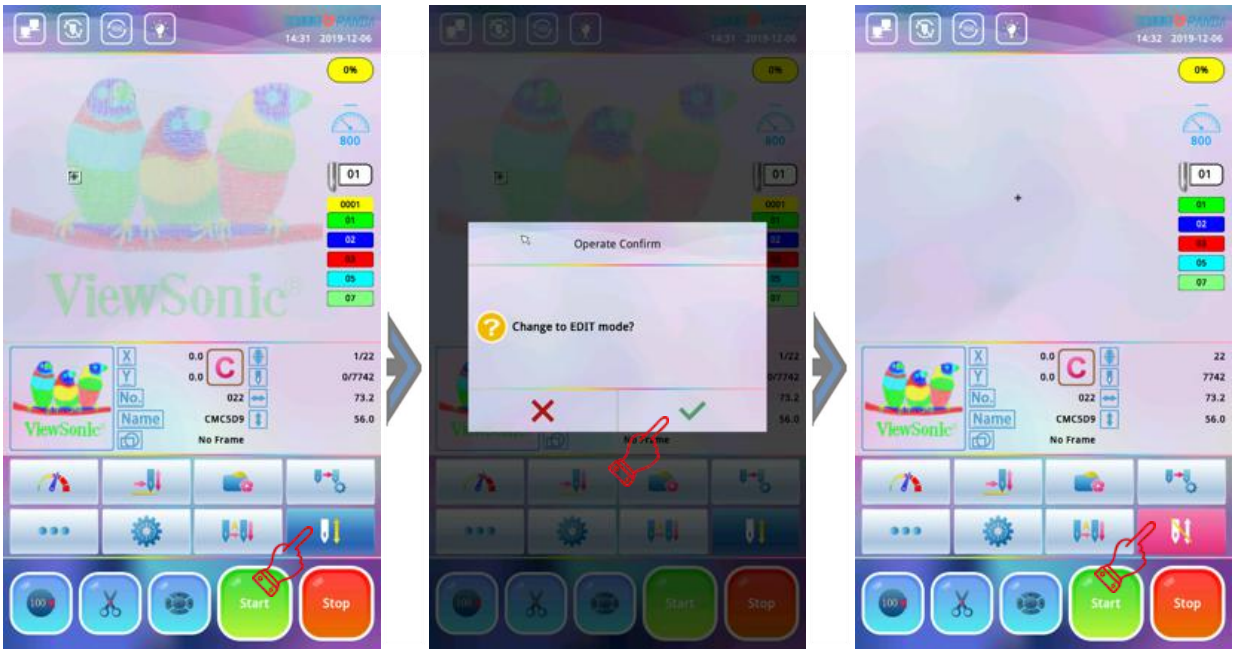
Manual Mending Mode： If observing the leakage embroidery, operator press “Stop” to stop the machine, and the machine head indicator light would turn green, at this time, the machine head will not lower the needle for embroidering operation unless the embroidery button on the motor head is manually pushed up and the machine head indicator light would turn red. After the frame rolling back in place, operator should press “Start” icon again, and the machine would start patching and continue embroidering when patching work finished.

Automatic Mending Mode： During the embroidery process, the machine head automatically detects the thread break, the machine head will turn red and start roll back according to the number of stitches set by the system (It can also be manually rolled back as needed). Press “start” icon after threading, the machine head will automatically start patching, light on the machine head will turn green from red, when patching work is finished, the machine will continue embroidery work.

4-7 Embroidery Release

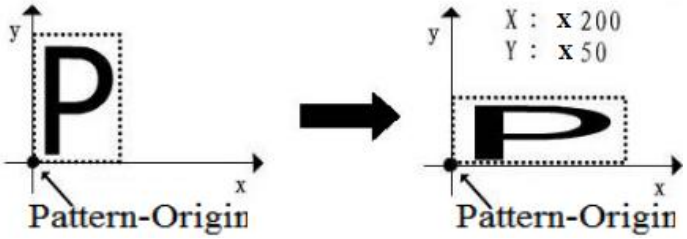
In the following cases, the embroidery needs to be released first: Need to replace other patterns when last pattern’s embroidery work is finished, need to modify the magnification, rotation angle and direction of the pattern, need to reset repetition embroidery, need to do some machine self-test operations or need to edit the patterns in memory etc.

Operation method: Press “ ” icon at the main function screen, the screen will pop up a dialog prompt: “Change to EDIT mode?”, press “ ” icon to confirm the embroidery release. (At this time the embroidery status icon turns red “ ” and the system is in the embroidery cancel state.)

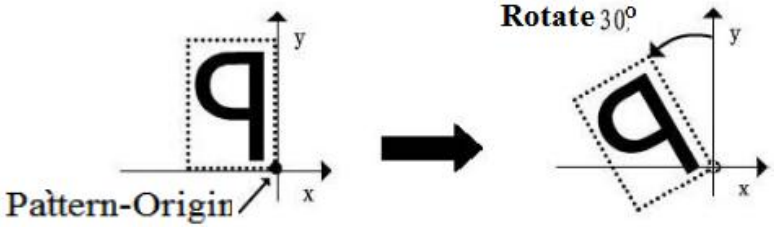


Chapter 5 Detailed Embroidery Parameters

(1) (2) **X Y Scales**: This parameter controls the zoom ratio of the pattern in X (horizontal) and Y (vertical) directions, and it can scale up/down the pattern by a percentage.



(3) **Rotation Angles**: The rotation angle refers to the counterclockwise angle of the embroidered pattern with respect to the selected pattern direction.



(4) **Direction**: This parameter sets the direction of the pattern design. Take the letter "P" as an example to illustrate the relationship between design and design direction:

Direction	F	Ł	ⅎ	⊓	ⅎ	⊓	Ł	Ш	F
Result	p	ɑ	d	ɔ	q	ɔ	b	ɑ	p

(5) **Rotate or Scale first, Priority**: When X and Y both has rotation while X is different from the Y on magnification. Different settings of the two priority modes will embroider different

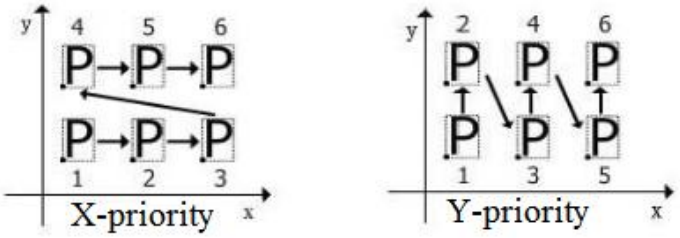
embroidery effects: if the rotation priority is set, the pattern will be rotated first and then scaled, and if the zoom priority is set, the pattern will be scaled and then rotated.

⑹⑺ **X/Y compensation：** The system automatically performs widening or reduction compensation on packing stitches in the X or Y direction, and the compensation value for each unit is 0.1mm. Negative values are reduced compensation and positive values are widened compensation. The compensation range is: -0.6mm ~

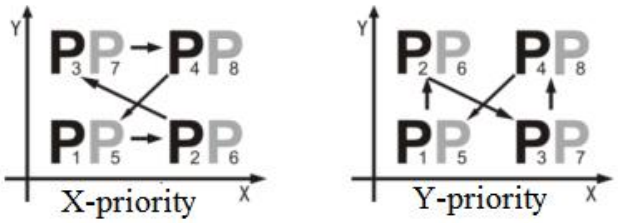
+ 0.6mm.

⑻ **Repeat Mode**

Normal Repetition： During repetition embroidery, after finishing a complete pattern, frame moves to next set position to embroider the same pattern again.



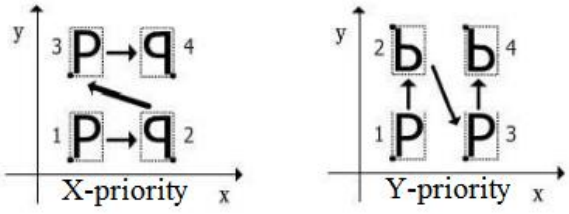
Part Repetition： During repetition embroidery, after embroidering a certain color of the pattern, frame moves to the corresponding position of the next repeating pattern and then embroider the same color of the pattern until the embroidery of this color finished, the system would then change to the next color and repeat until the stitches of each color are repeated.



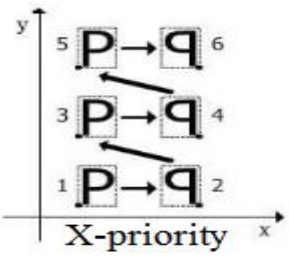
Mirror Repetition: The mirror repetition is performed only when the pattern is repeated an even number of times in one direction of X or Y. If the number of repetitions in both directions is even, the direction set in the repeated order takes precedence.

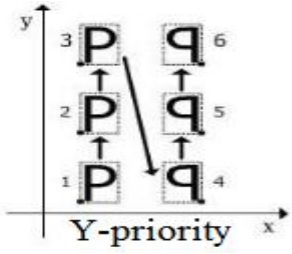
（There are four types in mirror repetition）

①When the number of repetitions X and Y are even times, the mirror repetition is performed according to the priority direction set in the repeated order;

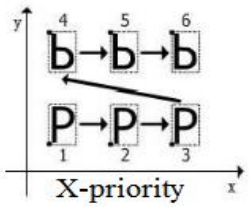


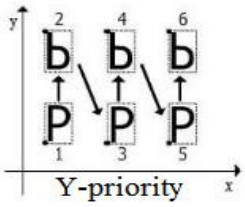
②When the number of repetitions X is an even number of times and Y is an odd number of times, mirror repetition is performed on the X direction;



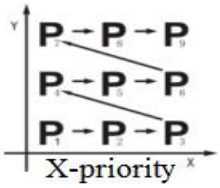


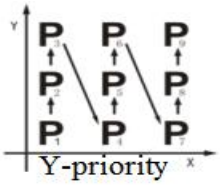
③When the number of repetitions X is an odd number of times and Y is an even number of times, a mirroring repetition is performed in the Y direction;





④When the number of repetitions X and Y are odd times, the mirror repetition is not performed, and normal repetition is performed.





Part+ Mirror Repetition： During repetition embroidery, after embroidering a certain color of the pattern, frame moves to the corresponding position of the next repeating pattern and then embroider the same color of the pattern until the embroidery of this color finished, the system would then change to the next color and repeat until the stitches of each color are repeated. The mirror repetition is performed only when the pattern is repeated by an even number of times in one direction of X or Y. If the number of repetitions in both directions is even, the direction set in the repeated order takes precedence. That is, the pattern is repeated according to the color blocks, and the sequence of repetition is performed according to the above four scenarios of mirror repetition.

(9) **Repeat Prior:**

X priority： Repetition embroidery is done line by line, and mirror repetition is preferred horizontally.

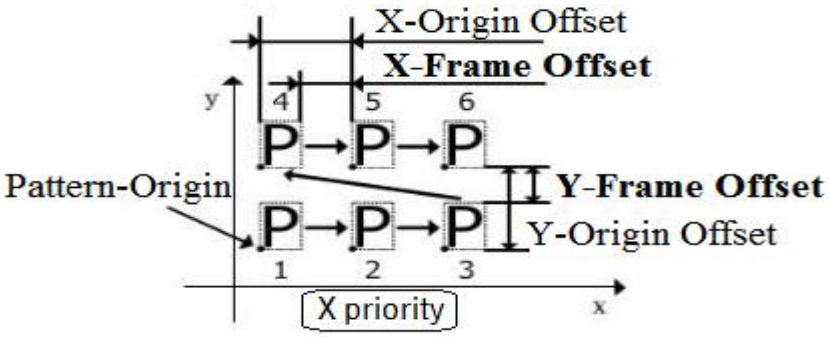
Y priority： Repetition embroidery is repeated column by column, and mirror repetition is preferred longitudinally.

The above charts show the meaning of X priority and Y priority.

(10) (11) **Numbers of X Y Repeats:** X Reps of this parameter sets the number of repetition embroidery patterns in rows, and Y Reps of it sets the number of repetition embroidery patterns in columns.

(12) **Repeat Offset Type：** There are two types:①**Origin Offset** and ②**Frame Offset**. Origin spacing means repetition based on the distance from the origin of the pattern; Border spacing means repetition based on the space between two borders that are adjacent in a pattern.

(13) (14) **X、Y Offset：** X represents repetition distance between two adjacent lateral designs; Y represents repetition distance between two adjacent longitudinal designs.


X-Origin Offset
X-Frame Offset
y
4
5
6
Pattern-Origin
Y-Frame Offset
Y-Origin Offset
1
2
3
X priority
x

Chapter 6 Jogging Operation of Main Shaft

⚠ Warning: This operation involves the rotation of the machine shaft. Pay attention to the safety!

6-1 Main Shaft Jogging Operation

The embroidery machine sometimes needs to make a slow motion or require automatic rotation to 100°.Main shaft up operation can be used to meet these requirements. The specific operations are as follows:

1.Press the "100" icon at main function screen, the system jumps out the inching operation menu, as shown below:

Figure of 6-2

2.Press "↻" icon at this time and the main shaft will move slowly one turn and stop at the 100° .

6-2 Main Shaft Down Operation

This function is used to change the cloth for large format batch embroidery. It slows down the main shaft, the main shaft down below the cloth surface and stops and the position of the embroidery cloth will be fixed. Once the cloth is fixed, staff can remove the embroidery bead, and then move the frame back to the appropriate position to re-fix the embroidery, so that they can continue to embroider unfinished patterns from the current position. The specific operations are as follows:

1.Press the "100" icon at the main function screen and the system will prompt out the Main Shaft Up operation menu, press the "↓" icon, at this time the main shaft moves slowly, and the needle is inserted downward into the embroidery. (Please pay attention to personnel safety) After the needle stops, the system returns to the main function screen;

2.When main shaft down, the embroidery bead can be released. At this time, the frame move key is open for use. Press the "✥" icon to move the frame, once the frame reaches proper position, the embroidery cloth can be re-tightened.

3.After the main shaft down, the system returns to the main function screen, and the needle is still in the down position. If you want to resume main shaft stop at 100°, use the "Main Shaft Up" function to retract the needle and return the main shaft to 100° (see: 16-1 Operation).

Chapter 7 Normal Embroidery and Idling

7-1 Relations of Normal Embroidery and Idling

Functions as idling, returning, etc. are intended for the convenience of darning. Low-speed idling, high-speed idling or positioning idling can be used as needed in embroidery. In the status of idling, the returning can be low-speed idling returning, high-speed idling returning or positioning idling returning.

Note: "Idling" refers to sewless frame movement.

7-2 Low Speed Idling

Operation: Press the " " icon when embroidery stops until the icon shifts to the Low Speed Idling icon " ". After setting low speed idling, operators can press "Start" icon to start embroidery, the main shaft won't rotate, the frame moves along the pattern stitch path, press the "Stop" icon if needed. When the "Stop" icon is pressed to return, the main shaft does not rotate, and the frame is retracted along the pattern stitching. If you need to stop the returning, press the "Stop" icon again.

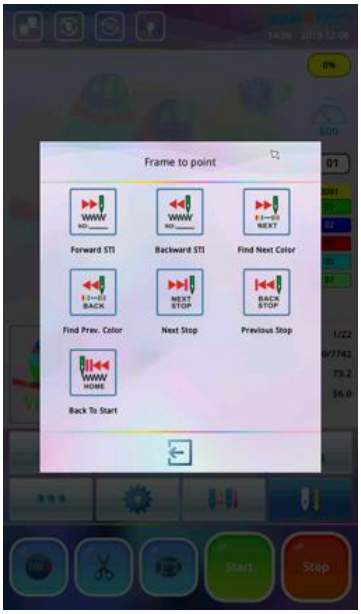
7-3 High Speed Idling

Operation: Press the " " icon when embroidery stops until the icon shifts to the High Speed Idling icon " ". At this time the system will prompt out the Position Idling menu, press the " " to quit and press "Start" icon directly, the main shaft won't rotate, the frame won't move, stitch-count increasing, after pressing the "Stop" icon, the frame moves directly to the actual position of the current stitch number, press the "Stop" icon to return and the main shaft won't rotate, the frame won't move, stitch-count decreasing, press the "Stop" icon to stop and the frame moves directly to the actual position of current stitch number.

7-4 Position Idling

The position idling can move the frame directly forwards (or backwards) to a designated position, or to a latest color-change position, or even to a latest stop-code position. Operation:

1.Press " " when the embroidery stops, until the icon shifts to " ". The main function screen also displays the following menu:



2.Press the icon of different kinds position idling and follow the on-screen prompts to enter the corresponding number of idle stitches to complete the operation. For example, press the "Backward STI" item, then the number of input box will appear (default 10 stitches). Users can use the number icon to change the number of back stitches. Press "Enter" icon to confirm when input completed, the system will go back to main function screen automatically, the frame roll back directly to the position of set stitches. If the position need to be mend，operator should press " " icon first until the normal embroidery icon " " appears, then the machine is in embroidery running status.

7-5 Release of Fast/Slow Moving

Operation: When the machine stops and the screen appears as the icon" " or " ", the icon will switch every time operator presses it, so press this icon until it shifts to the icon " ", then the machine is running in normal embroidery status.

Chapter 8 Color-Changing Operation

8-1 Manual Color-Changing

As the machine stops, if you need to change the color manually, press the " " icon to enter the manual color-changing window, select the desired color-changing pin number according to the number icon displayed at the bottom of the screen and press it.

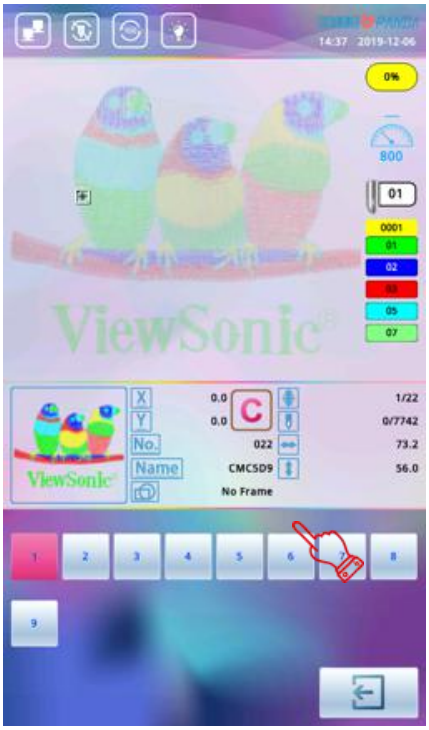


Figure of 8-4

8-2 Setting of Color-Changing Order: Refer to 4.3.1

8-3 Setting Automatic Color-Changing Order: Refer to 4.3.2

8-4 Store Manual Color-Changing Record

In the embroidery confirmation state, when you select the manual color change operation, you can choose whether to automatically record the needle position in the color change sequence unit. This operation has the following two functions: First, if the staff finds that the color-changing order of the automatic color-changing is set incorrectly during the embroidery process, then the color-changing order can be modified while manually changing the needle. Second, a new pattern is embroidered by manual color-changing once and saved, then the next time the machine can change colors as the saved order for embroidery directly and automatically. The specific operations are as following: 〔**Right upper figure** 〕

1.Press " " icon at the main function screen and press the " " icon to enter the "User Parameter" setting window.

2.Select the item of "Embroidery Assistant Parameter" and click "Save Manual Color Changes" to change it to "Yes".

Chapter 9 Frame-Moving Operation

9-1 Manual Frame-Moving

Press " " icon at the main function screen to enter the Manual Frame-Moving interface and press the arrow keys " " to move the frame along 4 different directions. This key " " in the middle of the four direction keys is used to control the speed of the frame-moving. It is divided into two modes, high speed and low speed. Each time you press the key, the mode is switched.

9-2 Return Frame to Last Stitch

During the embroidery process, the staff often need to stop embroidering and manually move frame for other operations such as applique. After these operations are completed, the staff needs to return the frame to its original position, that's when they need to use this Return Frame to Last Stitch operation.

The specific operations are as follows:

1.After machine stops, press the manual frame-moving button to move the frame out. (e.g. in case of applique)

2.After finishing the applique work, press the "" at the main function screen and press " " icon, and the "Return Frame To last Stitch" prompt will appear.

3. Press the " " icon and the frame returns to the stop point automatically and waits for embroidery to continue.（If you press the " " icon then the operation will be cancelled.）

9-3 Return to Origin

If the frame is moved manually during the process of embroidery or doesn't return to the origin when embroidery finishes, this operation can make the frame return to the origin of the pattern. The specific operations are as follows:

1.Press “ ” icon and a back-to-origin menu appears as shown in the figure:

2.Press “ ” icon and the frame return to origin automatically, if you want to quit this operation then just press “ ” icon.

9-4 Frame Origin Setting

The Frame Origin Setting can only be set when the pattern is released. Before memorizing the current frame position, user can first use the frame-moving button on the panel to move the frame to the desired origin position, and then use the “Frame Origin Setting “to remember the location of this point. The specific operations are as follows:

1.Press “ ” icon at the main function screen and press the professional parameter icon “ ” to choose “Frame Parameter”.

2. Turn to second page, press “Frame Origin Setting” item and the system prompts out the dialog box “Set Frame Origin Now?”.

3. If you do this, press the “✓” icon directly, the frame will move automatically in X and Y directions until X and Y are crossed, the system will remember the coordinates of the current position. Therefore, when using the “Frame Origin Setting”, the embroidery machine must install an effective limit switch, otherwise it will cause frame collision or memory errors. If you press the “✗” icon, you exit the operation.

4. When the system remembers the current position coordinates, the “Frame Origin Setting” will display “Set”. When meeting emergency stop because of malfunctions or something unusual such as power off unexpectedly or the frame has been shifted etc. The coordinate data of the frame protected before the power failure can be utilized to restore the position of the frame.

9-5 Frame Origin Resume

After power off, if the frame is moved, this operation can be used to restore the frame position when power resumes. The proper performance of this operation is based on Frame Origin has been set.

The specific operations are as follows:

1.Make sure the main shaft stops at 100 degrees.

2.Press “⚙” icon at the main function screen and press the professional parameter icon “👷” to choose “Frame Parameter”.

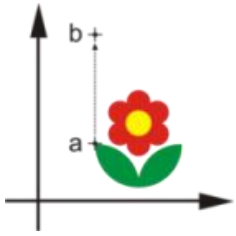
3.Turn to second page, press “Frame Origin Setting” item and the system prompts out the dialog box “Set Frame Origin Now?”.

4.If you do this, press the “✓” , and the frame will automatically move toward the X and Y directions until the X and Y directions touch the limit switch. The system restores the frame position according to the coordinate position stored before the power failure. Therefore, when using “Frame Origin Resume” function, the embroidery machine must be installed with a valid limit switch, otherwise it will cause frame damage or recovery error. If you press the “✗” the operation will be exited.

9-6 Offset Point Setting

Offset point must be set under embroidery confirmation status, it can be any point except the origin of design.

As shown below:



a： Start Point　　b： Offset Point

When the system performs “embroidery confirmation”, it will automatically clear the offset point of the last setting. Therefore, the setting method for offset point is:

1.Select the embroidery pattern and perform “embroidery confirmation” (see section 3-4);

2.Press “” icon at the main function screen and press the professional parameter icon “” to choose “Frame Parameter”.

3.Turn to second page and press the “Offset Point Setting” item, the system will prompt out a dialog window “Move to the offset point?”

4.Press “” icon at this time and use the 4 arrow keys “” to move the frame to the offset point of the pattern and press “” icon to confirm, at this time, the offset point is set.

5.After the offset point is set, the system returns to the previous interface, the “Offset Point Setting” displays “Set”, back to the main function screen this time and press the “Start” icon to start embroidery, the frame will move from the offset point to the pattern starting point automatically, and then the normal embroidery will start.

9-7 Save Origin Setting

Frame Origin Setting (Reference: 11-11) is the premise for Saving Origin Setting, this function saves the current frame position as the starting point of the current pattern.

The specific operations are as follows:

1.Press " ●●● " icon at the main function screen and press the " " icon to open the back-to-origin window.

2.Press the " " icon and the system will automatically save the current frame position as the starting point of the current pattern. And " " icon is to cancel this operation.

3.Note: If the starting point of a pattern does not change, you only need to do the Save Origin Setting once, then you can do the Restore Origin Setting for multiple times at any time.

9-8 Restore Origin Setting

If you have saved the start position of current pattern, you can use this function to locate that point. It is convenient to align the origin of the frame when embroidering the same pattern again.

The specific operation are as follows：

1.Press "●●●" icon at the main function screen and press the " "icon, the origin operation menu shows up.

2.Press " " icon and the system will move the frame automatically to the position that was previously memorized. And " " icon is to cancel this operation.

9-9 Moving Frame along the Pattern Border

After the selection of patterns and before the formal embroidery, this function is to move the frame along the pattern range to check whether the limits are exceeded.

The specific operations are as follows:

1.Press "●●●" icon at the main function screen and press " " icon to open the back-to-origin

window.

2.Press the “ ” icon and the system will automatically move the frame along the pattern range with the current position as the origin, and check whether the pattern exceeds the limits. If the current design origin causes the frame to exceed the limits, the system will automatically prompt, users should re-adjust the origin position and do this operation again. If the frame is in the range, users can press the “Start” icon to start embroidery. The “ ” icon is to cancel this operation.

9-10 Automatically Find the Origin

This function is used to automatically find a suitable starting point for the pattern to be embroidered, so that the pattern is located in the center of the embroidery frame range. The premise of this operation is that the machine has been set to “Frame Origin Setting” (Reference: 11-11).

The specific operations are as follows:

1.Press “ ” icon at the main function screen and press “ ”icon to open the back-to-origin window.

2.Press “ ” icon and the system will calculate the center of the embroidery frame range, and move the frame to locate the start point. Press “ ” icon to cancel this operation.

9-11 Open the Upper Thread Holding Device

This operation is to open the Upper Thread Holding Device at the machine head manually. The specific operations are as follows:

1.Press “ ” icon at the main function screen and press the “ ” to open the back-to-origin window.

2.Press the “ ” icon and the system will need to open the upper thread holding device at the machine head manually, press the “ ” icon again and the system will shut the upper thread holding device. Press it again to turn it on again, press it again to turn it off again, and so on. The “ ” icon is to cancel the operation.

Chapter 10 Speed Parameters

In the process of embroidery, the speed of embroidery is automatically adjusted by computer at any time according to the needle length of pattern. The low speed is used when embroidering the long needle, and the high speed is used when the short needle is embroidered. However, the maximum speed of machine is set by the user, that is, the main shaft "highest speed" is set. In the set range of the maximum speed of the machine, the speed-up and speed-down keys can be used to control the maximum speed of the current embroidery. The maximum speed of the machine is set in the range of 600-1000 rpm.

10-1 Max RPM/Min RPM

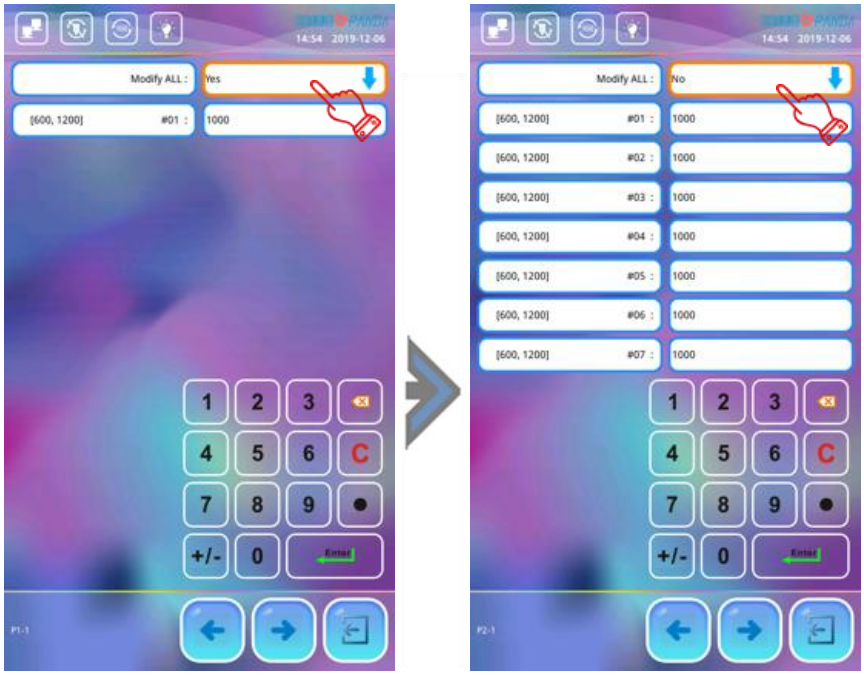
Function: This setting is used to determine the maximum upper limit speed and the minimum lower limit speed of the machine.

Operation:

1.Press the "" icon, press user parameter icon "" and press the "Speed Parameters" item.

2.Press "Max RPM" or "Min RPM" item according to user needs to set specific rotating speed.

Specific Operation: Press "Max RPM" item and press "Modify All": Set it to "Yes", the maximum speed of all needles can be set uniformly. Input the rotating speed using the number icon and press the "Enter" icon to confirm modification; press "Modify All": Set it to "No", the maximum speed of the needle number can be individually modified according to the needs of the user. Input the rotating speed using the number icon and press the "Enter" icon to confirm modification. Press "Min RPM" item you can only set the minimum speed of all the machine heads uniformly. After inputting the speed with the number icon, press "Enter" icon to confirm modification, press the "" icon to exit after setting.



Note: For the maximum speed setting, it is recommended to use the factory setting.

10-2 Set RPM

Function: Set the running speed during embroidery.

Operation:

1.Press the "" icon at the main function screen to enter the rotating speed setting interface, every time press "" icon the rotating speed would increase 10rpm， when pressed for a long time, the speed will rise rapidly, and it will not increase when it reaches the set maximum speed.

2.Every time press "" icon the rotating speed would decrease 10rpm, when pressed for a long time, the speed will decrease until it reaches the set minimum speed.

10-3 Main Shaft lock When Stopping

For some machines with lighter main shaft resistance, in order to make the main shaft stop stably on the parking space without being affected by inertia after high-speed stop, the main shaft lock operation needs to be performed. At this time, the parking lock main shaft function should be turned on.

The specific functions are as follows:

1.Press " " icon at the main function screen and press the " "professional parameter item and choose the Servo Main Shaft Drive Parameters on the next page.

2.Press the "Locking Motor At Stop" item to set, the system will switch between "Yes" or "No". This function is mainly for convenient manual maintenance of the main shaft.

10-4 Related Parameters of Main Shaft

No.	Name	Description
1	Max RPM	Set the highest speed of machine embroidery.
2	Min RPM	Set the minimum speed of machine embroidery.
3	Start-up RPM	The speed of main shaft when starting embroidery is 100 rpm by default, ranging from 80 to 150 rpm.
4	Jump RPM Limit	Set the rotation speed for jump stitch. 500 rpm by default, range from 300 to 900 rpm.
5	Float-HI Speed	The larger the value, the faster the high-speed idling. The default is 50, ranging from 1 to 64.
6	Float-LO Speed	The larger the value, the faster the low-speed idling. The default is 20, ranging from 1 to 64.
7	Locking Motor At Stop	For some machines with lighter main shaft resistance, in order to make the main shaft stop stably on the parking space without being affected by inertia after high-speed stop, the main shaft lock operation needs to be performed. At this time, the parking lock main shaft function should be turned on. When the main shaft is stuck due to a mechanical failure, the locked main shaft must be closed for maintenance purposes to facilitate manual rotation of the main shaft.
8	Startup Stitches	When starting the embroidery, start-up stitches of main shaft defaults to 1 stitch. According to different elastic embroidery threads and different lengths of trimming, Start-up stitches can be appropriately adjusted to avoid stitches are easy to drop the upper thread.
9	Rev.At Slow Motion	The speed of main shaft is running slowly when the "Start" icon is pressed and held, the default is 200 rpm, the range is 150~400.

Chapter 11 User Parameter

11-1 Sewing Parameter

No.	Parameter	Description	Defaults
1	Return to Start Point	Whether the frame will automatically return to origin after the pattern is finished.	Yes
2	Repetition Embroidery Enable	Set whether to do repetition embroidery.	No
4	TRACE SPEED	This parameter is used to set the frame moving speed when the pattern border operation is set. Parameter range: 1 to 16. The higher the value, the faster the frame is moved.	8
5	CC.Same Color Operation	When the same color-changing stitch appears in the order, the machine can be set to continue embroidery without cutting thread, or first cut thread and then continue embroidery.	Ignored
6	Save Manual Color Changes	"Yes"：Manual color-changing values are recorded in the color change order and saved. "No"：Manual color-changing values are not recorded in the color change order. If "Yes", manual color-changing is stored in the color-changing order. After embroidery, the setting will automatically change into "No".	No
7	Remove Empty Stitches	If "Yes", the machine will omit the empty stitches (needle moving without embroidering). If "No", the empty stitches will not be omitted. Empty needles generally refer to empty stain stitch (3, 0, 0) and empty jump stitch (4, 0, 0). The empty stain stitch behind the jump stitch is not omitted. The start-up stain stitches are all omitted.	Yes
8	Convert Stop Code TO Color	When the setting pattern is input into the memory, the stop code is changed to the color change code. This parameter defaults to "Yes". When the pattern is input, all stop codes (8, 0, 0) are converted into color change codes, including the stop code of the last stitch. It does not convert the end code to a color change code.	Yes
9	Long needle automatic jump stitch length	When the needle length is larger than the set value, the system moves the frame by jumping. Parameter range:0~12.8	12

10	Short needle automatic filter needle length	When encountering a needle length less than the set value, the system will automatically filter out the number of needles with these needle lengths. Parameter range: 0 ~ 2mm. Please use this function carefully. Improper setting will deform the embroidered pattern by filtering out part of the needle length.	0
11	Thick Stuff Adjust		

11-2 Head T.B. Detect Parameter

No.	Parameter	Description	Defaults
1	Upper Thread Check	Whether the system performs thread break detect on machine head.	Yes
2	T.B.Detect Surface Sensitivity	This parameter is used to adjust the sensitivity of the upper thread detection. The higher the value, the more sensitive the detection. Parameter range: 1 to 10.	1
3	T.B.Detect Bobbin Sensitivity	This parameter is used to adjust the sensitivity of the under thread detection. The higher the value, the more sensitive the detection. Parameter range: 1 to 10.	1
4	T.B.Detect STI.	The larger the parameter, the less sensitive the thread break detection is and the less likely it is to be misjudged. The smaller this parameter is, the more sensitive the thread break detection is and the more likely it is to be misjudged.	3 Stitches
5	T.B.Detect STI.	The larger the parameter, the less sensitive the thread break detection is and the less likely it is to be misjudged. The smaller this parameter is, the more sensitive the thread break detection is and the more likely it is to be misjudged.	3 Stitches
6	Patch Counts	This parameter is the number of needles for mending when the thread is broken. Range: 0 to 16 stitches. If the number of stitches for automatic thread retraction is set to 3 and the number of back stitches is set to 1, the needle is retracted by 3 stitches and 2 stitches are mended to the needle of thread break of machine head, then the needle of all machine heads are mended with 1 stitch.	1 Stitches
7	T.B.Detection Skip Count	When the user starts the embroidering, the first few stitches is set without thread break detection. This parameter is generally set to 3. If the needle is easy to misjudge, the machine needs to adjust the parameter appropriately.	3 Stitches

8	Head Solenoid Voltage	This parameter is used to set the number of stitches that are not broken after the jump is over. Because the upper thread is pulled longer after the machine jumps, the first few stitches will easily cause misjudgment of the thread. The system defaults to 3 stitches. If it is easy to cause misjudgment after jumping, you can increase the number of stitches that are not detected. Parameter range: 1 to 10.	3 Stitches

11-3 Frame Para.

No.	Parameter	Description	Defaults
1	Frame Speed(high)	Range: 1 to 30. The default value is 16. This parameter sets the speed coefficient when moving the frame at high speed. The larger the value is set, the faster the high-speed frame shifting speed	16
2	Frame Speed(low)	Range: 1 to 30. The default value is 12This parameter sets the speed coefficient when moving the frame at low speed. The larger the value is set, the faster the frame speed is.	12
3	Over frame Speed	This parameter indicates the speed of moving frame at which back to the original， the jump stitch or the color change frame during the embroidering process. Generally set by default. Excessively high setting values may cause some frame drive to move out of the frame.	16
4	Combine Jumping	In the case of a long pattern jump, whether to use a step-by-step frame to move the jump stitch. The default is “No”, which is to move the frame in one step.	No

11-4 Trim Parameters

No	Parameter	Description	Defaults
1	Trimming Type	The trimming thread has three ways: “Surface”, “Bobbin” and “None”. The user can also independently set the way of trimming the thread for different needle positions.	Surface

2	Trim on jumps	The parameter range is 1-12.When the user has selected “Always Jump”, the machine performs the jump stitch without trimming. It is also possible to set more than one stitch jumper according to the requirements of the embroidery, and then trim the thread to reduce the number of jumper on the cloth surface. The system can also set different parameters for different needle positions.	Always Jump
3	Trimming Length	Parameter range 1-8, the higher the value, the longer the thread length.	3
4	Lock Stitches Of Trim	The parameter range is 0-2, which is the number of lock stitches before the thread is trimmed. The default is 1 stitch to prevent the thread from falling off. If it is set to “0”, the stitch is not locked before the thread is trimmed.	1
5	Whipstitch Length (Long Tail)	The parameter range is 0.3-2.0mm.When the trimming stitch is set to “Yes”, the length of the lock stitch is set, and the default is 0.7mm.	0.7
6	Lock Stitches After Trim	The parameter range is 0-4, which is the number of lock stitches when embroidery starts after thread trimming. The default is 1 stitch to prevent the thread from falling off. If it is set to “0” and the “Start” icon is pressed, embroidery is starting again after thread trimming. The machine does not lock the stitch.	1
7	Lock Length After Trim	The parameter range is 0.3-2.0mm. When the embroidery is starting again after thread trimming, the default stitch length is 0.7mm to prevent the thread from falling off. The higher the value, the longer the lock stitch.	0.7

Chapter 12 Pattern Memory Management

All of the following 'Design' refers to embroidery pattern

12-1 Design Selection

This function is used to select patterns in the system memory for embroidery. After entering the interface, you can preview the pattern image for convenient searching and selection. For details, please refer to Section 4-2-2.

12-2 View Design in Memory

This function can display design in the system memory, and the display style is divided into 2 kinds: design image display and full screen design display.

The specific operations are as follows:

1.Press " " icon at the main function screen to enter the Design Memory Menu window.

2.The upper part of the screen displays a thumbnail of the memory design, as well as basic information such as the serial number, name, and number of stitches. If the memory design directory is more than one page, you can press "Page Up" and "Page Down" to view it.

3.Press the design you want to view and press " " icon, then enter the "full screen display" interface of the current design. The customer can display the design in different ways according to the icons at the bottom of the interface. It is convenient for the customer to carefully check the design, local details, color-changing and understand the specific stitch.

4.Press " " icon to exit the display.

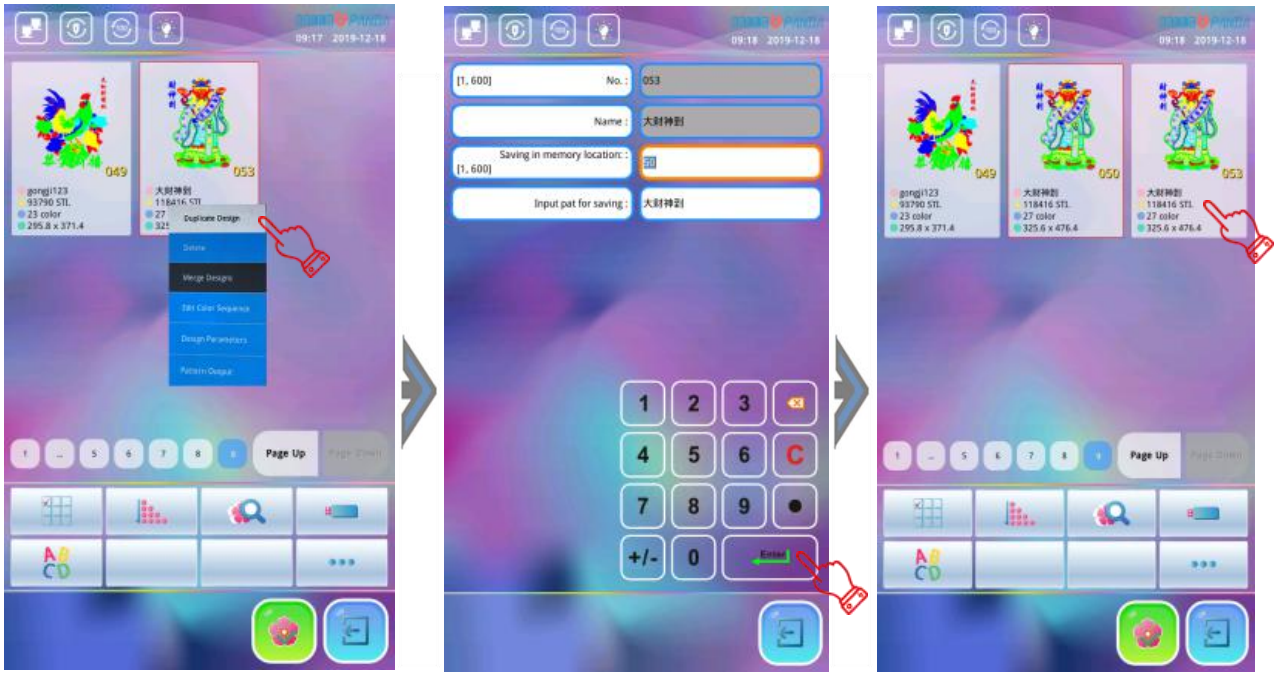
12-3 Duplicate Design

The specific operations are as follows:

1.Enter the "Design Memory Menu" screen, double-click the thumbnail of the design you want to copy, a drop-down menu will pop up, press "Duplicate design" icon and the system will proceed to the next operation. (If you need to cancel operation just press " " icon to go back

to Design Memory Menu)

2.Then, system would automatically provide the minimum available design number and the same design name. If you do not need to modify it, you can press the "Enter" and the system will save the newly duplicate design with this design number and the same design name. To enter another new design number (in digital format only) or a new design name (in English or numeric format), press the digital number icon to enter. After the input is completed, press the "Enter" to confirm the modification, and the system will save the newly duplicate design with the new design number and the new design name.



3.If the new design number used is the same as the design number already in the memory, the system will ask "Overwrite the design?" If you do, press the "✓". If you do not, press the "✗" to return to the "Saving in memory location" interface. Enter a non-repeating design number to copy.

4.After copying, the system will automatically jump to the design number that has just been copied, and display the design image. To exit the "Duplicate Design" interface, press the "⏎" to exit.

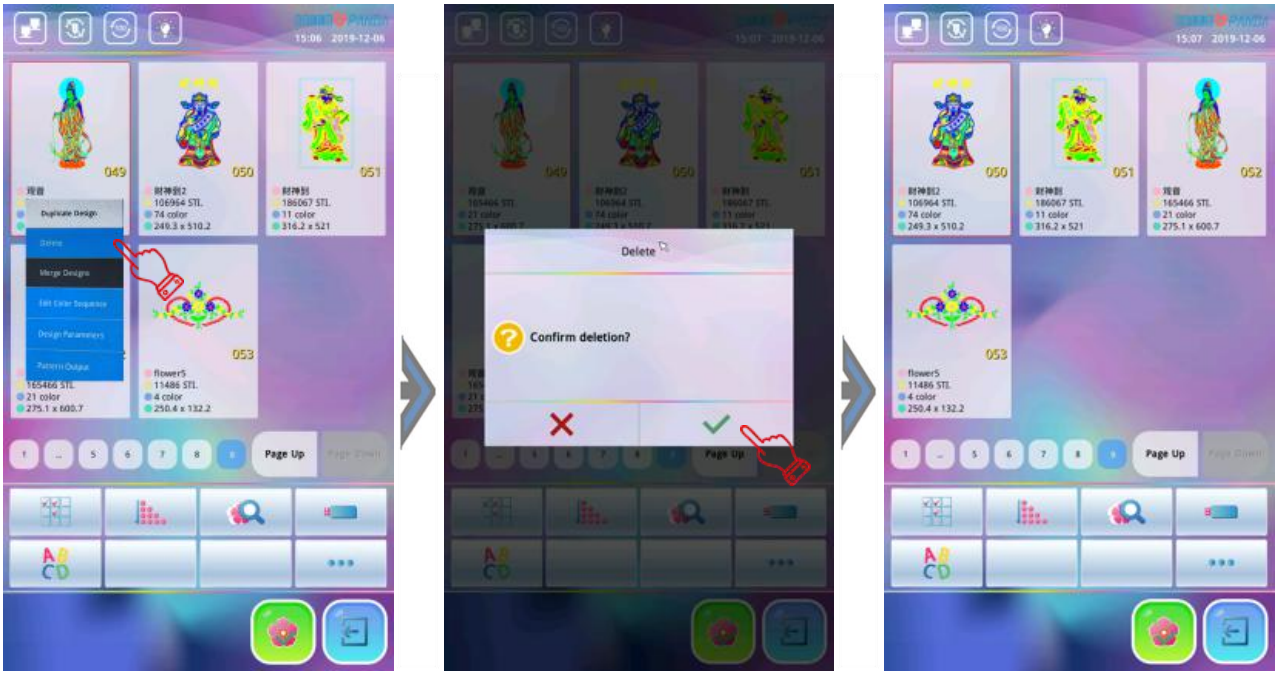
12-4 Design Editor (To be added)

12-5 Delete Design

This is to delete one designs in the machine memory. The specific operations are as follows:

1.Press "🗂" to enter the "Design Memory Menu" interface, double-click the thumbnail of the design you want to delete. A drop-down menu will pop up. Press the " Delete" icon and the system will pop up the "Confirm deletion?" window.

2.Press the "✓" to delete the current design. To cancel, press the "✗" to cancel the design deletion operation and return to the Design Memory Menu" interface.



12-6 Split Design

By operating this function, one design can be split into two designs at a designated point and keep the original design of memory.

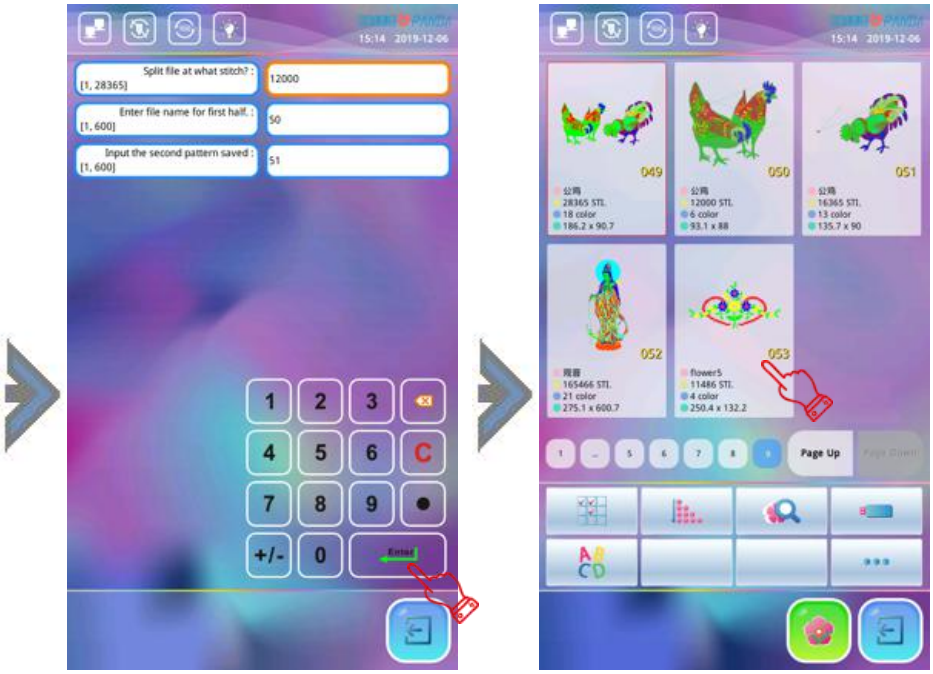
The specific operations are as follows:

1.Press "" icon to enter the "Design Memory Menu" interface and press "●●●"icon, press "Split Design" item, the system will pop up the "Split Design" window.

2.Use the numeric icons to enter stitch number of split number, and the design name of the first design to be divided and the number of the second design, and press the "Enter" to confirm. (Note: The system will automatically provide the minimum available design number and the same

design name for the two designs. If you don't modify it, just press the "Enter" to confirm.)

3.After pressing the "Enter" the system divides the design into two new designs and save them. To exit the design divide operation, press the "" to exit.



12-7 Merge Designs

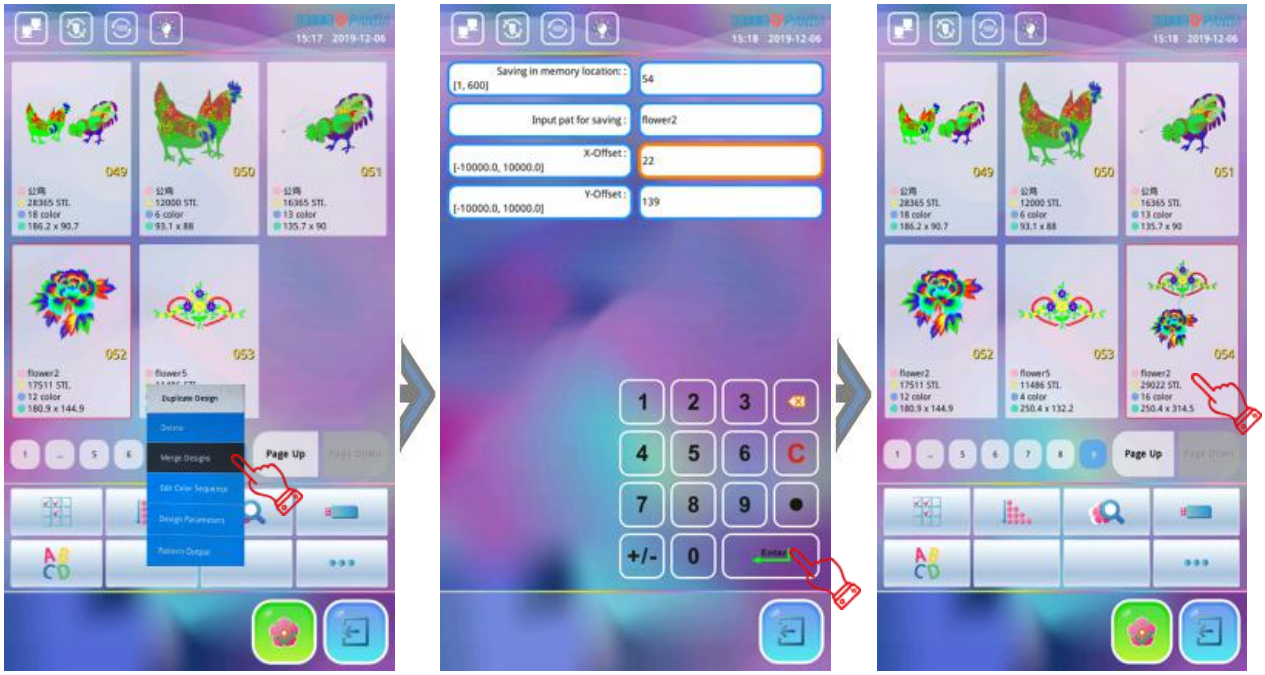
This function is to combine two designs into a new one. The interval between the two designs is the distance from the end point of the first design to the start point of the second design. (Unit: mm) The specific operations are as follows:

1.Pres"" to enter the Design Memory Menu screen, press the"" icon and select the two designs and press the Merge Design Menu to enter the Merge Designs interface.

2.Then the system pops up the dialog box of "Please enter the design number", "Please enter the name of the design to be saved", "Relative distance to the first design" and "Relative distance to the first design". The user can modify the above parameters according to actual needs, use the numeric keys to enter the "pattern number", "design name", and "relative to the first design X spacing" and "relative to the first design Y spacing" (unit: mm mm), or directly press "Enter" icon and the system will save the newly stitched design according to the smallest available design number, the same design name, and the default spacing value (0 spacing).

3.After the modification is confirmed, press the "Enter" icon, the system will save and run, then it prompts "Please wait".

4.After the Merge Designs is saved, the system automatically returns to the "Design Memory Menu" interface. Press the "" to exit the operation or to cancel the design combining in the middle of the operation.



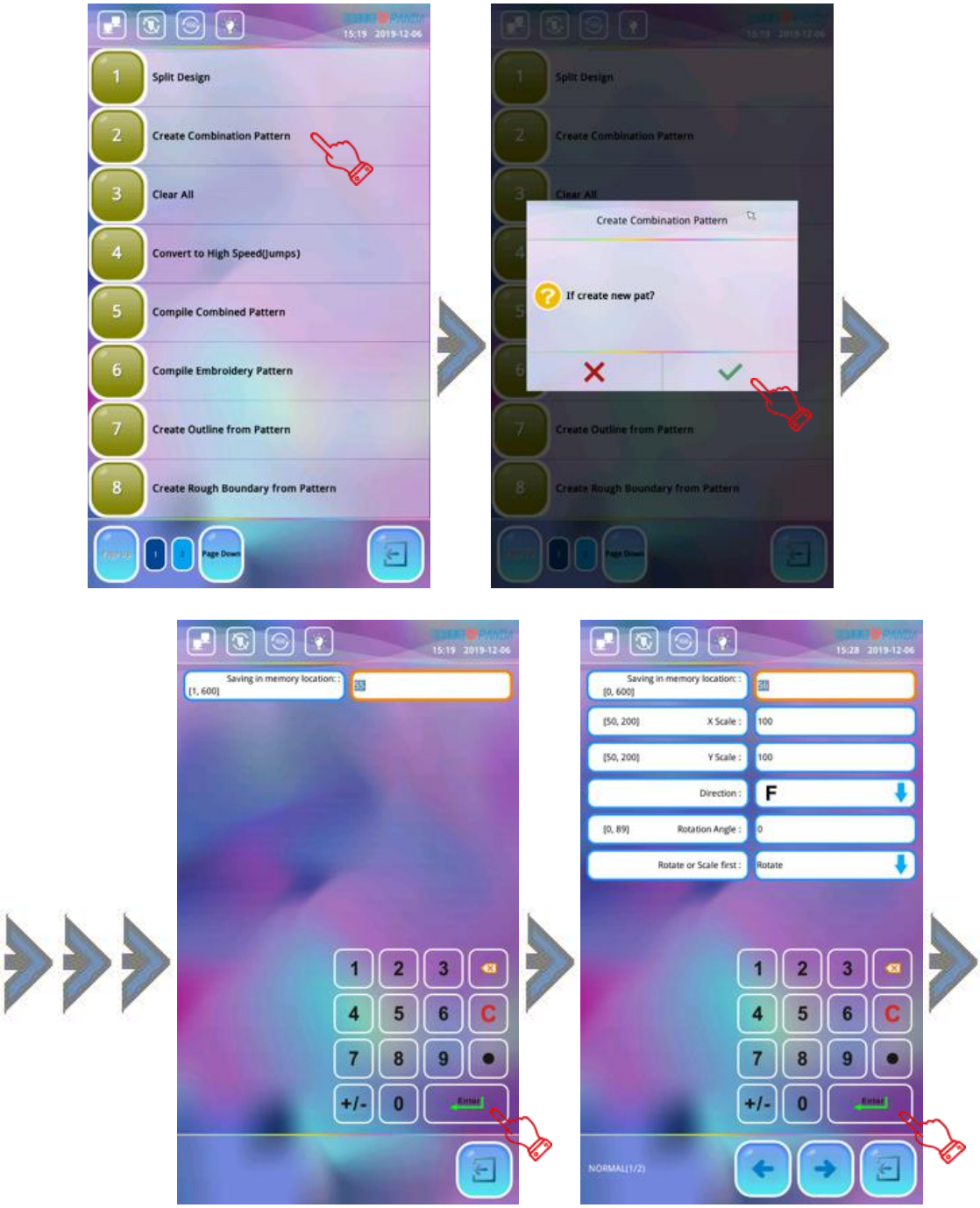
12-8 Create Combination Pattern

The combination pattern means a pattern group combined from a certain (less than 99) memory patterns after setting their parameters. The combination pattern is set as automatic continuous embroidery. In the Design Memory Menu, the pattern named “P-BATCH” is a combination pattern. System returns to the pattern memory menu screen after creating or editing the combination pattern. Then press the design and “Pattern Set To EMB”, system will automatically return to the main function screen. Then after embroidery confirmation, press “Start” icon for embroidery. The user can also edit the combination pattern by the “Compile Combined Pattern” function, so as to preview and embroider the design.

The specific operations are as follows:

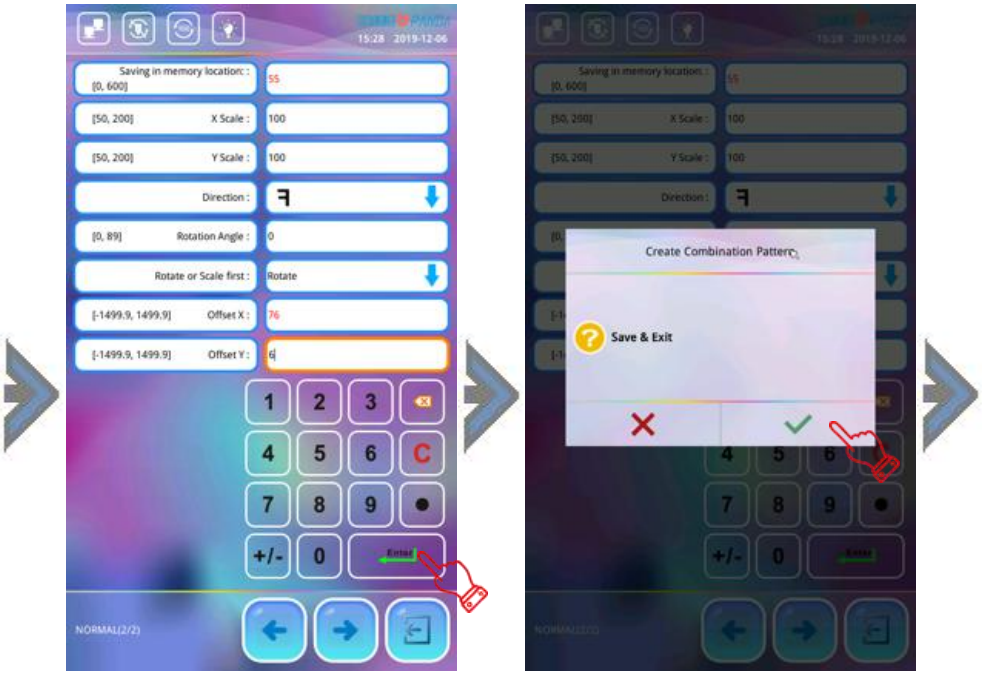
1. Press “ ” to enter the “Design Memory Menu” interface, then press “ ” icon and select “Create Combination Pattern “item. The system will pop up the “If create new pat?” window, select “ ”, the system will automatically provide a minimum available pattern number to save the combination pattern, if you do not need to modify this design number, you can press “Enter” ,the system will save pattern number and name it “P-BATCH”.

2.Then the system prompts “Please enter the pattern number”, the user should enter the first pattern number to be combined, and set the pattern's magnification, rotation direction, rotation angle, priority mode and other parameters. After setting, press “Next” Icon to edit the second combination pattern.



3.Enter the second combined pattern editing interface. The user first enters the second pattern number to be combined, and sets the pattern's magnification, rotation direction, rotation angle, priority mode and other parameters. By analogy, the user can select multiple pattern combinations. If the pattern being modified is not the first pattern in the combination pattern, the distance (unit: mm) of the pattern relative to the first pattern should be set according to actual needs.

4.After all the embroidery parameters of the combination pattern have been modified, press "" or "Enter" to exit the modification. At this time, the system will pop up the "Save & Exit" dialog box. If you save, press "✓" to Save & Exit. If you give up, press "✗" to exit the combination pattern editing.



5.After the combination pattern editing is saved, you can enter the "Design Memory Menu" interface to see that the pattern has been saved in the memory, but this pattern cannot be pre-displayed. You must select this pattern and confirm embroidery then it will be displayed by the system.

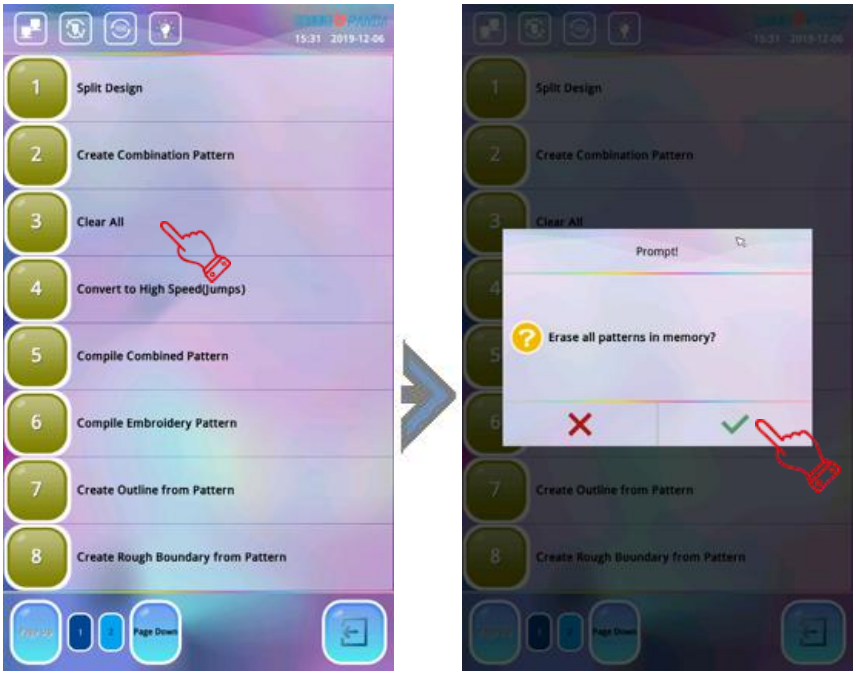
12-9 Clear All

This function is to clear all patterns in the memory. Be cautious to use it.

The specific operations are as follows:

1.Press "" in the main function screen to enter the Design Memory Menu and press "●●●" icon then press "Clear All" menu, the system pops up "Erase all patterns in memory?" window.

2.If you confirm to clear all memory patterns, press "✓" icon and all patterns in memory been cleared. Press "✗" icon to cancel the operation and return.



12-10 Read Designs from USB

This operation is to store the design from USB to system memory.

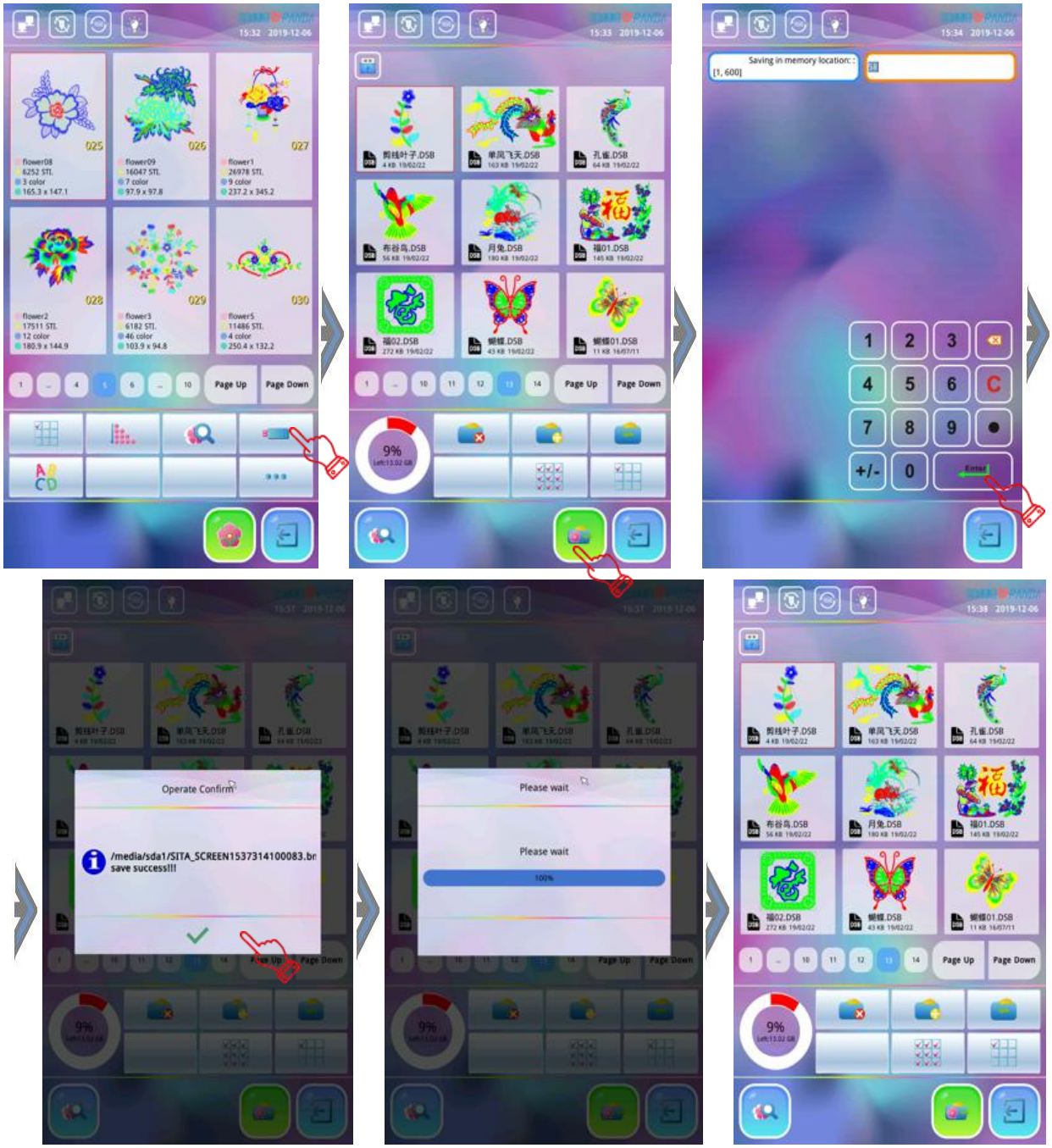
The specific operations are as follows:

1.Insert the USB flash drive, press the "" to enter the "Design Memory Menu" and press the "" to enter the "Design Input" Window. The design in the USB flash drive will be previewed in the small window on the right. If the design is stored in the root directory of the USB flash drive and the serial number is on the front then the user just directly press to choose the pattern that need to be input, If the design number is later, use the "Page Up /Page Down" icons to find them.

2.After selection of the patterns that needed to be input, press "" icon, the system pops up the dialog box of "Please enter the pattern number", and automatically provides a minimum available pattern number. If you need to modify, press the corresponding number icon to enter the new pattern number, if there is no need for modification just press the "Enter" icon to confirm, the system will pop up the "Apply stain compensation now?" dialog box. If you need to modify it, select "", the system will jump out of the interface for selecting the compensation value, and press the number icon to input the X direction or Y. The compensation value of the direction (unit: 0.1mm), if no compensation is needed, press the "Enter", and the system will input the pattern into the memory.

3.If you need to continue input, repeat steps 1 and 2 above; If not, press "" to exit.

4.If the pattern is stored in another directory of the USB flash drive, select the directory to enter, and then press to select the pattern to be imported.



12-11 Save Design to USB

This operation is to output the patterns in the embroidery system memory to the USB flash drive. The premise of this operation is that the system does not set the password for “Lock Saving Designs to USB” or know the password for the “design prohibit output”.

The specific operations are as follows:

1.Insert the USB flash drive, press the “” to enter the “Design Memory Menu”.

2.The system lists the patterns in the memory and displays them. The user can find the patterns that need to be output through the page-turning icon “Page Up /Page Down”. After double-clicking the pattern, the system pops up the drop-down menu and clicks the “pattern output” menu. The interface display the directory of the USB flash drive, select the directory you want to save (if you choose to store it in the root directory, you must click on any pattern file in the root directory).

3.Press the " " , the system will pop up the "Input filename" dialog box, and display the corresponding letter and number keys of the keyboard on the screen. If you need to modify it, enter a new design file name on the keyboard, then press "Enter", system will save the design to the USB flash drive with this file name. If no modification is required, press "Enter" the system stores the design to the USB flash drive using the same file name in the design memory. If you need to quit, press the " " to exit.

Chapter 13 Operation of Special Designs

13-1 Convert to High Speed Design

With this function, those long stitch length forms greater than 5mm (system default) can be cut to short ones, which will keep the embroidery speed at a high level.

The specific operations are as follows:

Press the "" to enter the "Design Memory Menu", use the "Page Up/Page Down" icon to search for the high-speed pattern to be generated. Press on the specific pattern and press the "" icon, and press the "Convert to High Speed" item, the system pops up the "Please enter the pattern number" dialog box, and automatically provides the smallest available pattern number and the pattern name "P-HSPEED", if no modification is required, press the "Enter" icon directly and the system will save this high-speed pattern with this pattern number and system default "P-HSPEED" pattern name.

⚠ (Note: The customer should perform high-speed pattern generation operations according to the actual craftwork requirements of the embroidery. Please operate carefully with designs that do not meet the craftwork requirements. Performing this operation at will may affect the embroidery process and cause losses.)

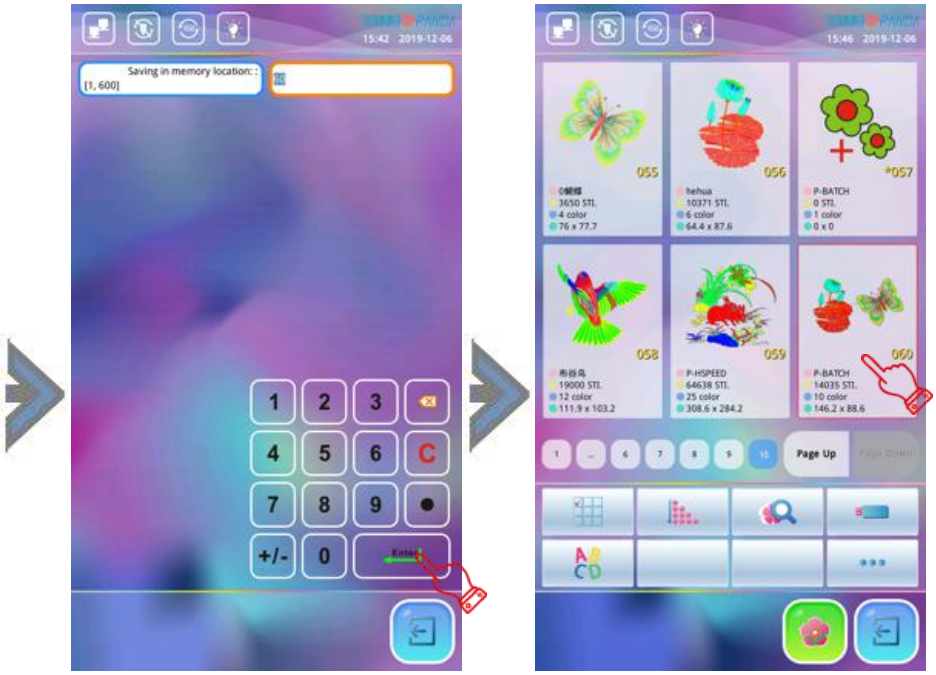
13-2 Compile Combined Pattern

As can be seen from the introduction of "Combined Pattern Editing" in Section 11-8 in the previous section, the "combined pattern" generated by this system is just a set of multi-pattern and multi-parameter combination information files, which can only be embroidered through the analysis of this system. If you want to transfer embroidery on other brands of machines, you must generate a readable standard basic pattern. This function is to provide the operation of generating basic patterns from combined patterns. The specific operations are as follows:

1.Press the "" to enter the "Design Memory Menu", use the "Page Up/Page Down" icon to find the combination pattern to be generated and click to select it. (Note: The combination pattern cannot be displayed in advance. To select a combination pattern, you must remember the pattern number of the combination pattern embroidered previously) Then press "" icon to choose the "Compile Combined Pattern" menu, and the system pops out the "Please enter the pattern number" dialog box and automatically provides the smallest available pattern number and the pattern name named "P-NORMAL". If no modification is required, press "Enter" icon directly, the system will save this combination basic pattern with this pattern number and the system default "P-NORMAL" pattern name. After saving, the system will automatically jump to the "Memory Design Management" interface.

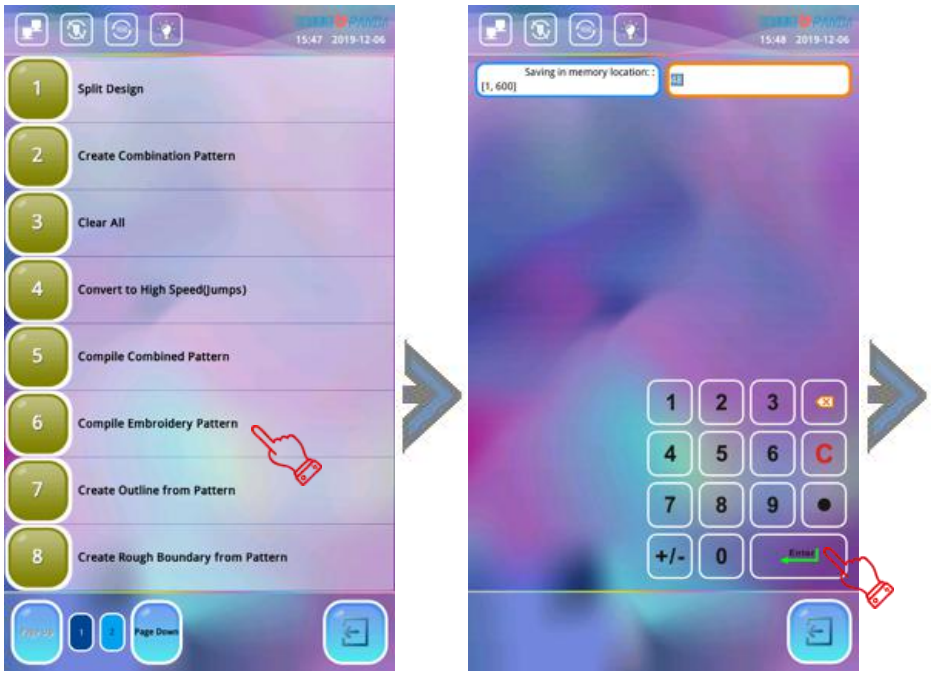
2.If you want to continue to generate the basic pattern, re-select a new combination pattern. If you want to quit, press "" to exit.

3.After the basic pattern is generated from the combination pattern, we can enter the "Memory Design Management" screen to see the basic pattern in the memory.



13-3 Compile Embroidery Pattern

This operation is to generate a pattern with related embroidery parameters stored in the system memory into a basic pattern with changes such as enlargement, rotation, and repetition. Therefore, this operation is only generated when the amount of changes such as enlargement, rotation, and repetition is set. The pattern is different from the original pattern, so it has practical significance. The specific operations are as follows:



1.Press "" to enter "Design Memory Menu", use the "Page Up/Page Down" icon to find the pattern you want to generate and press to select it. After pressing the "●●●" icon, select the "Compile Embroidery Pattern" menu and the system pops out the "Please enter the pattern number" dialog box and automatically provides the smallest available pattern number and the

pattern name named “P-PARAME”. If no modification is required, press “Enter” directly to confirm and the system pops up the “embroidery parameter setting” interface. The user needs to check the previously set embroidery parameters. If no modification is required, press “✓” icon, the system saves the current parameters by default. If you need to modify, click the relevant parameters to modify, press “✓” icon to confirm after modification.

2.The system will save the basic design generated by the embroidery parameters with this design number and the system default “P-PARAME” design name. If you continue to generate the basic design, repeat the above operation, if you want to exit, press the “⏎” icon.

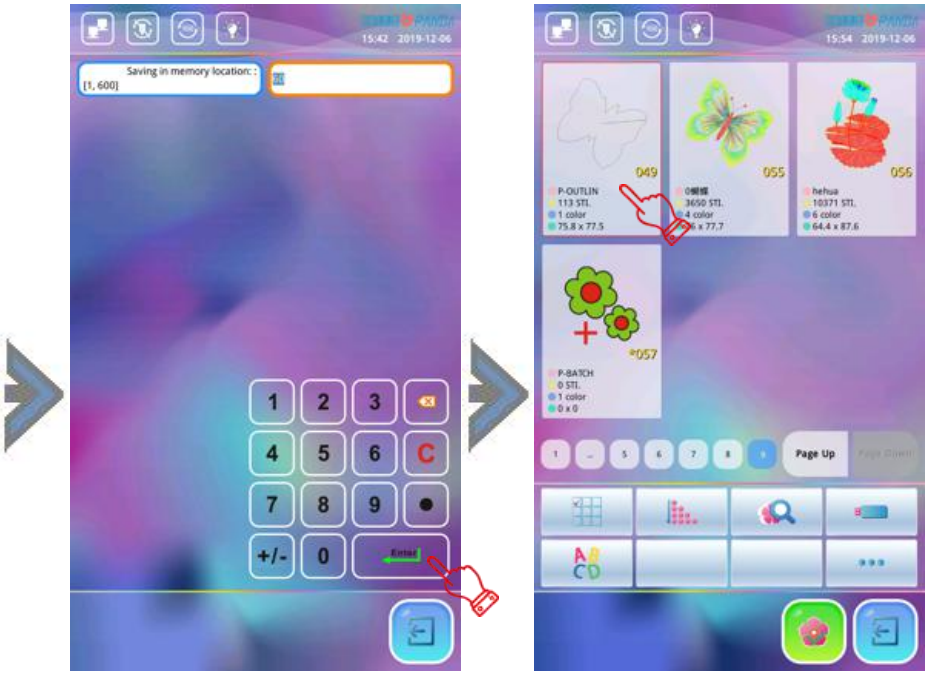
13-4 Create outline from Pattern

This function is to create a new pattern according to the outline of the designated pattern. If the original pattern is enlarged, rotated and repeated, the outline pattern is also enlarged, rotated and repeated accordingly. The specific operations are as follows:

1. Press the " " to enter the "Design Memory Menu", use the "Page Up/Page Down" icon to find the pattern that need to generate outline and press to choose it. Press the "●●●" icon and press "Create outline from Pattern" item, the system will pop up the "Saving in memory location" and automatically provide a default design number and a default design name called "P-OUTLIN". If no modification is required, press "

" icon to confirm and the system pops up the "embroidery parameter setting" interface, and user needs to check the embroidery parameters that have been set previously. If any modification is required, press the relevant parameters to modify, if not, press " " to confirm.

2.The system will save the basic pattern outline generated by the embroidery parameters with this pattern number and the system default "P-OUTLIN" pattern name. If you continue to generate the pattern outline, repeat the above operation, if you want to exit, click the " " icon.

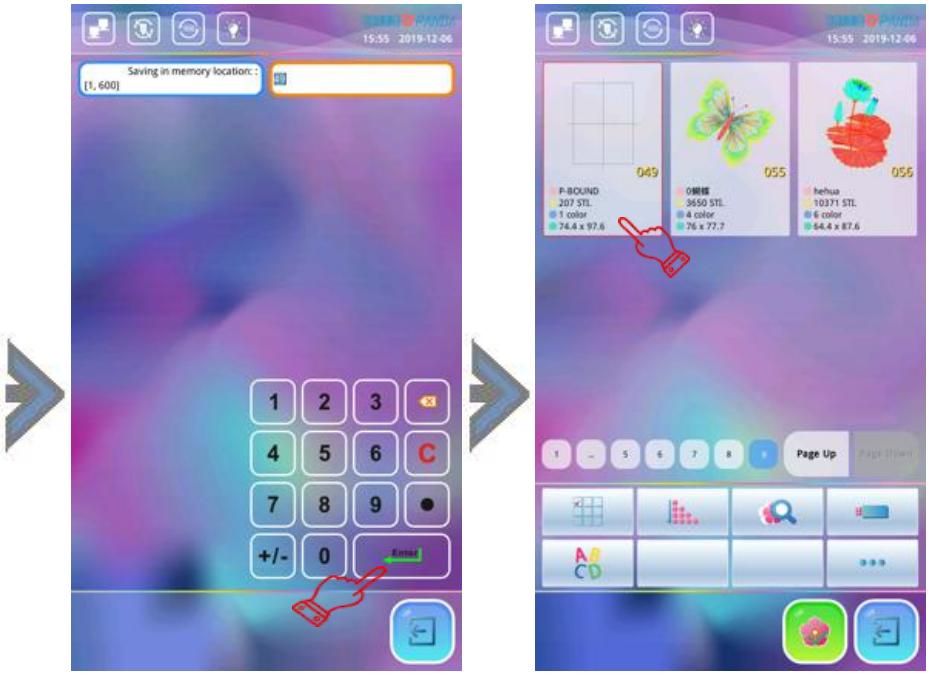


13-5 Create Rough Boundary from Pattern

This function is to create a rough boundary with a start-up point and a cross line according to the outline of the designated pattern. If the pattern is enlarged, rotated and repeated, the new pattern is enlarged, rotated and repeated accordingly. The specific operations are as follows:

1. Press the "" to enter the "Design Memory Menu", use "Page Up/Page Down "to find the pattern to be bordered, and press to select it. Press "" icon and select the "Create Rough Boundary From Pattern" menu, the system pops out the "Please enter the pattern number" dialog box, and automatically provides the smallest available pattern number and the pattern name named "P-BOUND", if no modification is required, press "Enter" icon directly.

2.Then the system jumps out the "Design Parameters" screen to check the previously set embroidery parameters. If you need to modify it, press the related parameter to do the modification. If you do not need to modify, press "" and the system will save the pattern border with this pattern number and the system default "P-BOUND" pattern name. If you continue to generate a rough boundary, repeat the above operation. If you want to exit, click the "" icon.



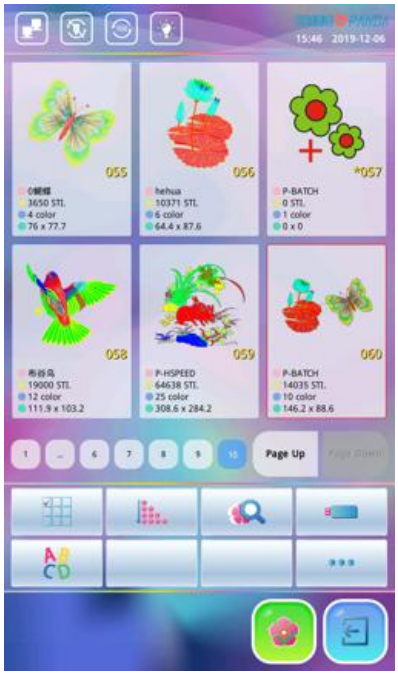
(**Note:** If the original pattern is a repetition pattern or a combination pattern, the generated pattern border will generate the corresponding multiple rough boundaries based on the border of a single design.)

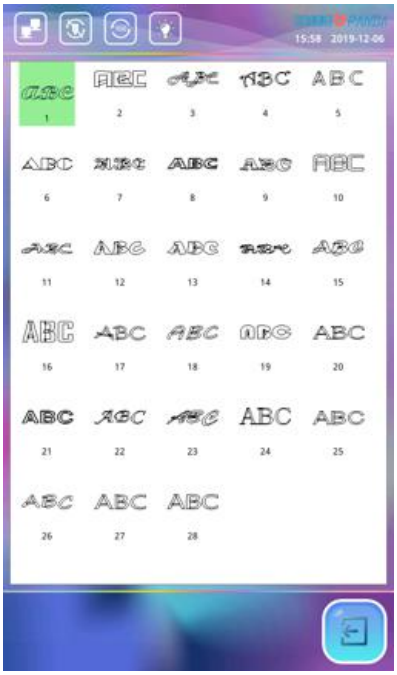
Chapter 14 Operations on Letter Embroidery

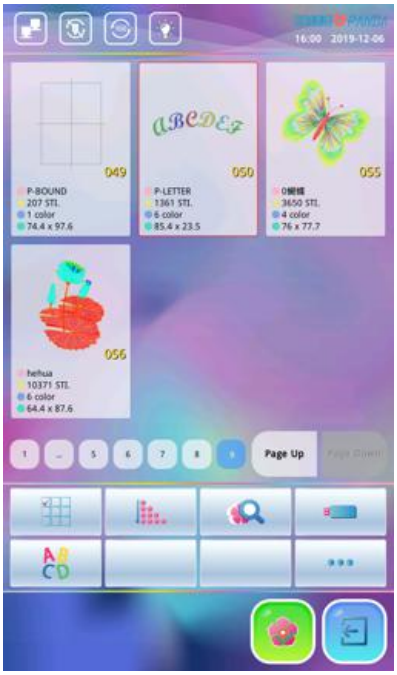
14-1 Letter Pattern Generation

This operation is to input the characters to be embroidered by the customer first, and the system converts them into patterns that can be embroidered through the built-in different embroidery font files. At the same time, the system also provides different typesetting functions, which greatly improves the aesthetics of embroidery. The specific operations are as follows:

1.Press " " icon at the main function screen to enter the "Memory Design Management" interface and press the "ABCD" icon, the system pops out of the Character Input Editing interface, and customers can use the keyboard at the bottom right of the screen to input uppercase and lowercase letters and numbers.







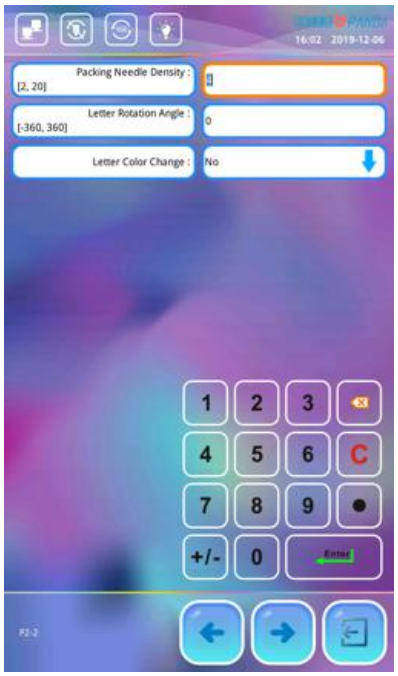
2.After entering the characters, press the font box to select the required font and set the relevant

parameters of the characters as required. Press "Enter" icon to confirm and the system enters the character layout interface.

3.In the Character Layout interface, customers can use the function keys at the bottom of the screen to perform character typesetting as required. After typesetting work, press " " icon and the system pops up the pattern storage dialog box and automatically provides the smallest available pattern number and the pattern name named "P-LETTER", if no modification is required ,press "Enter" icon and the system will save this letter embroidery pattern with this pattern number and system default "P-LETTER" pattern name. After saving, the system will automatically jump to the "Memory Design Management" interface.

14-2 Character Input Editing Interface

Enter the "Character Input Editing" interface as shown below:



No.	Parameter	Description	Default
1	String	English words, characters, and numbers that need to be embroidered.	
2	Font	The text font to be embroidered. The font for this interface is valid for all input text. If you need to change the font of individual characters, you can choose to modify them in the "Character Layout" interface.	1#Font
3	Arrangement	There are four types of arrangement: 1, horizontal arrangement 2, vertical arrangement 3, upward curved 4, and downward curved.	Horizontal Arrangement
4	Letter Height	For the height of the character corresponding to the selected font, the unit is millimeter (mm).	20mm
5	Character Spance	The space between the centers of the characters, in millimeters (mm).	0mm
6	Character Angle	When the input characters are arranged in radians, whether the angle of each character changes with the position of the arc.	No

7	String Rotation Angle	The angle by which the input string is rotated around the center of the string.	0
8	Letter Italics Angle	The inclination angle of the entered character is based on its vertical centerline.	0
9	Packing Stitch Density	It refers to the distance between the compensation needles of the generated letter embroidery pattern. The smaller the value, the higher the density of compensation needles.	4
10	Letter Rotation Angle	Refers to the angle at which each character entered is rotated by its center point.	0
11	Letter Color Change	Refers to whether each character entered uses an independent color to display the embroidery.	No

14-3 Character Layout Interface

Enter the Character Layout Interface as shown below:

(Note: the corresponding "+" mark on each character represents the center of this character)

No.	Icon	Description	Remark
1		Enter the "Character Input Edit" interface and modify the English words, characters, and numbers that need to be embroidered.	
2		Modify the font of the selected character.	Valid for selected characters
3		Switch the display mode of characters: 1. Display the outline of the characters; 2. Display the stitches of the characters	Valid for all characters
4		Whether the selected character displays embroidery in an independent color.	Valid for all characters

5		The selected character moves up.	Valid for selected characters
6		The selected character moves down.	Valid for selected characters
7		The selected character moves to the left.	Valid for selected characters
8		The selected character moves to the right.	Valid for selected characters
9		All characters entered are arranged horizontally.	Valid for all characters
10		All characters entered are arranged vertically.	Valid for all characters
11		All characters entered are arranged in a downward curved arc.	Valid for all characters
12		All characters entered are arranged in an upward curved arc.	Valid for all characters
13		When the character string is arranged in an arc, the angle of the character changes with the position of the arc (that is, the angle of the character is perpendicular to the arc).	Valid for all characters
14		When the strings are arranged in an arc, the angle of the character does not change with the position of the arc (that is, the angle of the character is perpendicular to the horizontal line).	Valid for all characters
15		Enlarge all entered characters to see the details of the characters.	Valid for all characters
16		Reduces all entered characters.	Valid for all characters
17		Displays all entered characters in a 1: 1 ratio.	Valid for all characters
18		Displays all entered characters in full screen proportions.	Valid for all characters
19		Go to the next menu.	
20		All input strings are rotated counterclockwise along the center of the string.	Valid for all characters
21		All strings entered are rotated clockwise along the center of the string.	Valid for all characters
22		When the strings are arranged in an arc, increase the arc of the string arrangement.	Valid for all characters
23		When the strings are arranged in an arc, decrease the arc of the string arrangement.	Valid for all characters
24		Increase the spacing between each	Valid for all characters

		character in the string.	
25		Decrease the spacing between each character in the string.	Valid for all characters
26		The selected characters are rotated counterclockwise along their respective centers.	Valid for selected characters
27		The selected characters are rotated clockwise along their respective centers.	Valid for selected characters
28		Increase the selected character height.	Valid for selected characters
29		Decrease the height of the selected character.	Valid for selected characters
30		The selected characters are mirrored horizontally along their respective centers.	Valid for selected characters
31		The selected characters are mirrored vertically along their respective centers.	Valid for selected characters
32		Increase the compensation stitch density of all characters.	Valid for all characters
33		Decrease the compensation stitch density of all characters.	Valid for all characters
34		Increase the selected character width.	Valid for selected characters
35		Decrease the selected character width.	Valid for selected characters
36		To switch selected characters, you must select all or select a character before you can typeset and edit it. When there is a red “+” in the center of the character, it means that the letter is selected. All characters are selected by default. After pressing the “ ” icon, the first character been selected, and then select the second one, so on and so forth. When the last letter is selected, press the “ ” icon, all characters will be selected again.	

Chapter 15 Cyclic Embroidery Setting

When cyclic embroidery is enabled, after completing the designated pattern the machine will automatically go back to the start point of the pattern and embroider it again without pressing “Start” icon manually. During the actual embroidery work, cyclic embroidery operation is often used in conjunction with “repetition embroidery” to embroider front and back versions, so that embroiders can collect and spread embroidered fabric without stopping, which greatly improves the efficiency of embroidery

The specific operations are as follows:

1.When the cyclic embroidery is not set, press “” icon and press the user parameter icon “”, then press the Embroidery Assistant Parameter item, and select the “Repeat Embroidery Enable” item and choose “Yes”.

2.The system goes back to the main function screen, the machine is set on cyclic embroidery status, at this time the cyclic embroidery icon below the main function screen shows “ ”

3.When the cyclic embroidery is set, and the user want to shut it down, just go to the Embroidery Assistant Parameter item, and select the “Repeat Embroidery Enable” item and choose “No”. In this way, the system closes the cyclic embroidery function and returns to the main interface of embroidery. The cyclic embroidery mark icon below the main interface is displayed as “ ”.

4.Another shortcut is that in the state of pattern releasing the user press the “ ” icon at the main function screen directly and shift it to “ ” icon, this means cyclic embroidery is set, if the user need to cancel cyclic embroidery status, press the “ ” to shift it into “ ” icon.

Chapter 16 Choice of System Operating Language

Press the “ ” icon at the main function screen and press “ ”icon to enter the system language setting interface. Select the language you want to switch. After setting, the system will automatically return to the previous interface, and the language type of the interface information will be switched immediately. If you want to quit the language switching operation, press the “ ” icon at the bottom right of the interface.

Chapter 17 Lock Saving Designs to USB

17-1 Set "Lock Saving Designs to USB"

This function is to protect the intellectual property of factory embroidery and prevent others from illegally copying the patterns in the system memory. (Stored on the USB flash drive) Once the administrator of the embroidery machine sets the password for the "Lock Saving Designs to USB" (8-digit password), other people will not be able to perform the operation of "Save to USB" without obtaining the password.

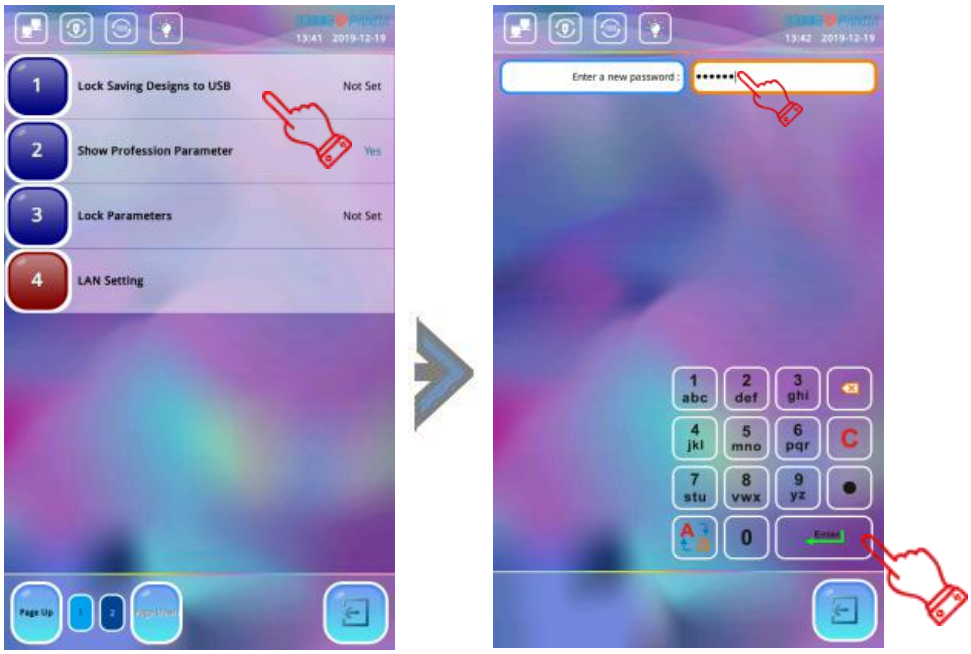
The specific operations are as follows:

1.If "Lock Saving Designs to USB" is not set, press "" icon and press the system management icon" " to select "Lock Saving Designs to USB" menu. At this time, the system will pop up "Enter a new password" window. Then use the number keys to set an 8-digit password, and press the "Enter"to confirm.

2.After the first password is confirmed, the system will pop up the "Verify the password" dialog box. Please enter the same password as the first input, press "Enter" to confirm. If the password is set successfully, "Lock Saving Designs to USB" item displays "Set".

3.If the password entered for the second time is different from the first input, the system will pop up the dialog box "Passwords do not match. Try again?". If you need to re-enter the password then press "" and enter the correct password twice again. If you want to give up the input, press the "" to exit.

4.After the password is set, the management personnel should properly keep the password so that it can be used when it is released. If the password is lost or forgotten, it must be handled by the customer service, which will cause inconvenience to the customer.



17-2 Release "Forbid Pattern Output"

If the customer wants to save design to USB, the manager must first release the "Forbid Pattern Output" function. After setting the password for "Forbid Pattern Output", repeat the operation of 17-1, input the password that was set last time, press "" to exit, and then the prohibition design output is cancelled.

Chapter 18 Initialize System

During the embroidery process, if the embroidery machine is strongly interfered by the power grid and peripheral equipment, that may causing some data or embroidery parameters stored in the system shifting into an illegal state, and the system program may also enter an illegal interlock state, at this time the program cannot operate correctly and reliably, and this situation cannot be removed after power off and restart. At this time, the interlocking state can be released by manual intervention, and the solution is to initialize system.

> **Note**: After the system parameters are initialized, "Thread break detect of machine head", "frame parameter", "main shaft related parameter", "trim parameter", "embroidery assistant parameter", "closed-loop color change parameter", "frame origin setting for sudden power-off" , "sequin embroidery Parameters" and "Special Embroidery Parameters" will be restored to the default factory settings, so the relevant parameters should be recorded before initialization. Please reset it after initialization, otherwise it may cause some functions lost or embroidery process not meeting requirements.

The operation of "Initialize System" is to restore a series of embroidery-related parameters in the embroidery system to the factory default values, and must be operated in the embroidery released state. The specific operations are as follows:

Press "" icon at the main function screen and press the system management icon "", select Initialize System menu and the system prompts out a dialog window asking "Return Parameters and Memory to Factory Setting?", press "" to confirm. The system will enter the initialization state at this time. When the initialization is completed, the system jumps out the "Operate Successfully, please restart!" prompt. Then the whole machine should be powered off and powered on again.

Chapter 19 Self-Test and Machine Parts Self-Test

> **Note**: This part of the operation is only for professional maintenance personnel.Generally, the embroidery personnel are not involved. This part of the operation involves some mechanical work, so you need to pay attention to personal and equipment safety.

19-1 Test Encoder

This test is to rotate the main shaft one turn by code, and measure the zero pulse (0PL), phase A continuous pulse (APL) and phase B continuous pulse (BPL) of the photoelectric encoder, and display the measured value.

Operation: Press the "" icon at the main function screen

→Press "" icon

→Press "Next"

→Press Test Encoder menu.

19-2 Test RPM

This test is to make the main shaft rotate according to the set speed, and compare the set speed with the actual measured main shaft speed to facilitate the main shaft debugging. After entering the test RPM, press the "" to decelerate and accelerate the operation of the main shaft. The correctness and stability of the main shaft operation are judged by comparing the set speed displayed on the interface with the measured speed. To exit the test, press the "".

Operation: Press the "" icon at the main function screen

→Press "" icon

→Press "Next"

→Press Test RPM menu.

19-3 Test Machine Parts

The component testing of the project includes: Limit Switch, Jump Solenoid, Thread Break Sensor， Frame Movement Test, Trimming Solenoid, Picker, Motor Stop Timing and Thread Lock Test. The specific operations should be performed according to the instructions of each project interface.

19-4 Turn Main Shaft to Angle

This operation can be used to rotate the main shaft from 100° to any angle by instruction to facilitate the maintenance and commissioning of the machine. After entering the menu, the system prompts “Enter angle in degrees”. Use the numeric keys to enter the angle you want to rotate. After pressing the “Enter” the main shaft will rotate to this angle to stop. If you continue to enter other required angles, press the numeric icons to enter the confirmation. To exit the operation, press the “”.

Operation: Press the " " icon at the main function screen

→Press " " icon

→Press "Next"

→Press Test Turn Main Shaft to Angle menu.

Appendix 1 Upgrade System Software

In order to continuously improve the functions of the system and improve the user's operating experience, the company will upgrade the system software of different models from time to time, the upgrade process is simple and convenient, and the reliability is high. The correct system upgrade does not affect the original parameter values in the system, and does not affect the current embroidery design.

The specific operations are as follows:

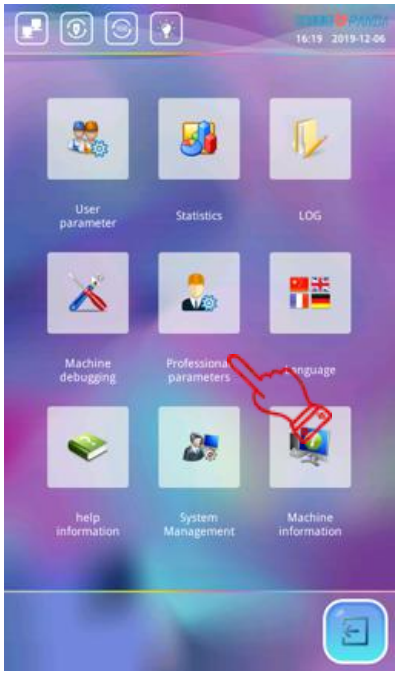
1.Insert the USB flash drive with the system software. Press "" icon and press "", then select the "Upgrade System Software" item.

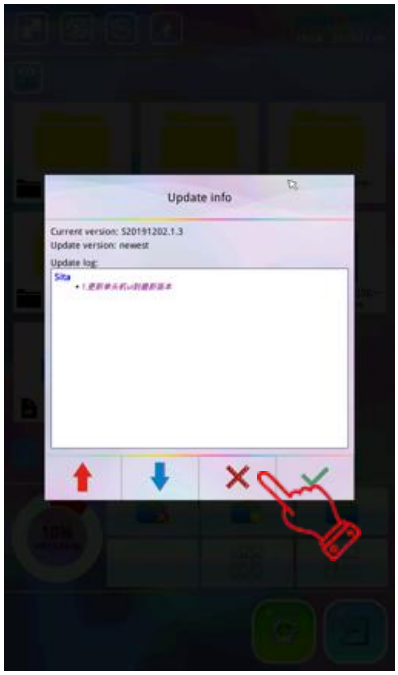
2.System enters the "Upgrade System Software" interface, and automatically read the contents of the USB flash drive. Use the "Page Up/Page Down" icon to select the system software to be upgraded. (If a file is system software, "Raysita_RXXX" will appear in the right prompt of the interface)

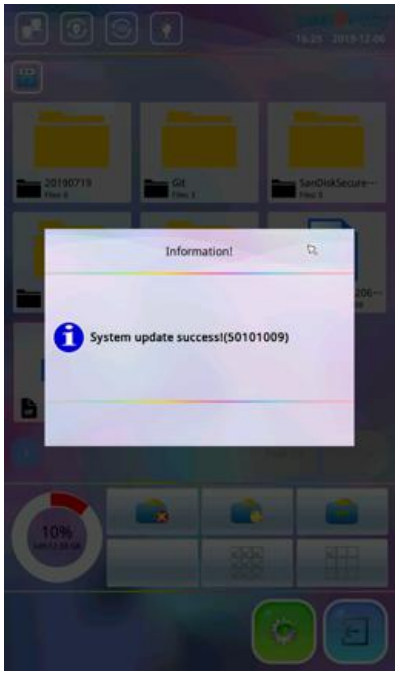
3.Press "" icon and the system will drip a short sound, the interface prompts "Please wait". And the system enters the software upgrade process. After the upgrade is completed, the system prompts "System Update Success!", the software upgrade is completed. The system must be powered off and then powered on before it can take effect.

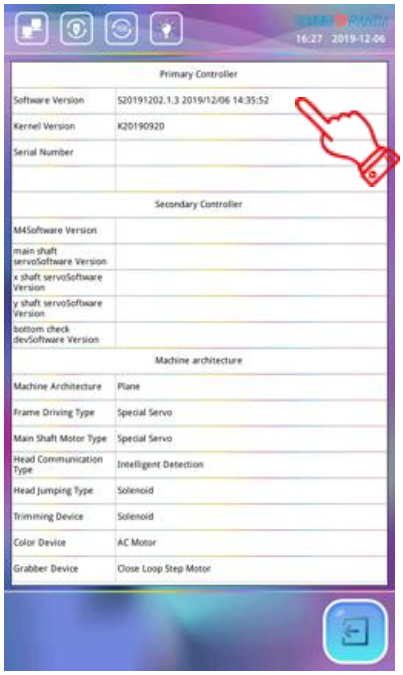
4.After the system software is upgraded, the user can press "" icon on the right side of the main function screen and press the "" icon to view the primary controller Software Version.

Note: The system software update process is forbidden to power off, otherwise the system may crash and cannot be started.




Update info
Current version: S20191202.1.3
Update version: newest
Update log:
Sita


Information!
System update success!(50101009)


Primary Controller
Software Version
S20191202.1.3 2019/12/06 14:35:52
Kernel Version
K20190920
Serial Number
Secondary Controller
M4Software Version
main shaft servoSoftware Version
x shaft servoSoftware Version
y shaft servoSoftware Version
bottom check devSoftware Version
Machine architecture
Machine Architecture
Plane
Frame Driving Type
Special Servo
Main Shaft Motor Type
Special Servo
Head Communication Type
Intelligent Detection
Head Jumping Type
Solenoid
Trimming Device
Solenoid
Color Device
AC Motor
Grabber Device
Close Loop Step Motor

Appendix 2 Upgrade Secondary Controller Software

In order to continuously improve the embroidery control function, the company will carry out irregular upgrades of the secondary controller software of different models, and the upgrade process is simple and convenient, and has high reliability.

The specific operations are as follows:

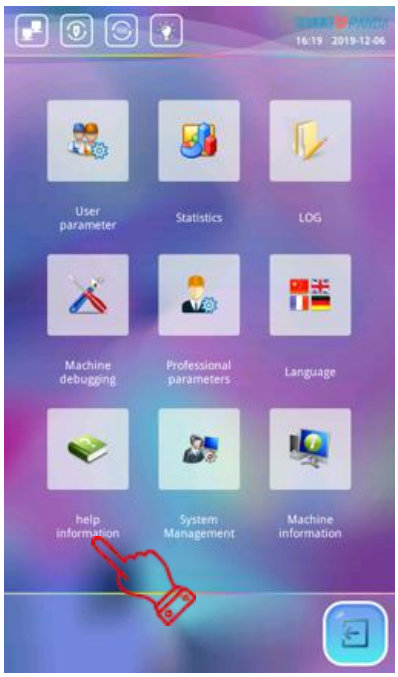
1.Insert the USB flash drive with the secondary controller software into the "USB" interface of the operating head. Press the " " icon and press " ", select the "Upgrade Special Driver Software" menu.

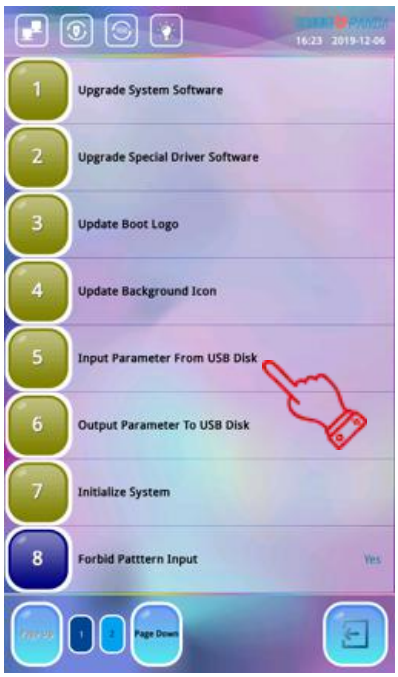
2.System enters the "Upgrade Special Driver Software" interface, and automatically read the contents of the USB flash drive. Use the "Page Up/Page Down" to select the secondary controller software to be upgraded. (If a file is a vice controller software, "Rayemb_RXXX.pec" will be displayed in the right prompt box of the interface.)

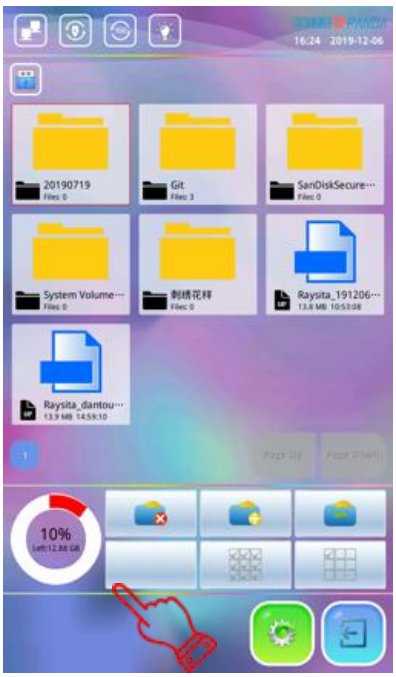
3.System pops up "Software Updating?" dialog box, press " ", the system prompts "Please wait". At this time, the secondary controller software enters upgrade process. After the upgrade is completed, the system prompts "Board Update Success!". At this time, the software upgrade is completed, and the system should be powered off and restarted.

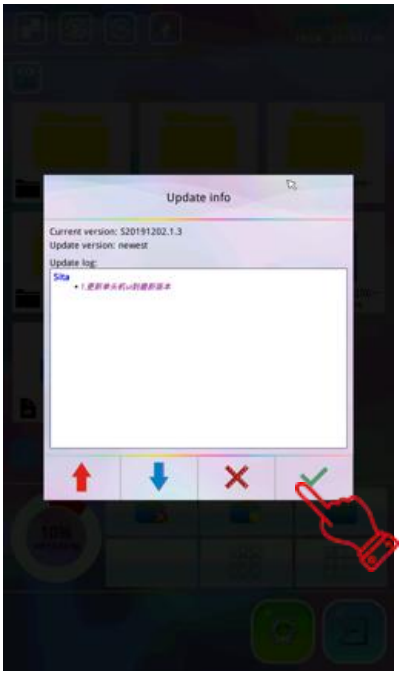
4.After the system software is upgraded, press the " " icon on the right side of the main function screen and press " " to check the secondary controller software version.

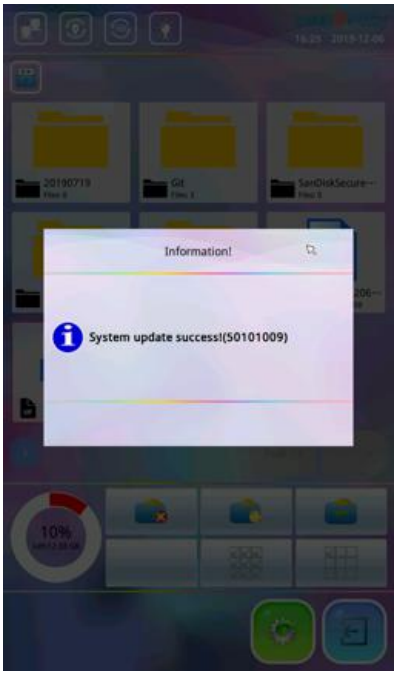
> **Note:** The secondary controller software update process is forbidden to power off, otherwise the system may crash and cannot be started.

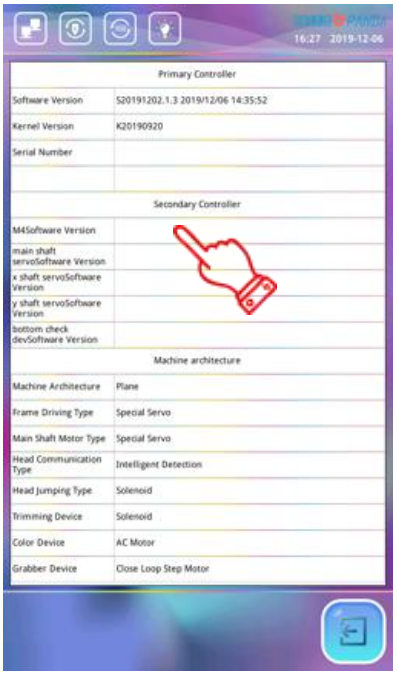







Update info
Current version: S20191202.1.3
Update version: newest
Update log:
Sita


Information!
System update success!(50101009)


16:27 2019-12-06
Primary Controller
Software Version
S20191202.1.3 2019/12/06 14:35:52
Kernel Version
K20190920
Serial Number
Secondary Controller
M4Software Version
main shaft servoSoftware Version
x shaft servoSoftware Version
y shaft servoSoftware Version
bottom check devSoftware Version
Machine architecture
Machine Architecture
Plane
Frame Driving Type
Special Servo
Main Shaft Motor Type
Special Servo
Head Communication Type
Intelligent Detection
Head Jumping Type
Solenoid
Trimming Device
Solenoid
Color Device
AC Motor
Grabber Device
Close Loop Step Motor