

# CONTENT

## PART 1 THE INTRODUCTION OF THE SYSTEM

<b>PART 1 THE INTRODUCTION OF THE SYSTEM.....</b>	<b>1</b>
<b>1.1 SUMMARY.....</b>	<b>1</b>
<b>1.2 PRECAUTIONS .....</b>	<b>1</b>
<b>1.3 WORKING ENVIRONMENT.....</b>	<b>2</b>
<b>1.4 SYSTEM POWER SUPPLY AND GROUNDING .....</b>	<b>2</b>
<b>1.5 CONTROL PANEL AND KEYS FUNCTION .....</b>	<b>3</b>
1.5-1 Control Panel.....	3
1.5-2 Keys Function.....	4
1.5-3 Function.....	6
<b>PART 2 EMBROIDERY WORKING PROCESS .....</b>	<b>8</b>
<b>PART 3 DESIGN INPUT.....</b>	<b>10</b>
<b>3.1 DESIGN IN THE U DISK INPUT TO MEMORY .....</b>	<b>10</b>
<b>PART 4 DESIGNS MANAGEMENT .....</b>	<b>12</b>
<b>4.1 SELECT DESIGN .....</b>	<b>12</b>
4.1-1 Photo Embroidery.....	13
<b>4.2 CUT DESIGN .....</b>	<b>14</b>
<b>4.3 COMBINE DESIGN .....</b>	<b>15</b>
<b>4.4 DELETE SINGLE DESIGN .....</b>	<b>17</b>
<b>4.5 DELETE ALL DESIGNS .....</b>	<b>17</b>
<b>4.6 INPUT DESIGNS TO U DISK.....</b>	<b>18</b>
<b>PART 5 EMBROIDERY DESIGN .....</b>	<b>19</b>
<b>5.1 EMBROIDERY STATUS SWITCH .....</b>	<b>19</b>
<b>5.2 PREPARATION STATUS .....</b>	<b>20</b>
5.2-1 Set Design Parameter.....	20
5.2-2 Switch Frame.....	22
<b>5.3 WORK STATUS.....</b>	<b>23</b>
5.3-1 Design Origin (Start Point) Set.....	24
5.3-1-1 Low speed check pattern outline.....	24
5.3-1-2 Embroidery pattern profiles.....	24
5.3-2 Offset (Another Start Point) Set.....	25
5.3-3 Offset point (top of the frame) access operation .....	25

5.3-4 Return Origin (Start Point)..... 25

5.3-5 Return Stop point..... 26

5.3-6 Set Change Color..... 26

5.3-6-1 Set Change Color Sequence (sticking cloth offset)..... 27

5.3-6-2 Replace Stitch Bar..... 30

5.3-6-3 Set the needle bar display color..... 30

5.3-7 Change Working Mode..... 31

5.3-8 Embroidery Mode Switch..... 32

5.3-9 Positioning Idling..... 33

5.3-9-1 Add the Specified Stitch/Reduce the Specified Stitch..... 33

5.3-9-2 Forward a Color / Backword a Color..... 34

5.4 EMBROIDERY RUNNING STATUS..... 34

5.5 STITCH BAR OPERATION..... 34

5.6 SEQUIN HEAD SWITCH CONTROL AND INDICATOR..... 34

**PART 6 LETTERS TO GENERATE EMBROIDERY.....36**

**PART 7 MANUALLY CHANGE COLOR.....37**

**PART 8 MANUALLY TRIMMING.....38**

**PART 9 FRAME ORIGIN.....39**

9.1 MANUALLY SET FRAME ORIGIN..... 39

9.2 AUTOMATICALLY FIND ABSOLUTE ORIGIN..... 40

**PART 10 FRAME SET.....41**

**PART 11 STATISTIC.....42**

**PART 12 MAIN AXIS JOG OPERATION.....43**

**PART 13 LANGUAGES.....44**

**PART 14 EMBROIDERY PARAMETERS.....45**

**PART 15 SET MACHINE PARAMETERS.....46**

**PART 16 USERS MANAGEMENT.....47**

16.1 TIME SETTING..... 47

---

16.1 REMOVE UNLOCK .....	48
<b>PART 17 SYSTEM TEST .....</b>	<b>50</b>
17.1 INPUT TEST .....	50
17.2 OUTPUT TEST .....	51
17.3 AXIS TEST .....	52
17.4 MACHINE HEAD TEST (USED ONLY IN ORGANIC HEAD PANELS) .....	53
17.5 HEAD ID SETTING (USED ONLY WHEN THERE IS AN AB COMBINATION EMBROIDERY FUNCTION) .....	53
17.6 TOWEL HEAD TEST (ONLY USED WHEN THE TOWEL EMBROIDERY FUNCTION IS AVAILABLE) .....	53
<b>PART 18 SYSTEM INFORMATION .....</b>	<b>56</b>
18.1 SYSTEM NO. AND VERSION INFO .....	56
18.2 SYSTEM UPDATE .....	56
18.3 INTERFACE UPGRADE .....	56
<b>PART 19 NETWORK SETTINGS .....</b>	<b>57</b>
<b>PART 20 APPENDIX .....</b>	<b>58</b>
20.1 PARAMETER TABLE .....	58
20.2 SYSTEM FAULT AND SOLUTION .....	62



# PART 1 THE INTRODUCTION OF THE SYSTEM

## 1.1 Summary

Thank you very much for using our computerized embroidery machine control system!

This system can be applied to variety of embroidery machines to meet different requirements of yours. it will provide you with satisfactory effect for thin and thick materials as well as 3D embroidery!

The advanced RAM+DSP control technology makes the system work faster. the friendly man-machine interface of the system effectively improves the productivity; This control system adopts smooth curve regulation. which makes the machine running more stable. reduces the noise and extends the service life of the machine!

Please read carefully this Manual before using so as to ensure correct operation of the system.

Please keep this Manual properly for future reference.

Due to the difference of configuration. some machines may not be equipped with some functions listed herein. please follow corresponding functions.

## 1.2 Precautions

Non-professional personnel can never be allowed to carry out maintenance and debugging of the electric system. or the safety performance of the equipment will be reduced. the malfunction will be more serious. and even personnel and property damage will be caused.

Some parts in the case are with high tension. in order to avoid any accidental damage. when the system is powered on. do not open the cover of the case.

Please replace the protective tube strictly in accordance with the identification of the product to ensure personal and property safety.

The power switch of this product is provided with over-current protection. in case the over-current protection switch acts. it will not be closed again until 3 minutes later.

The floppy drive is a precision device. please always remember to insert the disc in the right direction. to avoid damage of the disc or the drive. do not eject or insert the disc during reading or

write of the disc (when the floppy disc indicator is on). As the disc is made of magnetic material. it should be kept away from any magnetic field to avoid damage of the disc or loss of the data.

Do not pile up sundries around the control box. and during the operation. the surface of the control box and the filter mesh should be cleaned regularly to keep fine ventilation of the system and facilitate the cooling.

Do not modify the product without authorization of the company; the company should bear no responsibility for any consequence resulted therefrom!

## **Warning**

If it's necessary to open the cover of the case. do not touch any part in the electric cabinet unless you are under direction of professional personnel and the power has been turned off for over 5 minutes!

## **Prohibitions**

Do not touch any moving part or open the control device during operation of the machine. otherwise. it may cause personal damage or abnormal operation of the machine!

It is prohibited to operate any electrical equipment in damp location or environments with dust. corrosive. flammable or explosive gases. otherwise. it may cause electric shock or fire!

## **1.3 Working Environment**

Ventilating and sanitary environment with little dust;

Working Temperature: 5-40°;

Working RH: 30%-90%. no frost.

## **1.4 System Power Supply and Grounding**

This electric control system can use the following power supplies:

Single phase AC100-220V/50-60HZ

According to different configuration. The consumption power is between 0.1-0.4KW

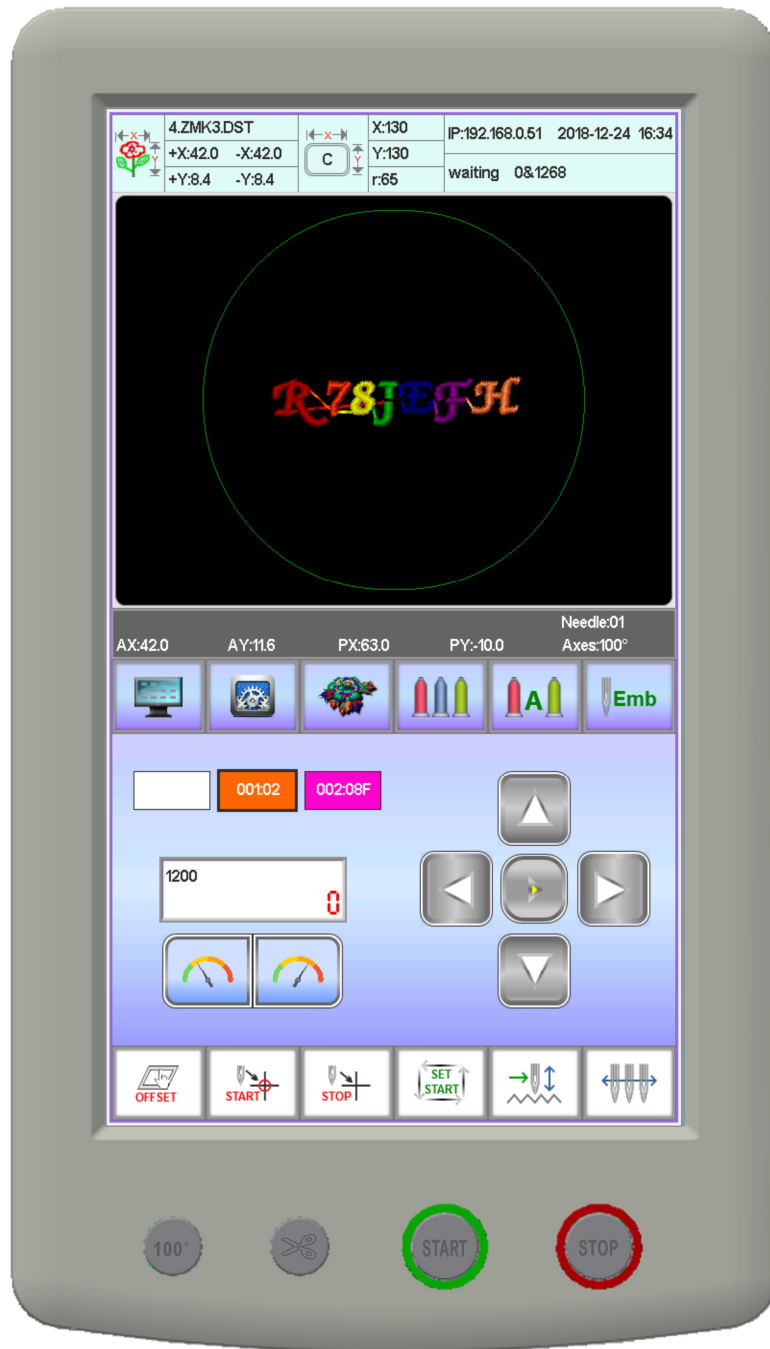
**To avoid electric shock or fire due to leakage of electricity, over-voltage or insulation etc., please ground the electric control system reliably.**

Grounding resistance less than 100 ohms. wire length within 20M. the area of wire greater than 1.0 MM<sup>2</sup>

## **1.5 Control Panel and Keys Function**

### **1.5-1 Control Panel**

Control panel is that interface display and operation control in the system. show as:



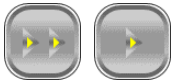
### 1.5-2 Keys Function



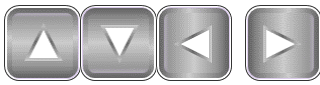
manually trimming key: when it's in the working status and preparation status. do the manually trimming operation



jog main axis key: click the key to jog main axis to 100 degree.



select key: to choose frame movement and control main axis speed.



directional keys: when in the embroidery and preparation status. to

move frame.



adjust main axis speed



main menu



parameter setting



files manager



set change color



work mode switch key(automatically change color automatically start embroidery

mode)



remove embroidery



offset operation



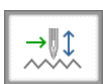
Return to origin



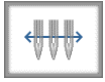
return stop point



origin point



embroidery mode switch (normal embroidery)



manually change color

AX/AY: display relative design origin coordinate

PX/PY: display relative frame origin coordinate

### 1.5-3 Function

This system has friendly man-machine interface and the operations are simple with powerful functions, which can greatly facilitate the operations of the user and improve the performance and efficiency.

Multiple language supported, select according to your requirement

With large memory capacity, the system can store 20000000 stitches and 200 designs

Multiple means for designs, greatly facilitate to select and use for customer. U disk, USB (required supporting PC software), network (required supporting PC software)

Support multiple design file format, can recognize Tajima DST and Barudan DSB, etc..

Strong parameter adjustment functions enable you to adjust various parameters according to different requirements to achieve the system control performance you need.

When power off, the function of "Auto Restoring embroidery after power off" enables the machine to continue embroidering from the stitches just before the power off, you need not worry about displacement of designs and realign the positions.

The "Self-checking of devices" function enables checking of the status and parameters of external devices and facilitates adjustment and maintenance.

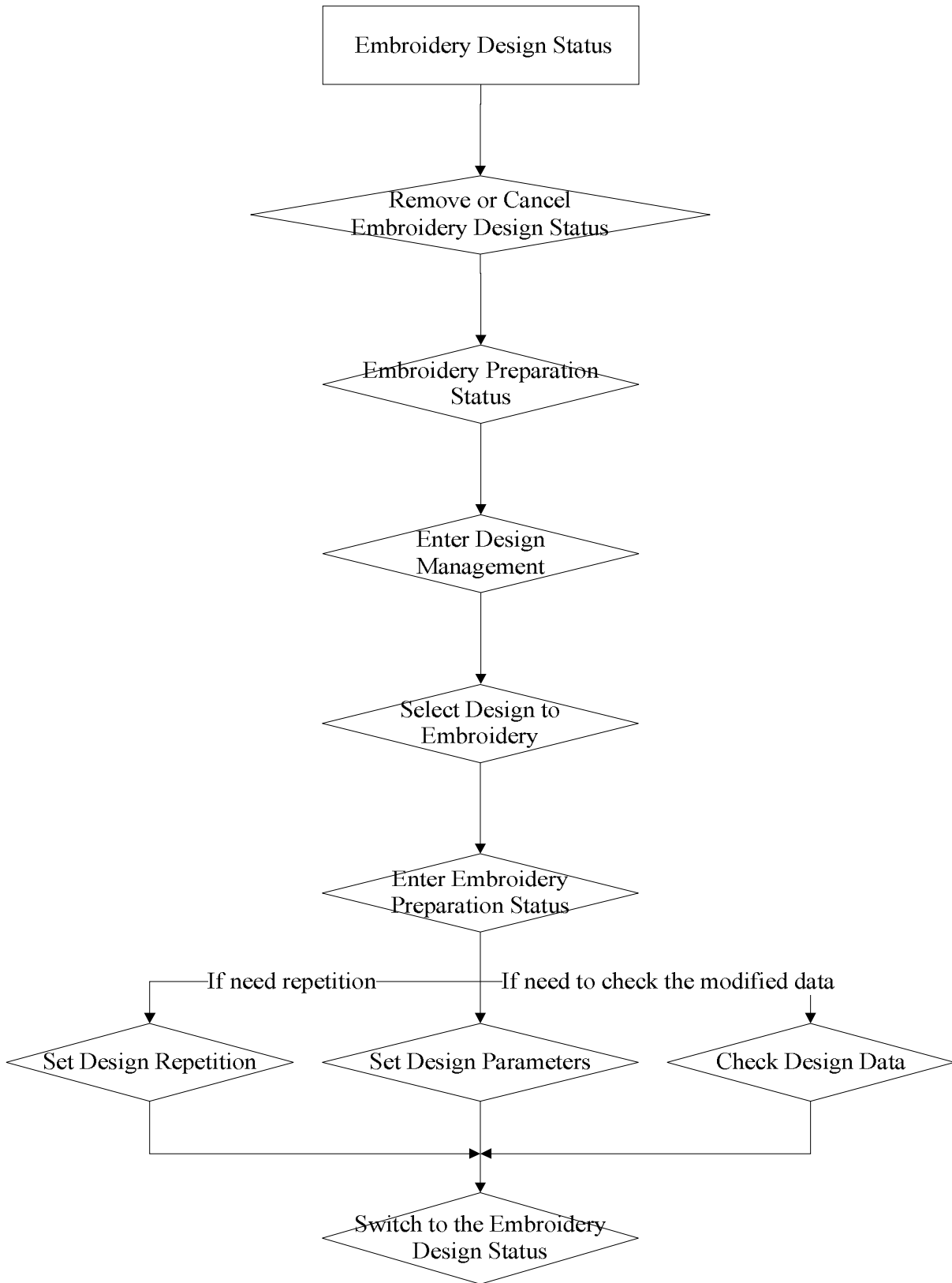
The "Main axis stop position adjustment" function enables the user to adjust parameters of the system according to the characteristics of the embroidery machine to achieve correct stop position.

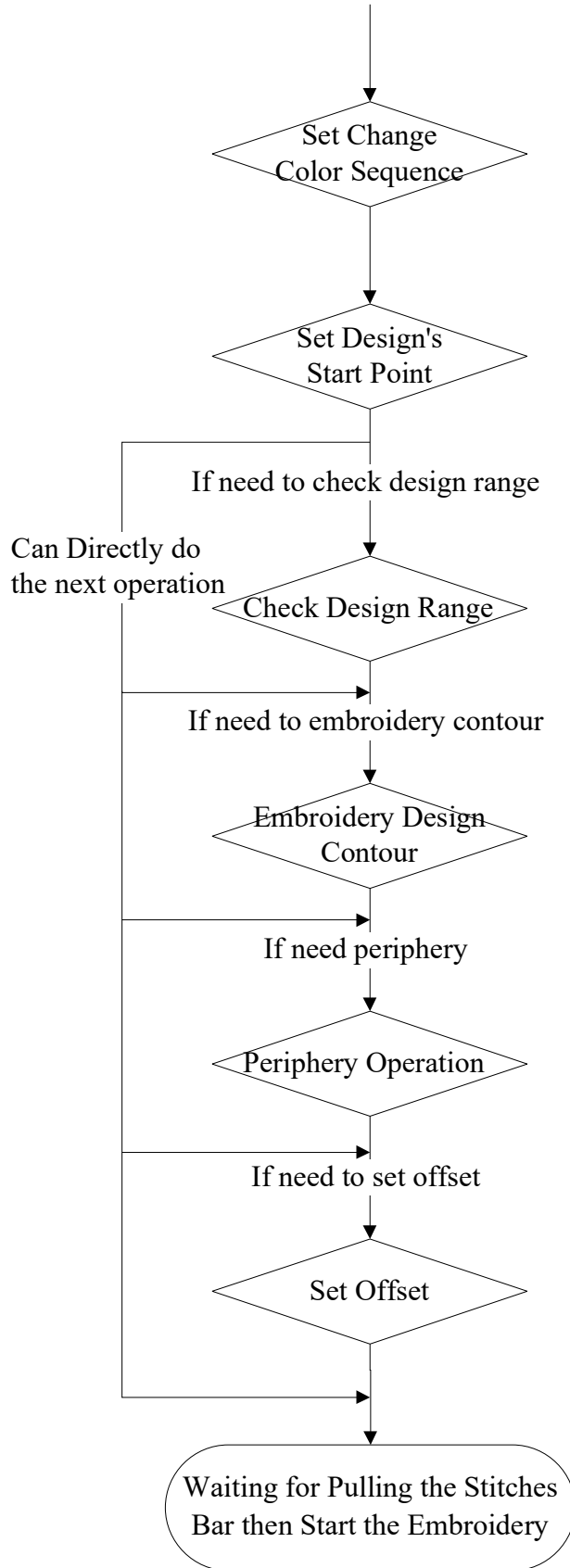
The "Auto memorizing of embroidery design parameters" function can automatically store the preset embroidering parameters or related data of embroidered designs, including color changing, the origin, the offset point, embroidering parameters and repetition etc., so as to facilitate the embroidery of the next time.

The "Patching offset" function enables user to set any change color stitch bar to path the frame, facilitate the patching embroidery.

The precise pattern beeline embroidering functions can meet your requirements for locating design embroidery.

## PART 2 EMBROIDERY WORKING PROCESS





## PART 3 DESIGN INPUT



Design input is that designs in the U disk input to memory. which can be operated in the embroidery preparation status and embroidery design status.

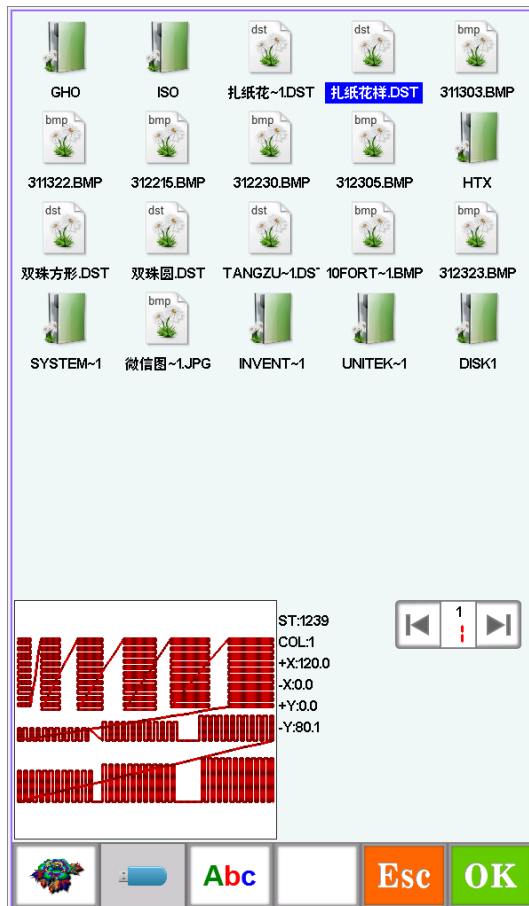
Design input. files in the external storage medium input to system memory. facilitate to select embroidery. If no designs in memory. it'll enter into the interface when start system.

The system. support reading Tajima DST and Barudan DSB 2 formates.


Before reading design. insert U disk to USB port. then operate panel.

### 3.1 Design in the U Disk Input to Memory


In the main interface, press  key to enter the layout management interface. click  show as:





Click the required designs. click . automatically display "input process" situation: memory No. And input process. after finishing. automatically return back U disk interface. do the next operation.




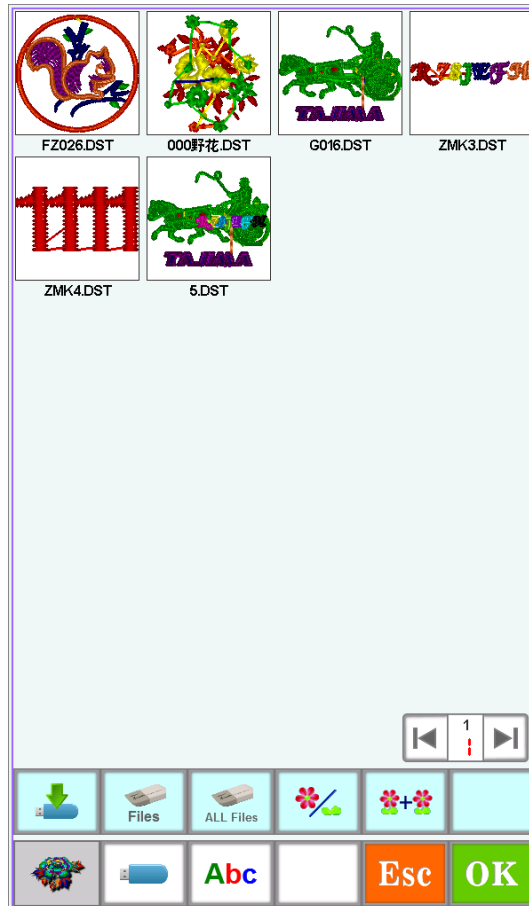
Click  to return the last interface.

## PART 4 DESIGNS MANAGEMENT

Designs management. contain that select design. output design. combine design. cut design. delete design. delete all designs( can not delete in the embroidery status).



In the main interface, press  key to enter the layout management interface.



### 4.1 Select Design

In the "Design Management" interface. The default enters to select the flower version Click the required design. whose relative information will be displayed in the screen. The selected design No.

And name background change as blue. Click  to enter "embroidery preparation status".

When memory design has many pages. click the directional keys to turn the page.


Longly click the selected design 3 seconds. can show the design in full-screen. touch screen a

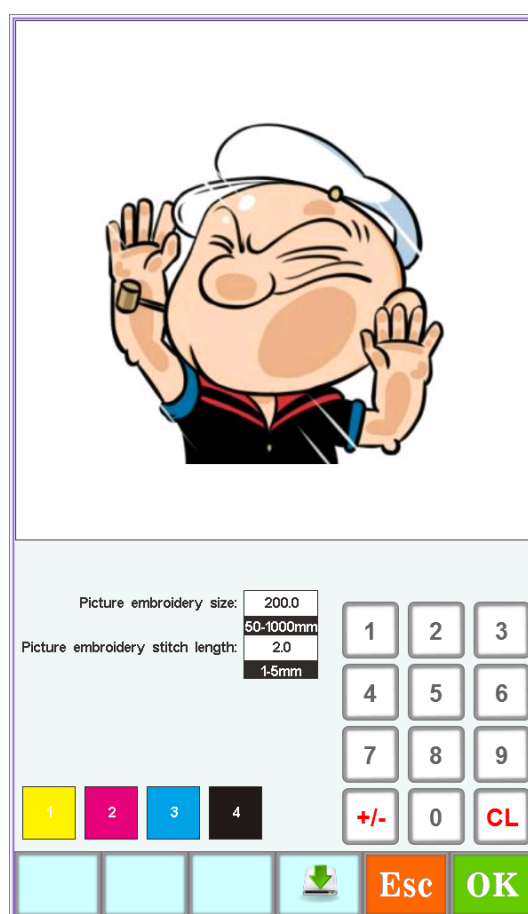
time to return the selected design interface.

In the embroidery preparation status, can set the required embroidery parameters, design rotate direction, zoom, rotate angle, repetition, satin stitch compensation.


## 4.1-1 Photo Embroidery

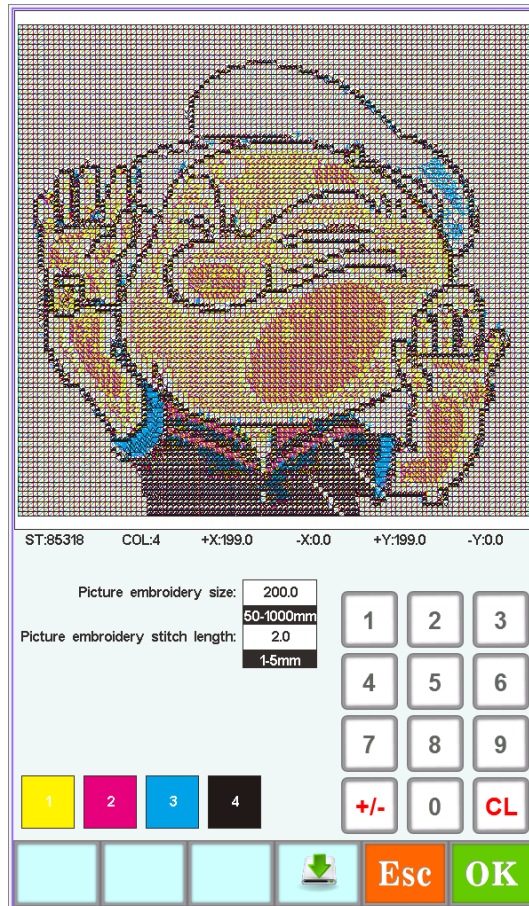
In Flower version Management interface, Select the pictures (BMP, JPEG Format) that need

embroidery, press  Key into the photo Setup screen, As shown in figure:



According to the need to set the picture width (height by proportional automatic adjustment), set embroidery needle length, needle step the smaller embroidery reduction degree, the more flower version of the needle will be more, customers can adjust according to their needs, after the


completion of  The key begins to generate the embroidery file, as shown in figure:



In this interface, the parameters can be changed again according to the requirements to continue to generate.

The color of the lower-left corner is the color order of the flower version: Yellow, red, blue and black. Customers can shade colors based on the base color.




Press  The key enters the preparation embroidery interface, carries on the embroidery related setting.

## 4.2 Cut Design

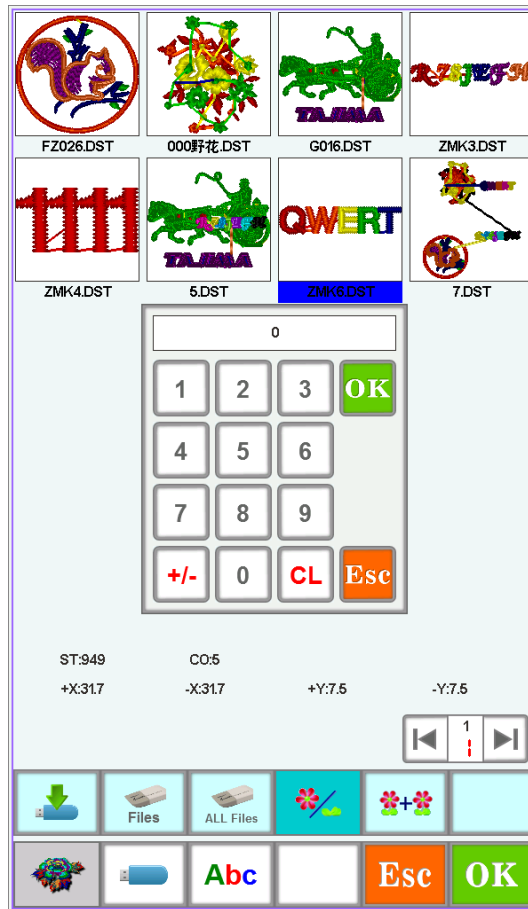



In the "Design Management" interface. Press  to enter the option to split the pattern.

Click the required design. Click the required design, whose relative information will be displayed


in the screen. The selected design No. and name background change as blue. Click , show a

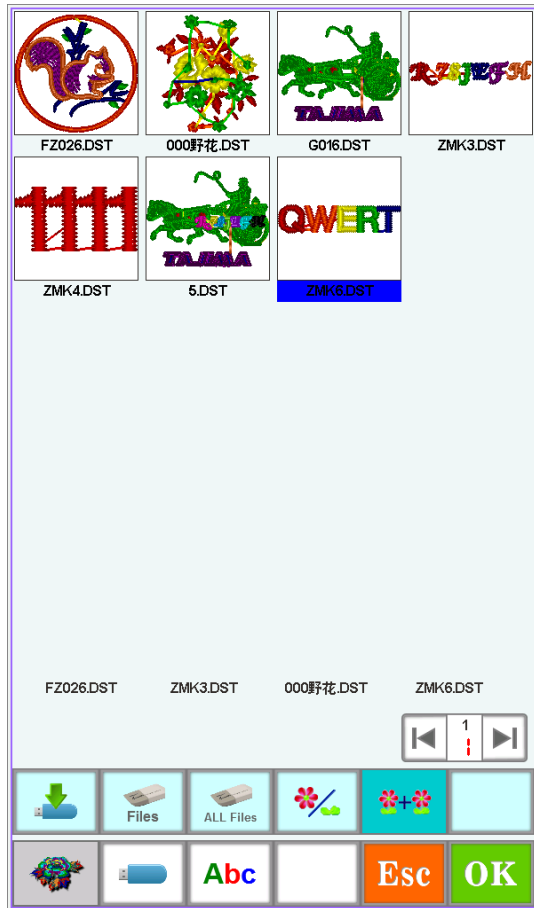
box. input the cut stitches. show as:



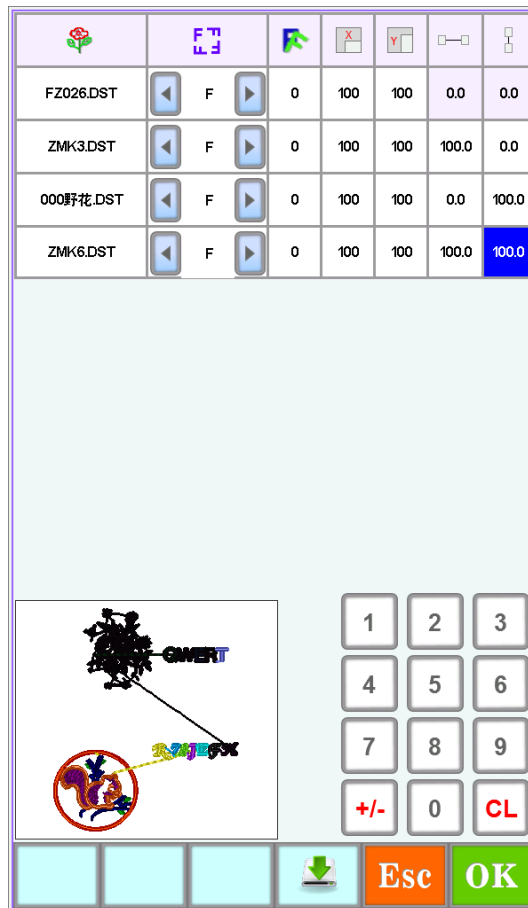
Click  to confirm. then it'll prompt that the design's storage number and cut progress after cutting. After finishing. it'll automatically return "Cut Design" interface.

### 4.3 Combine Design


In the "Design Management" interface. click  Key to enter the combination of engraving operation. Click the required design. a design can be selected more times. the maximum is 4 designs to combine a file. the selected design number and name will display in the screen. show as:




Click . show as:




According to combination requirements, set the need value, then choose combination mode.

click  to confirm. Storage number and name will be automatically generated.



Press the  key to save the combination of the flower version, the system automatically given the storage number and name.

#### 4.4 Delete Single Design

In the "Design Management" interface, click , select design, click  to confirm.

#### 4.5 Delete All Designs

In the "Design Management" interface, click , click  if you confirm to delete.

click . if don't delete. click  to quit.

## 4.6 Input Designs to U disk

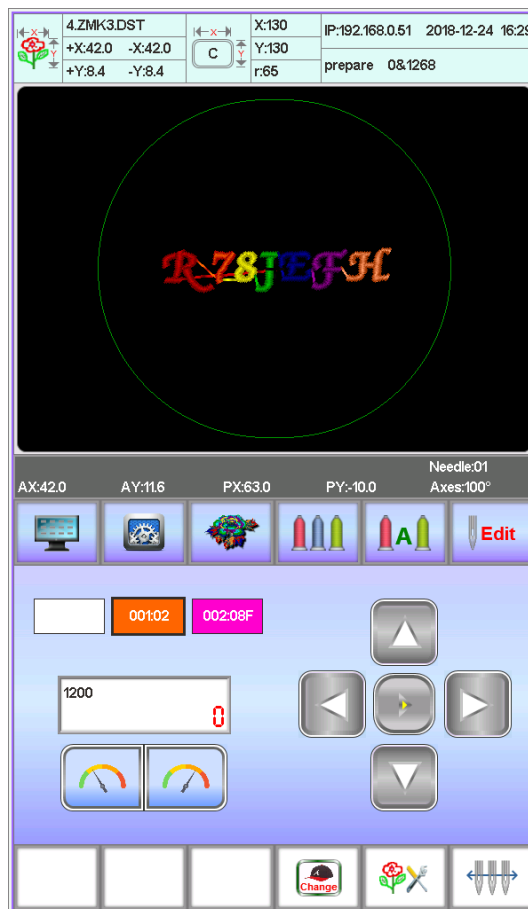
In the "Design Management" interface. Click . select designs. click  to U disk.

## PART 5 EMBROIDERY DESIGN

### 5.1 Embroidery Status Switch

Embroidery status has 3 kinds: preparation status, working status, and running status. You can switch them by the keys on the interface. Pull stitch bar to enter "running status". show as:

Preparation Status

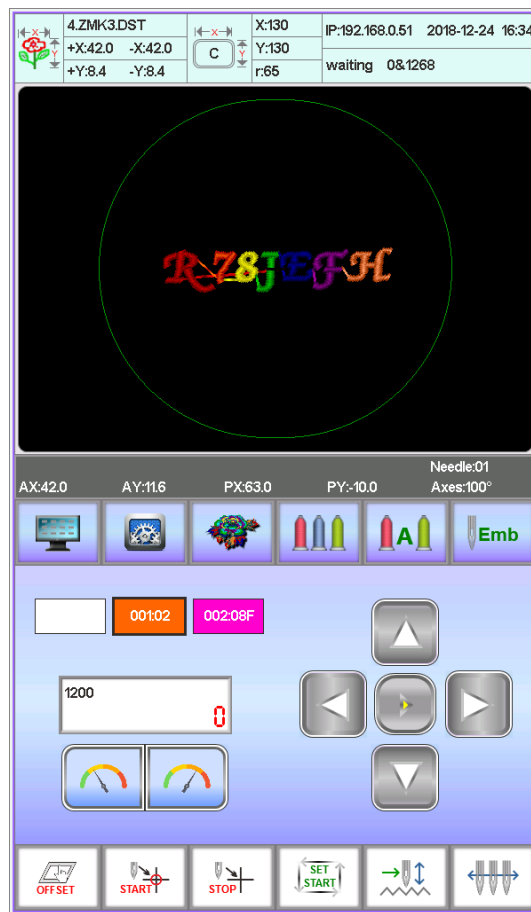


In the preparation status, click . show a dialogue box "whether to enter working


status?" click  to confirm. show as:

If no designs in memory, it'll prompt that "don't choose design". and can not enter working status.

## Working Status




In the working status, click . show a dialogue box "whether to remove working status ? "

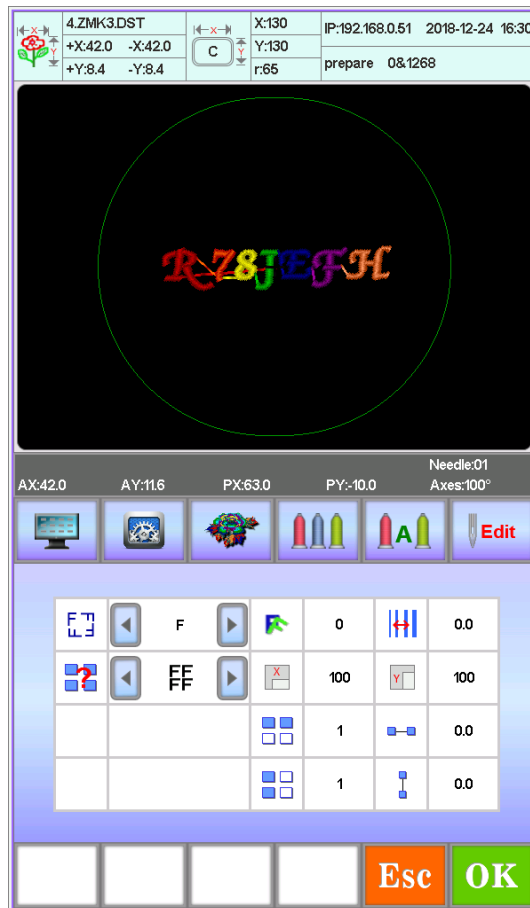
click  to enter preparation status.

## 5.2 Preparation Status


In preparation status, can do the operations: main axis jog, trimming, switch frame, manually change color, set design parameter and select design etc.

### 5.2-1 Set Design Parameter

In preparation status, click . show as:



Modify the numerical value according to your requirements. then click  to save. or click

 to return the preparation status interface.

Parameter Range:



Rotation Direction: default has 8: 0°、90°、180°、270°、0°mirror、90°mirror、180°mirror、

270°mirror



Rotate Angle:0-89° (calculate after the rotation direction)



X/Y direction magnification: 50%-200%



Repetition: ordinary. X symmetry. Y symmetry. XY symmetry



X/Y repetition: 1-99 ( ordinary X/Y99. X symmetry X2/99. Y symmetry X99/Y2. XY symmetry X2/Y2)



X/Y distance: 0-±999.9mm

The unit is mm. and numeric value input 0.1m. for example. if need to input 100mm. please input 10000.



X/Y compensation (satin stitch): 0-±0.3



Head mode selection (limited function): After the combination function of the nose, Use ordinary mode (A) or combination mode (AB) embroidery, ordinary embroidery for each handpiece at the same time, combined embroidery for a single and double head with embroidery a flower version. When setting the AB mode, the manual color change and the total number of color change needle bars are twice the number of needles of the current head, that is, the total number of 15 needle machines is 30, and 1-15 is the first head embroidery, 16 -30 second head embroidery. When the machine head is switched, the frame and the handpiece are automatically switched.

When using the combined function, make sure the headplane ID is set.



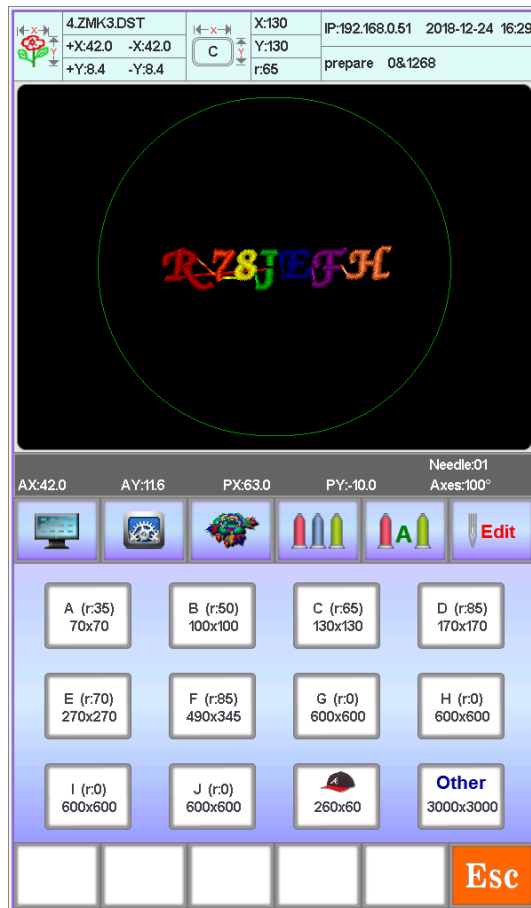
Tape Embroidery interval (limited function): the spacing between the

starting points of each pattern when the Ribbon embroidery function is turned on, using the scrolling display function. 0-999.9mm, when set 0 points, normal embroidery. When you set up 1-999.9, the automatic swap tape feature is turned on. When setting the tape display interval, the interval size can only be less than the Y of the embroidery box to maximize the embroidery size (Y embroidery box size), otherwise it will not work properly.

## 5.2-2 Switch Frame



In the preparation status interface. click . show as:



Select the current required frame type from A-J and cap frame. the frame will automatically find absolute origin. and stop at the middle of the frame. please note the frame movement. Embroidery range and the middle point of Cap frame and A-J frame. see the **frame set**. Other frame don't find absolute origin. embroidery range set as software limit (detail operation see **software limit set**)

After choosing frame. automatically return to the preparation status interface. if not choose. the system will use the last used type.


When choose cap frame. the current selected design will automatically rotate 180°. The others not change.

### 5.3 Work Status


In the working status. can set design origin( start point). offset (another start point). return origin. return offset. return stop point. change color sequence. jog main axis. manually trimming. manually change color. change working mode. embroidery mode switch. position idling. embroidery design contour. embroidery straight angled line. embroidery + line. embroidery straight line. moving frame


generated design. view embroidery range. power off return embroidery working point. check design and frame proportion etc.

### 5.3-1 Design Origin (Start Point) Set


In the working status. move frame to design's origin (start point). Press  key to set the flower version yuandian go home and check the box along the pattern maximum range. AX/AY coordinate clear.

If the current design had been set origin point. it'll prompt that "origin point had been set. if


need to reset again?" click  to reset the current position as origin point. the old offset also

will be cleared. Click . not set. continue to use the last origin.

#### 5.3-1-1 Low speed check pattern outline

After setting a starting point, press the  button to start generating the outline of flower version, after the completion of the frame Auto slow empty embroider contour, contour after completed the frame automatically returns to the starting point of flower version. If you spend beyond the frame setting range version, the system will pop flower embroidery version beyond the scope of the error message.

#### 5.3-1-2 Embroidery pattern profiles

After setting the start point, press the  button to start generating the outline of flower version, after the completion of the embroidery frame embroidery automatic contour, after the completion of the outline of the embroidery frame will automatically return to the starting point flower version. If you spend beyond the frame setting range version, the system will pop flower

embroidery version beyond the scope of the error message.

### 5.3-2 Offset (Another Start Point) Set

Set the offset point is mainly to facilitate the retractable embroidery materials and placed with the patch, set the offset point must be set before the origin (from the embroidery point).



When the offset point is not set, the default default frame is the offset point.

After the button is moved to the desired offset out frame point, press  the key to enter

the offset operation, and press  the key to complete the setting.

After setting, each time after the start of the embroidery frame automatically return to the origin of embroidery began embroidery. After the embroidery is completed, the frame is automatically stopped to the offset point.


### 5.3-3 Offset point (top of the frame) access operation

Press  to enter the offset operation. Press  key to the frame between the current position to set the frame size of most apex mobile, each press of the button, in the parking position to move alternately between the vertices.

When automatic offset whether parameter setting: "Yes", after the completion of the embroidery frame embroidered flower version will automatically move to set the frame size of the vertex stop, start again automatically after return to the last starting position start embroidery.

### 5.3-4 Return Origin (Start Point)

In the embroidery midway. if need to return origin to start again. can do the operation.

Press  key. the system will prompt that "if terminate embroidery. return origin?".




### 5.3-6-1 Set Change Color Sequence (sticking cloth offset)


In the interface. 001 ~ 200 means the change color times (the system only support 200 times). the cursor in the interface will start with the last position which has stitch bar value. input the current color sequence corresponding stitch bar No.. then the cursor will move the next sequence.

In the setting midway. if the front stitch bar No. error. select it and reset.

#### Offset out of the frame:

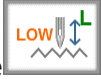
When a color sequence need **offset frame out (stitching cloth path embroidery)**. before

inputting stitch bar No.. please click  a time. the background of the current stitch bar will

change as red. If you need to cancel it. click  a time.

#### Low speed embroidery:

If the cursor is in a color order, you need to use low-speed embroidery automatically, press

the  key immediately before entering the needle bar, and increase the "L" after the current











needle bar number. If you want to cancel low-speed embroidery, press again  key.

The height of the towel can be adjusted as needed


#### Rotary Belt needle Bar set (function Limited):

It is used only in the machine with the function of tape embroidery. The default is mounted on the right side, using the first needle disconnection detection.

The Belt embroidery function has 10 Working mode selection,

			Left winding Embroidery,
			Right winding embroidery, Ordinary belt embroidery, Fold Belt Embroidery,
			Left rope embroidery, Right rope embroidery, Rope Embroidery3.
			Rope Embroidery4. Rope Embroidery5. Rope Embroidery6.



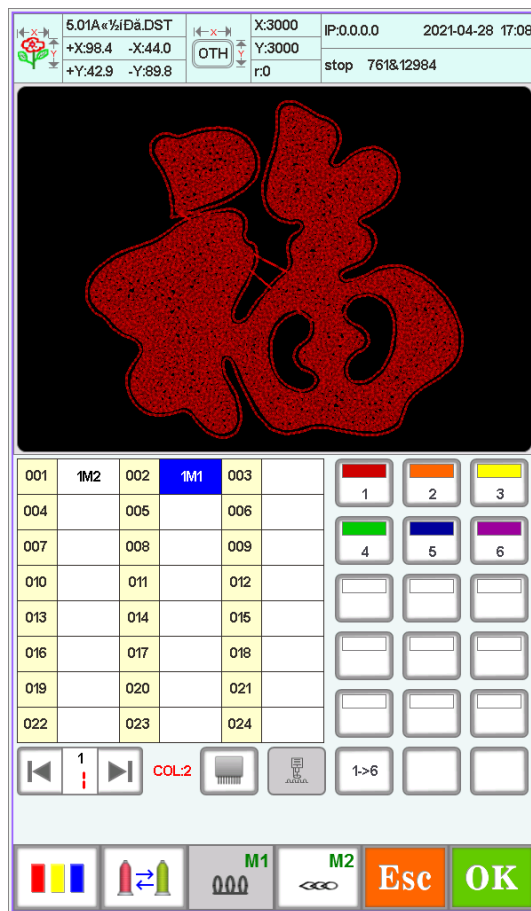
When you need to set the tape embroidery mode, press . The key enters the selection interface.

Depending on the pattern you are currently looking for, the left color order displays the corresponding pattern number.

**Towel embroidery needle rod settings (restriction function):**

Use only on machines with towel embroidery. The default is on the right, and the peace embroidery needle rod is independent.


In setting up the color change interface, as shown:





When setting the color change, first select whether it is a flat embroidery head or a towel

embroidery head, and press  or  to select.

Press the  key to enter the flat embroidery needle bar interface, and press the number

keys for the needle bar; press the  key to enter the towel embroidery needle bar interface,

and then press the  key to select the towel embroidery or the chain embroidery, then press

the number  keys to select the needle bar.

**Presser foot height adjustment (electric presser foot. This setting is set to open when the independent presser function is turned on):**

In the use of electric lift foot function, each color of the presser foot height can be adjusted according to need. Do not set the default height when using embroidery parameters.

Presser foot lowering height: the size of the presser foot from the highest position to the lowest position (0-50mm, usually 30mm)

Presser foot working stroke: the size of the presser foot from the lowest position when the embroidery is moved (3-8mm, usually 5mm)

Laser parameter setting (this setting is only available in systems with laser function):

Laser parameters are: maximum light intensity, minimum light intensity, maximum speed, minimum speed


Maximum light intensity: the maximum power of the laser during cutting

Minimum light intensity: the minimum light intensity of the laser at the time of cutting (the light intensity at the corner position is adjusted according to the uniformity of the cut)


Maximum speed: the maximum speed of the laser during cutting

Minimum speed: the bottom speed of the laser at the time of cutting (the speed of the corner position, adjusted according to the uniformity of the cutting)

When setting the current color change requires laser cutting, after selecting the laser function by

pressing the  button, the setting interface pops up, and the parameter setting can be made according to the cutting material. The cutting material has a low melting point (easy to cut), which can reduce the maximum light intensity or increase the maximum speed. To improve efficiency. If the cutting material has a high melting point (not easy to cut), it can increase the maximum light intensity or reduce the maximum speed to improve the quality.




Complete setting. click  to save. **in the function. the system will save the the cursor position prior data**

### 5.3-6-2 Replace Stitch Bar


The function is used for disposable modify a certain stitch of all color sequence.




In the change color setting interface. click . Click on the selected needle bar needs to be replaced, all the same needle position are selected, press the key you want to use (replace) the completion of the replacement value of the needle bar needle bar operation.

### 5.3-6-3 Set the needle bar display color






After setting the color change interface, press the  key to enter the needle bar display color setting, show as:



First press the key to select the needle bar button to be set, and then click the left color block to select the desired color. After selecting the needle bar to be modified, press the  button to save the selected color. The color of the real-time embroidery preview will be displayed according to the set color.

### 5.3-7 Change Working Mode

In the working status interface, click  to change working mode. click a time and change a mode(cycle change). click keys follow change. the following is  automatically change color automatically start mode.  manually change color manually start mode.

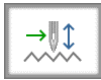
In the manually change color manually start mode. the set color sequence invalid.

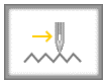
Shutdown and power on. it is still the modified mode.

### 5.3-8 Embroidery Mode Switch

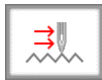
Switch embroidery mode. mainly for realization the compensation operation. Users can move the stitch tracking to the specified position by idling embroidery.

In the working status interface. click  to change embroidery mode. click a time and

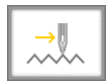
change a mode(cycle change). click keys follow change. the following is  normal embroidery.



low speed idling embroidery.



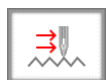
high speed idling embroidery.



low speed idling embroidery:

In the stop state, press the START key (low-speed idle), the spindle will not move, the embroidery frame advances along the embroidery stitches, and the low-speed needle feed stops when the key is released.

In the stop state, press the STOP key (low-speed evacuation), the spindle will not move, the embroidery frame will go back along the embroidery stitches, and after releasing the key, the low-speed exit will stop. Stop status.



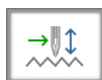
high speed idling embroidery:

In the stop state, press the START key (high-speed air-in), the spindle and the embroidery frame do not move, and the number of embroidery progress needles is increased. When the key is released, the embroidery frame moves directly to the position of the forward stitch point.

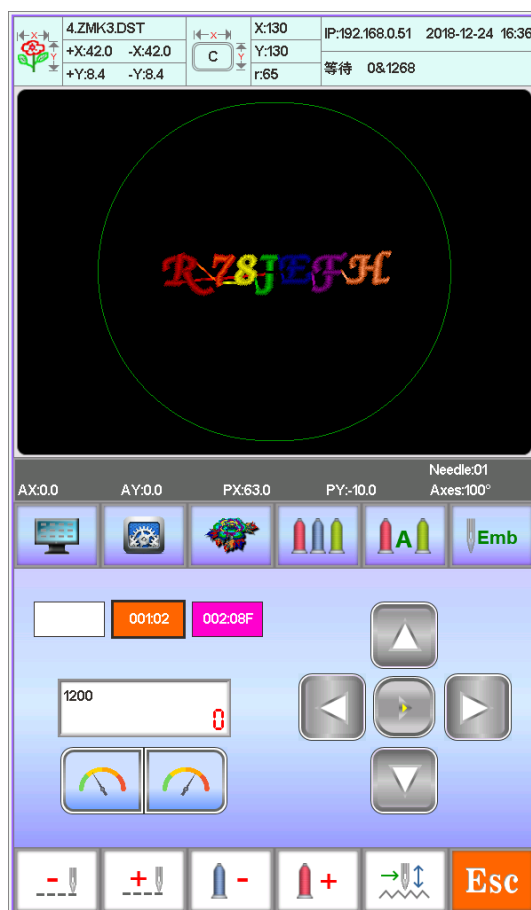
In the stop state, press the STOP key (high-speed evacuation), the spindle and the embroidery frame do not move, and the number of embroidery progress stitches decreases. When the key is released, the embroidery frame moves directly to the position of the back stitch point.

## 5.3-9 Positioning Idling

Positioning idling contains add the specified stitch. reduce the specified stitch. forward a color. backward a color.



In the working status interface. click , show as:




Complete the positioning idling. click  to return working status.

### 5.3-9-1 Add the Specified Stitch/Reduce the Specified Stitch




In the positioning idling interface. click  or  to choose them. show as:



Click numeric keys to input the required stitches. click , frame will directly move to the specified stitch position.

### 5.3-9-2 Forward a Color / Backward a Color





In the positioning idling interface, click  or  to choose them. frame will directly move to the specified stitch position.


### 5.4 Embroidery Running Status

In the embroidery running status, only do the main axis lift speed operation.



Click   to slow down or speed up main axis rotation speed. Click 



 to choose the lifting speed.

### 5.5 Stitch Bar Operation

After the parameter setting of each embroidery is completed, you can press the START button to start embroidery.

When the embroidery pattern is stopped: press START to start embroidery. Press and hold the START button for more than 3 seconds, the spindle will embroider at the lowest speed. Press the STOP button to reverse the needle, and press it again to stop the reverse needle.

When the embroidery pattern is running: press the STOP button once to stop embroidery. Press the START button for more than 3 seconds, the spindle will embroider at the lowest speed

### 5.6 Sequin Head Switch Control and Indicator

Toggle the switch from up to middle, the indicator is green, the landing gear put down (machine lock open). toggle the switch down, slice motor work a time; toggle the switch down more than 2 seconds, the indicator will be orange, release the switch, the landing gear will rise (air pressure)



Switch in the middle, don't enter the sequin embroidery, the indicator is orange, landing gear up, wait send slice. When enter sequin embroidery, landing gear down, indicator change as green.

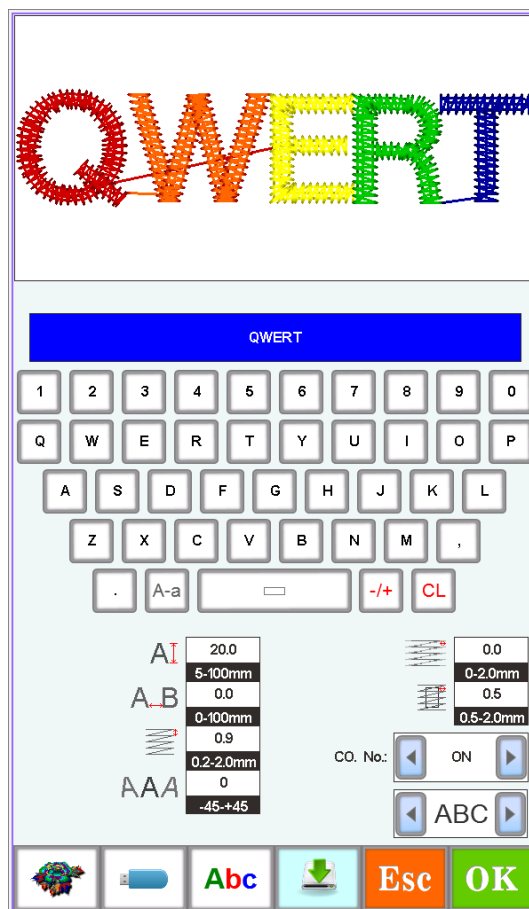
Sequin head switch up. the indicator off. and close landing gear(when has air pressure. landing gear will automatically rise).

## PART 6 LETTERS TO GENERATE EMBROIDERY

In the flower management interface, press  key to enter into letter interface.

Press key to select required letters or other signs. Press  key to switch upper-case and

lower-case letters. Press  key to clear letter. After entering is completed. press  key to skip to setting interface (operation cannot be continued if embroidery is not released).



Set letter related parameters. After setting is completed. press key below to select required

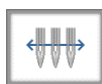
letter type (5 types). Press  key to generate letter pattern. On the left upper corner. it can

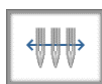
see the generated embroidery card. Press  key to save embroidery card in memory.

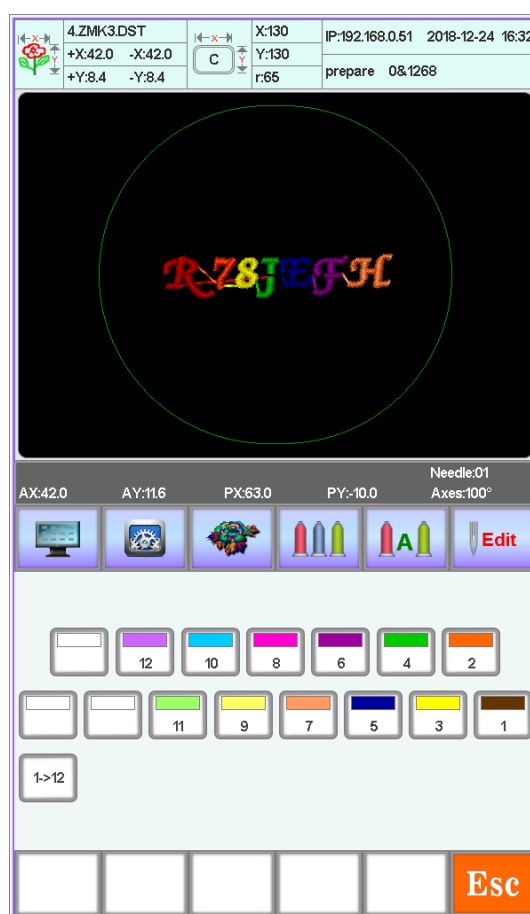
The current letter string needs to use monochrome embroidery when the color order is closed,


you need to open multi-color.

## PART 7 MANUALLY CHANGE COLOR




In the working or preparation status. Click  to switch manually change color operation. it'll prompt that a numeric keypad. according to your requirements. click the corresponding numeric value to change color.



Press the number key to switch the ordinary head needle pole, Press  Key switch to tape embroidery Head (limited function).The Embroidery box will automatically switch to the current head position.

## PART 8 MANUALLY TRIMMING


In the embroidery preparation or working status, can do the trimming operation.

Click  on the panel to do bottom side trimming operation.

## PART 9 FRAME ORIGIN

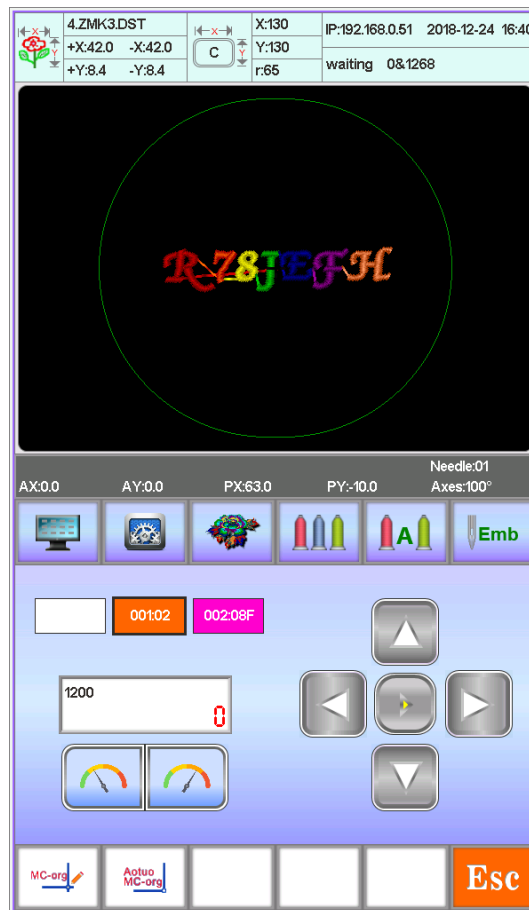
Frame origin operation contains manually set origin. find absolute origin and set software limit.



In the main interface, press  key to enter the integrated setting interface, press



 key to enter the original operation interface. show as:



### 9.1 Manually Set Frame Origin





In the "Frame Origin" interface, click , it'll prompt a dialogue box "Whether set the

current point as frame origin?". click  to complete. PX/PY coordinate change as 0.0.

## 9.2 Automatically Find Absolute Origin

Absolute origin take use of frame limit to detect frame's absolute position. to ensure that some accidents happen in the embroidery midway. can use recovery embroidery to continue.

**The function is automatically find by system. must confirm that limit sensor is effect. or it'll cause machine parts destroy!**

In the frame origin interface. click . it'll prompt a dialogue "Please confirm limit switch work normal?". click  to find frame origin absolute origin. completed. return the prior stop point.

After finding the absolute origin. the operation will be not effect until the frame moves after power off.

## PART 10 FRAME SET

The feature use to set the size of cap frame and A-E frame. and the distance between from frame absolute origin to frame middle.



In the main interface, press



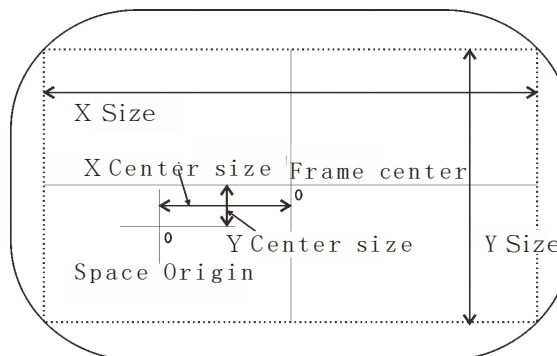
show as:

type	X centre	Y centre	X size	Y size	Rounded
	63	58	260	60	0
A	63	-10	70	70	35
B	63	-10	100	100	50
C	63	-10	130	130	65
D	63	-10	170	170	85
E	63	-10	270	270	70
F	63	-10	490	345	85
G	0	0	600	600	0
H	0	0	600	600	0
I	0	0	600	600	0
J	0	0	600	600	0

1	2	3
4	5	6
7	8	9
+/-	0	CL


				<b>Esc</b>	<b>OK</b>
--	--	--	--	------------	-----------

Input numeric value according to your requirements. then click to save.



## PART 11 STATISTIC













The feature use to view generated statistic and clear statistic.


In the main interface, press  key to enter the integrated setting interface ,

click  .

Embroidery Sum:	<input type="text" value="0"/>
Total Completed:	<input type="text" value="0"/>
Break Times:	<input type="text" value="0"/>


					
					

Click  to clear the current statistic value.

## PART 12 MAIN AXIS JOG OPERATION

The feature use that main axis position stop. can operate it in the interface matched with keys.

According to your requirements to do it.

Click  to jog main axis to 100 degree (Zero positon)

## PART 13 LANGUAGES



In the main interface, press

key to enter the integrated setting interface, click




to change required languages. Click to select the desired language, the system automatically switches to the selected language.

## PART 14 EMBROIDERY PARAMETERS

Owing to different machine configuration and embroidery process requirements, need to change some commonly used parameters to meet.

In the main menu, click . click the required parameter. click  or  to modify. click


 to save. then return the main menu.

The definition and the value range of embroidery parameter. see **Table 1**.

## **PART 15 SET MACHINE PARAMETERS**

The parameters only can be set by professional engineers. the other can not. please don't freely change and modify. to avoid machine can not work.

## PART 16 USERS MANAGEMENT

In the main interface, press  key to enter the integrated setting interface, Press the




key to enter the user management interface. In this interface, you can set the time setting and user limit. Figure:



The screenshot displays the user management interface with the following elements:

- Time:** 2018-12-26 15:03
- usage time:** 0 days
- Encryption Serial Number:** 112233445566
- Remove PWD:** [Redacted]
- Numeric Keypad:** Buttons for digits 1-9, +/-, 0, and CL.
- Bottom Navigation Bar:**
  - Row 1: Unlock (lock icon), Clock (time icon), Password (user icon), and three empty buttons.
  - Row 2: User icon, computer icon, document icon, flag icon, question mark icon, and empty button.
  - Row 3: Sewing machine icon, INFO icon, MC-org SET icon, POWER OFF TO BACK icon, Esc icon, and OK icon.

### 16.1 Time setting

Press the  key to enter the time setting interface (if the device is open after the restrictions can not enter the time setting interface), as shown in Figure:

Year: 2018  
Month: 12  
Day: 24  
Hour: 16  
Minute: 37

1 2 3  
4 5 6  
7 8 9  
+/- 0 CL


Unlock [Clock] Password [Person] [Blank] [Blank] [Blank]  
[Person] [Monitor] [Document] [Flag] ? [Blank]  
[Printer] INFO MC-org SET POWER OFF TO BACK Esc OK

Set the current system time as needed, press the  key to save.

## 16.1 Remove Unlock

The machine because of restrictions on the use of expiration, the system automatically lock the machine, and prompted to enter the release limit password. Figure:




After the encrypted serial number is told to the device vendor, the user can obtain the unlocked password and press the  key to complete the unlocking of the current limit. After the release of the use of time will be re-set, 0 days for the use of restrictions.

Do not close the current device until the password is removed. Otherwise, the password will not be released.

## PART 17 SYSTEM TEST

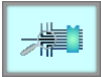
The operation mainly be used by maintenance engineer. check and test machine.

In the main interface, press  key to enter the integrated setting interface. Press

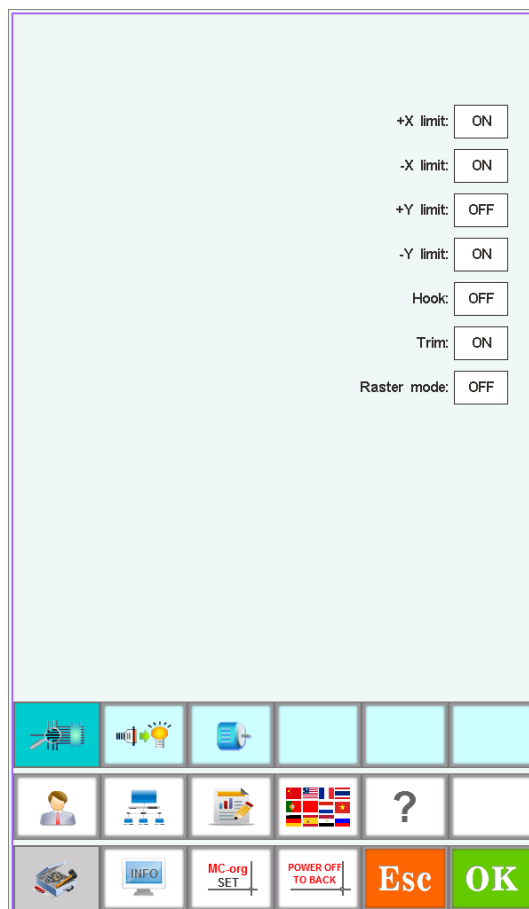


to enter the system test interface. The input test interface is entered by default.


### 17.1 Input Test

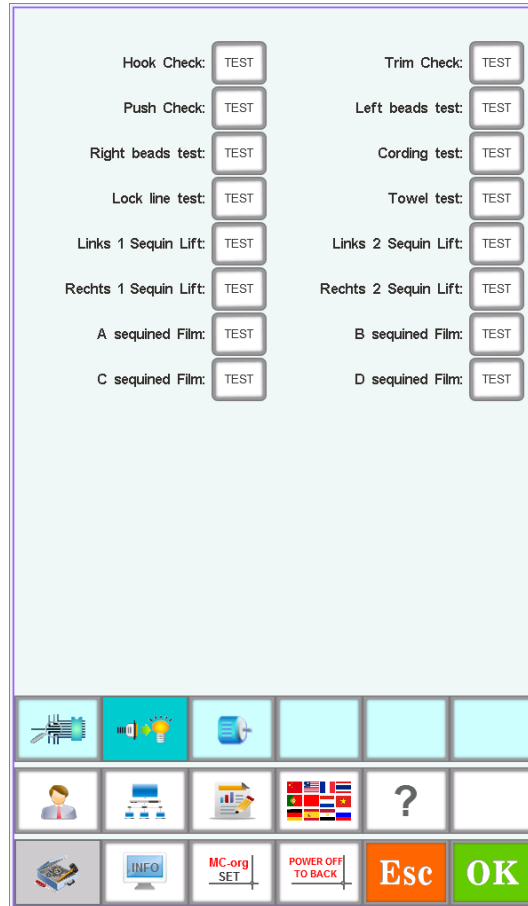
In the test interface. click  . view the input status changes. if no change. the input signal


fault. please check and repair.



## 17.2 Output Test

In the test interface, click .



click the corresponding  key of required testing items. check whether output has effect or not. if the output device no action. the output is fault. please check and repair.

Hook Test: each click. hook knife will do the alternating movement between stretch and reverse.

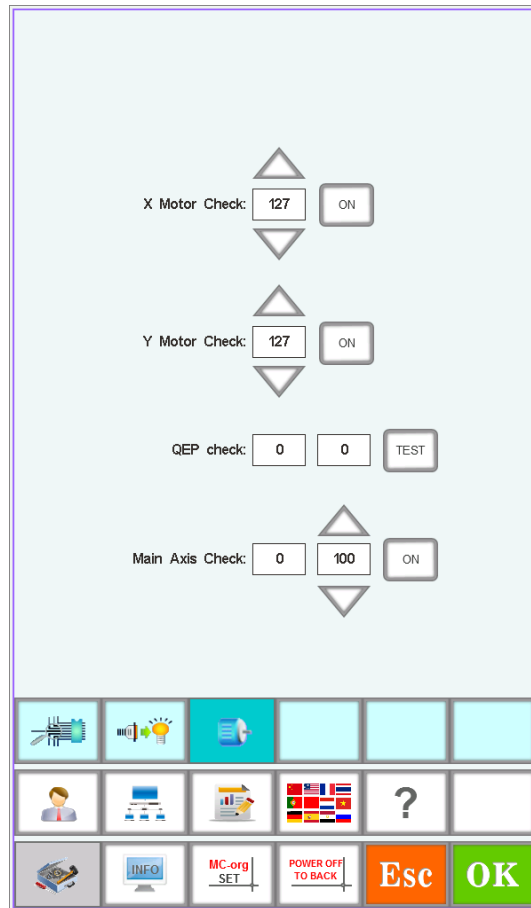
Trim Test: each click. trim motor will do the alternating movement that turn a half of circle and stop. and one-half turn in the same direction in place.


Buckle Test: each click. buckle electromagnets pull 2 seconds to automatically disconnect.


Sequin Test: each click. sequin landing gear perform decline. slice 3 times. rising.


## 17.3 Axis Test

In the "Test" interface, click  into "Axis Test".




and click the corresponding  key of required testing items. check whether axis has effect or not. if the output device no action. the output is fault. please check and repair.

XY axis Test: click direction keys to change motor moving pulse numbers(1-127). the default is 127 pulses. click  to begin to move back and forth.

Main Axis Test: click  to begin to turn by 100 rev/min. click direction keys to modify main axis speed. Check target speed and actual speed are the same(1000rpm difference of less than 5rpm)

## 17.4 Machine Head Test (Used only in organic head panels)

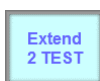


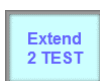
In the test interface, press  key to enter into machine head breakage test. Press figure button to test corresponding needle bar. Check whether breakage detection is valid. If the pre-out has fault, Please check and make maintenance.

Facial suture test: When facial suture test spring is closed, red indicator is normally on. It is changed into green when it is separated.

Bottom suture test: Toggle the test wheel. The indicator is flashing along with the toggle speed. Select facial suture and bottom suture according to the requirements.


## 17.5 Head ID setting (used only when there is an AB combination embroidery function)

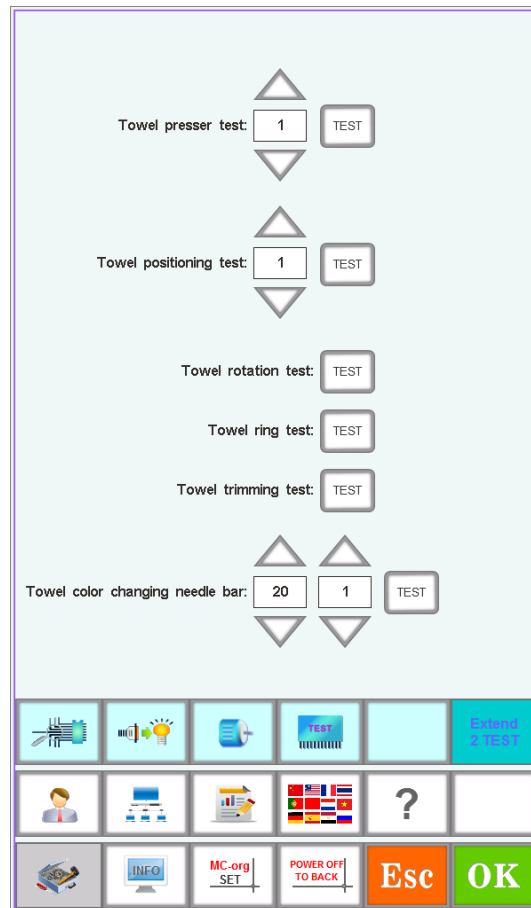


In the test interface, press  the button to enter the head ID setting interface. After pressing the “1” button, push the No. 1 head plate switch up (or the Mend button) for more than 5 seconds. After the ID is completed, the operation head will drop. A 3 beep indicates that the ID is successfully written, and the operation continues to write other head IDs. When you are done, you can exit.

## 17.6 Towel head test (only used when the towel embroidery function is available)



In the test interface, press the  key to enter the towel test interface, as shown in the figure:



**Towel positioning test:** Press the up and down keys to select the positioning position, press the



key, the positioning will automatically rotate to the position and stop.



**Towel rotation test:** Press the key, the needle bar will automatically rotate several times and then stop.



**Looping rotation test:** Press the key, the looping will automatically rotate several times and then stop.




**Towel thread cutting test:** Press the button, the thread cutter will automatically extend,


and press the  button again to retract it

**Towel color-changing needle bar:** the left number box is the current needle bar compensation value -20--+20 adjustable, the right is the selection needle bar 1-6, after the needle bar is selected,


the color changes to the current needle bar automatically, if the position is If it is not in the current position, you can press the up and down buttons in the left adjustment frame to adjust. When the compensation value is adjusted, the current needle bar value will be displayed. Shake the ring head left and right to adjust the compensation until the needle bar is displayed.

## PART 18 SYSTEM INFORMATION

In the main interface, press  key to enter the integrated setting interface,


In the main menu, click .

### 18.1 System No. and Version Info

In the system info interface, click  to view.


### 18.2 System Update

Used to update new software.

In the system info interface, click  to update. Follow the prompts to upgrade, Follow the prompts to upgrade, in the upgrade process can not power. About 3 minutes to complete the upgrade, the system automatically restart. You can not unplug the U disk before restarting.


### 18.3 Interface upgrade

The library file used to upgrade the control system.

In the system information interface, press the  key to start the upgrade operation. Follow the prompts to upgrade, in the upgrade process can not power. About 8 minutes to complete the upgrade, the system automatically restart. **You can not unplug the U disk before restarting.**

## PART 19 Network settings



In the main interface, press  key to enter the integrated setting interface,



In the main menu interface, press the  key to enter the network settings interface.


Depending on the system configuration, you need to set up the system IP when using a wired connection. Use the wireless connection need to search WIFI to connect, the specific operation is as follows.

IP settings:

the machine must set the IP and LAN IP in the same number, or can not link. That is, the first three segments of the same, the final address does not conflict.

WIFI connection:

enter the search interface to search for a nearby wireless connection account, the system automatically sorted by the signal strength, select the need to connect the account (account name is limited to az / AZ and digital, other characters can not be displayed correctly), enter the password input interface , Enter the password (password is limited to az / AZ and digital, other characters can

not enter), press the  button to connect, after the success of the main interface shows the IP address, the connection is not successful when the error message.

## PART 20 APPENDIX

### 20.1 Parameter Table

Name	Functions	Default	Range
<b>A</b>			
Jump stitch trim number	It starts to trim or not when several stitch jumped	3	1-9, no trim
Width thread trim length	The remaining thread length after trimmed, a higher number means a longer remaining	3	1-7
Bottom thread break detect	Check sensitivity	Middle	High, middle, low, no detection
Width thread break detect	Check sensitivity	5 stitches	3-9 stitches, no detection
Jump stitch break detect	Detect breaking whether or not when jumping	No	Yes, No
Upper thread lock angles	Close the open angle again after startup.	200	200-250
Trim lock times	Lock several stitches when trimming, to avoid off-thread	1	1-3
Trim lock stitch length	Increase lock stitch length if the material is thin, and decrease lock stitch length properly if it's thick	0.6mm	0.5-1.0mm
Break auto-return	Auto-return stitches after breaking, the break head will compensate embroidery ahead	4	0-9
Auto-set start point	Set "Yes" when designs in the head and tail continuous embroidery	Yes	Yes, No
<b>B</b>			
Auto-return start	Whether or not to return start point after	Yes	Yes, No

point	embroidery, set "No" in the end-to-end continuous embroidery		
Pull stitches continuous back	Return stitches automatically and continuously after several stitches when pull stitches	0	0-9
Large stitch embroidery mode	Which modes to use when large stitch	Low speed	Low speed, jump
Auto-jump stitches	When large stitch is in auto-jump, divided into 2 stitches or more automatically if stitches is over a certain range	6.5mm	6.5-8.5mm
Auto-decelerate stitches	Decelerate embroidery speed if stitches is over a certain range	6.0mm	2.0-9.0mm
Continuously jump deceleration	When jump continuously, decelerate to a percentage of the current speed	80%	60%-90%
Start main axis rotation speed	Main axis rotation speed when starting or stopping, it will increase the trim length when the rotational speed rises	100	60-200
Max. restrict speed	Main axis maximum rotation speed ( by machine parameter limit)	750	550-1000
High-speed moving frame speed	Set high-speed moving speed, a higher number means a higher speed	5	1-9
Stepper change color speed	The changeable color speed when use stepper motor	5	0-9
<b>C</b>			
Auto-start same color	Whether or not to auto-start when meet the same color stitch bar	Yes	Yes, No
pull stitch beyond frame and stop	Whether or not to stop when pull stitch beyond frame	Yes	Yes, No

Machine stitch bar quantity	The current machine used stitch bar quantities	n*	1-15
Sequin stitch bar	Use left, right or both of them. The parameter is invalid if the feature closed in the machine	left*	left, right, left and right
Sequin embroidery limit speed	Main axis max. rotation speed at the sequin embroidery	700	300-1000
Carve knife stitch position	Use the position of carve knife (no breaking detection)	0	0-n
Rope embroidery stitch position	Use rope embroidery stitch position (auto-deceleration)	0	0-n
Rope embroidery limit speed	Main axis max. rotation speed at the rope embroidery	300	300-800
Circle embroidery	Whether or not to continue to embroidery	No	Yes, No
Auto Back Offset	Whether or not the frame automatically shift to stop to its top after the completion of the embroidery (the frame parameter must be correspondent to its size)	No	Yes, No
<b>D</b>			
Frame moving curve	Frame moving mode, adjustment according to the actual embroidery effect	F1*	F1-F5
Frame moving angle	Frame moving angle, adjustment according to the actual embroidery effect	250*	220-270
Moving frame compensation time	Thin material use positive compensation, thick material use negative compensation, adjustment according to the actual embroidery effect	0	5%, 0, -5%, -10%
Whether or not to use trimming	Whether or not to use trimming	Yes	Yes, No
Break rise landing gear	Whether or not to rise landing gear after breaking in the sequin	Yes	Yes, No

Reset frame after power on	Whether or not find frame absolute origin after power on	No	Yes, No
Landing gear type	Sequin landing gear mode	motor	Motor, pneumatic
Left sequin size	Left sequin slice size	3*	3-9
Right sequin size	Right sequin slice size	3*	3-9
Various speed stitch numeric	Adjust speed less than continuous stitches	20*	5-20
<b>E</b>			
Main axis brake delay	The larger the numeric is, the later the brake angle is	8*	1-20
Whether or not to move frame after trimming	Whether or not to move frame after trimming	No	Yes, No
Hook motor speed	Adjust hook stepper motor speed	5*	1-5
Sequin lift speed	Adjust lift stepper motor speed	3*	1-4
Broken voice prompts	How long to prompt once after a break for each time interval	1	1-3, Close
Cording shelf type	Which kind of frame of rope embroidery to use	JY*	JY, GJ
Cording lifting methods	A lift mode for rope embroidery	Power*	Power, Air valve
Cording swing amplitude	Adjustment of swing for rope embroidery	20	0-20
Cording slack adjuster	Loose or tight adjustment for rope embroidery	1*	0-9
Cording lifting speed	Lifting speed of rope embroidery	3*	1-4

**n\* machine use stitches (no default)**

-\* set according to your requirements (no default)

## 20. 2 System Fault and Solution

<b>Fault</b>	<b>Cause</b>	<b>Solution</b>
ation timeout or 1/2 communication timeout of Multifunction board	1.A signal line connection fault from operation head to Multifunction board 2.Multifunction board is not match with operation head 3.Multifunction board destroy	1.Overhaul the Cable 2.Replace Multifunction board 3.Replace Multifunction board
Touch Panel has no response	1.Poor contact of touch panel's plug 2.Touch panel destroy	1. Re-insert touch panel's plug 2.Replace touch panel
The movement of touch panel (the malposition of Touch position)	1.Ageing touch panel 2.Touch panel destroy	1. Recalibrate the touch panel's position 2.Replace touch panel
Main axis not in the 100 degree	Main axis don't stop 100 degree	Jog or manually move main axis to 100 degree
Main axis not turn	1.Main axis controller no signal or power input 2.Main axis motor no power input or input fault 3.Controller or motor destroy	1.check signal wire or power wire 2.check main axis motor input power 3.replace controller or motor
Main axis reverse turn	1.Servo controller parameter error 2.Coder A/B phase reversed	1.Reset servo controller parameter 2.Adjust coder A/B phase connection
No zero position	1.Zero signal panel destroy 2.Zero position to main board connection fault	1.Replace zero position panel 2.Check or replace connection wire
Change color overtime	1.Change color motor not turn 2.Machine part of change color stuck 3.Change color motor to power wire fault	1.Check change color motor or wire 2.Repair or replace the stuck machine part 3.Check or replace wire
No stitch position	1.Stitch detection wheel position fault 2.Stitch detection board destroy	1.Adjust the position 2.Replace the board
X motor driver	1.X driver over-voltage or over-current	1.Check driver input power and power on

fault	protection 2.Driver destroy	again 2.Replace driver
Y motor driver fault	1.Y driver over-voltage or over-current protection 2.Driver destroy	1.Check driver input power and power on again 2.Replace driver
Trim not in place	1.Proximity switch detection not in place 2.Proximity switch destroy	1.Manually adjust trim position 2.Replace proximity switch
Trim motor does not turn	1.Poor contact of motor plug or cable 2.Multifunction board destroy 3.Motor destroy	1.Check cable or plug, re-insert plug 2.replace multifunction board 3.Replace motor
Hook motor does not turn	1.Poor contact of motor plug or cable 2.Multifunction board destroy 3.Motor destroy	1.Check cable or plug, re-insert plug 2.Replace multifunction board 3.Replace motor
Lock head fault(stitch rod drop)	1.Poor contact of motor plug or cable 2.Multifunction board destroy 3.Motor destroy 4.Mechanical malposition or stuck	1.Check cable or plug, re-insert plug 2.Replace multifunction board 3.Replace motor 4.Maintenance of machinery part
Sequin position fault	Sequin stitch bar set fault	Reset change color sequence
Abnormal detection for stitch break	1.Optical coupler installation position is not correct 2.Optical coupler board destroy 3.Cable or plug fault from optical coupler to multifunction board 4.Multifunction board destroy 5.Embroidery parameter "Width thread break detect "or "Bottom thread break detect" setting error	1.Re-adjustment of installation 2.Replace optical coupler 3.Check cable, re-insert plug 4.Replace multifunction board 5.Adjust Embroidery parameter correctly
Design malposition	1.Design data error 2.High rotating speed 3.Low XY driver current 4.Mechanical failure	1.Check design 2.Reduce main axis rotating speed 3.Adjust the drive current or change the speed of the needle-step numerical values 4.Maintenance of machinery part
+X limit fault	+X direction limit	Manually move frame in opposite direction
-X limit fault	-X direction limit	Manually move frame in opposite direction
+Y limit fault	+Y direction limit	Manually move frame in opposite direction

-Y limit fault	-Y direction limit	Manually move frame in opposite direction
----------------	--------------------	---