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# **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 form 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

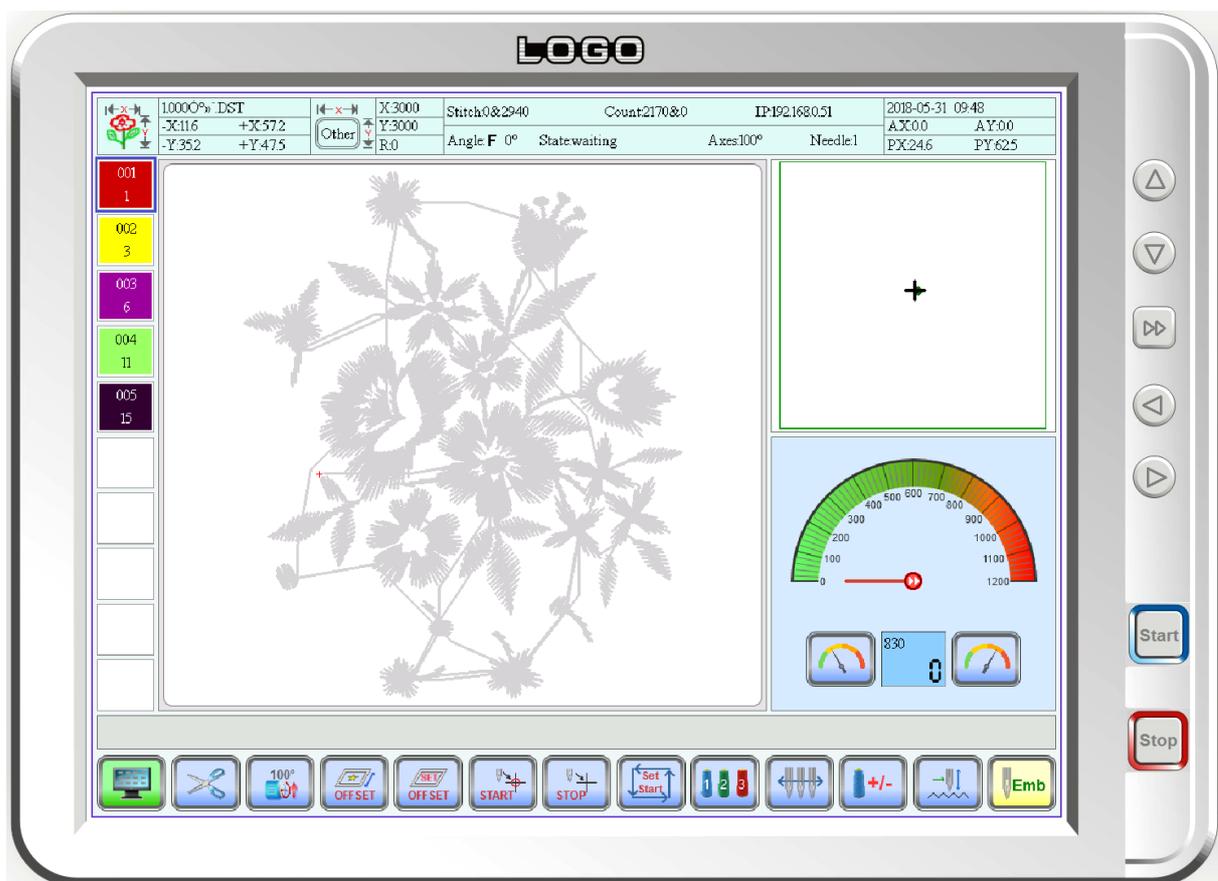
**To avoid electric shock or fire due to leakage of electricity, over-voltage or insulation etc.. please ground the electric control system reliably.**

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



directional keys: when in the embroidery and preparation status.

to move frame.



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



start key



stop key

## 1.5-3 Touch Icons



adjust main axis speed



main menu



origin point



Return to origin



offset point



Set offset



manually change color



set change color



embroidery mode switch (normal embroidery)



remove embroidery



idling embroidery



return stop point

AX/ay: display relative design origin coordinate

PX/PY: display relative frame origin coordinate

### 1.5-4 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 formate. 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.

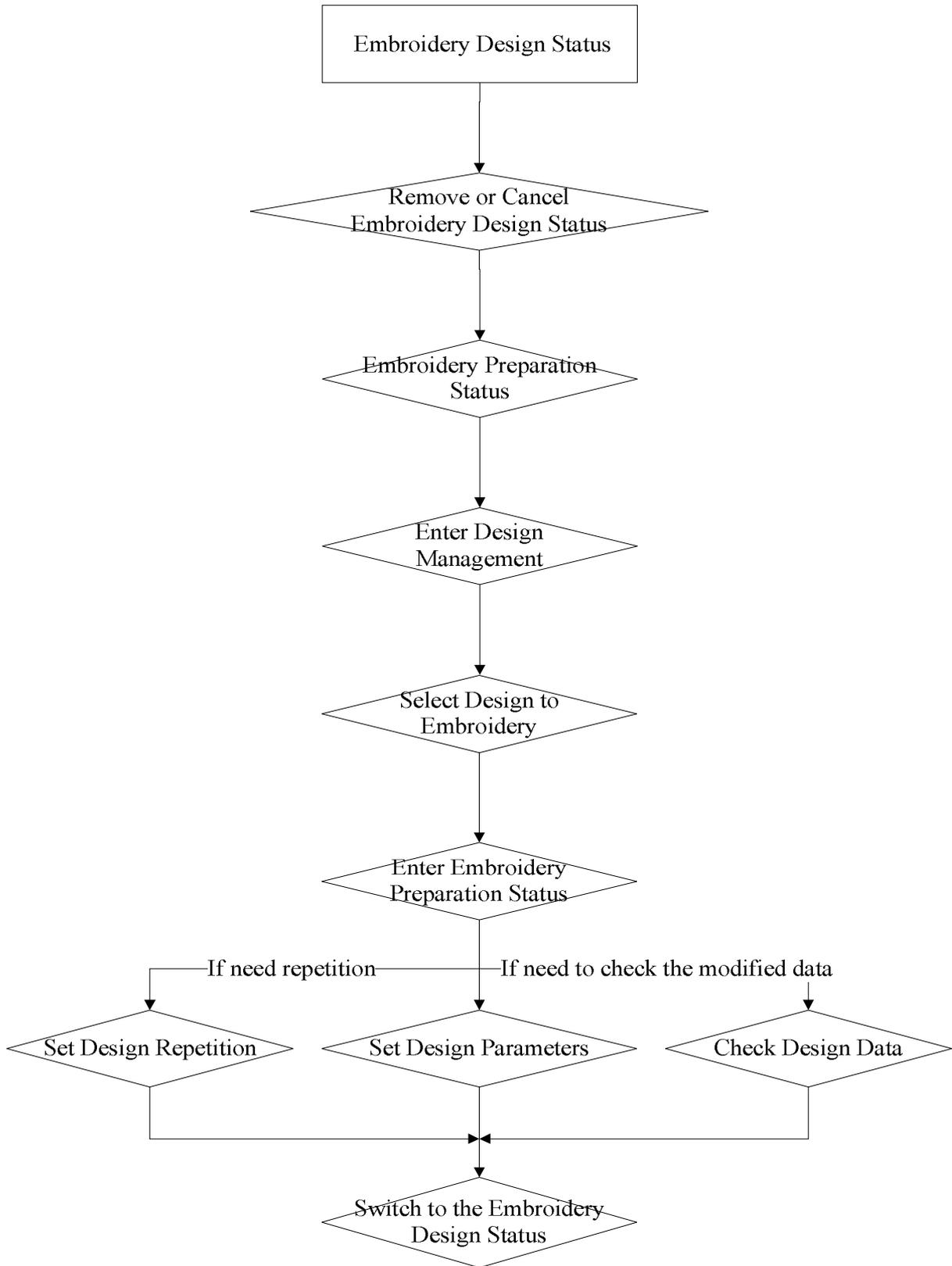
The “Main axis stop position adjustment” function enables the user to adjust parameters of the system according to the characteristics of the embroidery machine to achieve correct stop position.

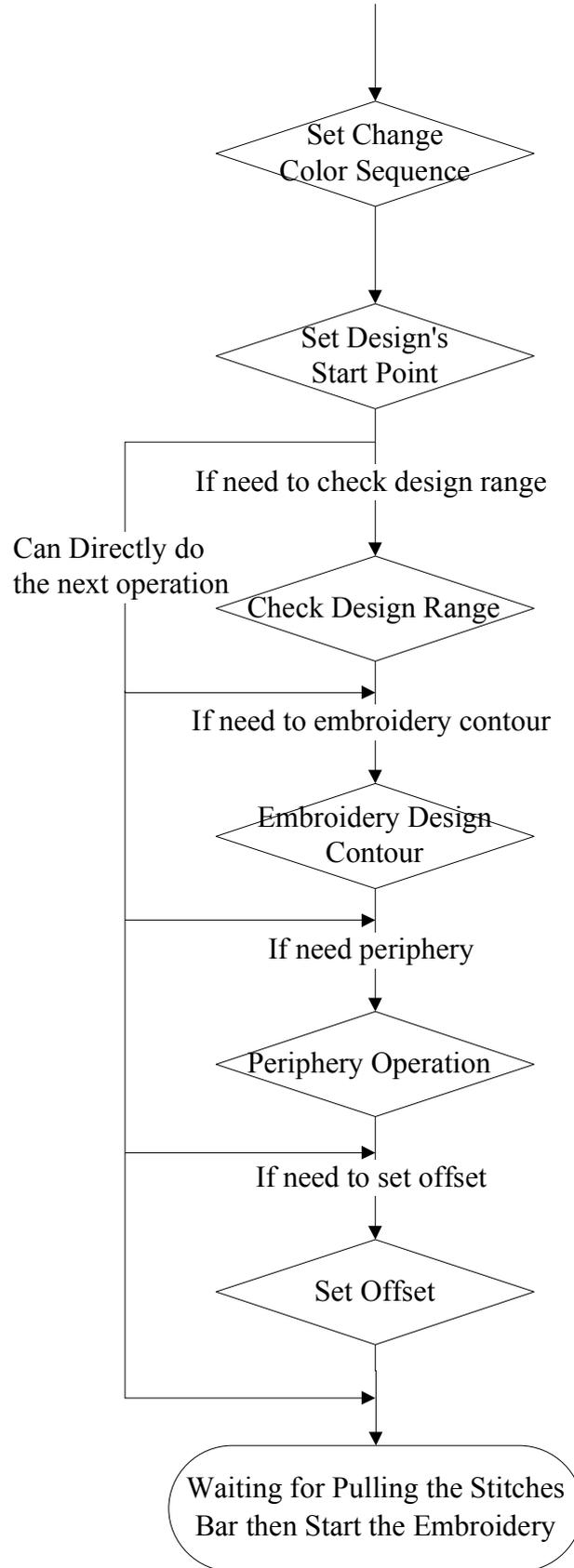
The “Auto memorizing of embroidery design parameters” function can automatically store the preset embroidering parameters or related data of embroidered designs. including color changing. the origin. the offset point. embroidering parameters and repetition etc.. so as to facilitate the embroidery of 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 Menu" interface. click  to enter the flower management interface .click . show as:

Or in the release of embroidery after the preparation of embroidery interface, Click  key operation



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.

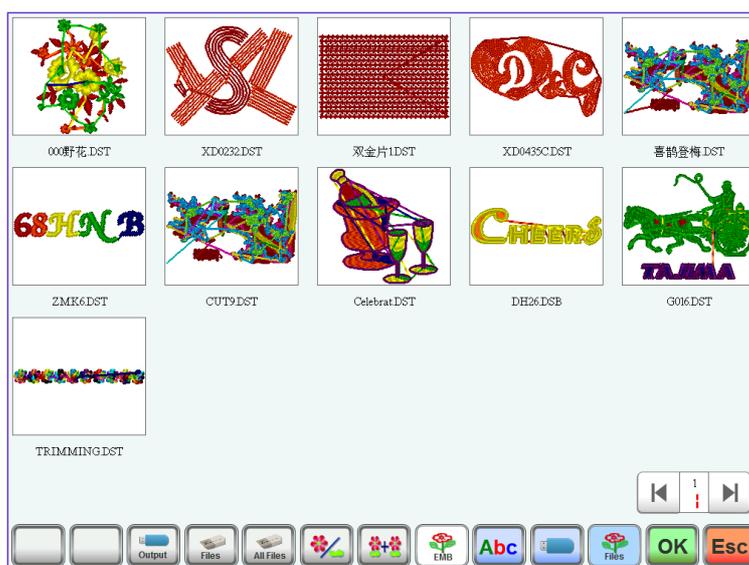
Click  to return the last interface.

## 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 Menu" interface. click . enter "Designs Management" interface. show as: :



### 4.1 Select Design



In the "Design Management" interface. click  to enter "Select Design" operation.

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.

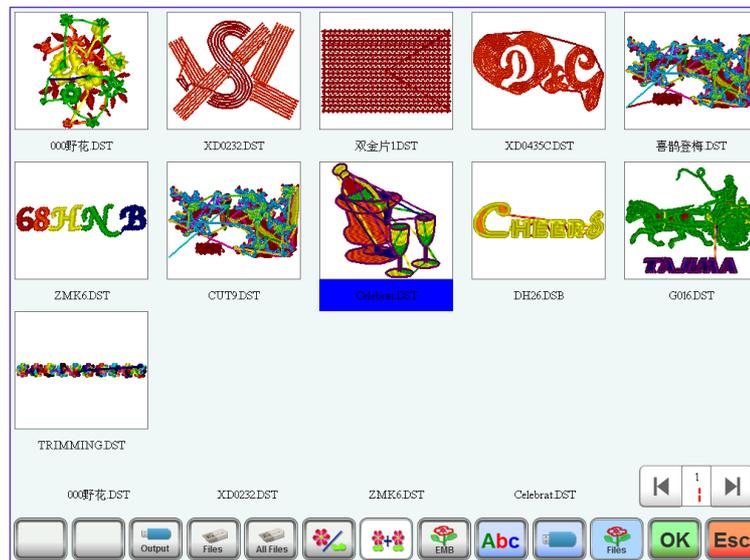
## 4.2 Cut Design

In the "Design Management" interface, click .

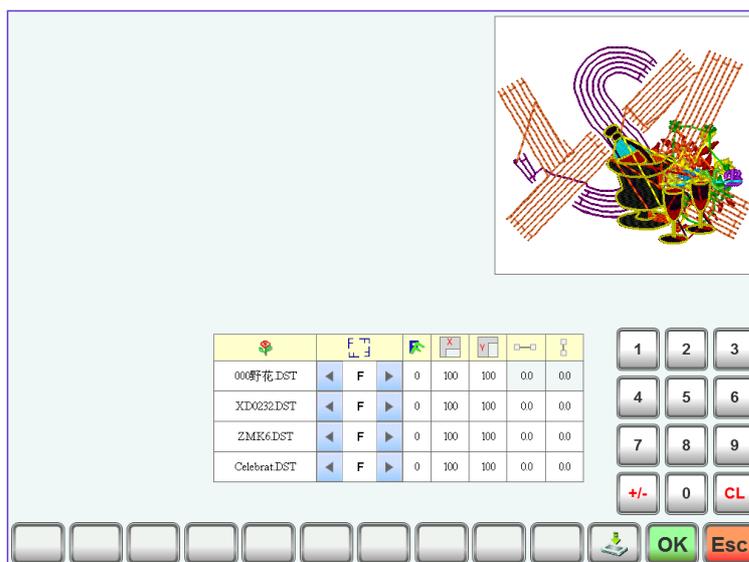
Click the required design. Click the required design, whose relative information will be displayed in the screen. The selected design No. and name background change as blue. Click . show a box, input the cut stitches. Click  to confirm, then it'll prompt that the design's storage number and cut progress 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.

#### 4.5 Input Designs to U disk

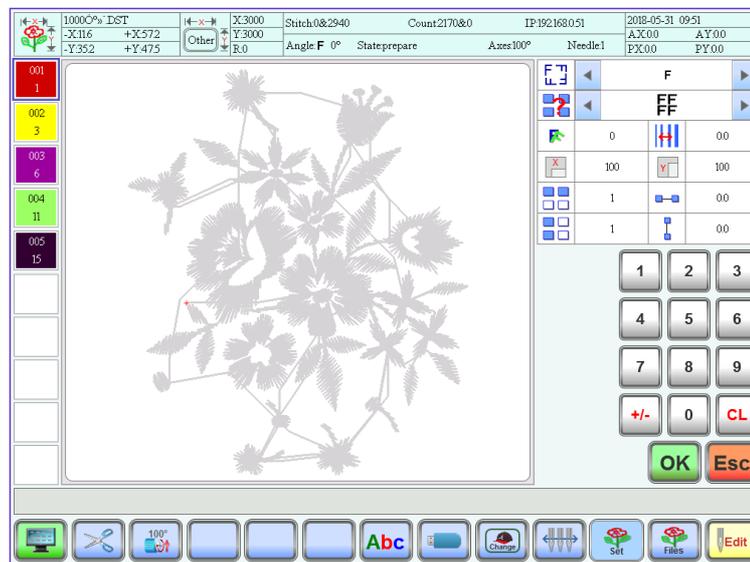
In the "Design Management" interface, click , select designs, click  to U disk.

## 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:

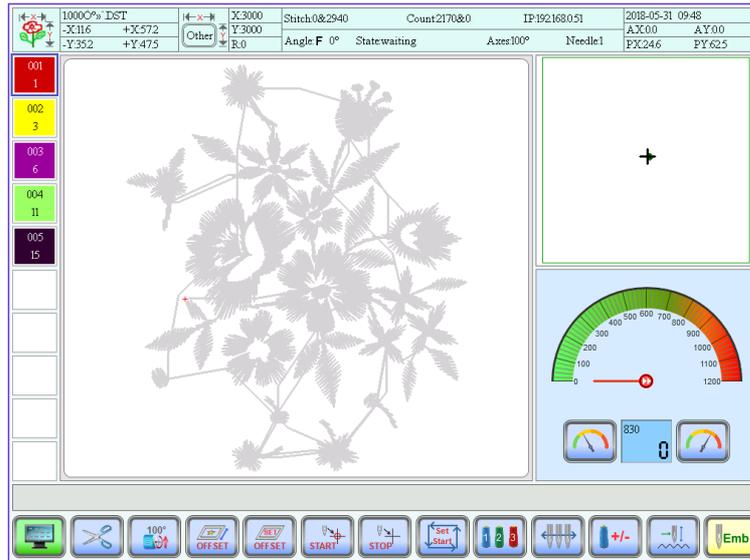
Preparation Status



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.

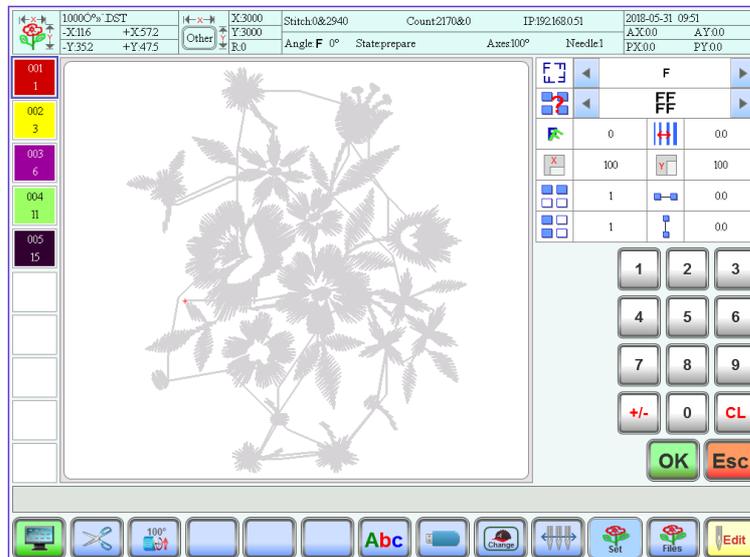
## 5.2 Preparation Status

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%

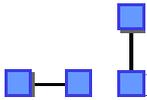


Repetition: ordinary. X symmetry. Y symmetry. XY symmetry



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.

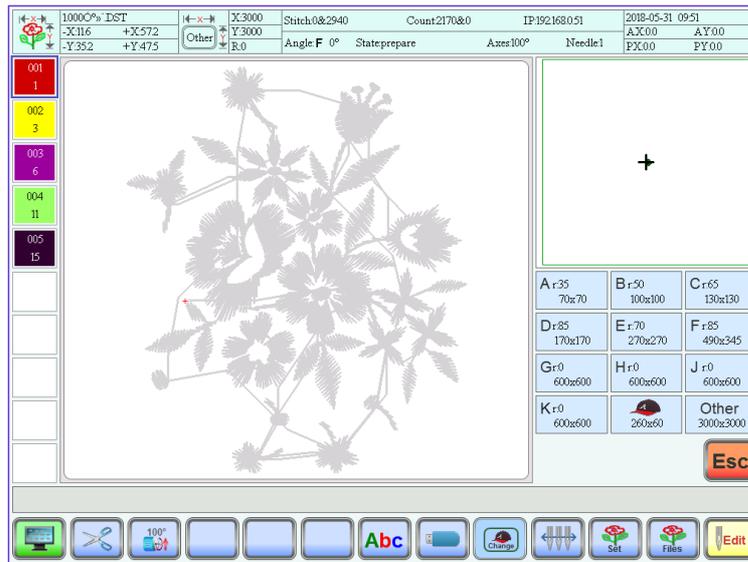


X/Y compensation (satin stitch): 0-±0.3

## 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 origin position.

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 Finding flower outlines

After setting the starting point, press  key to check the frame along the maximum range of the pattern. AX/AY coordinates are cleared. After the outline walks, the frame will automatically return to the beginning of the pattern. If the pattern exceeds the setting range of the frame, the system will pop up the error message that the pattern exceeds the embroidery range.

#### 5.3-1-2 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.

#### 5.3-1-3 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.



Press the  button, the interface pops up the prompt "move the box to the offset point, press the OK key.", Manually move the box to the need to frame the location, press the



 button to complete the set.

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  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.



next sequence.

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

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:

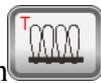
If the cursor is in a color order, you need to use low-speed embroidery automatically,

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.

Simple towel embroidery:

If the cursor is in a color order, you need to make simple towel embroidery, press

the  button without input needle bar, and increase the "T" after the current needle bar number. If you want to cancel the towel embroidery settings, press again  key.

The height of the towel can be adjusted as needed.

### **Presser foot height adjustment (electric presser foot):**

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.

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 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.  automatically change color manually 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.

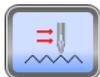
### 5.3-7 Embroidery Mode Switch

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:

Stop status. click start key(low speed forward) a time. main axis not move. frame will go forward with embroidery stitch track. and click stop key to stop.

Stop status. click stop key (low speed backward) a time. main axis not move. frame will go backward with embroidery stitch track. and click stop key to stop.



high speed idling embroidery:

Stop status. click start key(high speed forward) a time. main axis and frame not move. embroidery stitches increasing greatly. click stop key to stop. frame will directly move to the forwarded stitch track position.

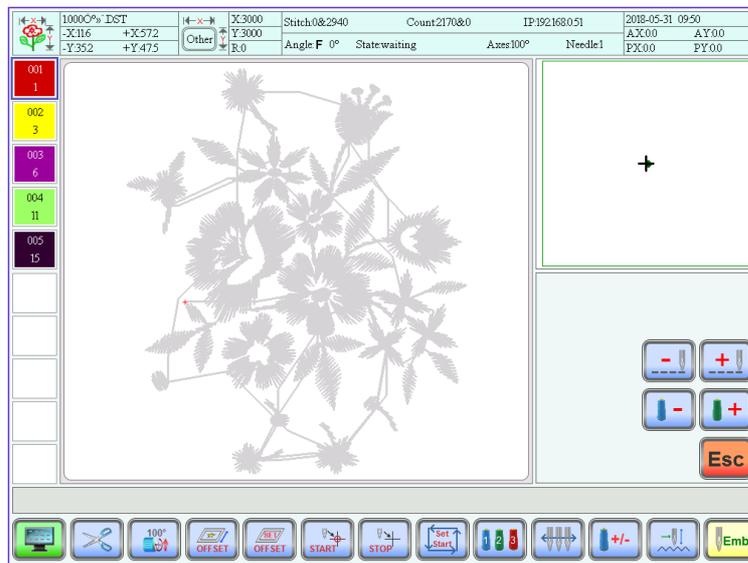
Stop status. click start key(high speed backward) a time. main axis and frame not move.

embroidery stitches decreasing greatly. click stop key to stop. frame will directly move to the back stitch track position.

### 5.3-8 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.

#### 5.3-8-1 Add the Specified Stitch/Reduce the Specified Stitch

In the positioning idling interface. click  or  to choose them. Click numeric keys to input the required stitches. click . frame will directly move to the specified stitch position.

#### 5.3-8-2 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 completed the relative embroidery parameters, you can click the  key to embroidery.

**Stop in the embroidery design status:** click  key a time to embroidery; click stop key a time to backward the stitch.

**Back the stitch in the embroidery design status:** click  key a time to stop backward the stitch.

**In the embroidery running status:** click the  key more than 3 seconds, the main axis embroidery with the lowest speed. click the stop key to stop.

## 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)

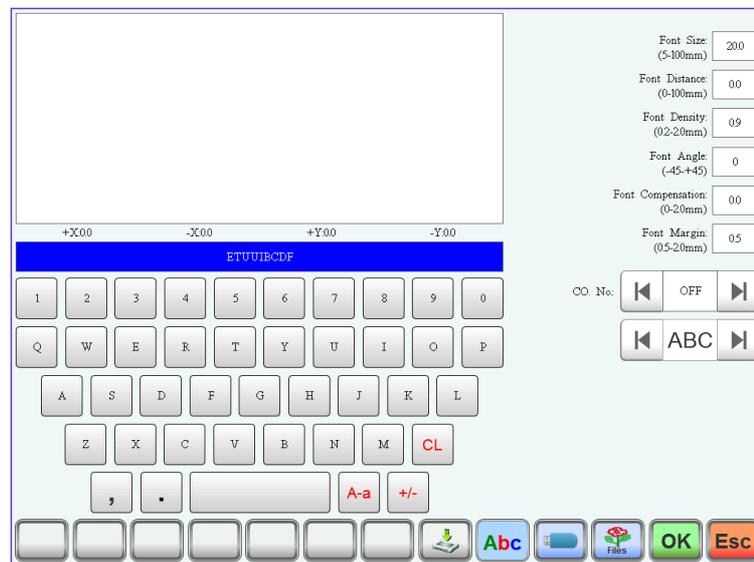
Switch in the middle, don't enter the sequin embroidery, the indicator is orange, landing gear up, wait send slice. When enter sequin embroidery, landing gear down, indicator change as green.

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

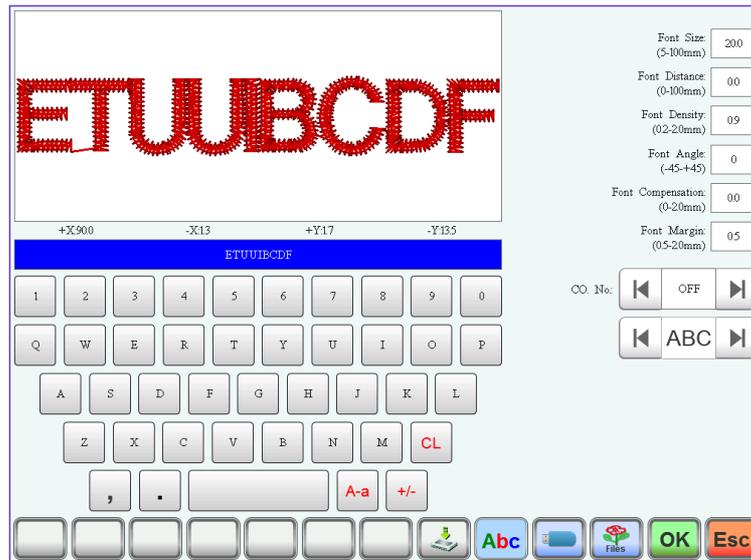
## PART 6 LETTERS TO GENERATE EMBROIDERY

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

Or press the  key to enter the interface for preparing embroidery.



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.



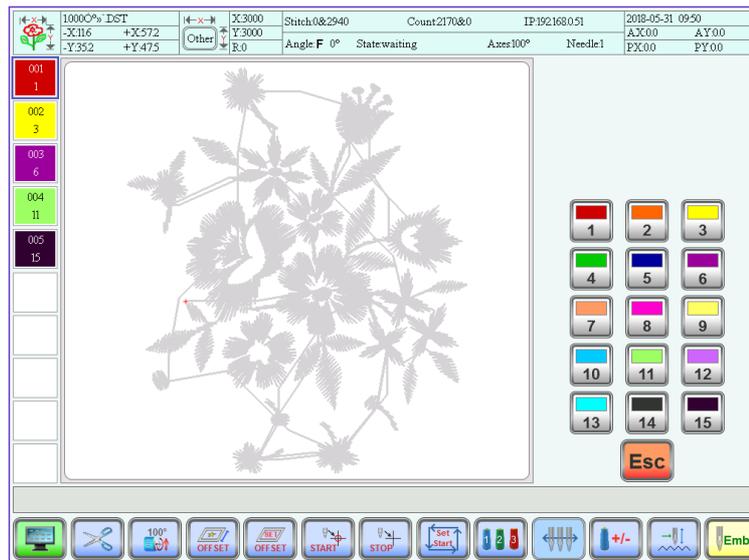
Set letter related parameters. After setting is completed, press key below to select required letter type (5 types). Press  key to generate letter pattern. On the left upper corner, it can see the generated embroidery card. Press  key to save embroidery card in memory.

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.

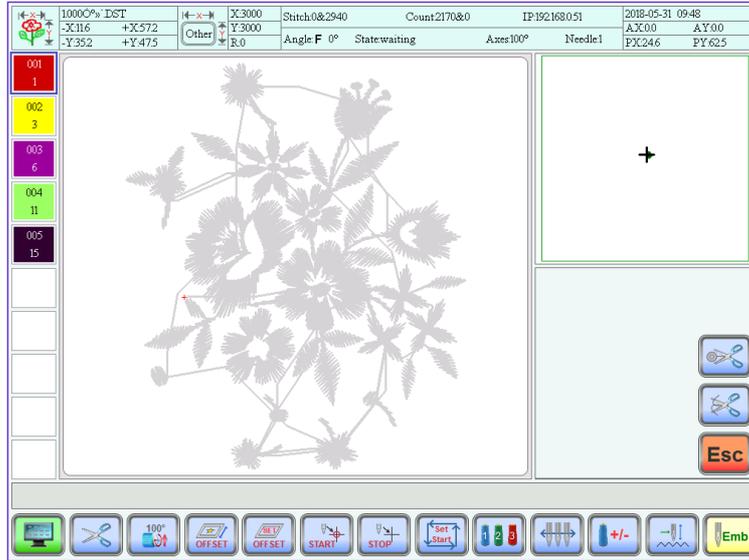


## PART 8 MANUALLY TRIMMING

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



Click  on the panel to do bottom side trimming operation, show as:



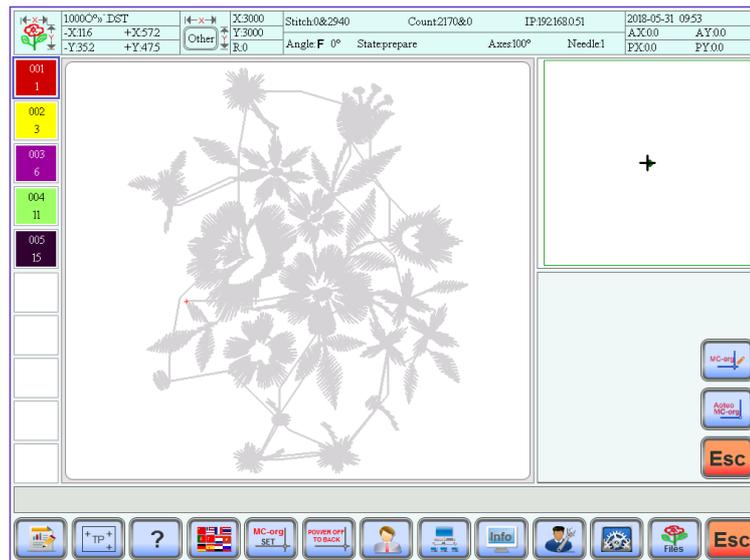
Press  key to cut all lines, press  key to cut only the bottom line.



## PART 9 FRAME ORIGIN

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

In the main menu. click . 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 11 STATISTIC

The feature use to view generated statistic and clear statistic.



In the main menu, click

| No. | Name         | Break line | Finish | Stitchs |
|-----|--------------|------------|--------|---------|
| 001 | 0000% DST    | 4          | 0      | 2170    |
| 001 | 0000% DST    | 4          | 0      | 2170    |
| 002 | XD0232.DST   | 0          | 0      | 0       |
| 003 | Es%AE-1DST   | 0          | 0      | 0       |
| 004 | XD0435C.DST  | 0          | 0      | 0       |
| 005 | PEppQA.DST   | 0          | 0      | 0       |
| 006 | ZMK6.DST     | 0          | 0      | 47      |
| 007 | CUT9.DST     | 0          | 0      | 0       |
| 008 | Celebrat.DST | 0          | 9      | 77942   |
| 009 | DH26.DSE     | 0          | 0      | 0       |
| 010 | G016.DST     | 0          | 0      | 0       |
| 011 | TRIMMING.DST | 0          | 1      | 19825   |
|     |              |            |        |         |
|     |              |            |        |         |
|     |              |            |        |         |







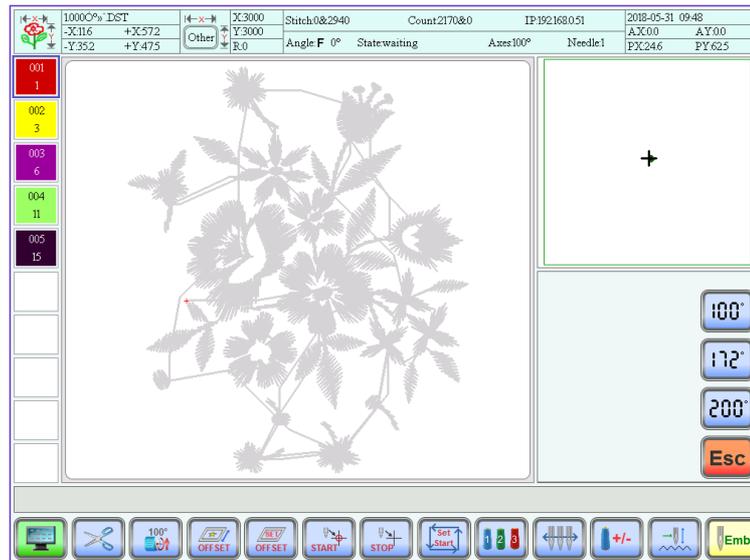
Click  to clear the current statistic value.

## 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. show as:



Press the corresponding key to jog.

## PART 13 LANGUAGES



In the main menu, 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 . Press  key to enter the embroidery parameter setting interface. 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.

In the main menu interface, press  key to enter the parameter setting interface, press  key to enter the machine parameter setting interface, and need to input the password. This feature is only open to machinery manufacturers.

## PART 16 USERS MANAGEMENT



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

usage time:

Encryption Serial Number:

Remove PWD:

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

Unlock [User Icon] OK Esc

### 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:

Month:

Day:

Hour:

Minute:

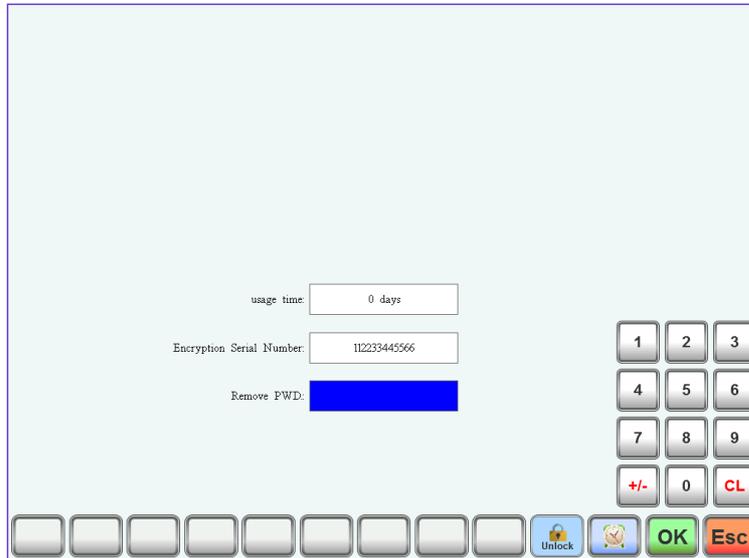
1 2 3  
4 5 6  
7 8 9  
+/- 0 CL

Unlock [User Icon] OK Esc

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.

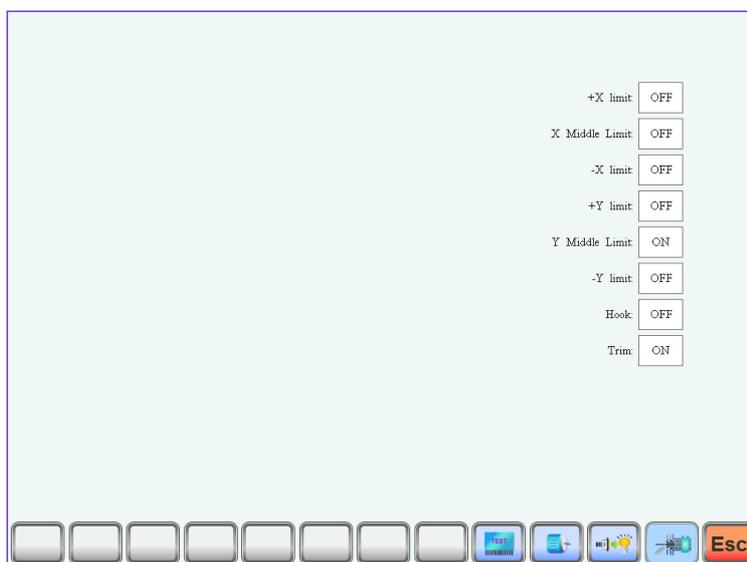
## PART 17 SYSTEM TEST

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

In the main menu. click  to enter "System Test" interface.

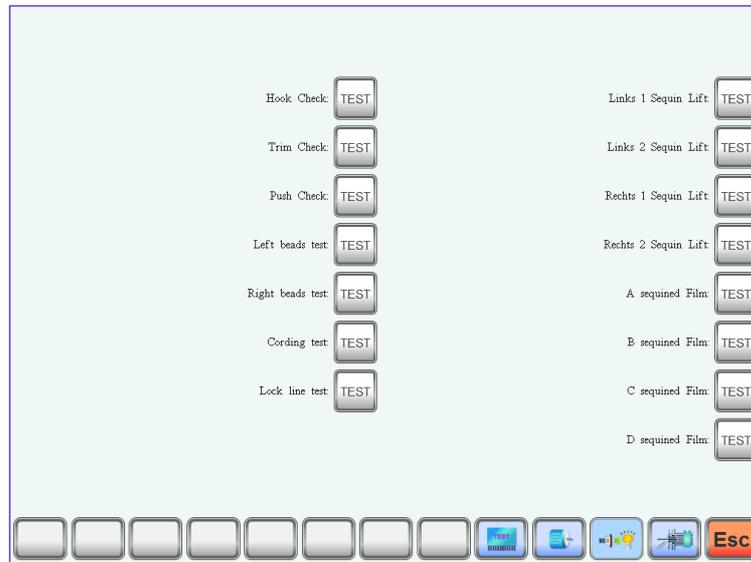
### 17.1 Input Test

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.

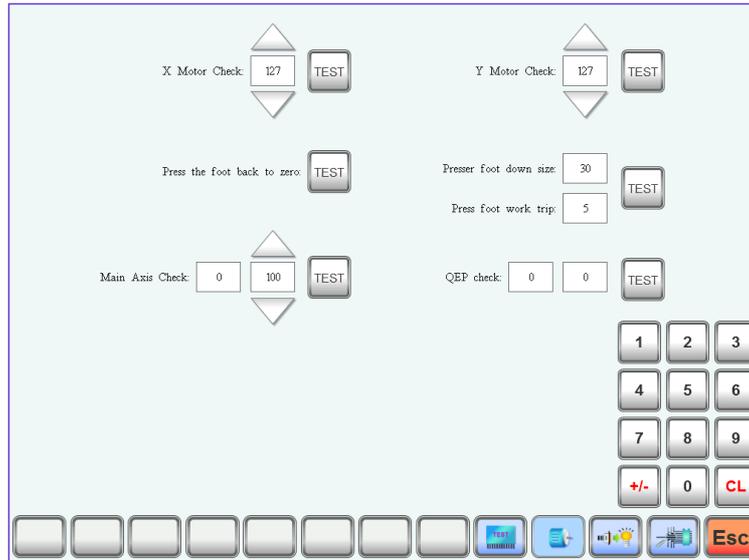
Trim Test: each click. trim motor will do the alternating movement that turn a half of circle and stop. and one-half turn in the same direction in place.

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)

QEP test: Press  key spindle to stop at a speed of 100 rpm and start to stop after one revolution. Check the feedback value, 1000/15. If the deviation exceeds 5 values, the encoder is damaged and must be replaced.

Presser foot return to zero position: press  button to raise the presser foot to the highest position of the zero point (effective when there is electric presser foot).

Presser foot lowering height: The set value is the size of the presser foot from zero to the lowest position, press  key once to press the foot. (Valid with electric presser foot).

Presser foot working stroke: Set the working height of the presser foot raised from the lowest position. Press  key once to press the foot. (Valid with electric presser foot).

## 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.

Test mode: Press the number key, the indicator light of the head control board turns to red (the switch middle position) after the thread spring of the current needle position is closed, and turns to green after disconnection; dial the bottom inspection wheel and the indicator light changes according to the dial speed Flashing (switching position), toggle the switch to the lower position to test the electromagnet of a single head (you will hear the click sound), then press the number keys to change the color to the needle bar to be tested and repeat the above steps to continue the test.

If the close indicator is still green, the current needle break detection is faulty.

## PART 18 SYSTEM INFORMATION



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 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 Double bottom strip installation method**

When using the double bottom strip as disconnection detection, you need to dial the DIP switch on the bottom strip to adjust. The first bit of the DIP adjustment checker bar is used in the forward (OFF) or reverse (ON) order. The second bit adjusts whether the checker bar is used as a singular needle bar (ON) or a double needle bar (OFF). SW1-SW8 is positive and SW8-SW1 is reverse.

The bottom strips are individually designed for 8 optocouplers, which are SW1-SW8.

When used as a 15-pin:

The following one uses eight optocouplers as single needles. SW8 is the first pin, SW1 is the fifteenth pin, and both DIP 1 and 2 are turned ON.

The above one uses seven optocouplers (with SW8 cut off) as a double needle bar. SW1 is the second pin, SW7 is the 14th pin, and the DIP 1 and 2 are both turned OFF.

When used as a 12-pin:

The following one uses six photocouplers (cut SW7-8) as a double needle bar. SW6 is the second pin and SW1 is the 12th pin. Turn DIP 1 to ON and 2 to OFF.

The above one uses six photocouplers (cut SW7-8) as a single needle bar. SW1 is the first needle and SW6 is the 11th needle. Turn DIP 1 to OFF and 2 to ON.

## PART 21 APPENDIX

### 21.1 Parameter Table

| Params Name              | Params Function   | Default | Range                |
|--------------------------|---|---------|----------------------|
|                          | A   |         |                      |
| Jump to Trim             | Jump, trim or don't trim  | 3       | 1-9、 No              |
| Length After Trim        | After trimming, the larger the number, it'll be more longer.  | 3       | 1-7                  |
| Lock Needle at Jump      | If need to lock before jumping, to avoid off-line.  | Yes     | Yes、 No              |
| Tread Broken Sensitivity | Side line breaking detection sensitivity  | 5       | 3-9、 No              |
| T.B Detect at Jump       | If detection when jump  | No      | Yes, No              |
| Check Bottom T.B         | Bottom line breaking detection sensitivity  | Low     | High/Middle/Low , NO |
| L.S Number after Trim    | Lock after trimming start, avoid off-line   | 1       | 0-3                  |
| L.S Number Times Trim    | Lock stitches when trimming, avoid off-line   | 1       | 0-3                  |
| Trim Top Thread Length   | It need to lengthen when embroidery thin material   | 0.6mm   | 0.5-1.0mm            |
| Auto Back When T.B.      | Automatically return stitches after breaking, the breaking head will complement embroidery in advance | 4       | 0-9                  |
| All Patch Stitch Number  | The first few stitches that complement embroidery finished start all head                             | 0       | 0-5                  |
| Header Patch Mode        | Use single head or all head when complement embroidery  | single  | single、 all          |
| Speed Down After Patch   | If decelerate when complement embroidery finish completion point                                      | Yes     | Yes、 No              |
| Auto Set Start           | Continuous embroidery set as "Yes"  | Yes     | Yes、 No              |
| Auto Back Start          | If return the start point after embroidery finished, and end to end continuous embroidery set as "No" | Yes     | Yes、 No              |
|                          | B   |         |                      |
| Back Steps of L.S        | After slowly stitch a few while the bar back needles, it'll automatically continuous back needles     | 0       | 0-9                  |

|                          |  |           |                 |
|--------------------------|--|-----------|-----------------|
| Slow Emb Speed           | Main axis' speed   | 100       | 100-500         |
| Long Sti. EMB Mode       | Larger stitches embroidery mode  | Low speed | Low speed、 Jump |
| Auto Jump Stitches       | When large stitches are jumping, exceed some distance, it'll automatically divide more than 2 needles for embroidery | 6.5mm     | 6.5-8.5mm       |
| Auto Speed Down ST       | Stitches exceed some distance, decelerate to embroidery  | 6.0mm     | 2.0-9.0mm       |
| Speed Down at Jump       | Decelerate the proportion of the current speed when continuous jumping   | 80%       | 60%-90%         |
| Main Axis Start Speed    | Main axis' speed when starting   | 100       | 60-200          |
| Main Axis Max Speed      | Main axis highest speed set (limit by machine parameters)  | 750       | 550-1200        |
| Move Frame Max Speed     | Set high speed move frame, the larger the faster   | 5         | 1-9             |
| Color Motor Speed        | Speed that use stepper motor to change color   | 5         | 0-9             |
| Same ST Auto Startup     | Whether or not to automatically start when meet same color needle  | Yes       | Yes、 No         |
| Stop Frame of Moving     | Whether or not to stop when beyond frame   | Yes       | Yes、 No         |
| Needles In A Head        | The current machine used stitches  | n*        | 1-15            |
| Needle Of Boring         | Carving Knife's needle position(not breaking detection)  | 0         | 0-n             |
| Repeat Embroidery        | Whether or not to continue to embroidery after finishing embroidery  | No        | Yes、 No         |
|                          | C  |           |                 |
| Display Stitch Number    | Whether or not to display the designs' stitches  | Yes       | Yes、 No         |
| Filter 0 Stitch Data     | Whether or not to filter 0 stitch in the embroidery  | Yes       | Yes、 No         |
| Open Trim Function       | Whether or not use trimming feature  | Yes       | Yes、 No         |
| BreakThreadUp            | Whether or not rise landing gear after sequin breaking   | Yes       | Yes、 No         |
| Reset Frame              | Whether or not to find absolute origin point after power on  | No        | Yes、 No         |
| Upper thread lock angles | The starting angle at which the upper thread grips the line clamp to start the                                       | 200       | 200-250         |

|                                |  |        |                            |
|--------------------------------|--|--------|----------------------------|
|                                | take-up line   |        |                            |
| Voltage Of Solenoid            | Adjust solenoid voltage value  | 2*     | 0-5                        |
| Start Push Delay               | Extend buckling time while starting  | 1      | 1-3                        |
| Stitches value                 | Stitches adjustment speed within continuous stitches                               | 20*    | 1-20                       |
| Main Axis Brake Delay          | The larger the number, the later the stop angle                                    | 6*     | 1-10                       |
| Up Line Check                  | Detect the spring' sensitivity, the larger the number the more sensitivity         | 5*     | 0-9                        |
| After trimming move frame      | Whether or not move frame after trimming   | 1      | 0-9                        |
| Hook Motor Speed               | Hook stepper motor's adjustment speed, the larger the number, the faster the speed | 5*     | 1-5                        |
| Whether to stop the shaft lock | Whether to lock the axis after the spindle stops                                   | No     | Yes, No                    |
| Broken voice prompts           | Tread Broken Sound prompt  | Yes    | Yes、 No                    |
| Auto Back Offset               | Whether to automatically return to the offset point after the job is completed     | No     | Yes, No                    |
|                                | D  |        |                            |
| Left needle bar features       | Last needle extension  | Close  | Close, Sequins, Cord, Bead |
| Right needle bar features      | The first needle expansion function  | Close  | Close, Sequins, Cord, Bead |
|                                | Sequin parameters  |        |                            |
| Sequin Max Speed               | The maximum speed of the spindle during the sequin embroidery                      | 700    | 300-1000                   |
| Lifting Arm                    | Sequin landing gear use  | Motors | Valves, Motors             |
| Piece Speed                    | Elevator stepper motor to adjust the speed, the greater the value the faster       | 3*     | 1-4                        |
| Left sequin way                | Left sequin work method  | Close  | Close A/AB/ABC<br>ABCD     |
| Left A sequin                  | Left A sequin size   | 3*     | 2-9                        |

|                         |   |        |                        |
|-------------------------|---|--------|------------------------|
| size                    |   |        |                        |
| Left B sequin size      | Left B sequin size  | 3*     | 2-9                    |
| Left C sequin size      | Left C sequin size  | 3*     | 2-9                    |
| Left D sequin size      | Left D sequin size  | 3*     | 2-9                    |
| Right sequin piece way  | Right sequin work method  | Close  | Close A/AB/ABC<br>ABCD |
| Right A sequin size     | Right A sequin size   | 3*     | 2-9                    |
| Right B sequin size     | Right B sequin size   | 3*     | 2-9                    |
| Right C sequin size     | Right C sequin size   | 3*     | 2-9                    |
| Right D sequin size     | Right D sequin size   | 3*     | 2-9                    |
|                         | Cord parameters   |        |                        |
| Needle Of Cord          | Use needle position of rope embroidery  | Close  | Close,Left,Right       |
| Max Speed Of Cord       | Spindle maximum speed during rope embroidery  | 300    | 300-800                |
| Cording shelf type      | Which kind of rope embroidery shelf to use  | JY*    | JY、GJ                  |
| Cording lifting methods | Rope embroidered landing gear use   | Motors | Valves,Motors          |
| Cording swing amplitude | The swing amplitude of the rope embroidery motor swings, the larger the value, the larger the swing is. | 20     | 0-20                   |
| Cording slack adjuster  | Rope embroidery thread tension adjustment, the greater the value, the more loose                        | 1*     | 0-9                    |
| Cording lifting speed   | Cording speed when electric lift, the greater the value the faster                                      | 3*     | 1-4                    |
|                         | Bead parameters   |        |                        |

|                             |   |       |                  |
|-----------------------------|---|-------|------------------|
| Bead application mode       | Which control method to use                                   | 1     | 1-3              |
| Bead embroidery speed limit | The maximum spindle speed during bead embroidery              | 300   | 300-800          |
| Bead using needle bar       | Use needle position beads                                     | Close | Close,Left,Right |
| Foot parameters             |   |       |                  |
| Presser foot down size      | The size of the presser foot from zero to the lowest position | 27    | 20-50            |
| Press foot work trip        | Lifting work height from the lowest position                  | 5     | 3-8              |

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

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

## 21. 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<br>2.Multifunction board is not match with operation head<br>3.Multifunction board destroy | 1.Overhaul the Cable<br>2.Replace Multifunction board<br>3.Replace Multifunction board                    |
| Touch Panel has no response                                       | 1.Poor contact of touch panel's plug<br>2.Touch panel destroy  | 1. Re-insert touch panel's plug<br>2.Replace touch panel  |
| The movement of touch panel (the malposition of Touch position)   | 1.Ageing touch panel<br>2.Touch panel destroy  | 1. Recalibrate the touch panel's position<br>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<br>2.Main axis motor no power input or   | 1.check signal wire or power wire<br>2.check main axis motor input power<br>3.replace controller or motor |

|                                     |   |   |
|-------------------------------------|---|---|
|                                     | input fault<br>3.Controller or motor destroy  |   |
| Main axis reverse turn              | 1.Servo controller parameter error<br>2.Coder A/B phase reversed  | 1.Reset servo controller parameter<br>2.Adjust coder A/B phase connection   |
| No zero position                    | 1.Zero signal panel destroy<br>2.Zero position to main board connection fault   | 1.Replace zero position panel<br>2.Check or replace connection wire   |
| Change color overtime               | 1.Change color motor not turn<br>2.Machine part of change color stuck<br>3.Change color motor to power wire fault   | 1.Check change color motor or wire<br>2.Repair or replace the stuck machine part<br>3.Check or replace wire   |
| No stitch position                  | 1.Stitch detection wheel position fault<br>2.Stitch detection board destroy   | 1.Adjust the position<br>2.Replace the board  |
| X motor driver fault                | 1.X driver over-voltage or over-current protection<br>2.Driver destroy  | 1.Check driver input power and power on again<br>2.Replace driver   |
| Y motor driver fault                | 1.Y driver over-voltage or over-current protection<br>2.Driver destroy  | 1.Check driver input power and power on again<br>2.Replace driver   |
| Trim not in place                   | 1.Proximity switch detection not in place<br>2.Proximity switch destroy   | 1.Manually adjust trim position<br>2.Replace proximity switch   |
| Trim motor does not turn            | 1.Poor contact of motor plug or cable<br>2.Multifunction board destroy<br>3.Motor destroy   | 1.Check cable or plug, re-insert plug<br>2.replace multifunction board<br>3.Replace motor   |
| Hook motor does not turn            | 1.Poor contact of motor plug or cable<br>2.Multifunction board destroy<br>3.Motor destroy   | 1.Check cable or plug, re-insert plug<br>2.Replace multifunction board<br>3.Replace motor   |
| Lock head fault(stitch rod drop)    | 1.Poor contact of motor plug or cable<br>2.Multifunction board destroy<br>3.Motor destroy<br>4.Mechanical malposition or stuck  | 1.Check cable or plug, re-insert plug<br>2.Replace multifunction board<br>3.Replace motor<br>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<br>2.Optical coupler board destroy<br>3.Cable or plug fault from optical coupler to multifunction board<br>4.Multifunction board destroy | 1.Re-adjustment of installation<br>2.Replace optical coupler<br>3.Check cable, re-insert plug<br>4.Replace multifunction board<br>5.Adjust Embroidery parameter correctly |

|                    |   |  |
|--------------------|---|--|
|                    | 5.Embroidery parameter “Width thread break detect ”or “Bottom thread break detect” setting error  |  |
|                    |   |  |
| Design malposition | <ol style="list-style-type: none"> <li>1.Design data error</li> <li>2.High rotating speed</li> <li>3.Low XY driver current</li> <li>4.Mechanical failure</li> </ol> | <ol style="list-style-type: none"> <li>1.Check design</li> <li>2.Reduce main axis rotating speed</li> <li>3.Adjust the drive current or change the speed of the needle-step numerical values</li> <li>4.Maintenance of machinery part</li> </ol> |
| +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  |