Touch Screen Embroidery Machine PTCS1501/1201/0601-TS

Instruction Manual

RiCOMA®

Ricoma (Shenzhen) Co., Ltd.

⚠ **Caution**

Note： **The touch screen computer shall be shut down before power off the embroidery machine with the following method: press switch button on the right side of screen (as shown in the following picture),   and then shut down the main power on the back of machine after screen off;**

Power   Switch

The Instruction Manual contains four parts:

I   **Introduction to embroidery work interface**

II   **Speedy embroidery**

III   **Parameter setting**

IV   **Function information**

V   **On-line communication**

VI   **Common faults and trouble-shooting**

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 2 -

I Introduction to embroidery work interface

Functions of each key are described as follows:
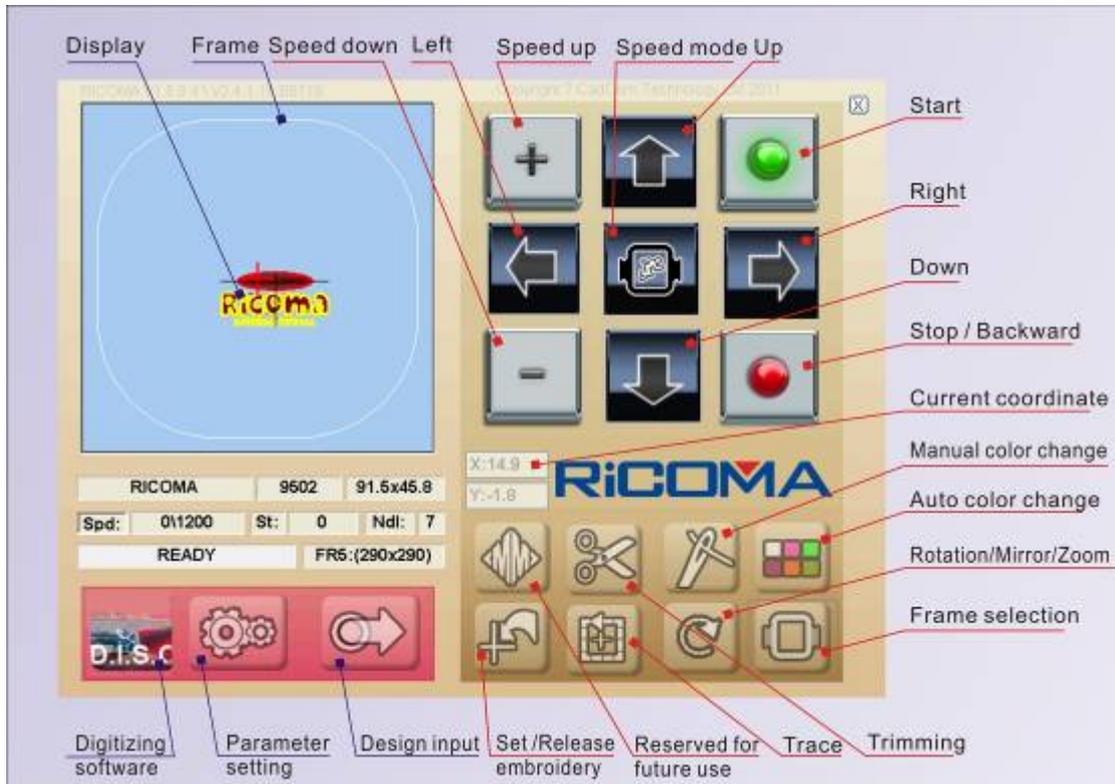
Parameter setting interface is shown as follows:

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 3 -
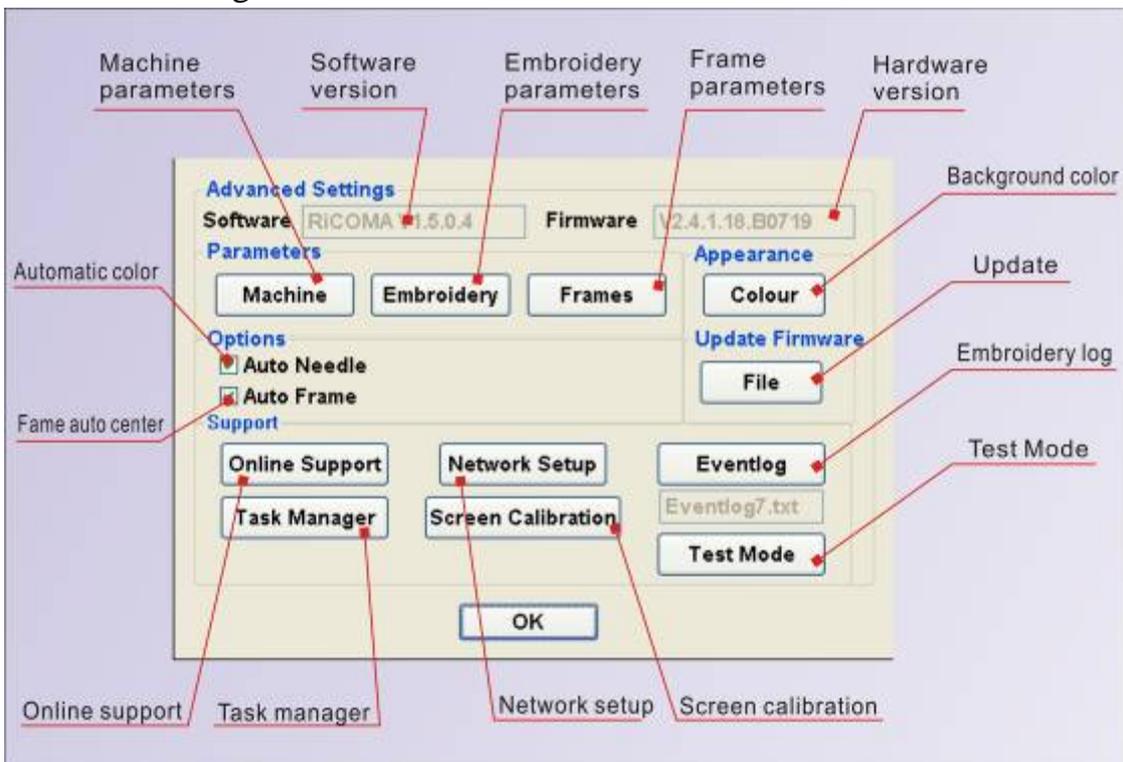
II   Speedy embroidery

Before delivery, each embroidery machine has been correctly set with parameters, thus, under no special circumstances and guidance, the machine will render you the first embroidery experience.

1. Plug power lines attached with the machine into power source, and set the switch on the back of machine at "1" (active mode), as shown in the following picture:

Set at Position 1
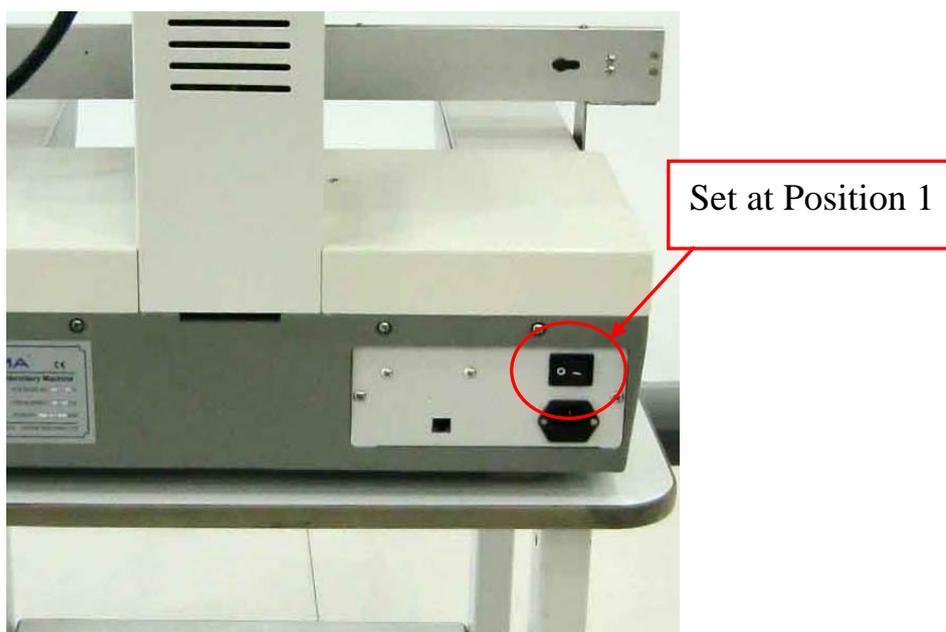
2. Power on touch screen computer, press power switch on the right side of the screen, as shown in the following picture:

Power Switch

After which, screen status bar will prompt "READY", then proceed with the next

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 4 -

operaton;

3. Prepare pattern file, frame and sorts of embroidery material, top stitch and Robbin stitch, with concrete information detailed in Instruction Manual of Embroidery Machine or the relevant video record attached with machine.

It is required during framing to know sizes of each RICOMA frame so as to select proper frame in the computer as well as select in the touch screen computer according to the real item photo of frame;

4. Select frame

Press icon ![icon] to select frame; frames presently available are:
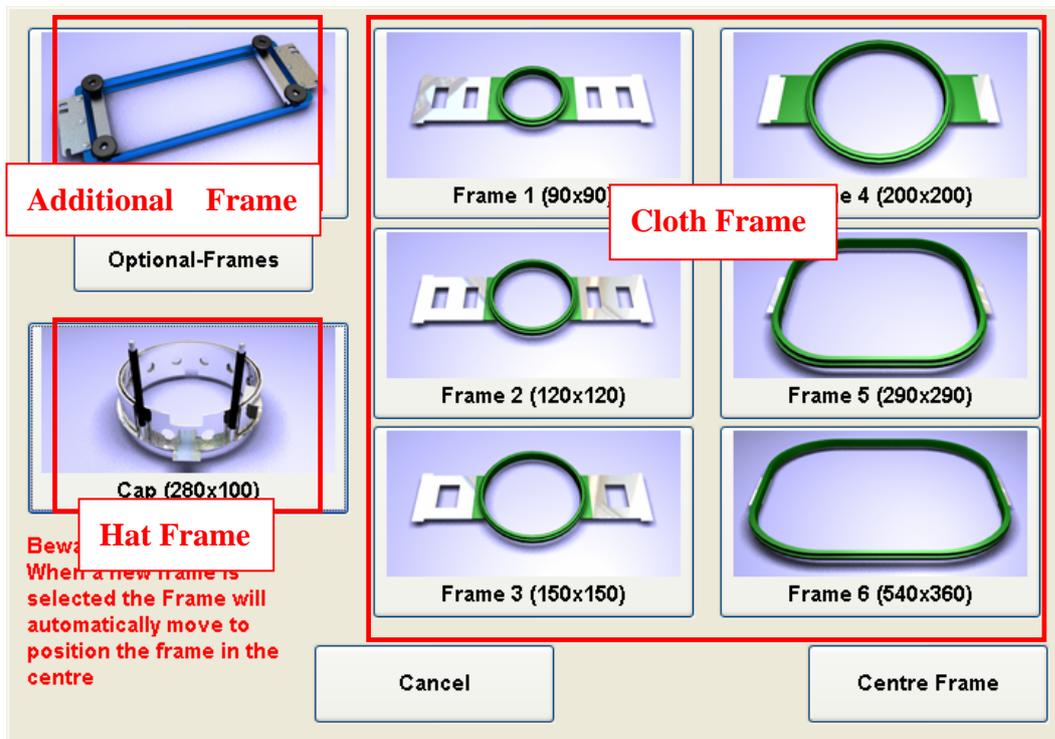
Note: As the frame will automatically move to the center after it's been selected, please keep your hands away from the bedplate, hand rail or frame to avoid any injury. It will not automatically center when ☑ Auto Frame of the parameter setting not checked.

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 5 -

A Passion for Excellence

5. Design input

Press the key [image] to call patterns saved in computer into the machine, as shown in the following picture:
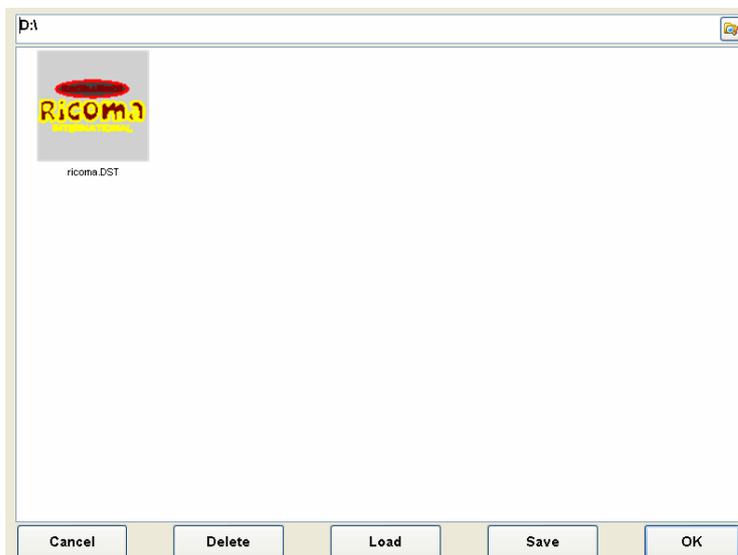
Select the needed embroidery pattern by clicking on "OK", waiting for the pattern information, and operate until the prompt "READY" displayed in the status bar;

Pattern will be displayed as follows:

6. Set color switch sequence by clicking on [image], input the color sequence you need and click on "OK" to confirm, as shown in the following picture:

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 6 -
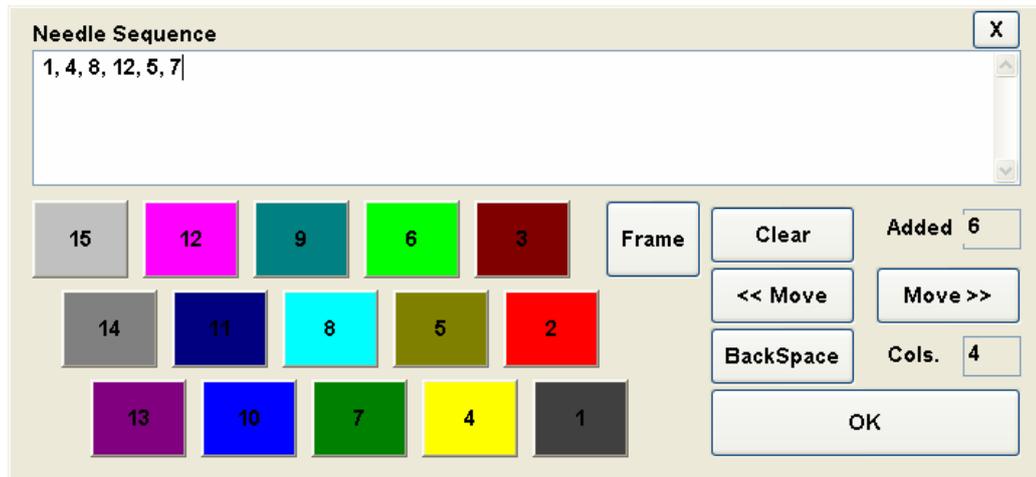
Note: it can be valid only by checking ☑ Auto Needle in the parameter setting or it will be manual color switch.

7. Pattern frame. Position of pattern in the frame means the position of actual embroidery as shown in the following picture:
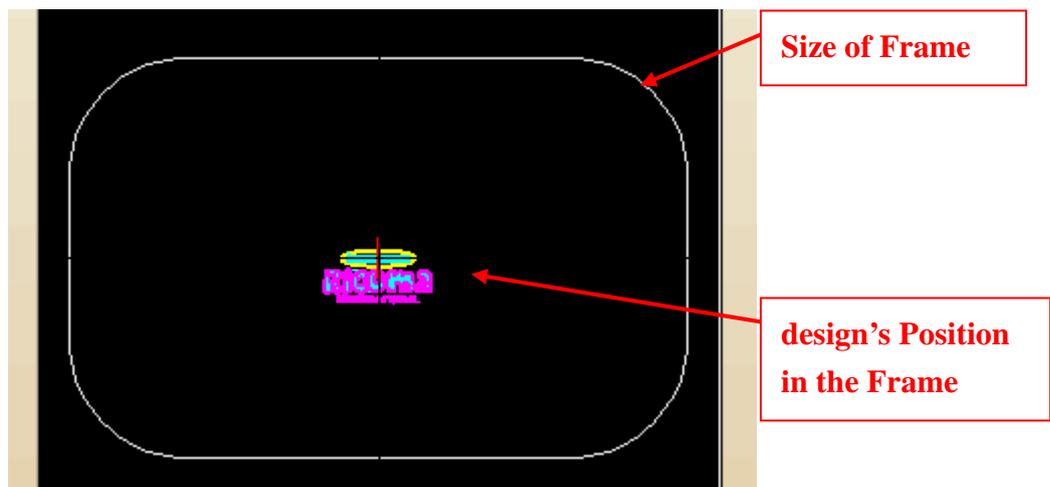
In practical operation, you can move frame by clicking on , and get to know if any frame collision occurring in the following embroidery.

8. Start embroidery. Click on to start embroidery, during which, you can click on to pause or to proceed with it. In emergency, click on the red emergency stop switch on the bottom part of screen, then status bar will display

E-STOP , and after the lifting of emergency, loosen the switch and

click on [icon] to proceed with the embroidery.

The above description is the complete operation process of embroidery.

III   Parameter Setting:

With more unique performance and simplified handling, the serial embroidery machine will bring you a thrilling embroidery experience to your liking.

1. Embroidery parameters:

Click on [icon] before start [Machine] to set parameters with password 11052011，as shown in the following picture:

Property	Value
⊟ **Machine Parameters**	
principal axis control mode	Closed loop
principal axis drive ratio	186
switch terminal motor	Stepper Motor
hook-line motor	Stepper Motor
start angle for hook-line	320
principal axis max speed	1200
sequins function	no
start angle for cutting	260

principal axis control mode
One of: Closed Loop or Open Loop

[Reset Default]   [OK]   [Cancel]
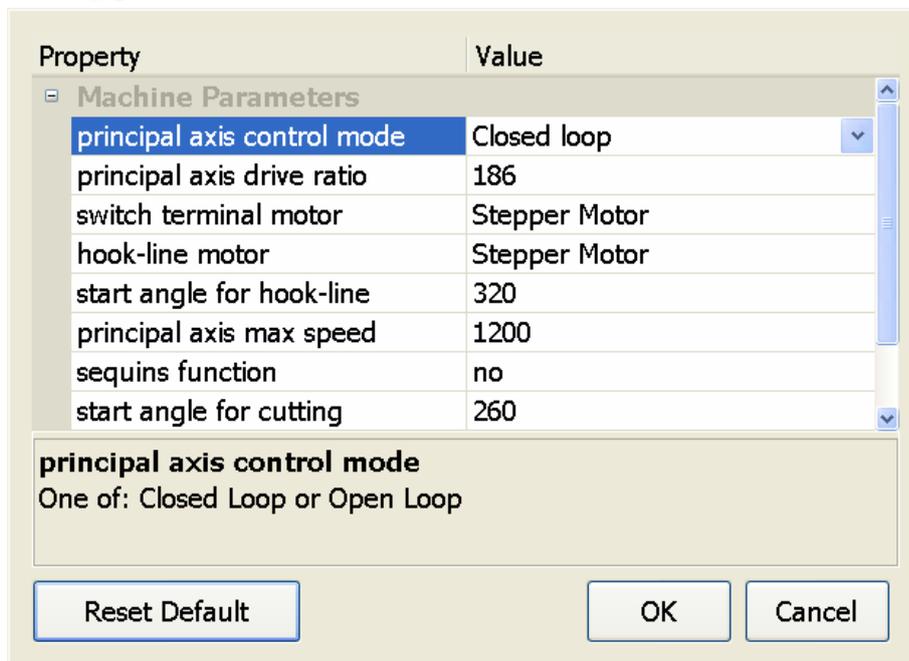
Note: two ways to set: A: Click on "Value" to select from options;

B: Click on "Value" to enter value in the number box;

Specific implication of each parameter:

Principal axis control mode: Select "Close loop" mode;

Principal axis drive ratio：With default selection 186:100；(Omission of 100)

Switch terminal motor: Select stepping motor;

Hook-line motor: Select stepping motor;
Start angle for hook-line: With default value 320;
Principal axis max speed: With default setting 1200rmp;

Sequins function: With default setting "Close";

Start angle for cutting: With default setting degree 260;
Note: after setting, click on OK to save before quit. If any uncertainty about

setting, you can restore the default setting by clicking on Reset Default .

2. Embroidery parameter setting:

Click on 🔴 before start Embroidery , enter embroidery parameter setting interface by

inputting password 11052011, as shown in the following picture:

Property	Value
⊟ **Embroidery Parameters**	
Cutter Jumps	3
Thread Cut Length	3
Lock Stitch before jump	No
Thread Break Sensor	5
Check Thread Break while Ju...	No
long stitch embroidery mode	Jump
Auto Jump Stiches	75
Auto Slow Speed Stiches	60

Reset Default		OK	Cancel

Cutter Jumps: With default value 3 and setting range 0-9;
Thread cut length: With default value 3 and setting range 0-7;
Lock stitch before jump: With default status No; and recommended status Yes
Thread Break sensor: With default value 5 and setting range 0-9, it can be
modified as 0 when idling embroidery test is required.
Check thread break while jumping: With default status No;
Long stitch embroidery mode:It can be classified as the jump mode and slow

speed mode, with default status Jump；

Auto jump stiches: It means auto jump when stitch length is bigger than the setting value, with default value 75，meaning auto jump when stitch length is bigger than 7.5mm; setting range 65—85，meaning6.5mm---8.5mm；

Auto slow speed stiches: It means auto slow speed when stitch length is bigger than the setting value, with default value 60，meaning auto jump when stitch length is bigger than 6.0mm; setting range 40—90，meaning4.0mm---9.0mm；

Principal axis stop position: It is used for fine tune of principal axis stop position, with default value5 and setting range 0—30；

Maximum speed: With default value 1200, the maximum value than which the setting value cannot be higher, otherwise poor quality of embroidery may be caused.

Maximum frame speed: With default value 5 and setting range 1-9

Same color automatic:　With default status Yes；

Property	Value
Principal Axis Stop Position	5
Maximum Speed	1200
Maximum Frame Speed	5
same color automatic start	Yes
lower speed with consecutiv...	80
Stop Frame of Moving	Yes
Number of Needle	15
sequins needle pos	Left Needle Pole
sequins speed limit	500

Reset Default　　　　OK　　Cancel

Lower speed with consecutive jumps: It means it will slow down the speed to setting percentage of original one during consecutive

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576　　　　Fax: +86-0755-25857773　　　　- 10 -

jumps, with default value 80, meaning 80% of original speed, and the setting range 60—90, meaning

60%--90%；

Stop frame of moving: It means if to stop working when receiving the stop

instruction, with default status Yes；

Number of needle: The number of needles had been set according to actual needle numbers of the machine;

Sequins needle pos: It means the position of sequins needle, i.e. the needle used for sequins embroidery, with left and right needle poles, and the default one Left Needle pole;

Sequins speed limit:　It means the maximum embroidery speed of sequins, with default value 500;

Boring needle pos: With default value 0;

Cord needle position: With default value 0;

Cord embroidery speed limit: It means the maximum speed of principal axis during cord embroidery, with default value 300 and setting range 300-600;

Cycle embroidery: Cycle embroidery means if automatically to proceed with embroidery after the completion of pattern plates, with

default status No；

Property	Value
Boring Needle Pos	0
Cord Needle Position	0
Cord Embroidery Speed Limit	400
Cycle embroidery	No
display file stitch num	Yes
Skip blank stitches	Yes
Colour Motor Speed	1
Colour For Screen	0
Frame Control Type	0

Reset Default   OK   Cancel

Display file stitch num: With default status Yes， meaning display the stitch
number;

Skip blank stitches: With default status Yes;

Colour for screen: With default status Yes;

Frame control type: Curve of frame moving, which can be used to adjust the actual embroidery effect, with default value 0 and setting rang 0-4;

Frame move angle: The bigger the frame load, the smaller the frame moving angle, the angle can be adjusted properly according to actual embroidery effect, with default value 230;

Reverse delay: With default value 0;

Property	Value
Frame Move Angle	230
reverse delay	0
Thread Break Up	0
delay while move frame	0
reset frame when turned on	No
cloth mode type	6
hat mode frame x pos	98
hat mode frame y pos	80
hat mode frame x size	260

Reset Default   OK   Cancel

Thread break up: It means if to lift the undercarriage when there is thread breakup, with default value 0 and setting range 0/1;

Delay while move frame: It means the compensation time for frame moving, with positive compensation for thin material and negative for thick one, which can be adjusted according to actual embroidery effect, with default value 0;

Reset frame when turned on: It means the frame will automatically seek for absolute original point when turned on, with default status No.

Cloth mode type: Select proper frame type for the mechanical safety, with default value 6;

Hat mode frame x pos: With default value 98;

Hat mode frame y pos: With default value 80;

Hat mode frame x size: With default value 260;

Hat mode frame y size: With default value 80;

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 13 -

Property	Value
hat mode frame x pos	98
hat mode frame y pos	80
hat mode frame x size	260
hat mode frame y size	80
undercarriage type	Yes
thread cut switch	Yes
thread break backward stitc...	4

[Reset Default]   [OK] [Cancel]
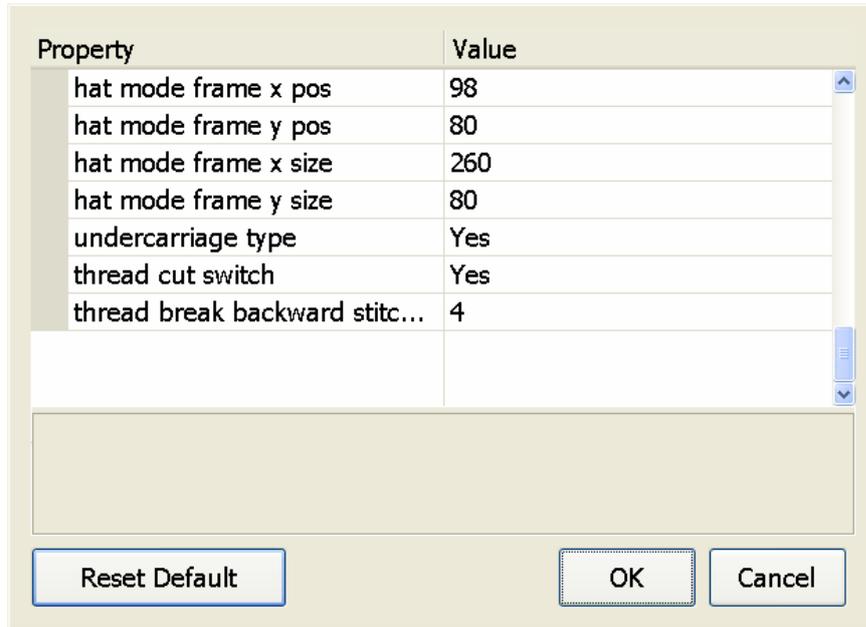
Undercarriage type: It means the lifting mode of undercarriage, with default

status Yes，no real setting meaning;

Thread cut switch: With default status Yes，meaning start the thread cut

function;

Thread break backward stitches: With default value 4 and setting range 0-9

stitches;

Note: after setting, click on OK to save before quit. If any uncertainty about

setting, you can restore the default setting by clicking on [Reset Default] .

3. Frame parameter setting:

Click on ⚙ before start [Frames], enter the frame parameter setting interface, as

shown below:
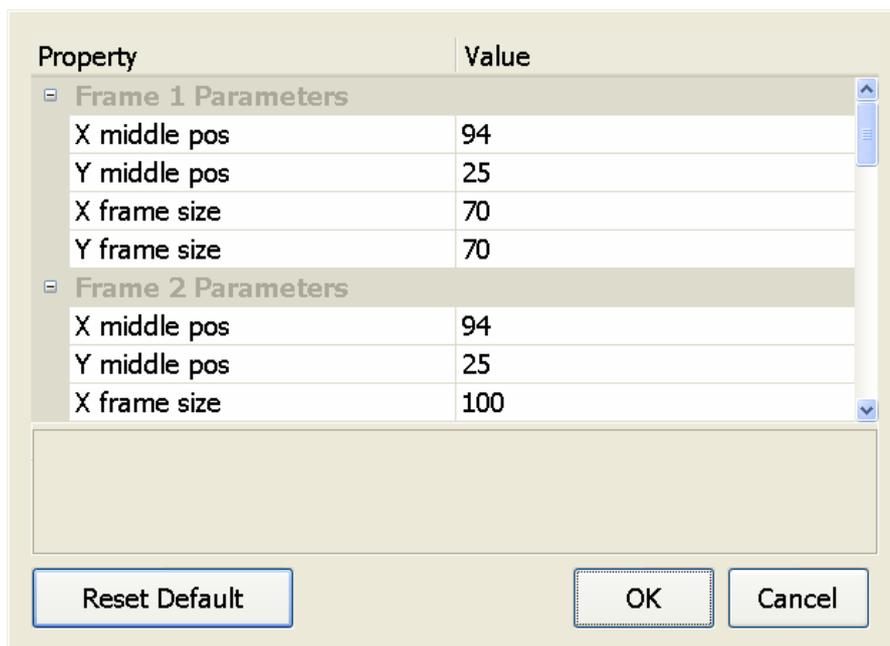
Seven cloth frames are available, with frame center point position and their size shown as bellow:

Frame 1:
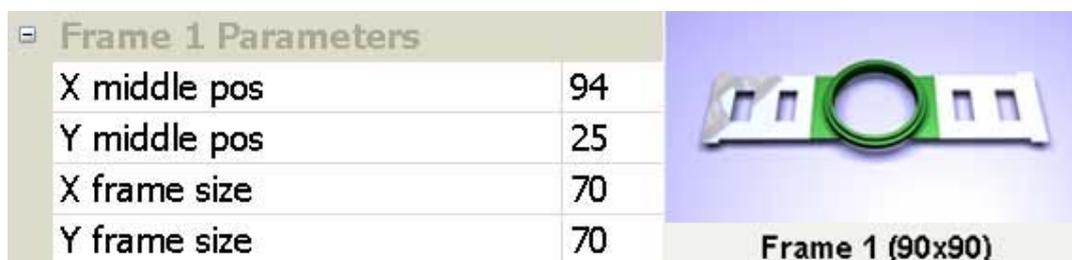
Frame 2:
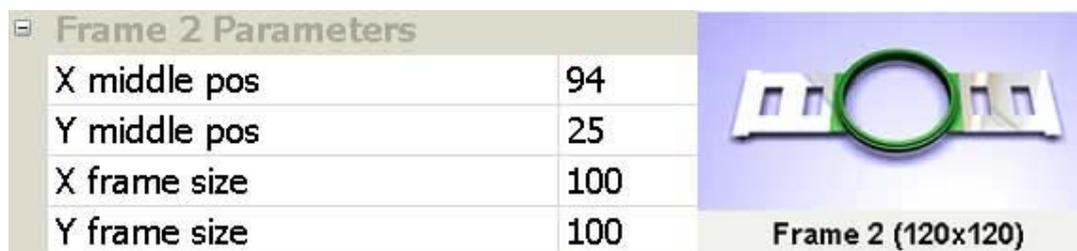
Frame 3:

Frame 3 Parameters	
X middle pos	94
Y middle pos	25
X frame size	130
Y frame size	130

Frame 3 (150x150)

Frame 4:

Frame 4 Parameters	
X middle pos	94
Y middle pos	25
X frame size	180
Y frame size	180

Frame 4 (200x200)

Frame 5:

Frame 5 Parameters	
X middle pos	94
Y middle pos	25
X frame size	270
Y frame size	270

Frame 5 (290x290)

Frame 6:

Frame 6 Parameters	
X middle pos	94
Y middle pos	25
X frame size	520
Y frame size	340

Frame 6 (540x360)

Frame 7: (Custom)

Frame 7 Parameters	
X middle pos	0
Y middle pos	0
X frame size	0
Y frame size	0

Note: after setting, click on OK to save before quit. If any uncertainty about

setting, you can restore the default setting by clicking on Reset Default .

IV Function

1. Change the background color display:

The function can be used to select proper background color, according to pattern color, to highlight the pattern, with following method: click on before start Colour , enter background color setting interface, and change the current color as shown in the following picture:

2. Upgrade hardware program:

When any function modification occurs to the master control hardware, you can conduct corresponding program upgrade;

Upgrade method: click on before start File , enter hardware program upgrade interface and find corresponding hardware upgrade files

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 17 -

through file transmission (with status bar displaying Transfer firmware), till the status bar displaying READY; as shown in the following picture:

⚠️ | Warning

Warning: during the upgrade, it is forbidden to cut off power and loosen the USB connection, otherwise serous costs resulted by damage to the master control board might be caused.

After the completion of upgrade, you can check the newest software version as shown in the following picture:

Software	RiCOMA V1.5.0.4	Firmware	V2.4.1.18.B0719

4. Network Setting:

When network setting is required, click on [icon] before start Network Setup , and enter the Microsoft console to complete relevant network setting such as IP/DNS/Router, as shown in the following interface:
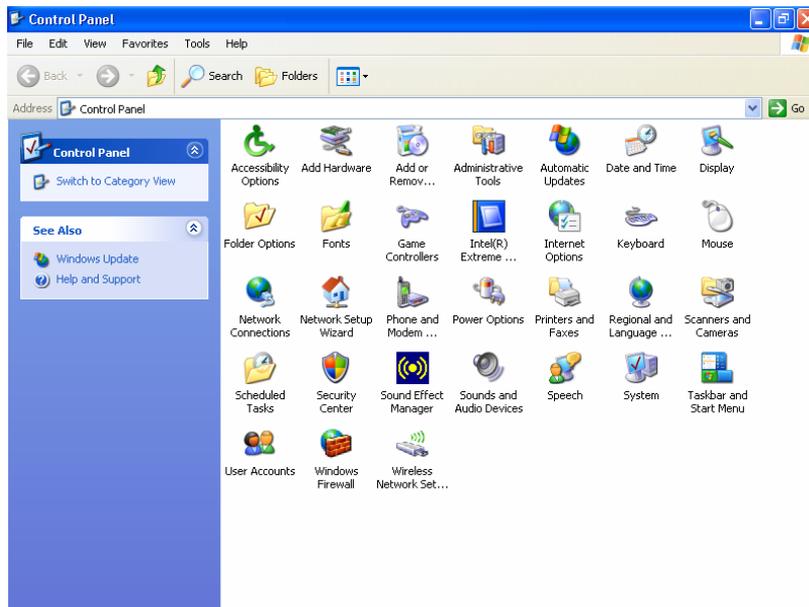
Tip: if any malfunction about the software, please shut off it and switch to the desktop to restart desktop icon MerlinPro, as shown in the following picture:

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 19 -
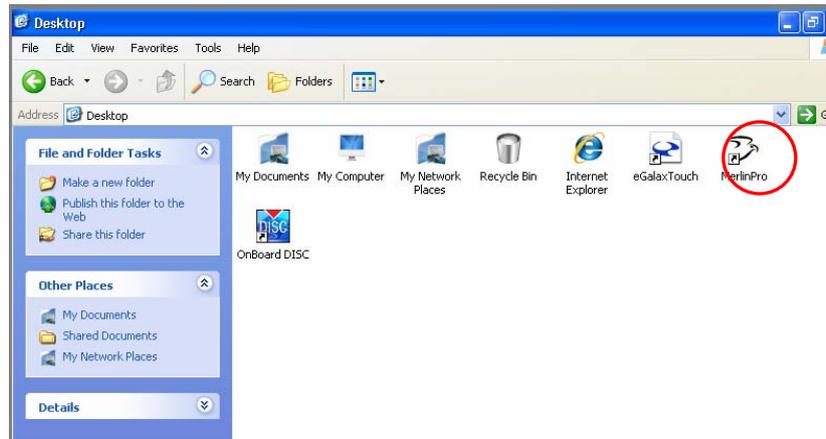
5. Operational Control of Background Software

Click on [gear icon] before start [Task Manager], check the running condition of background program, and terminate running of unnecessary program to ensure the normal operation of embroidery software, with interface shown as follows:
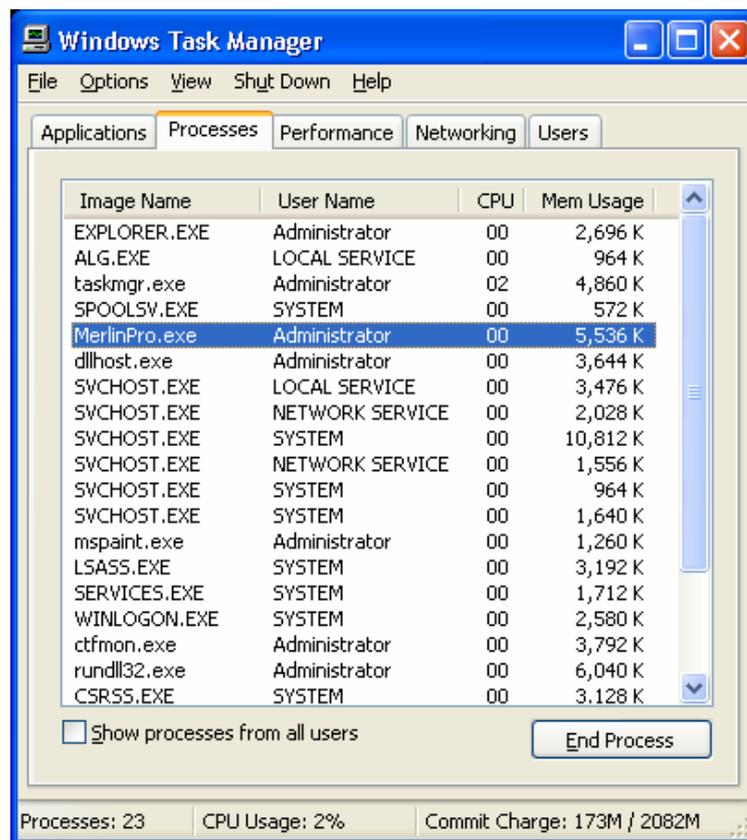
6. Touch screen calibration:

If screen is not sensitive to touch, multipoint calibration can be conducted to the screen, normally the four-point calibration with method as follows: click on

A Passion for Excellence

With finger tip pressing on the center of round cross on the screen, and loosen finger when hearing the sound "ticktock" about two seconds later, and make calibration to other three points with the same way, save before quit.

4 Points Calibration

With finger touching here until hearing the sound of ticktock
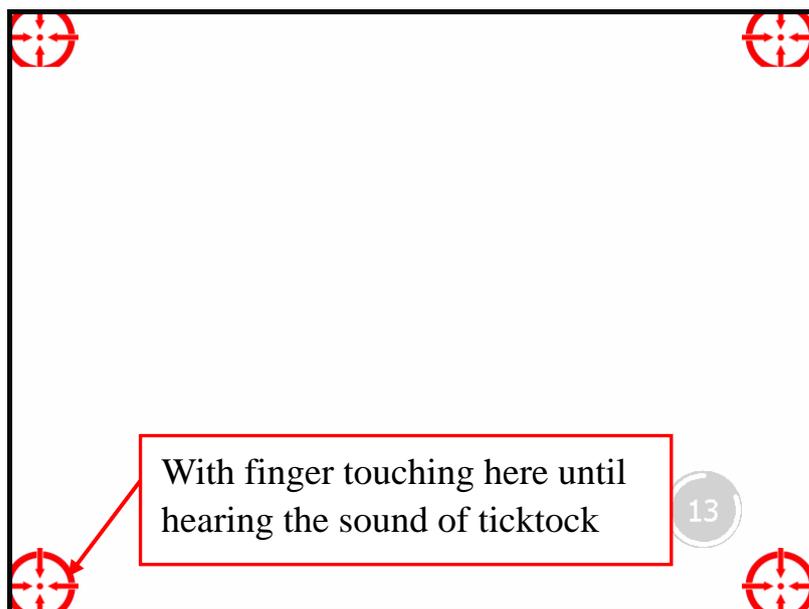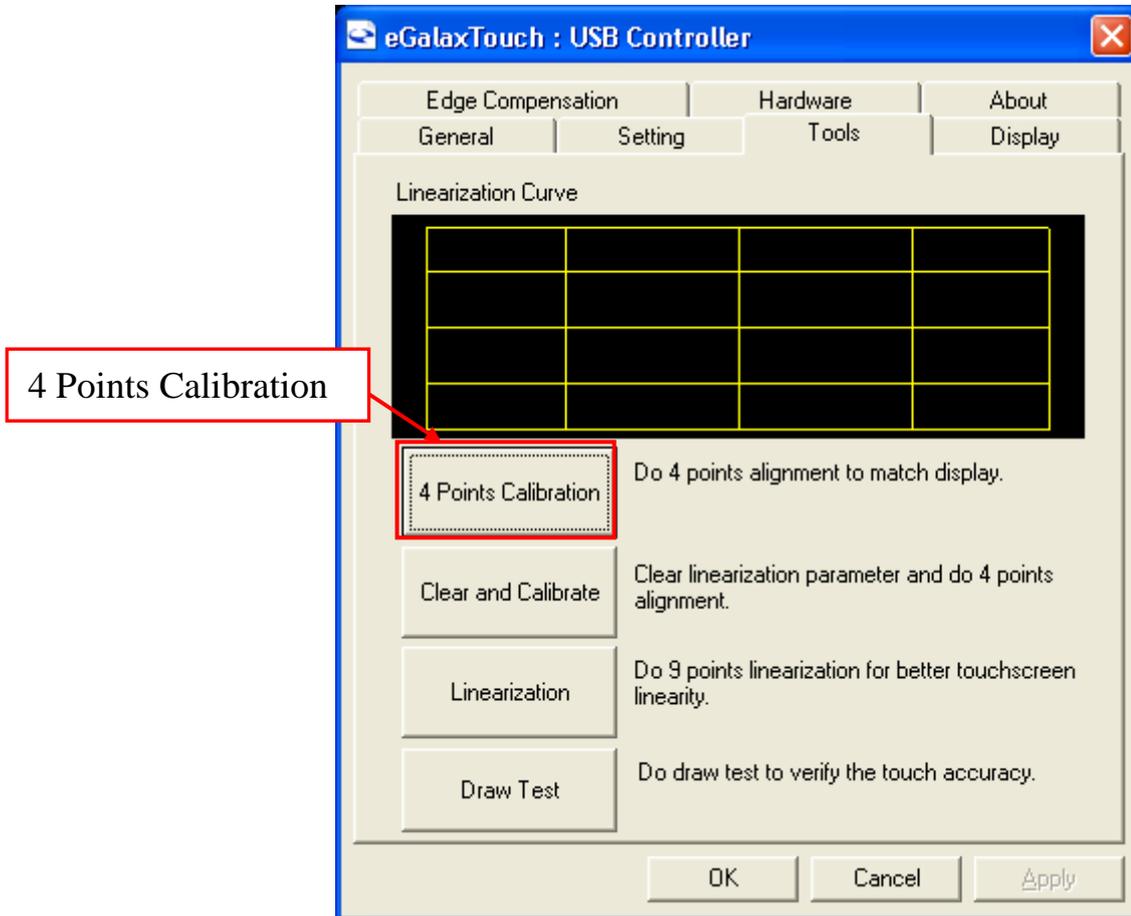
7. Function test:

The practical function test can be used to conduct sorts of malfunction test and find causes by clicking on before starting Test Mode , shown as follows:
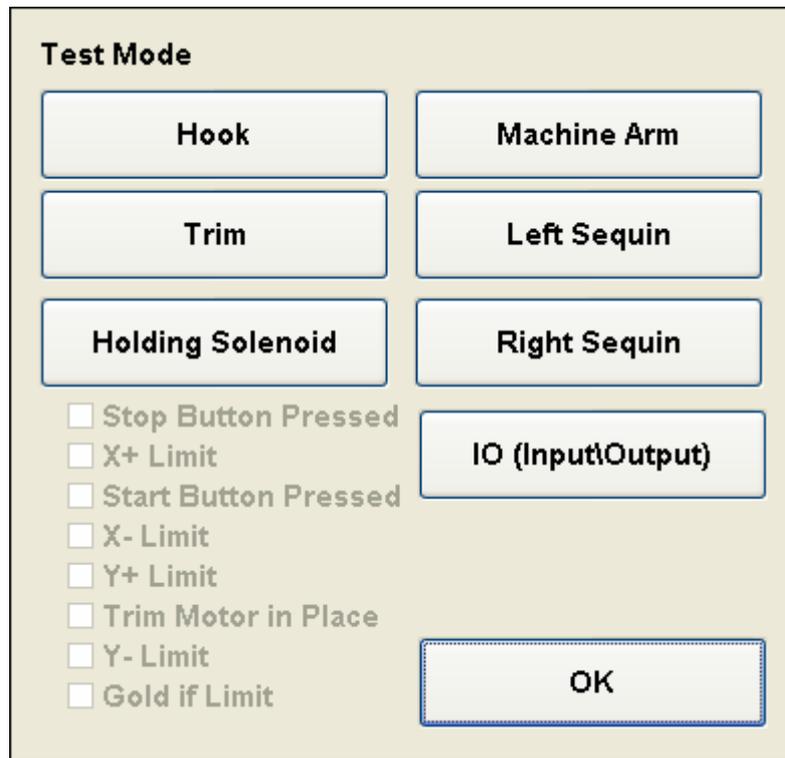
Function test such as hook-line, thread cut, sequins and cord grip are available;

8. Speed Switch Key:

Speed switch keys (shown as follows) can be used to cooperate with frame moving direction keys to change frame moving speed, or the embroidery speed in cooperation with embroidery speed keys ;

 Fast speed key and slow speed key

9. Rotation, acoustic image and zoom of pattern

By Clicking on to enter the function interface, you can conduct operations such as magnification, zoom, rotation and acoustic image to meet needs required by embroidery, as shown in the following picture:
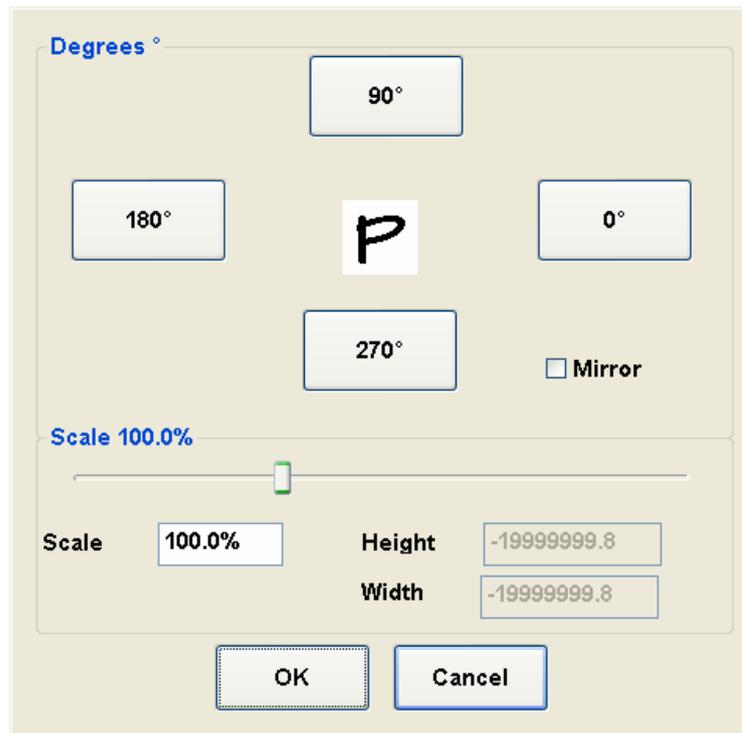
10. Applique embroidery:

The software can also be used to conduct repetitive appliqué operations by adding the operation of frame quit during the process of color switch sequence setting, as show in the following picture:
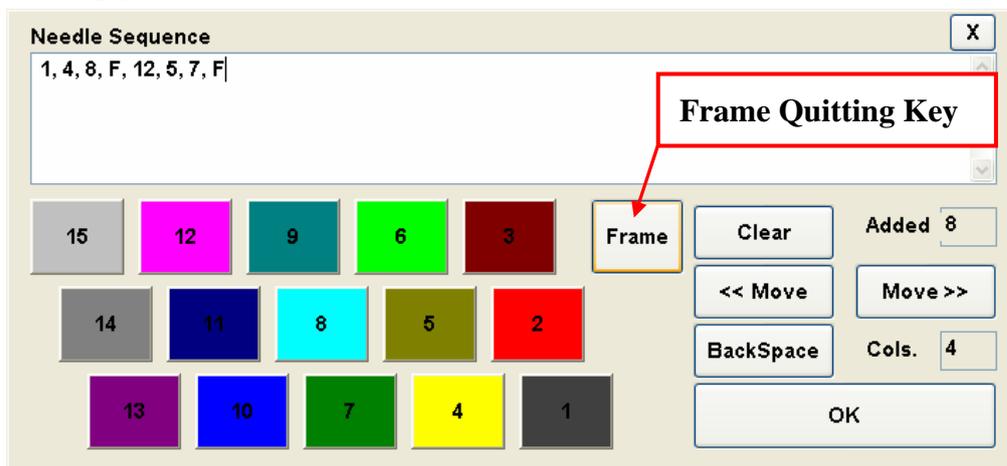
As shown above, after the completion of the 8th color embroidery, the machine pauses

and frame move out automatically, and then proceed with embroidery after relevant operations; after the 7th color embroidery, frame automatically moves out to be convenient for operator to change cloth, preparing for the next embroidery operation.

Color setting for thread roller

The function can be used to set the actual color of thread on the wire coil in the computer, thus real time setting of color can be set according to the color of pattern, without pay attention to the stitch color on the wire rack and wire coil, during color sequence setting. The method is shown as follows: to click on

to enter function interface and check ☐ **Edit Colour** , setting the actual color from stitch to stitch.
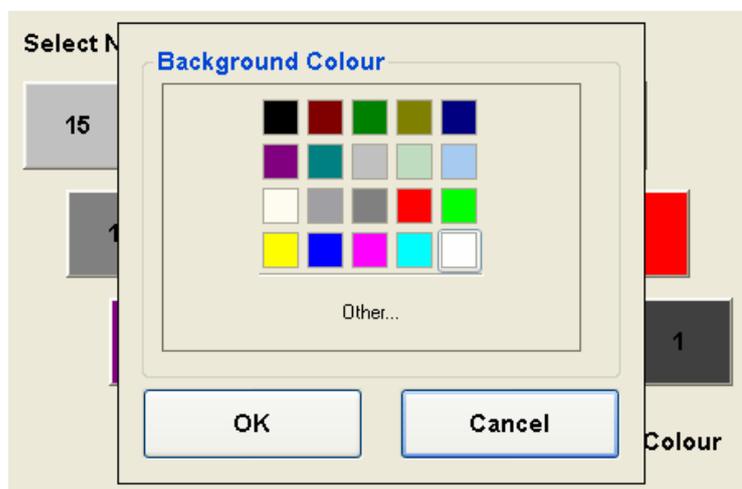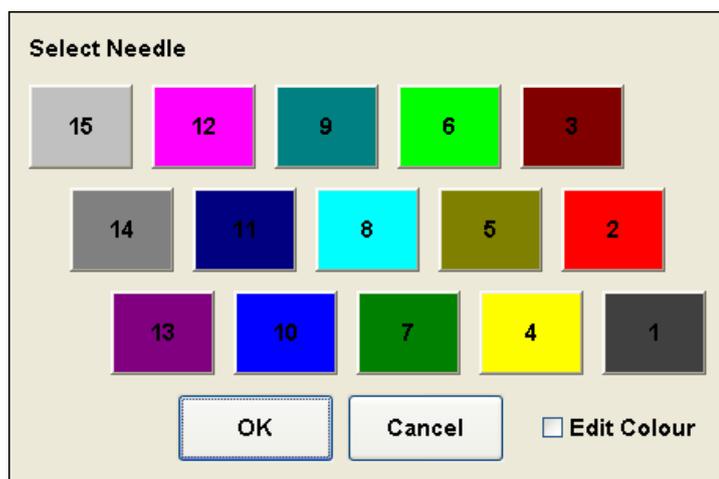
11. Pattern files management:

Click on pattern input key to enter the relevant management interface, shown as follows:

It is available to copy pattern files between USB and computer as well as load and cancel pattern files, with one point need to be **noted: the software support only the DST format.**
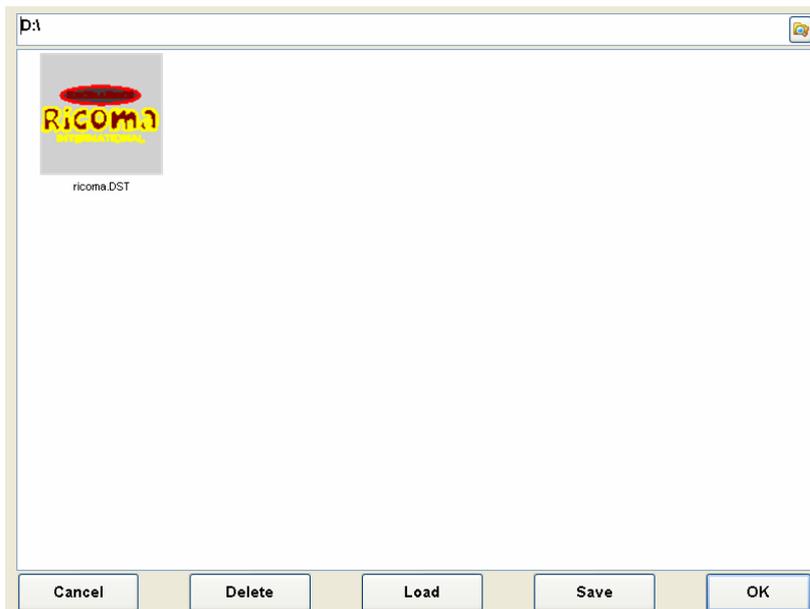
12. Pattern making software-DISC

As a powerful full touch screen pattern making software developed by RiCOMA, DISC can be used to realize one-stop operation of design and embroidery in combination with the embroidery software. Click on to start it shown as follows:
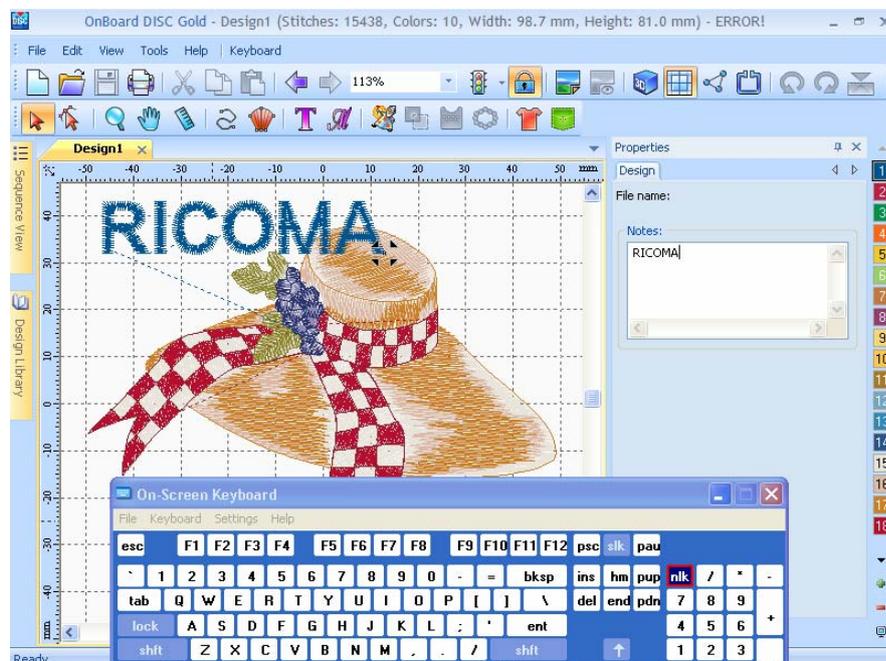
Note: please contact with RICOMA service personal if want to obtain the official right to use DISC.

13. Ampler additional devices:

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 25 -

Ampler additional devices developed by RICOMA have been reserved in the machine to meet different pattern embroidery needs of customers, such as silk banner, pillowcase, sleeve, glove, pants edge, briefcase, shoulder tape and shoes, as shown in the following picture:
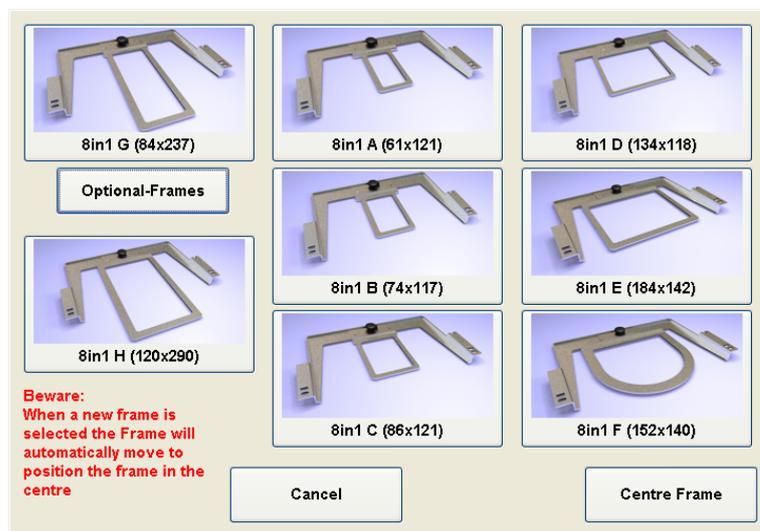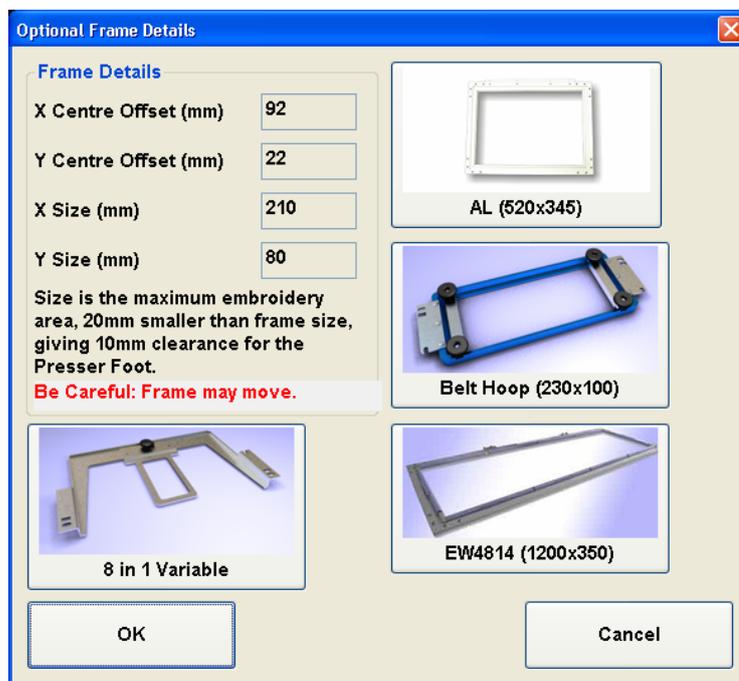
Note: above additional devices are subject to separate ordering, if so, please contact RICOMA service personal;

V On-line Communication;

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 26 -

Ubiquitous on-line service is another remarkable characteristic of the machine. Click on ⚙ and start **Online Support** via internet*, after inputting the ID (Password), you can achieve directly on-line interaction with RICOMA service personal;

● On-line text chat with sorts of machine malfunctions;

● On-line voice and video communication; (video devices are required for client)

● On-line software upgrade and troubleshooting;

● On-line remote control embroidery machine to solve problems in real time;

Note: *means that the client is required to have access to internet;

VI Troubleshooting;

⚠ **Caution**

In any time, embroidery machine have to be operated under the READY status.

1. When machine status bar displaying **E-STOP**, please loosen the emergency stop switch to resume normal operation;

2. When status bar displays **NO CONNECTION** after the startup of machine, please check the connection condition of USB connecting wire, and replug wire before close the software. Tips in "4, Network Setting" of "IV Function Introduction" for reference;

3. If status bar displays **RECONNECTING** during the running process of machine, please check USB connection and if any equipment with strong vibration or high power in operation round the USB. After removing those external interferences, reconnect USB connecting wire, close software and restart it. Tips in "4, Network Setting" of "**IV Function Introduction**" for reference;

4. Removing the stitch position error:
When circumstances shown as follows (see next picture) occur, it means that needle position have not been effectively detected. Click on pop-up error prompt message, slowly revolve color switching handle, and after a digit appears in the needle position, indicating the needle position have been effectively detected and trouble removed, abnormal operation then will be allowed.

Needle display
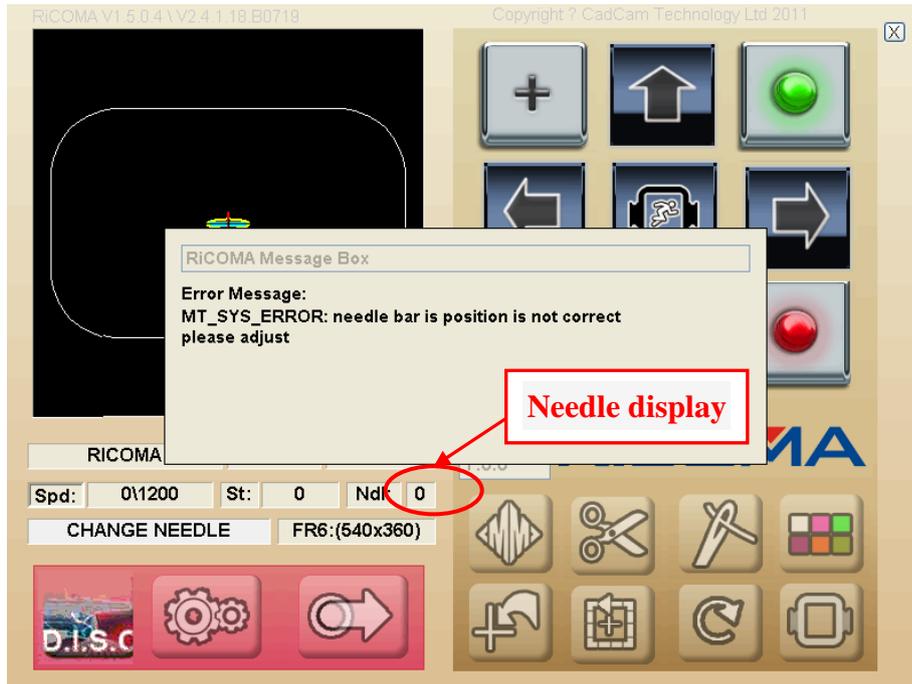
5. Trouble shooting for improper thread cut

Errors prompt shown as follows means no effective induction from the thread cut sensor. Click on error prompt message, cutter automatically reset for induction; if the message still exists, watch out if any mechanical failure and prevent the cutter reset;

⚠️ Warning

A Passion for Excellence
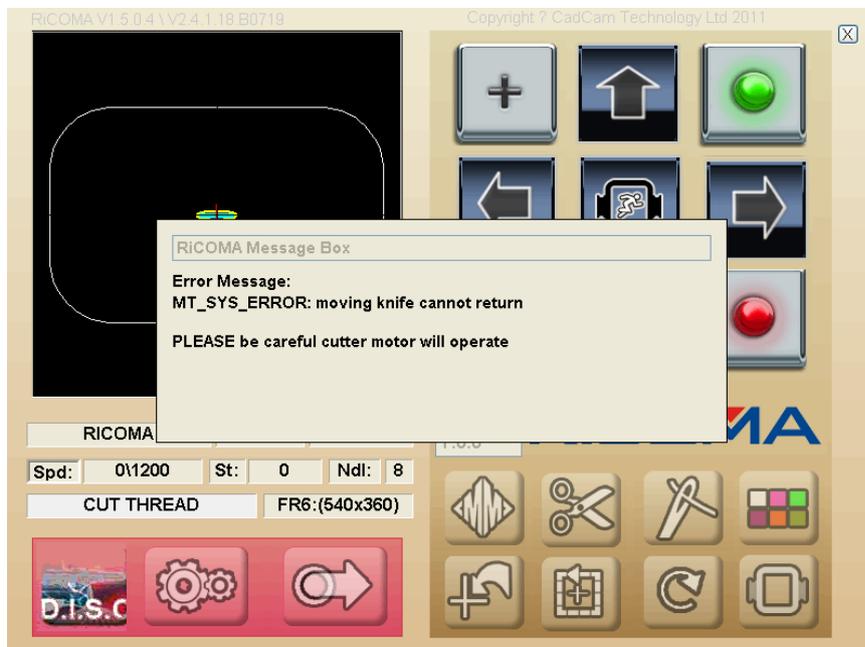
Note: pay attention to operational safety, keep hands way from the cutter and needle rod;

6. Trouble shooting for principal axis not being at zero position:

Errors shown as follows means the principal axis is not at zero (i.e. 100 degree)

MAIN AXIS NOT AT ZERO, then click on directly the error prompt message, with

principal axis motor automatically working and turning to 100 degree.

Warning
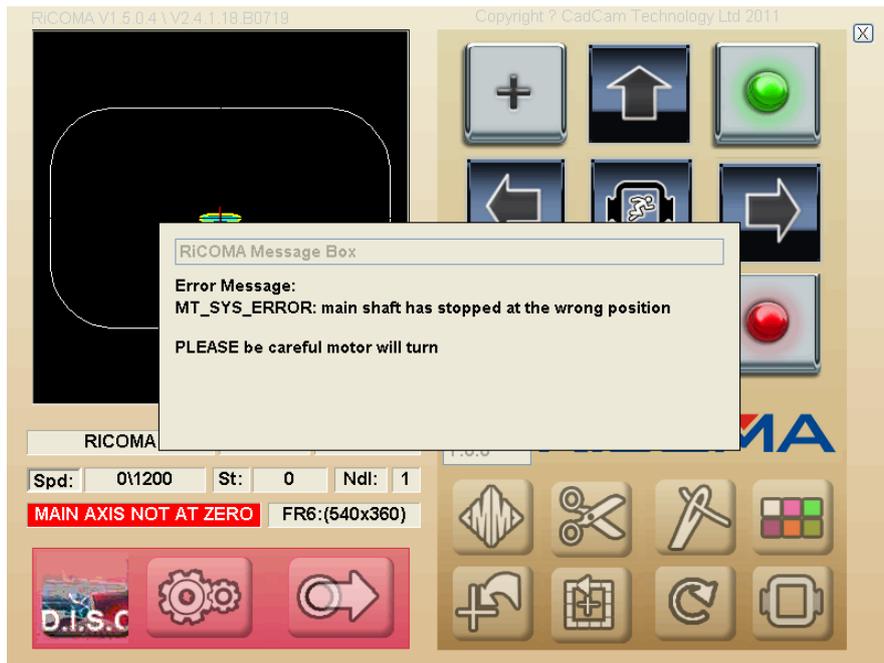
Note: pay attention to operational safety, keep hands way from the cutter and needle rod;

7. Prompt for pattern-out-of-frame:

After inputting pattern, if any error prompt message shown as follows occurs, it means patter size exceeds the frame size and frame may be punched, therefore, switching to a greater frame is the correction solution;

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 30 -

If any other error prompt message, please contact distributor or RiCOMA service personal, or log on www.ricoma.cn for newest solutions.

Add.: Building B, ShenChangGang Science Park, Jinlong Road 1, Baolong Industrial Town, Longgang District, Shenzhen, P.R.C

Tel.:+86-0755-25857576   Fax: +86-0755-25857773   - 31 -