

**Manual Book for
Computerized Quilting Machine**

YD512

(General purpose)

Version: 2011-11

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Chapter I Summarize

We welcome you to use this computerized embroidery machine manufactured by Taiyuan Dahao Yida Electrical Control Co., Ltd. Please read this manual book first to ensure your operation is proper; besides, put this book in a safe place to read it at any moment.

1.1 Warning & Notice

For the sake of fire and electricity disaster during operation, please follow these instruction.

Attention for use	
Danger	Don not open cover board of electric box when machine is working. Some part of box will have high voltage and keep rotating, all these may hurt user.
Forbid	The electrical equipment shall not work in an place with humid, dusty and corrosive air, and the machine is forbidden to be accessible by flammable materials, otherwise shock or fire will occur.
Forbid	The electrical equipment shall not work in any place with shock, otherwise malfunction will occur.
Notice	Please follow these requirements and warnings on our machine for the safety of people and property.
Notice	LCD is frangible, please do not click hardly with any sharp object.
Notice	When using Floppy disk or USB disk, you must insert it in right direction. Otherwise, this will damage the port. Please do not insert or plug out disk when reading or writing.
Notice	Additional book will be issued when necessary. If there is any contradiction between manual book and appendix, please refer appendix content.

Attention for installation	
Notice	None professional is not allowed to disassemble electrical board to prevent damage.
Notice	If the machine is not used for some time, power shall be applied on periodically (say: once every two or three days), the power is on for more than one hour each time.
Notice	If the machine is not used for a long time, please call a professional to check it before power on.

Attention for transport	
Notice	Please do not hold connection wires when carrying facilities incase of damage or hurt.
Notice	Please follow these requirements and warnings on our machine for the safety of people and property.
Force	Please do not over load packaging for safety.

Attention for connection	
Forbid	It is forbidden that user test insulation of controller in-out loop, otherwise this will damage your machine.
Forbid	Overload electric facilities are forbidden on the power socket or the terminal of control box.
Notice	All connection wires (for power or signal) should be insulated well and not be broken.
Notice	Wires for power and signal should be separated.
Notice	All wires must be fixed well and not pulled by any object. All holes passed by must be treated in order to prevent wires. Sleeves and isolation are necessary if possible.
Notice	Resistance of machine to the ground is less than 10Ω and connected well.

Attention for operation	
Danger	Operating without shield of moving part on machine is not allowed.
Forbid	Do not touch any moving part of machine!
Notice	Only the mentioned power supply is to be used with the machine. Voltage regulator must be equipped in case of 10% fluctuation.
Notice	When alarming, please find the reason and solve it, then reset alarm and work after everything is safe.
Notice	This machine has current over load protection method. If protection is switching, it must be turn off after 3 minutes.

Attention for maintenance	
Warning	If the electric box has to be opened, the power supply shall be shut off first, and electric plug is taken off and placed for 1 minutes before opening.
Notice	The circuit boards are very easy sensitive to static electricity, nonprofessionals are forbidden to dismantle the boards by themselves.
Notice	If the machine is not used for some time, power shall be applied on periodically (say: once every two or three days), the power is on for more than one hour each time.
Notice	If the machine is not used for a long time, please call a professional to check it before power on.

Attention for scrap	
Notice	When scrapping embroidery machine, regard this as common electronic product for industry and disposal it according to national standard.

1.2 Characteristic

1. Simple and smart interface make you easy to operate.

2. Automatically alternate embroidery function

Each head can alternate-embroidery automatically according to design

3. Large memory

This machine can store 60 million stitches (1000 designs).

4. 60 million stitches for one design

At present, one design can accommodate 60 million stitches and change color for 1024 times

5. Multitask shift

When embroidering a design, you can read or write design and edit it, even change other parameters.

6. Parameters can be saved with design together

Common parameters such as color-change (stitch) order can be saved separately, also you can set other designs when machine works to save time.

7. Grouping management for parameters

Parameters are assorted according to their function and type. Anyone no matter technician or manufacturer can save and recover their data, also they can add password for safety.

8. USB disk input or output

USB disk is available for design input or output

9. Multi-design input

User can input multi-design from all USB disk in the same list.

10. Patch function

You can set color change code or stop code to patch point. When reaching this point, machine will stop. After the patch work, the bar is activated to return the frame to the stop point automatically to go on with the embroidery process.

11. Adjustment for braking

The braking data can be adjusted as per the characteristics of different kinds of embroidery machines, to make the main shaft stop accurately.

12. Start point memory

This function is used for memory every start point of design to avoid finding start point manually for the same design.

13. Maintenance and debugging

Including: photoelectricity coder, self-test for main shaft speed, main shaft stops at any position and assembly test. This function will make you find malfunction easily.

14. Mutil-language interface

15. Design output

Design in memory can be saved to diskette or USB disk. This product can output DST binary format design. This design can be transferred through internet directly (some other format can not be transferred directly).

16. Repetition embroidery

The same design can be embroidered repeatedly (cyclic embroidery together), this will save lots of time.

17. Cyclic embroidery

This function allow machine back to original point after the first design over and start for the next one. Special or repetition design can be operate together to improve efficiency.

18. Edit the designs:

(1) The machine allows the editing performance, and the design can be zoomed and rotated etc. to result in a new design in the storage for the convenient usage by the user.

(2) This computer also can yield combination designs for other use.

20. Speed adjustment

You can set max. speed , then machine will adapt its speed to stitch distance change automatically.

21. Trimming function

You can trim manually or automatically after embroidery or when color changing.

22. Broken thread detection

The machine stops automatically and alarms in case of the broken thread or the ending of both the face and bottom threads during the process.

23. Color changing

Both the total and the elapsed times of color changing of the design are displayed during the process. Color changing is performed manually or automatically as per the sequence.

1.3 Specification

1. Max design number in memory: 1000

2. Memory capability: 60,000,000 stitches

3. Resolution: 800x600

4. Data media: USB disk

5. Control accuracy: Minimum stitch distance: 0.1mm

6. Stitch range: 0.1mm~12.7mm

Chapter II Embroidery guide

2.1 Operation box introduction

1. Operation box structure



a. LCD

High luminance LCD.

b. USB port

USB for data read and write, meanwhile diskette device can be connected through this port.

2. USB disk use



When using USB disk, you must notice static electricity for the safety of device. Users should discharge static electricity by touching metal material. When reading or writing USB disk, please avoid pulling it out. If this happens, data integrity should be test and recovered for use.



Notice: If power is off or pull out when formatting USB disk, it may damage USB dick.

2.2 Control panel introduction

User can control machine by keys on the panel and LCD. Operation of panel will be displayed on LCD.



No.	Name	Description
1	LCD	Display operation menu
2	+/- shift key	Select number +/-
3	Design management key	It contains selecting quilting design, viewing design, reading design, saving design to USB disk, deleting, packing and clearing designs.
4	Numeric keys	Select or set parameters.
5	Manual frame move key	Move frame or change value in parameter set menu.
6	Frame move speed switch key	Used for changing the modes of frame moving methods ( high speed or  low speed).

No	Name	Description
7	Speed modification key	Press  ,  to speed up and down
8	Confirmation key	Confirm your operation
9	Exit key	Quit your operation
10	Function select key	Select function displayed on screen by relevant key(F1 to F10)
11	Design management key	Enter design management menu in memory
12	USB disk Management key	Enter USB disk reading menu

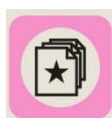
2.3 Function key instruction



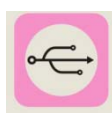
Embroidery confirmation/cancel key



Jogging



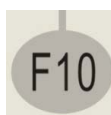
Design management



USB disk management



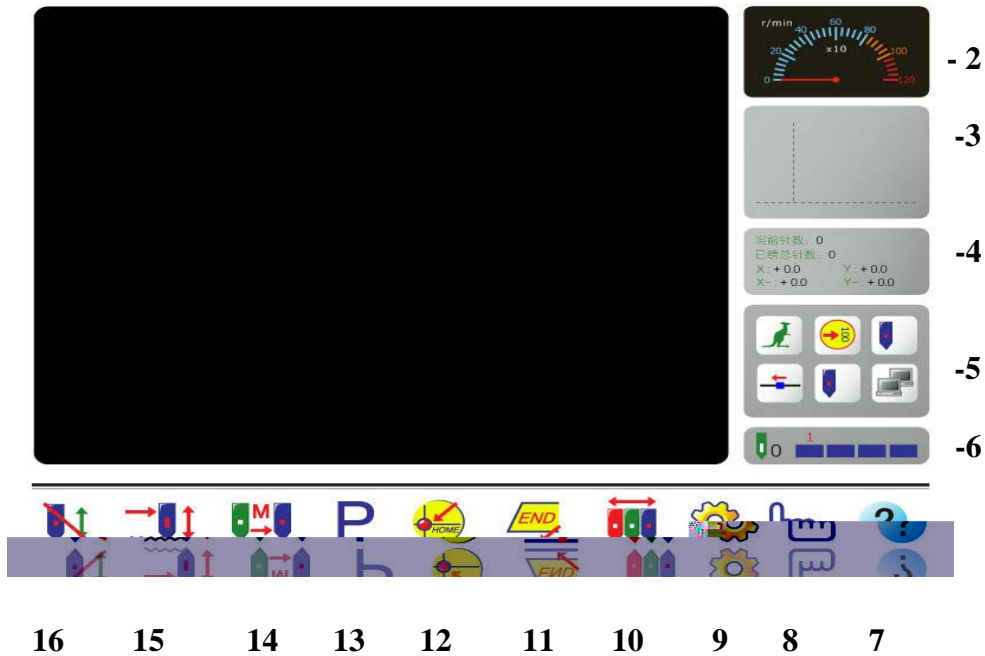
to




















Main function operation key Same as displayed on screen.

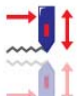








2.4 Main menu instruction




1






No.	Display	Name	Description	Reference
1		Embroidery track	Stitch track or design will be shown in this area	
2		Main shaft speed	Displays current main shaft speed and preset speed	
3		Design information	Design information and outline are shown in this area	
4		Embroidery status.	Total embroidered stitches and quilting length	
5		Machine status (Left to right, top to bottom)	Frame move speed (Low speed  , high speed  . Use  to shift)	

No.	Display	Name	Description	Reference
5		Machine status (Left to right, top to bottom)	Main shaft status (Running  Stop at right position  Stop at wrong position 	
			Embroidery status (Thread broken  , end  , color change  , jump stitch  , pull bar to stop )	
			Cyclic embroidery  , None cyclic embroidery is empty	
6		Color change list & stitch position		
7		Help	Operation for help	
8		Assistant embroidery	Design orientation, machine test and language set	
9		Set parameter	Set all parameters	
10		Set color change order	Press corresponding stitch No. to change color. According to the clew, set alternate embroidery.	
11		Back to embroidery point	After stop, press manual move key to move frame(patching). Then press this key to make frame go back to stop point.	







No.	Display	Name	Description	Reference
15		Normal embroidery	The machine now is in normal embroidery status. Pull bar forward, then main shaft will rotate and taboret will move. Pull bar backward to idle backward at low speed. When machine stops, press this key to switch to idle at low speed  .	
		Low speed idle	The machine now is in low speed idle status. Pull bar forward, then main shaft will not work but the taboret will move following design. When pulling bar backward to go backward, main shaft will not rotate but the taboret will move back following design. When machine stops, press this key to switch to idle at high speed  .	
		High speed idle	The machine now is in high speed idle status. Pull bar forward, then main shaft and taboret will not move, but stitch number will increase. After pulling bar to stop, taboret will move to current stitch position. When pulling bar to go backward, main shaft will not rotate and taboret will not move, but stitch number will decrease. After pulling bar to stop, taboret will move to current stitch position. When machine stops, press this key to switch to embroidery status  .	
16		Standby status Embroidery confirmation	The machine now is in standby status. You can set design and its parameters. Press this key and confirm, machine enter embroidery confirmation status  from standby status  .	

No.	Display	Name	Description	Reference
16		Embroidery confirmation status Cancel embroidery	The machine now is in embroidery confirmation status. You can pull bar to work at any time. Press this key and confirm when machine stops, machine will cancel embroidery confirmation status and enter standby status  , from embroidery confirmation status  .	

2.5 Explanation for items in menu

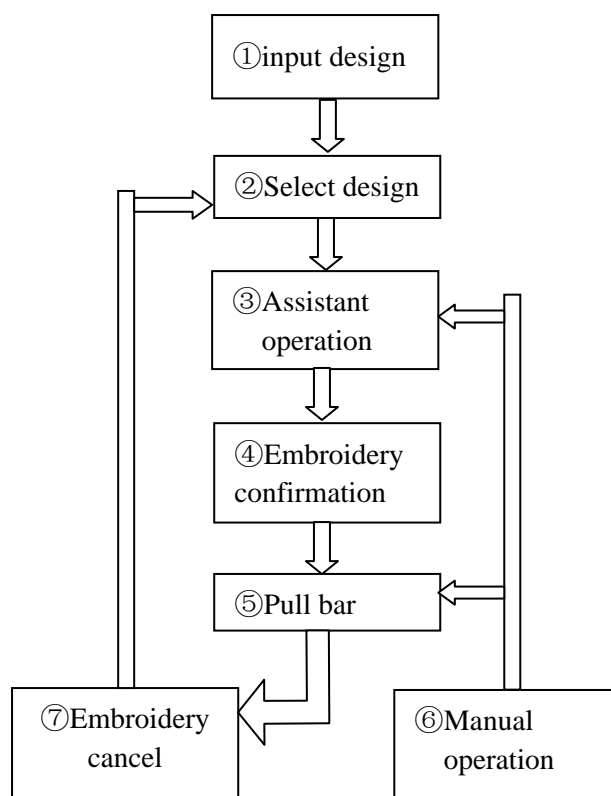
When inputting number, press  to input radix point and  to input negative number. If there is a number on keyboard, press  to erasure the last number.

2.6 Cursor move method


Cursor on screen is displayed on different background, you can press     or corresponding numeric keys to item. Hold  or  , cursor will continuous move.

2.7 Basic embroidery flow


Computerized machine work is based on designs saved in memory. The following chart shows how it works.

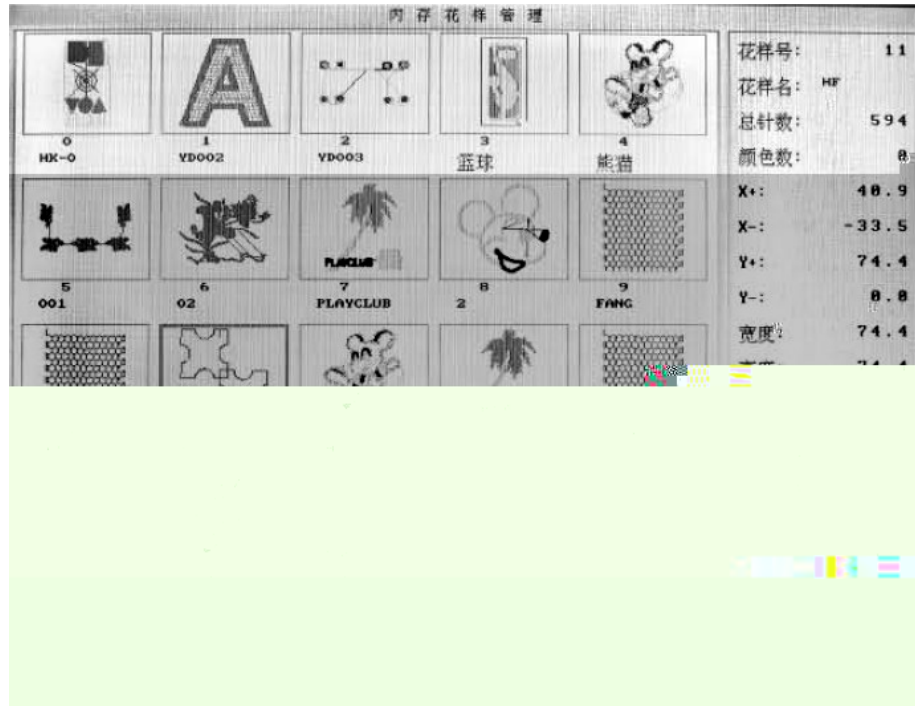


1. Input design


Press  key in main menu to enter design management menu.


a. After entering design management menu, press   keys to select design, then press

 key.(or )







b. If there is a quilting design preset, machine will clue:


Design has been selected! Change current design to embroidery design? Press  key to confirm this operation and enter main menu. Then, you can pull bar to working. If there is no design selected, machine will tell you: Please select design!

Press  key to select this design for quilting embroidery.

2. Confirm embroidery




a. When assistant operation finished, press  key, then screen will clew you. Press  key to confirm. After that,  (embroidery cancel) turn to  (embroidery confirmation). This means that machine is in embroidery confirmation status.



If press  key, machine will still in embroidery cancel status. Now, even you pull bar, machine still does not work. At the same time, it will ask user to confirm.




b. Set color change and start mode

In main menu, press key stands for  (or  ) you can switch these three status:

-  (Auto color change and start)
-  (Auto color change, manual start)
-  (Manual color change, manual start)

c. Set normal embroidery or idling









In main menu, press key stands for  (or , ) , you can switch these three status:

-  (Normal embroidery)
-  (Low speed idling)
-  (High speed idling)


- **Stop status:** Pull bar rightward to embroider (including low and high speed idling).
Pull bar leftward to go back (including low and high speed idling).
- **Working status:** When machine is working, hold bar rightward for slow embroidering and loose bar for normal embroidering.
Pull bar leftward to stop (including low and high speed idling).

3. Manual operation

a. Manual move taboret

When machine stops, press direction keys (, , , ) to move taboret. This key  is used for change move speed:  (high speed),  (low speed). Press  once for changing speed once.





b. Clear taboret coordinate

When machine stops, press  key to clear taboret XY displacement. It also can be used together with manual move taboret.



c. Manual color change

When machine stops, input stitch number, and machine head will move to preset position automatically.



d. Main shaft jogging

When changing color, move taboret and start , main shaft must stop at right position. If main shaft is not in 100 degree, you can jog it. In main menu, press  key, then press  key to jog. After that, icon  (main shaft not in position) will be  (main shaft in position).


e. Back to start point

In main menu, press  key (F5) and press  to go back to start point.

f. Back to stop point

In main menu, press  key (F6) and press  to go back to stop point.


g. Oriented idling

This function is used after embroidery confirmation. Machine can move taboret to appointed position without embroidering to meet client's demand. In main menu, press  key to select appointed stitch number, color change code and stop code to let machine idle forward or backward.

4. Cancel embroidery

After stop, press  key (F1) or , then press  key, icon  (embroidery confirmation) will be .

2.8 Normal embroidery, move back and patching

In embroidery confirmation status (), switch on the head that need to embroider normally should be dial to normal state., and does not need to embroider normally should be in down position. Then pull bar rightward once (hold it will embroider slowly) to make machine work normally. During machine working, pull bar leftward once to stop machine.

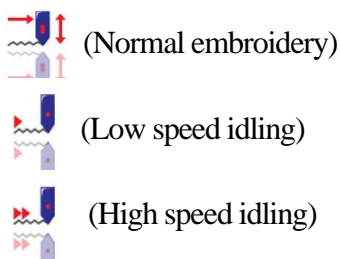
After machine finishing work, pull bar leftward once, taboret will go back for one stitch. Hold the bar will make the taboret keep on going back. After 10 stitches (according to different machine, this value may be different), if you loose the bar, machine will keep on moving back. Then, pull bar leftward once to stop.


The purpose of moving back is for patching. When stop moving back, switch on the head that need to be patching should be dialed to patching status. Pull bar rightward, only patching head starts and other heads do not fall stitch. When patching reaches preset point, other normal heads begin to fall stitch to embroider.


2.9 Relation of normal embroidery to idling

Idling and move back functions are used for patching. According to embroidery need, low speed idling, high speed idling and oriented idling are available. In “idling” status, idling back function also contains low speed, high speed and oriented idling.

In main menu, press key stands for  (or  , ), you can switch these three status:



After set low speed idling  , pull bar to move taboret according to design and main shaft do not rotate. Pulling bar to idle backward is th same.

After set high speed idling  , when pulling bar to embroider, main shaft will not rotate and the taboret will not move either. At the same time, stitch number will increase. After pulling bar to stop, taboret will move to the position of current stitch number. When pulling bar to move back, main shaft will not rotate and the taboret will not move either. At the same time, stitch number will decrease. After pulling bar to stop, taboret will move back to the position of current stitch number.

Oriented idling function can make taboret move forward (or backward) to specified position of a certain stitch number, also to a latest color change position, even to a latest stop code position . After system going back to main menu, pull bar to finish oriented idling function.

2.10 Operation bar and slow move operation

Embroidery operation bar (under bedplate).

Stop status: Pull bar rightward to start embroider (including low and high speed idling).

Pull bar leftward to move back (including low and high speed idling)

Working status: Hold bar rightward for slow embroidering and loose bar for normal speed embroidering. Pull bar leftward to stop.

2.11 Thread broken detecting and patching switch

There are three kinds of thread broken detecting in theory: Thread picking spring type, thread rolling wheel type and composite type.



Thread picking spring type is by judging picking spring and touching spot are hit or not to test thread broken. When thread is broken, picking spring and touching spot will be never separated. This method is sensitive for upper thread detecting, but it will not work well when bottom thread runs out. This method need to modify spring pressure for a suitable value, neither big or small will lead to mistake or omitting detecting.

Thread drives rolling wheel move, so, **thread rolling wheel type** is by detecting and counting rotate angle of thread rolling wheel to test thread broken. When upper thread is broken, it will be reliable. Under most circumstance that bottom thread is over, usage of upper thread will be decreased. So, according to probability and statistic, system will judge that bottom thread is over and warn you. This method will not be easy to omit alarm, but it is less sensitive than spring type.











Composite type has advantage of former two types. No matter which type, there are a dial switch and an indicator light on each head. This switch has three dial positions, but only two of them have lock positions. When switch is on down position, indicator light will not shine and the head will stop embroidering. When switch is dialed from down position to middle position, indicator light will turn green for normal embroidery. When system find thread broken, machine will stop and light that on head will be red where the upper or bottom thread is broken . Then machine change to darning status. If you want to set to manual darning status on a head, dial the switch to up position. Up position can not be locked, so the switch will go back to middle position, but indicator light will tuen red. This means this head is in darning status.

2.12 Embroidery machine working status

Computerized machine has three working status:

1. Embroidery preparation status  : For embroidery operation, all kinds of control parameters, design and preparation work should be set.
2. Embroidery confirmation status  : Confirm preset control parameter to make machine ready before working.
3. Embroidery status (or start status): Begin to embroider.

Status switch:


In embroidery preparation status  , if design and its parameter in memory are selected, press  key and then  key to confirm. System enters embroidery confirmation status  . Pull bar rightward to work, and enter embroidery status  . In this status  , pull bar leftward to stop and machine enter embroidery confirmation status (Pull bar leftward to enter embroidery status). During embroidery confirmation status  , press  key and  to confirm, then system enters embroidery preparation status  .

Chapter III USB disk management

In USB management menu, user can input design in USB disk to machine, also design in machine's memory can be output to USB disk.








Supported formats for reading include DSB and DST. When outputting data to disk, format is DSB .

3.1 Select disk

1. Press USB operation key  .

2. Enter disk operation menu.





No.	Display	Name	Description
1		Listed files in USB disk	Designs in USB disk is shown in icon mode for selecting.
2		Preview design	Read selected design, show its information and draw its icon.
3		Read design	You're your choice to memory. If more than one designs is selected (blue background & white words), they will be saved together.
4		Multi choice /cancel choice	Press this icon, if the design that is not selected, it will be added to multi choice list (blue background & white words). If design is selected, it will be canceled.
5		Select all /cancel all	Select all designs in USB disk. If all of designs have been selected, they will be canceled by this operation.
6		Page information	Current and total pages' information.
7		Disk capacity	Display disk capacity and spare room of memory.
8		Design stitch	Display design stitch.
9		Target name	Name of design.
10		Target icon	<p>Icons stand for target type:</p>  Target is content  Target is DST format  Target is DSB format

3.2 Design preview

1. In USB disk operation menu, press  keys to find your choice.



In design files and content list, designs in USB disk are shown by icons. One page contains 20 designs. If design number is more than 20, there will be more pages to display design. Press   keys to page up and down. Outline of selected design will turn blue.

2. Design preview key 

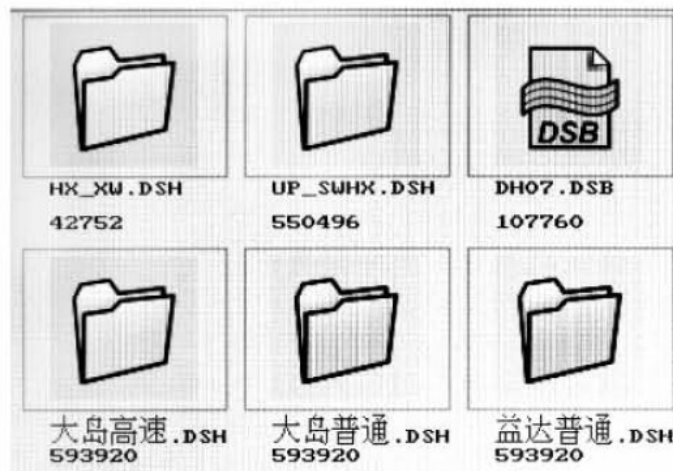


System read data from disk and display design pro rata. At the same time, design information and color change times will be displayed together.





3.3 Select single or multi design

Before inputting and deleting design, you should select a certain design or some designs.

1. Press     keys to find your choice



Default status is that the first item is selected in the first page and other designs are not selected. Press

    keys to make your choice, then the outline of icon and word will turn blue.







2. Multi choice/cancel choice key

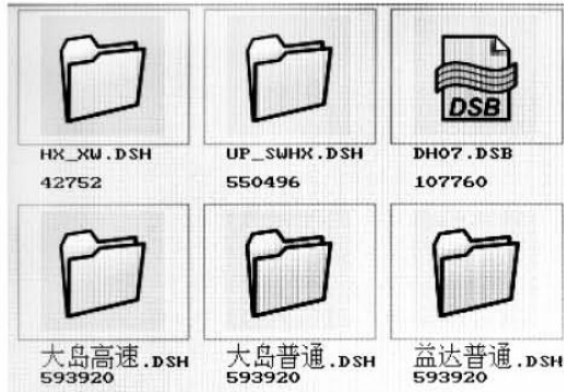
In default status,  key is the same as .


If you need to read multi design, press  or  key to add design in USB operation menu.

Outline of selected design will turn blue and name and stitch number will be shown.

3. Select multi objects in turn

Press     keys to your choice and press  to confirm, outline of selected design will turn blue and name and stitch number will be shown. Repeat this operation you can select other designs and press  to cancel selected design.




4. Press  key in USB management menu to select design. After pressing select all designs key, all designs in system will be picked and press it again for canceling choice.

3.4 Input design

1. Select one or multi design in USB disk.

If multi design is not selected (selected status: blue back ground, white word and stitch number), system will consider the design that is in blue frame is your choice for inputting. Now, single design will be read.

2. Press design input key

If reading single design, system will name this design default name in the minimum number. Then save it to memory. If you do not need to modify it, press  key. Press other key to input design number and name then save it. When inputting multi design, system will choose design number automatically and design name will be original name.

3.5 Delete design

1. Make a choice that you want to delete.

2. Press  key.


3. System will tell you to confirm.

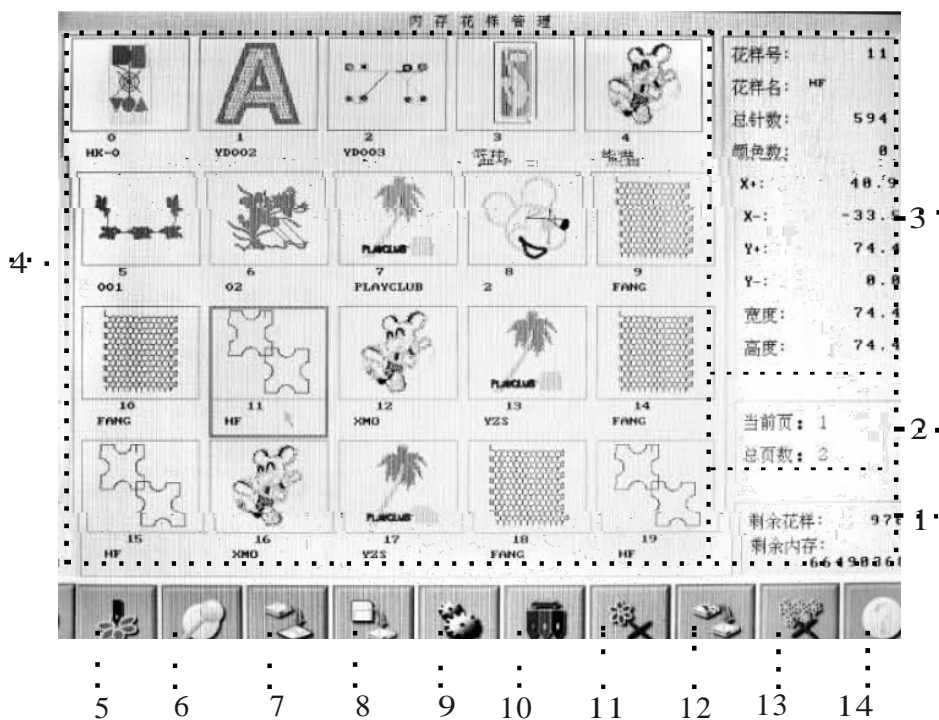
4. Press  to delete and  to exit.











Chapter IV Design management

Design management includes: select design, edit design parameter and generate new design.

4.1 Design management menu instruction

In main menu, press  key to enter design management menu. This interface contains: Breviary design display area, information column and function menu. Breviary design display area can display most 20 designs. If number is more than 20, other designs will be shown in next page. In function area, you can collocate and view design.




No.	Display	Name	Description
1		Design total and memory info	Display design total and memory info.
2		Page info	Display current and total page number.
3		Display design info	Display selected design info.
4		View design	Display design icon for choosing design.
5		Select design	Press this key to modify design parameter, after that, select this design for embroidering.
6		Preview design	View design in large size.
7		Save design to USB disk	Save your design to USB disk.
8		Read design from USB disk	Press this key to enter USB management menu.
9		Set design parameter	Set design parameter when embroidering
10		Set color change order	Set color change order and alternate embroidery.
11		Delete design	Press this key to delete your choice.
12		Pack memory space	Set design compensation.
13		Clean designs	Press this key to clean all designs.
14		Help	Enter help menu.





4.2 Select single or multi design

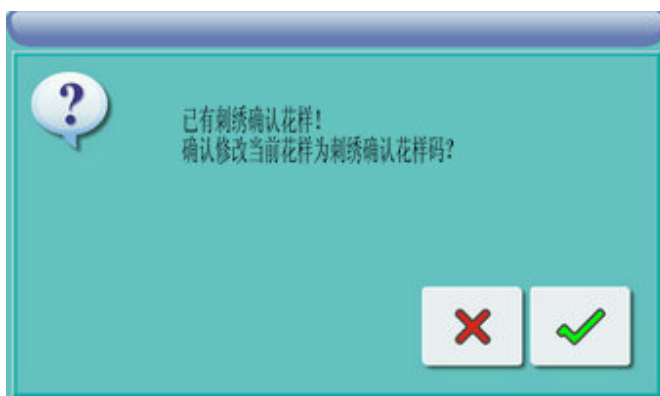
After modifying design, you must make a choice.


Press     keys to select.

Default status is that the first item is selected in the first page and other designs are not selected. Press  keys to make your choice, then the outline of icon and word will turn blue.


4.3 Select embroidery design

1. If you need to select a new design, please make sure that system is in  status.
2. Press  key to enter design management menu.
3. In design icon area, select your design.
4. Press  or  key to enter design clue.
5. Make a choice according to the clue.



If design for quilting embroidery is confirmed, there will be a clue: “Design is selected! Change it into current one for embroidery?”. Press  key to confirm your choice and go back to main menu, then pull bar to embroider.



If there is no design for embroidery is confirmed, screen will be “Please confirm your design!”. Press  key to select current design for quilting embroidery.

4.4 Design preview in memory



Design preview menu

This item is used for viewing design in detail.

Notice: If breviary chart is not displayed, you can renew design it.

4.5 Save design to USB disk



Save design to USB disk

Press this key to save design to USB disk.

4.6 Read design from USB disk



Read design from USB disk

Press this key to read design from USB disk.

4.7 Set embroidery parameter of current design



Set embroidery parameter

Press this key to enter embroidery parameter set menu.


4.8 Set color change order of design



Set color change order

Press this key to set color change order.


4.9 Delete current design

Press  key to delete current design.

4.10 Pack memory space

Press  key to pack system fragment to get more room in memory.


4.11 Clean designs

Press  key to delete all designs in system and set parameter to default.

Chapter V Parameter management

In this system, common parameters such as zooming, repetition and color change order are saved together with each design. When a new design is selected, these parameters saved together will take effect.



This system support multitask operation, so you can set other design's parameters. Please refer to Chapter IV to enter other design edit operation menu.

Press  key to enter this function.



5.1 Step for parameter set

All parameters are almost the same, you can follow instruction in this chapter to set them.

1. Select class

You can move cursor to parameter class or press numeric key, then press  key to enter menu. Then, move to your choice and press  key to enter.

5.2 Set parameter sort

Notice: Part of these parameters can not be input but pressing   key to select.

5.2.1 Zoom, rotate and repeat design

No.	Parameter name	Default	Option	Note
Set design parameters				
	Design direction	P		
	Angle of rotation	0	0~89	Control design rotation
	X-Y zoom rate	100/100	50%~200%	Control zoom rate
	Repetition sequence	X first	X first, Y first	
	Repetition mode	usual	Usual, part	No use
	Frequency of X-Y repetition	1/1	1~99	
	X-Y repetition distance	0.0/0.0	-999.9~+999.9	
	Priority mode	Rotation first	Rotation first, Zooming first	

5.2.2 Common parameters for quilting machine

No.	Parameter name	Default	Option	Note
Set quilting machine parameters				
	Frame curve	1	1-4	
	Frame angle	245	230~290	
	Max. speed	500~1000	500...,1000	
	Min. speed	400	400,...,600	
	Needles	3	1,2,...,MAXNE EDLE	According to machine head number. If not correct, color change will be abnormal.
	X,Y frequency doubling no.	5	1-20	According to servo motor.
	T.B.BACK STL.	1	0 ~7	
	Upper thread detecting	ok	NO, ok	
	Bottom thread detecting	NO	NO, ok	
	Bottom thread detecting paras.	6	1~15	
	Upper thread detecting without dithering no.	3	1~6	
	Stop compensation	10	1~30	
	Startup ACCE	8	1~30	Adjust start acceleration
	Jump limit	NO	400~800	Jump speed limit
	Head no.	32	1~172	According to machine
	T.B. mode	Double	Double, normal	Double: one solenoid and two stitch.
	Step frame	NO	NO, ok	Ok: move after jumping
	Switch speed length	4.0mm	3.0mm--7.0mm	Adjust stitch speed
	Auto stop quilting number	0		0: not stop, according to set value to stop
	Auto stop bottom thread number	0		0: not stop, according to set value to stop
	X compensation	0	0~5	
	Y compensation	0	0~5	

5.2.3 Assistant embroidery parameters

No.	Parameter name	Default	Option	Note
Assistant embroidery parameters				
	Auto orig	ok	NO, ok	
	Repetition EMB.	NO	NO, ok	After embroidery, whether it will work automatically. Work with repetition and special design making.
	Display stitch no.	ok	NO, ok	
	Filter empty stitch	NO	NO, ok	Ok: System will filter empty stitch to avoid fall stitch in former place. NO.: Do not filter.
	Auto start when same color	ok	NO, ok	In color change order, when former position is the same as next position, whether or not deal it as color change.
	Manual color change remember	NO	NO, ok	Ok: Color change is saved. After work, it will be NO.
	Stitches for patch	0	0~500	
	Low speed for patch EMB	MAX.	80~ MAX.	
	Design stop code conversion	NO	NO, ok	Change stop code to color change code for some country.
	Display bottom color	ok	NO, ok	
	3D display	NO	NO, ok	
	Filter empty stitch when EMB.	NO	NO, ok	

5.2.4 Thread broken detecting parameters

No.	Parameter name	Default	Option	Note
Thread broken detecting parameters				
	T.B. detect	ok	NO, ok	
	STI. not T.B. detect	8	0 ~15	
	T.B. detect stop	ok	NO, ok	
	Pull bar after T.B.	NO	NO, ok	
	T.B.BACK STI.	1	0 ~7	Some type do not work(Sequin EMB.)
	Darning NO.	0	1 ~10	Stitch no. after thread broken point when darning is over.
	Mode after darning	Stop	Still, Decelerate, Stop	
	All head darning	NO	NO, ok	Ok: when darning, unlocked heads works.
	T.B. detect when jump	NO	NO, ok	
	T.B. detect mode	Spring	Spring, rolling wheel	
	T.B. detect without dithering no.	3	1 ~6	
	Upper thread detecting paras.	6	1~15	
	Bottom thread detecting paras.	6	1~15	
	Upper thread detecting without dithering no.	6	1~6	
	Bottom thread detecting without dithering no.	6	1~6	

5.2.5 Parameters of taboret

No.	Parameter name	Default	Option	Note
Frame parameters				
	Frame curve	1		
	Frame angle	245	230~290	
	Step move frame	NO	NO, ok	
	High speed of frame move	10	1~30	Change manual frame move speed.
	Low speed of frame move	15	1~30	Change low speed manual frame move speed.
	Frame move speed	6	0,1,2,...,30	Change frame flat move speed.
	Gas frame	ok	NO, ok	
	Gas frme time	3	0~15	
	X-Frame angle A	245	230~280	
	X-Frame angle B	250	230~280	
	EMB. mode	Normal EMB.	Normal EMB. / Cap EMB.	
	Frame weight			
	Debugging 1			
	Debugging 2			

5.2.6 Main shaft control parameters

No.	Parameter name	Default	Option	Note
Main shaft parameters				
	MAX. speed	700~1000	250, 300, 350, ...,1000	
	MIN. speed	400	250,300,350,...,600	
	Switch length (mm)		1.0~10.0 (normal)	When stitch length is larger than this value, machine will reduce speed.
	Speed choice	0	0--4	Change stitch code speed
	Jump stitch speed	500	400~750 (normal)	Set rotate speed when there is a jump stitch.
	Set run speed	80	80,90,...,150	
	Slow stitch no. when start	1	1 ~9	After finish slow stitch no., machine will accelerate.
	Startup ACCE	10	1,2,3,...,30	The bigger the value is, the faster the acceleration is for pulling bar operation.
	Stop compensation	10	0~30	Range:0—30。 Slip motor:8; Servo motor:5--7
	Main shaft motor para.	8	0~30	Slip motor: Enlarge this data can prevent dithering when braking. Default:8
	Speed of slow EMB.	400	80 rpm, MIN speed 【get MIN value】	
	Stop ok bef. pull BAR	ok	NO, ok	

	Adjust freq. conversion drive rate	15	-15% ~ +15%	For converter motor. This value will not make set speed be different from real speed.
	Thick cloth compensation	0	0~3	
	Stitch stop adjustment	0	0~30	
	Lock main shaft when stop	ok	NO, ok	
	Main shaft type	General	General, Dahao, Freq. conversion, slip	According to main shaft type.

5.2.7 Parameters of trimming

No.	Parameter name	Default	Option	Note
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	Lock Num-After trim	2	0~3	This parameter is used for setting the locked stitch number when pulling bar to work after trimming.
	Main shaft rotate no. after trim stop	1	1,2	Normal machine:2. Small machine:1.
	X Frame move angle	250	230~280	
	Action after trim	Y move	X move, Y move, Needle.	
	Move frame after trim	NO	NO, ok	
	Buckling angel compensation	0	0~3	
	Test trim position	NO	NO, ok	
	Clasping angle	0	-100~+100	Enlarge this value and the angle will move backward
	Clasping motor drive ratio	1:12	1:9,1:10,1:12,1:15,1:18,	
	Turn off trimming	NO	NO, ok	
	Trimming or not	NO	NO, ok	
	Lock Stitch length before trimming	1.0	0.3~2.0	
	Lock Stitch no. before trimming	0	0~2	
	Start angle of trimming	3	0~20	For stepping motor
	Back knife angle when trimming	4	0~30	For stepping motor
	Keeper angle	5	0~99	For stepping motor
	Buckling solenoid voltage	1	1~3	For stepping motor

5.2.8 Sequin embroidery parameters

No.	Parameter name	Default	Option	Note
Sequin parameter				
	Sequin R-needle	0		Set sequin stitch position
	Sequin L-needle	0		
	R-sequin size	1		
	L-sequin size	1		
	Sequin board type	Single	Single, Double, undefined	According to sequin board.
	Sequin R-speed	400		
	Sequin L-speed	400		
	R-sequin deliver angle	18		
	L-sequin deliver angle	18		
	Gas valve for sequin	250	230~280	
	Sequin device falling time	3		
	Lift sequin after T.B.	NO	NO, ok	
	Sequin device move separately	NO	NO, ok	
	Lift gas valve when jumping without trim	NO	NO, ok	

5.2.9 Special embroidery parameters

5.2.10 Machine config and maintenance parameters


No.	Parameter name	Default	Option	Note
Config and maintenance parameters				
	Needles	3	1,2,...,MAXNEED LE	Refers to the number of the needles installed at the head. If it is not set correctly, color change will be abnormal.
	X,Y freq. doubling	5	1-20	According to machine and servo driver
	Boring needle	None	None, 1~ N	N: machine needles no.
	Boring shifting	0	0mm,12mm	
	Cord EMB. Needle	None	None , 1, N	N: machine needles no.
	Speed for cord EMB	400	300,310,320,...,60 0	
	Solenoid voltage	4	0,1,2,...,30	
	Solenoid current time	5		
	Stepping color change speed	3	0~30	Color change motor type is stepping motor. Larger this value is, faster the machine moves.
	Backlight time			
	Forbid design output	NO	NO, ok	
	T.B. detect board mode	Double	Double, normal	Double: One solenoid has two stitches.
	Upper thread keep voltage	6	1~10	

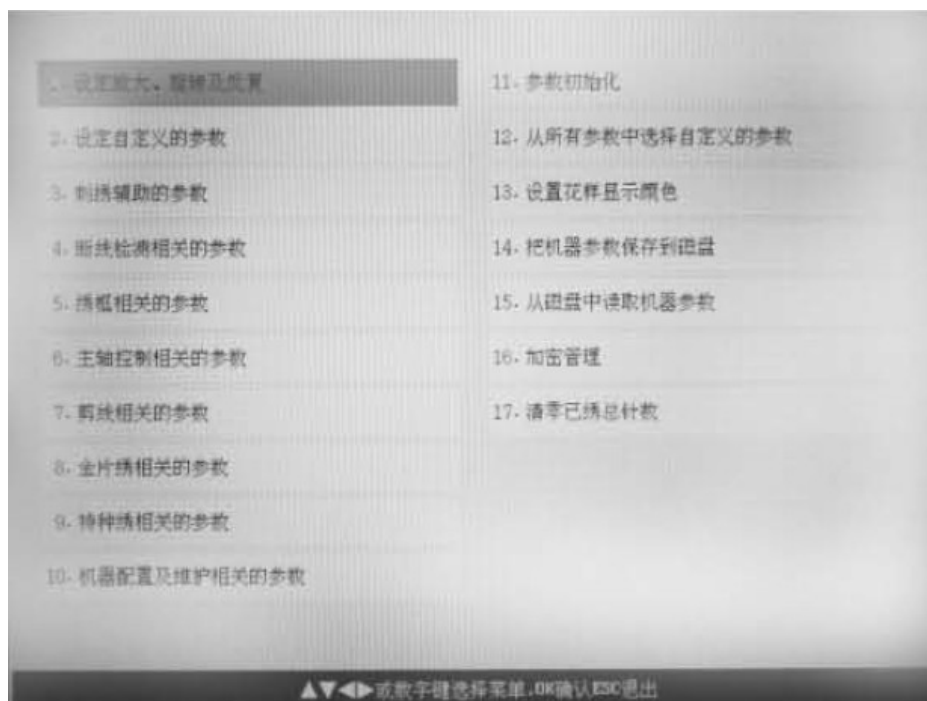
	Head no.	33		Same as real no. of machine head.
	Head no. of one set	2		This value will see several heads as one set. When it is larger than one, alternate embroidery will be active. Color no. can be enlarged.
	Head distance			Same as real no. of head distance. When alternate embroider, it is used for auto frame move.
	Y compensation	0	0~5	Y compensation value
	X compensation	0	0~5	X compensation value
	Main shaft type	General	General, Dahao, Freq. conversion, slip	According to main shaft type.
	Display clock	ok	NO, ok	

5.2.11 Parameters initialization

Initialize and reset all parameters to default.

Chapter VI Assistant function


Press  key in main menu to enter assistant embroidery interface.



6.1. Set parameters


Please refer to Chapter V.

6.2. Orienting operation



Oriented idling operation is available in  status. According to your request, oriented idling function can move the table to the appointed position without embroidery. You can specify the stitch number, color change code and stop code for idling forward and backward. The oriented idling list is on this interface; move the cursor to your choice to apply this function.



6.2.1. Oriented idling of forward stitch number

1. Move cursor to forward stitch number and press  key.




2. Input stitch number and press  key to confirm and  key to cancel.
3. System goes back to main menu, then pull bar rightward to idling for appointed stitch number.


6.2.2. Oriented idling of backward stitch number


Operation step is same as forward one, but you should pull bar leftward. Please refer to Chapter 6.2.1.

6.2.3. Oriented idling of next color change code

1. In oriented idling menu, move cursor to “next color change code” and press  key.



2. Press  key to return to main menu and pull bar rightward to idle to next color change code.




Press  key to cancel this operation.

Other three functions are the same.

6.3. Display or set clock

Set system time.

6.4. Display language

Move cursor to this item, press  key to enter and   key to select language.

6.5. Relevant test for machine

This operation is for maintenance personal use only, operator do not enter this item. This operation will make machine work, so be careful when testing.

Debugging function is used for machine test, maintenance and checking malfunctions. It contains as follow:

Photoelectricity encoder test

Main shaft self test

Main shaft rotate from 100° to a certain angle

Test switch bar

Test limit switch

Test head solenoid

Test trimming solenoid/motor test

Buckling solenoid test clasp

Solenoid/motor open scissor

Trimming motor reaches a certain angle

Find original point to test thread broken detecting

Thread broken data for each head

Running number of rolling wheel type thread detector for each head

Raise/fall sequin device

Z embroidery jogging

Raise/fall presser foot for tray embroidery

Test upper thread catch

6.6 Password management

Set system password.

6.7 Set thread broken detecting board number

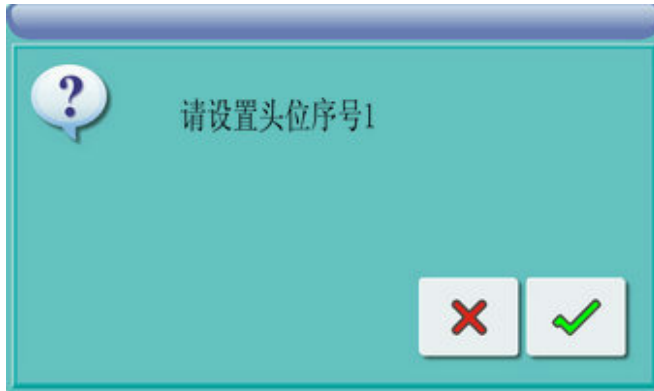
1. Number thread broken detecting board according to priority.



System ask you to set head serial number “1”, then dial three position switch on this head to down position. After that, dial the switch to middle position. If success, system will increase head serial number to “2”. Other heads are the same.

2. Number appointed thread broken detecting board

System asks you to input your serial number of head, then will be shown as follow.



System ask you to set head serial number “1”, then dial three position switch on this head to down position. After that, dial the switch to middle position.

6.8. Software information

View information of machine software version.

6.9 Help

Help information.

6.10 Set design color

When design being embroidered, system will display color, cloth color and main background color.

6.11 Reset embroidered stitch number

Clear total number of embroidered stitch in main menu.

6.12 Reset embroidered length

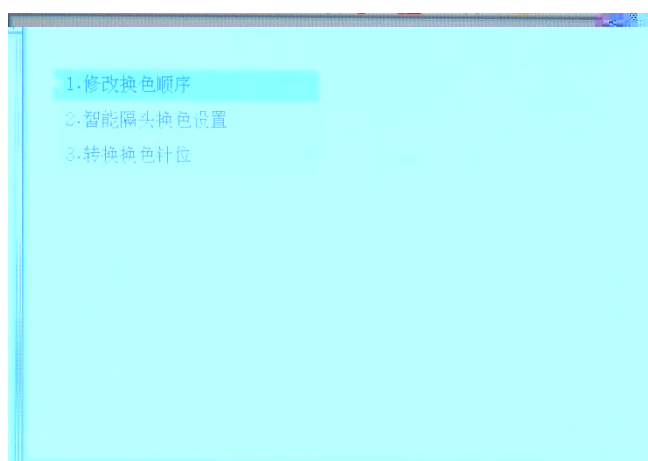
Clear total number of embroidered length in main menu.


Chapter VII Color change order & alternate embroidery set

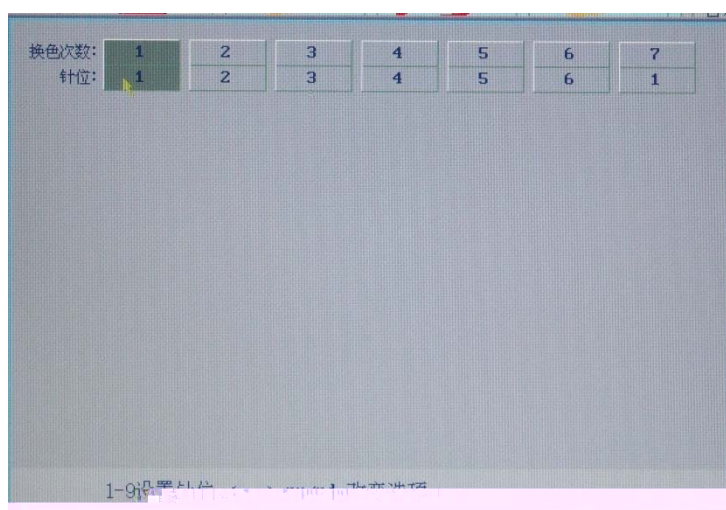
7.1 Modify color change order

Color change order is saved together with design.

Press  key to enter design color change menu to set parameter.





1. Move cursor to “Modify color change order” and  key to enter data input menu.




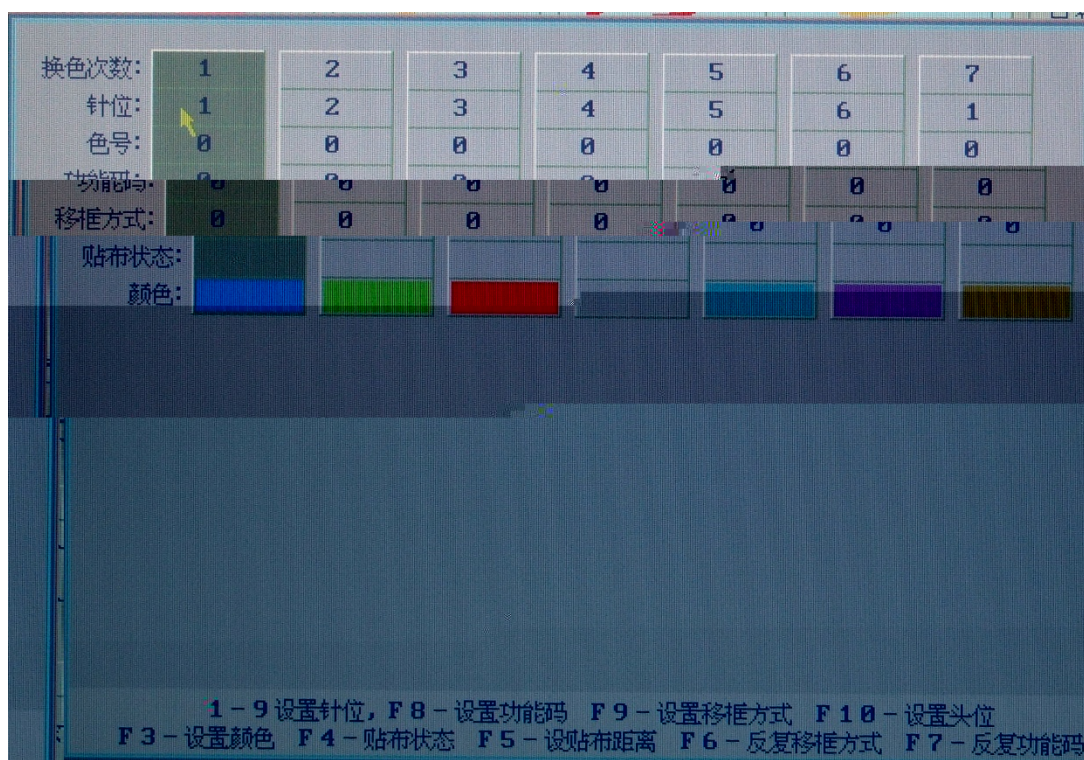
2. Press numeric key (Notice: numbers can not exceed machine stitch number) to input color change portion, then screen will show stitch number and its order.




If inputting special or sequin embroidery position, system will enter special or sequin embroidery mode menu. More details are in their operation modes.

Press  key to save color change order and repeat them. Press  key to cancel your option without saving order.

7.2 Set intelligent alternate color change

1. In design color change order menu, move cursor to “Intelligent alternate color change set”, press  key to enter this menu.



Press “ ” keys to select your choice and numeric key to input color change position. If input numbers exceeds machine stitch numbers, press  key to input a position number.

If parameter “Head no. of one set” is not “1”, system will work according to this data.

Head no.: During embroidery, system will see this head number as one head for use, and lock other head that is outside of embroidery area.

MAX effective stitch number = “Head no.” * “Machine stitch no.” Namely, if “Head no.” is 3 and stitch no. is 6, MAX effective stitch number will be 18. Now, machine stitch number is set to 18.

When inputting color change stitch position, effective stitch number should be less than MAX effective stitch number.

Set color change stitch number:

A set of head position = (Effective stitch number / Machine stitch no. +1).

Working stitch no. = Arithmetical compliment of Effective stitch number % Machine stitch number.

If arithmetical compliment is "0", stitch position will be machine stitch number.

Namely, If stitch position is 13 and machine stitch number is "6", color change head number is in Position 3 in this set and stitch number will be 1.

When working to this position, system will change color it Position 1 and lock the 1st and 2nd head of this set and unlock 3rd head to embroider. System will move current embroidery point to 3rd head to go on working.

Add 12 colors to machine.

Explain: You can set head number according to taboret move range and design attribute.

7.2.1 Set head position

In design color change set menu, press "F10" to enter head position set menu.



Green (1) : Current head position unlocked.

Red (1): Current head position locked.

Press “” key to select head position.

Press “F5” to unlock head and this head will fall stitch when embroidering.

Press “F6” to lock head and this head will not fall stitch when embroidering.

Press “F7” to copy this order according to cursor pointed head position data.







7.2.2 Set design color


In order to make screen color be close to read design’s color, system can set stitch color. This set of color will be saved with color change order.

1. In color change order menu, press “F3” to enter stitch color menu.





2. There are 320 kinds of color for stitch color set.

Press key  to find your stitch, then select color in 40 choices by pressing     keys and  key to confirm. After that, stitch will update color set.

3. After set operation, press  key to save data and go back to design color change set menu.

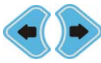
Then press  key to exit without save.

7.2.3 Set patching status

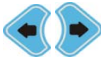
Press   keys to find your choice and “F4” key to set or cancel current patching status of color change. If parameter is set, this operation will cancel it.

Patching status = “T” stands for this color change has patching operation.


7.2.4 Set patching distance

Press  keys to find your choice and “F6” key to set current patching distance. Once patching distance is set, system will set patching operation in this color change.


7.2.5 Set function code

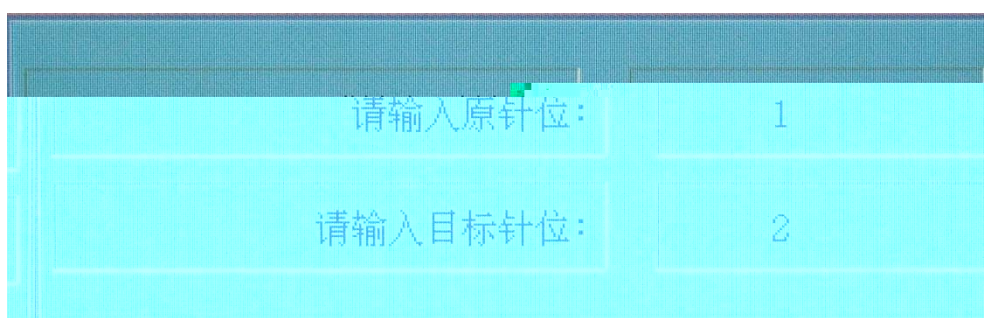
Press  keys to find your choice and “F8” key to set function code of current color change. Press “F6” to copy cursor pointed data.



7.2.6 Set taboret move mode

Press  keys to select position of color change times, then press F9, to set taboret move mode of current color change. Press F7 to copy move mode that is in front of cursor to the mode behind cursor.

7.3 Switch color change order

1. In color change order menu , move curse to “Switch color change position” and press  key to enter switch color change order menu.



Press numeric key to input “Stitch position need to be replace”, press  to confirm and enter “New position”, press numeric key and  to save.