RICOMA

RCM-1201PT

Operating Manual

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Part I Features

1. Equipped with LCD

This machine model uses LCD as monitor. Both words and icons are used in the operation window to help fast learning and easy operation. The design picture can be displayed simultaneously with embroidery.

2. Input and output of disk-stored designs

From the built-in floppy disk drive, the user can directly input the designs data in the following formats into the memory: files in binary system (.dsb), ternary system (.dst) and Z coding system (.dsz) from Tajima format disk, and files in binary system, ternary system and Z coding system from Barudan format disk. And it is also possible to output the design data of binary system from the memory to Tajima format disk.

3. Storage capacity for design data

The built-in storage can keep 99 designs and the stored maximum stitches are 1,000,000.

4. Rotating speed control

Press the keys to adjust the current rotating speed of the main shaft between 150 rpm and the highest speed, and the current value will show in the screen. And the average highest rotating speed for flat embroidery is 1000 rpm.

5. Real time scaling up/down and design rotation

While embroidering the designs in memory, the user can scale up/down the design 50% to 200% separately in vertical and horizontal directions.

Meanwhile the user can rotate the design freely in a circle by choosing one of the eight coordinate directions and adding an angle degree between 0° and 89°.

6. Thread break detecting

In parameter setting, the user can select thread break detecting or no thread break detecting. When it's effective, the machine will stop automatically and show an icon in the screen when thread break happens.

7. Work sequence

The "work sequence" parameter decides how to deal with color change codes.

8. Over-frame protection

It's to prevent the frame from exceeding the normal scope to cause a collision accident.

9. Auto origin return

With this function, the frame will return to the origin point upon completion of embroidering.

10. Positioning idling

The frame can move fast forward or backward to the desired position by setting a function code or a certain stitches to move without embroidering, which will let the machine to start embroidery from anywhere.

11. Repetition embroidery function

There can be maximal 99 times of repetition for one design in each of vertical and horizontal directions.

12. Periphery operation

This is to show or idle around the border of the design which has been scaled up/down, rotated or repetition embroidered.

13. Scaling up/down and rotating the design

It is to embroider the design after scaling up/down and/or rotate it.

14. Design operation

With this, the user can survey the memory directory and the information of design files in the directory. And the user can delete, copy, combine or divide the designs.

15. Disk management

It is to list the design files, input/output files and format the disk.

16. Error information

In case of wrong operations or machine malfunctions, the screen will show words or icons to inform you.

17. Frame protection

When the frame has changed its position after power-off during embroidering or after stopping the machine, it will be unable to continue the former embroidery. If the frame protection has already been set as effective, the user can restore the frame position to continue embroidery via the operation "Frame restore".

18. Adjusting the stop position (parameter "Set brake Para")

It is to adjust the stop position of the main shaft to suit different machines. The parameter is available to change, and the more its value is, the larger additional degrees the main shaft will stop with.

19. Returning and patching

When the thread breaks, the user can choose automatic return of a certain stitches or press the stop button for manual return. When the machine arrives at the start point for patching, press start button to patch.

The stitches of automatic return can be set.

20. Combining design

A new design can be created by combining several designs with their different parameter setting. Thus the combined designs can be embroidered together.

21. Cyclic embroidery

With this function the machine will automatically return to the origin point to start again after embroidering one design.

22. Offset point

It's to set an offset point anywhere away from the start point. This will facilitate the operations such as fabric-changing and trimming.

23. Chinese-English switch

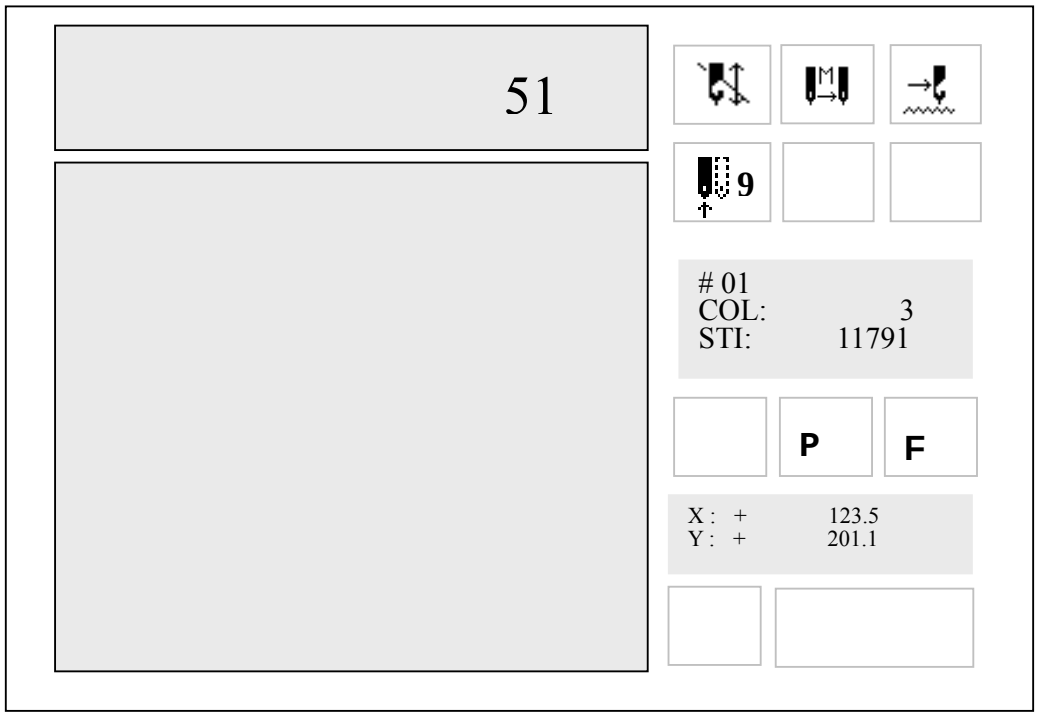
Choose the desired language to suit different customers.

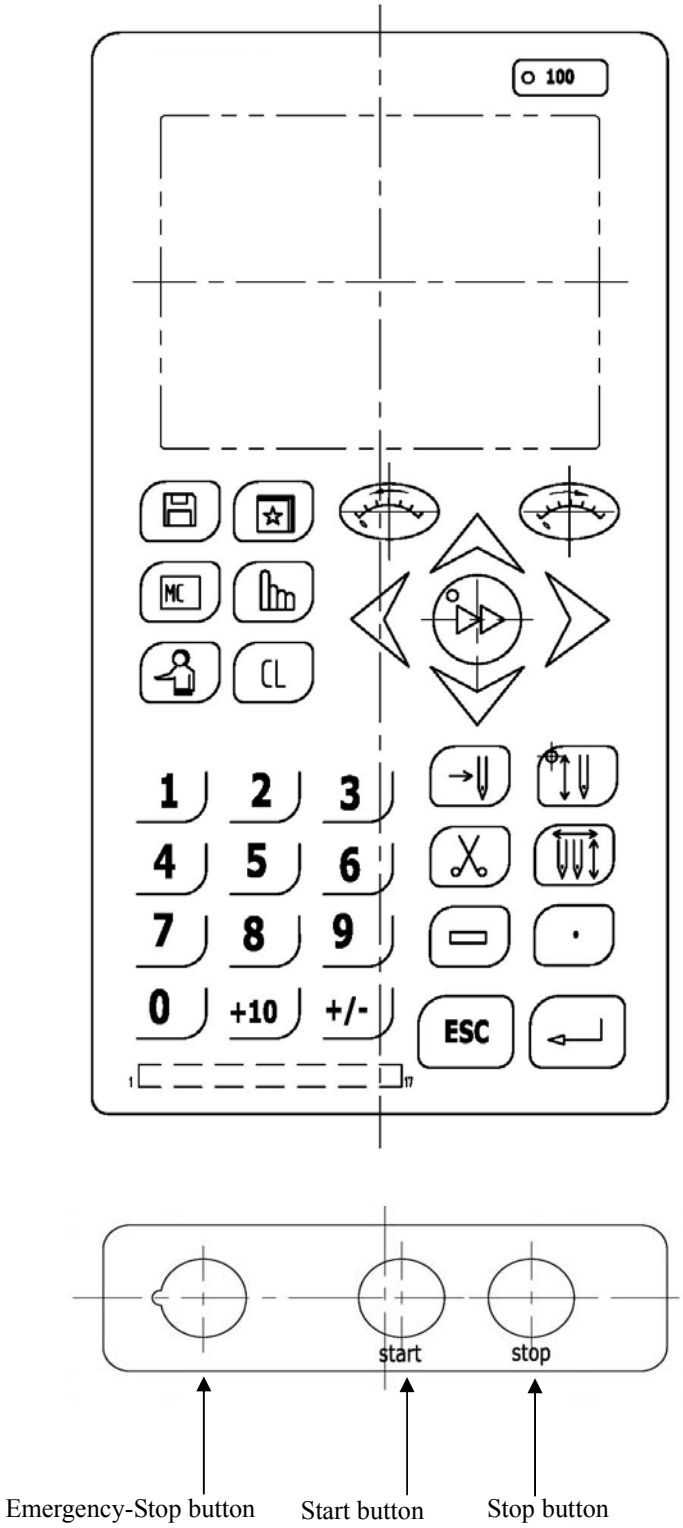
24. Trimming

In embroidery the user can choose the automatic trimming according to the function codes or stopping the machine to manual trim.

Part II Control and Basic Operations

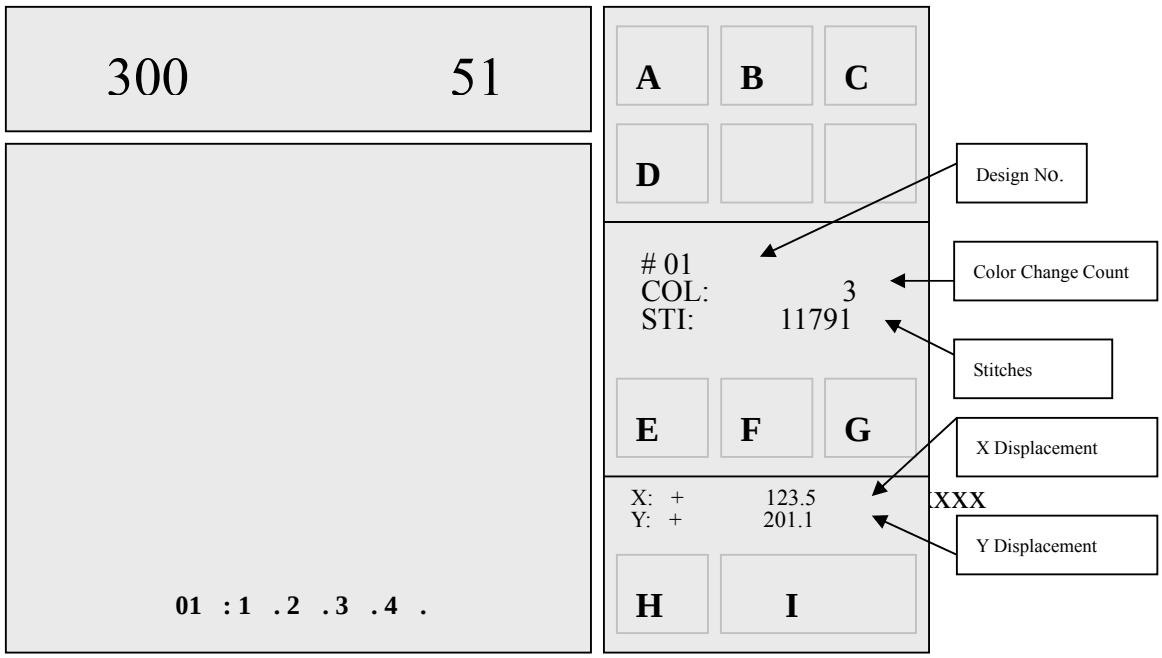
2.1 Control Panel




100
MC
CL
1
2
3
4
5
6
7
8
9
0
+10
+/-
ESC
start
stop
Emergency-Stop button
Start button
Stop button

2.2 Main Screen

Following power-on, the machine will start up and display the main screen. In the main screen there are 9 areas for icon display: ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐ and I. The screen shows as follows:



Definition of the above areas (A-I):

: It's for the current system mode. The icon " " means embroidery preparation mode and " " means embroidery confirmation mode.

The mode " " is for preparation work; and in this mode the user can press the start button to begin embroidery. After that, it's no longer allowed to select design, input scale and repetition parameters, delete memory-stored designs, clear all designs in the memory, move frame around the design range, embroider the design range, save origin points, restore frame position, restore default setting, etc.

Press the embroidery confirmation key "" to switch between the embroidery preparation mode " " and the embroidery confirmation mode " ".

: It displays the color change and start mode. The color change and start key "" on keyboard is to switch among the following three modes: auto color change auto start "", auto color change manual start "" and manual color change manual start "".

C: It is for embroidery mode: normal embroidery "", low-speed idling ""☐or high-speed idling "". Press the key "" to switch among them.

It shows the current needle position. Press the number key to change color and the current needle position will show in this area, e.g. press the numerical key "9" to change from the color 1 to color 9, and this area will show " 9".

E: If the cyclic embroidery function is closed, there will be corresponding icon display in this area. Otherwise it will show " "☐

F: This is to show whether the design is set with scaling up/down or rotation. The icon " P "will show here if these parameter values are standard: scales (☐: 100%, ☐: 100%), design direction: ☐, rotation angle: 0). Otherwise it will show " "☐

G: It shows the repetition embroidery. "F " will appear when no repetition (each of ☐ and ☐ normal repetitions is set as 1). If there is

repetition (normal repetition)□it shows "F F F F"□

I: It shows the special operations or causes of machine stop during embroidery.

" "□ It comes to the stitch skip codes during embroidery.

" "□ It comes to the color change codes during embroidery.

" "□ Embroidery comes to an end.

" "□ The machine returns to the start point.

" "□ The machine stops because thread break is detected during embroidery.

" "□ The machine stops because the stop button is pressed.

" "□ The machine stops after it returns and then patching embroiders to the thread break point.

The following items are also shown in the main screen:

1. Design number: it's the number of the memory-stored design (like "#01" in the above picture), which is ready for embroidery immediately after start-up. The user can select another design number by entering design operation (press " " to enter it). And the system will remind the user whether to renew the current one after inputting a new design from the disk (press " " to enter the disk operation).

2. Stitches: There are "11791" stitches for the #01 design in the above

picture.

3. Embroidery speed: It shows the current set value of rotation speed when there is no embroidery and for an instant when the user presses the acceleration key “ ” or deceleration key “”. It shows the current rotation speed during embroidery, like "300" in the above picture.

4. Stitch count: It counts the stitches since the last clearance of the number, like "51" in the above picture. Press the key “ ” CL panel and press “ ” to confirm. Then select “Clear Add Stitch” to reset the count. Otherwise press “ESC" to exit operation.

5. Frame coordinate: It can set the last design’s frame position as the zero point of coordinates, like “X+123.5 Y-201.1” in the above picture. Press the key “ ” CL panel, select the second option “Clr Frame Coordinate” and confirm by pressing “ ”, so to reset the coordinate value. Otherwise press “ESC” to exit.

2.3 Definition and Basic Operation of Keys

1) Function key:

—Disk operation

This is for all the operations concerning the disk, including listing designs in floppy/USB disk, inputting floppy-disk/USB designs into memory, inputting design data into memory by PC COM port, deleting disk designs, outputting design data to floppy/USB disk, formatting floppy/USB disk, etc.

—Design operation

This is for all the operations concerning the design (files/data), including selecting design, memory-stored design display, inputting design from floppy disk, editing batch design, clearing all designs, deleting/copying/combining/dividing memory-stored design, renaming design file, expanding satin and create letter design. Please read Part VII.

—Parameter operation

It's for parameter setting and has two pages. One is for design parameter operations, including scaling up/down, design direction, rotation angle, repetition priority, repetition times, repetition interval, offset origin, cyclic embroidery and work sequence. The other page is for standard data, trim and machine parameters, and common parameters. The user can select any of them to enter the next level of menus for setting. Please refer to Part IV.

—Manual operation

This key is for all manual operations, including showing frame operations and positioning floating, etc. Please refer to Part V for details.

—Switch key for working methods

Press this key to switch between "manual color change and startup" (without application of work sequence) and "embroidering in the set work sequence". When the machine embroiders in the set work sequence, the

sequence is displayed in highlight together with the icon " " in the main menu. Otherwise, the sequence is displayed in low light together with the icon " " in the main menu.

— Assistant function

It includes default setup, language choice, etc. All operations for assistant function are set by this button. Please refer to Part VIII.

— Embroidery method

Press this key to switch among normal embroidery, high-speed floating and low-speed floating.

Numerical keys

Keys "+/-□.□0□1□9" are used to input design number, design name and various data parameters.

" ▭ " is used for inputting special operations such as design name input.

" CL " Clearing

The key is used for clearing fault information or data such as stitch count and frame coordinates.

"ESC" Exit key

Before confirmation in all operations, press this key to end operation and return to the upper menu. Keep pressing the key to return to the main screen.

" **" Confirmation key**

It's used for confirmation of various operations and data.

2) Manual frame-moving key

“ **switch between two frame-moving speeds**

It has two different speeds: high speed “ ▷▷ ” and low speed “▷ ”. Press this key to switch between them.

⇧ ⇩ ⇦ ⇨ **—Frame-moving keys**

PU PD

In the main menu, press one of the above keys to move the frame to the pointed direction before embroidery starts. Or press two neighboring keys at the same time to move the frame in the direction of the angle bisector.

In all function and menu operations, press “ ⇦ ⇨ PU PD ” to move the cursor in the horizontal direction or to turn page while pressing “ ⇧ ⇩ ” move the cursor in the vertical direction.

3 Direct control key

“ ” **Speed deceleration key**

Use this key to set the embroidery rotating speed.

In the main menu, 10 rpm is reduced for each time of pressing this key. Keep pressing it and the rotation speed will decrease until 150 rpm.

“ ” **Speed acceleration key**

In the main menu, 10 rpm is raised for each time of pressing this key. Keep pressing it and the rotation speed will rise until the set highest speed. The highest speed for standard embroidery is between 650 rpm and 1000rpm.

Note: Only “ ” and “ ” can be used during embroidery.

2.4 Indicator Light of Main Shaft Stop Position

It is to show whether the main shaft has stopped in the “stop area”. The light is on when the main shaft stops in the area. Otherwise the light is off. The main shaft has to stop in the “stop area” before starting embroidery, returning, moving frame, etc. The user can manually turn the shaft to the position.

2.5 Start and Stop Button

The start button (green) is on the operation box and it’s for starting embroidery.

The stop button (red) lies on the operation box, and it’s for stopping embroidery.

Start button: Press it to start embroidering forward when the machine stops; when the machine has stopped press the button for a single return of 10 stitches and the machine will return continuously while the user keeps pressing the button.

Part III Basic Knowledge and Operation

3.1 Work Mode, Embroidery Mode and Work Sequence

1. Work mode

The machine has two modees: embroidery preparation and embroidery confirmation. The icon“ ” means the system is currently in embroidery preparation mode and the icon“ ” means the system is currently in embroidery confirmation mode.

Under “ ” mode, the user can prepare for embroidery; after entering the “ ” mode, the user can start embroidery. Then it’s no longer permitted to select design, input scale and repetition parameters, etc. which will affect the design embroidery.

Under “ ” mode, press the key“ ” to enter the embroidery confirm mode; under “ ” mode, press the key“ ” and “ ” to enter the embroidery preparation mode.

When a design is input into the memory under “ ” mode, the machine will automatically enter the embroidery confirmation mode“ ”. And then embroidery will start when the startup button is pressed.

In menu operations of this system, the available options are in highlight while the unavailable options are in darkness.

2. Embroidery method and returning for patching

The machine has the following embroidery methods: normal embroidery, low-speed floating and high-speed floating. The icon“ ” is for normal

embroidery; " " is for low-speed floating, and " " is for high-speed floating. Press the key " " to switch among the three methods.

Normal embroidery " " is the embroidery method in which the machine embroiders designs. Low-speed floating and high-speed floating are the assistant embroidery methods. They together with returning are for patching embroidery, which is necessary often because of thread break and so on.

Under embroidery confirmation mode and in normal embroidery mode, press the startup key and then the main rotates and moves according to the design data, the stitches are counted and stitches are embroidered onto the fabric to form designs. Press the stop button in embroidery and the machine will stop.

If the frame return is permitted in parameter setting, press the stop button when the machine stops and the frame will trace the stitches back. Press the button once and the frame will return one stitch. Keep pressing and the frame will return stitch by stitch, and 10 single-stitch returns will enable the continuous return. Then the return will continue even when the stop button is released. Press the stop button once more to stop the return.

When the return operation stops, the user can press the startup button to start patching.

If the machine is set as low-speed floating, when the user presses the startup button, the frame will move forward along the stitch trace with the main shaft not rotating; when the user presses the stop button, the frame will move

backward along the stitch trace with the main shaft not rotating.

If the machine is set as high-speed floating, when the user presses the startup button, the frame and the main shaft will remain still and the stitch count is added; when the stop button is pressed, the frame will move directly to the position corresponding to the current stitch count. When the user presses the stop button, the frame and the main shaft will remain still and the stitch count is reduced; and when the stop button is pressed, the frame will move directly to the position corresponding to the current stitch count.

The user has to ensure before embroidery that the system is in normal embroidery mode.

3. Work sequence

Threads of different colors are required for a complicated design. This is often based on color blocks in the design. The work order is to preset whether to change thread for every color block.

When embroidery is started up with the work sequence effective, the machine will automatically change thread according to the set sequence. Otherwise the user should set in the manual operation before embroidery.

The user can choose whether to use the work sequence by the key " ". When the work order is effective, it's displayed in highlight in the main screen. Otherwise it's displayed in darkness. The operator has to decide whether to use the work sequence before embroidery.

The setting of the work sequence is in the operation of parameter input.

3.2 Design Input from the Disk and Starting the First Embroidery

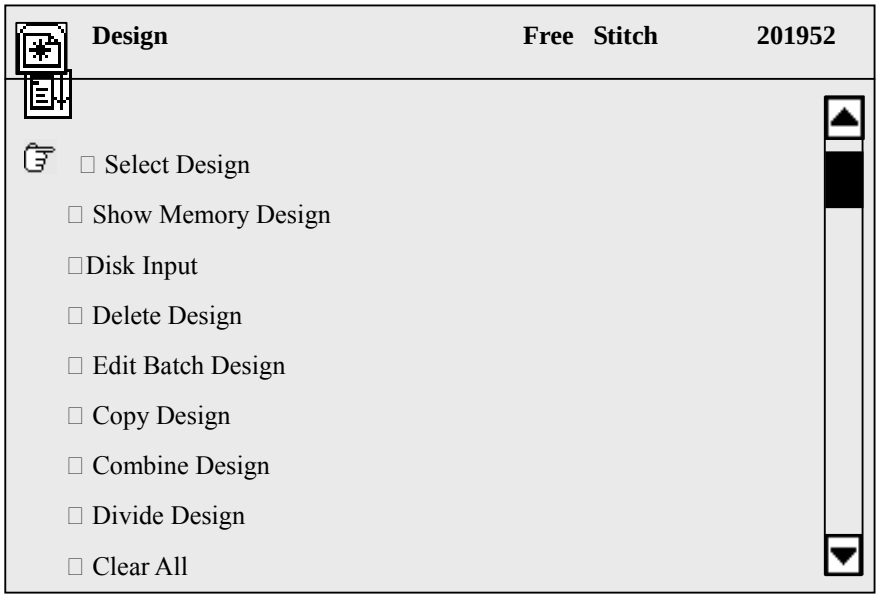
1. Design input from the disk

Machine embroidery is based on the design data in its memory. So it's necessary to input design data from the disk/USB disk to the machine memory before embroidery.

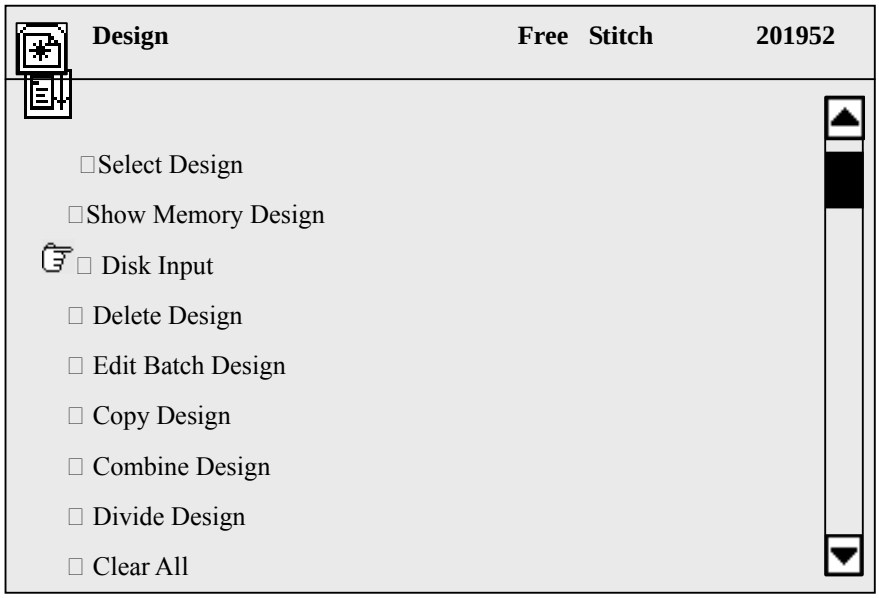
Input of disk designs to memory can be done both in design and disk operations. And here take an example from design operation..

Operation:

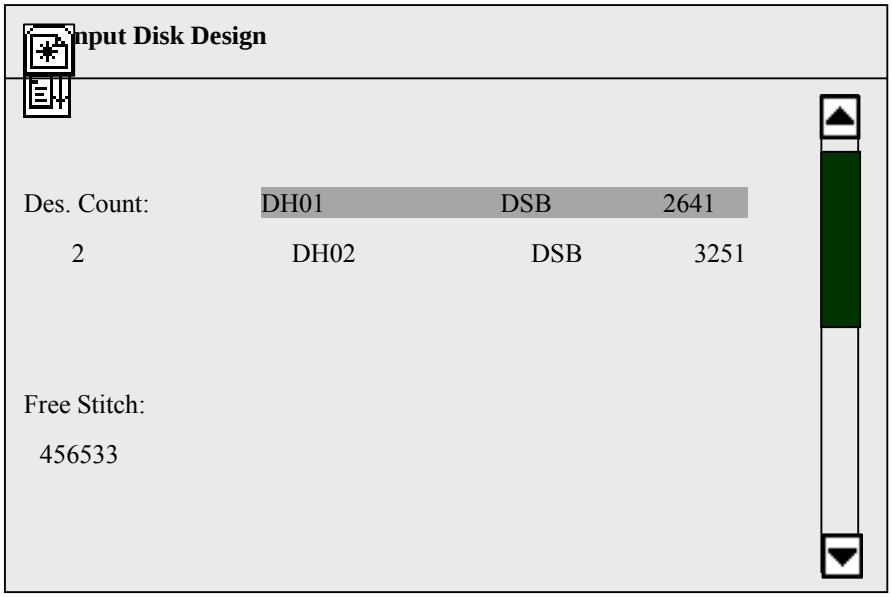
1) Press " " to enter the (memory) design operation menu and insert the floppy disk into the driver. Then the following screen will show:



2) Press " ⇧⇩" or directly press the numerical key 3 to move the cursor the third option "Disk Input", and then press the confirmation key" ⏎ ".

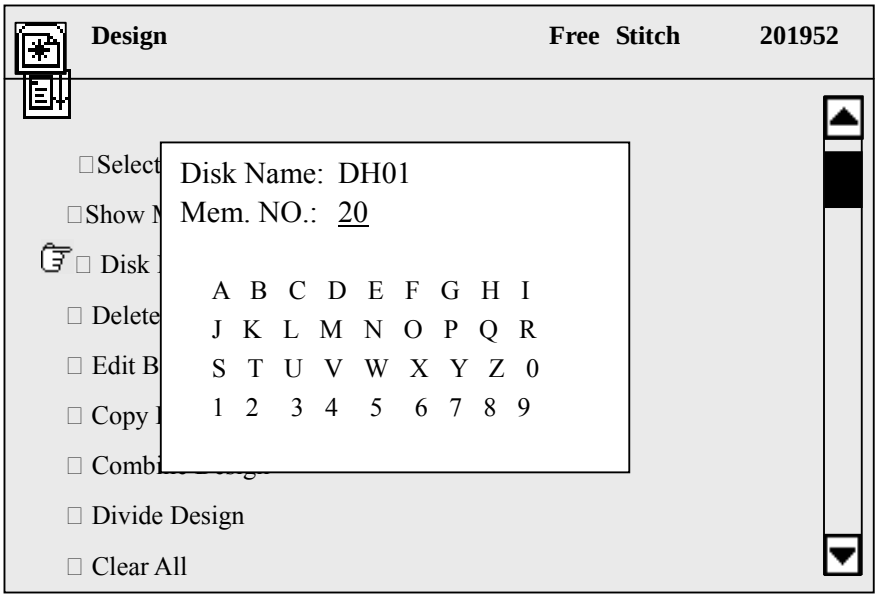


3) Now the driver begins to read the disk directory with the driver light on, and then the disk directory is displayed in the screen. The user can press " PU PD " to turn pages, then press " " to move the cursor to select the design and press " " to confirm.

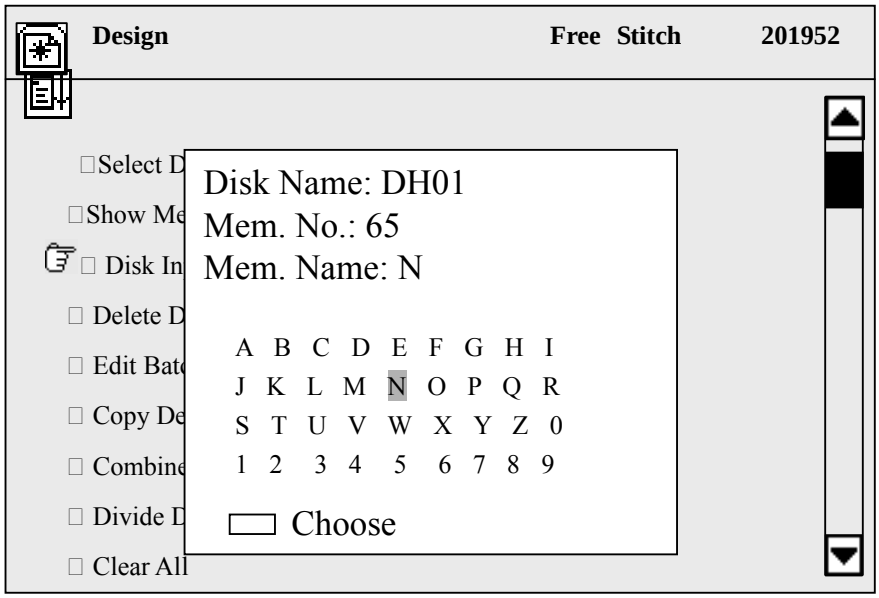


4) The machine automatically provides and displays the smallest number available for the new memory design. It's possible to input other numbers since

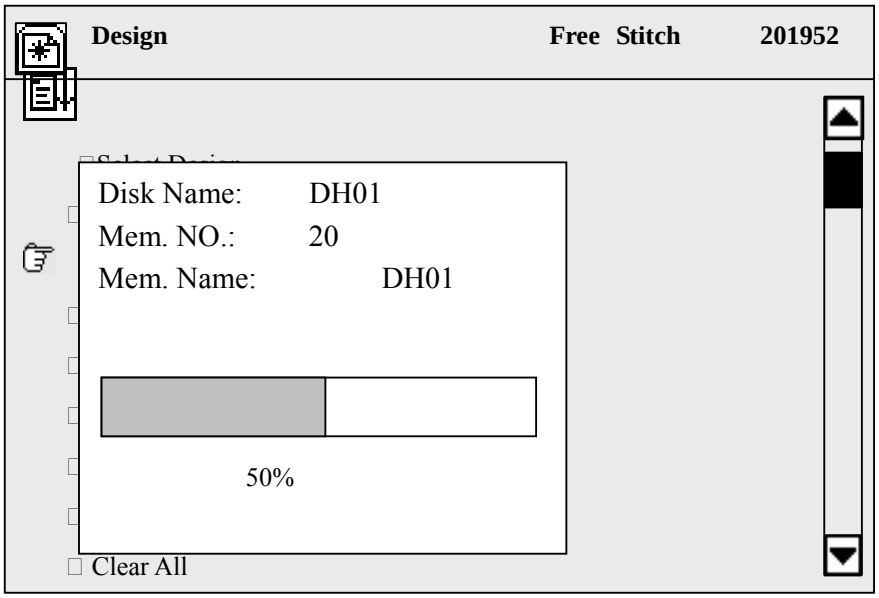
there is a cursor here. For instance when the smallest number is 20 and the user wants to input a new number 65, he will press the keys “6” and “5”, and then “ ” to confirm. If the number has been used by another design, the confirmation will not be accepted. Otherwise the following operations can be do CL the user wants to change the design number, he can press “ ”.

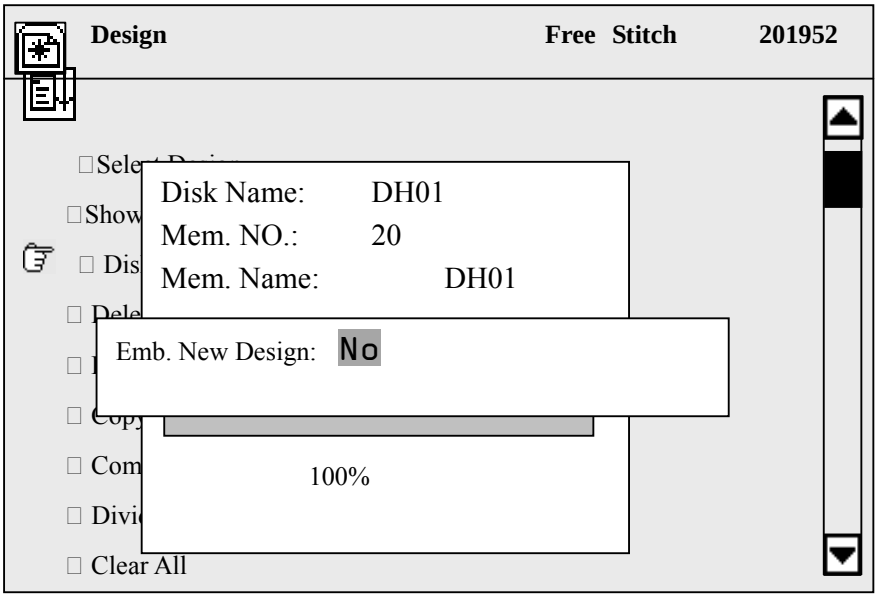


5) The system asks for input of the memory design name. If it’s the same to its disk name, press “ ”; otherwise move the cursor to the selected letter by ”, press “ ”to input the letter and press “ ” to confirm the input name. The user can press “ CL ” for re-inputting a name.

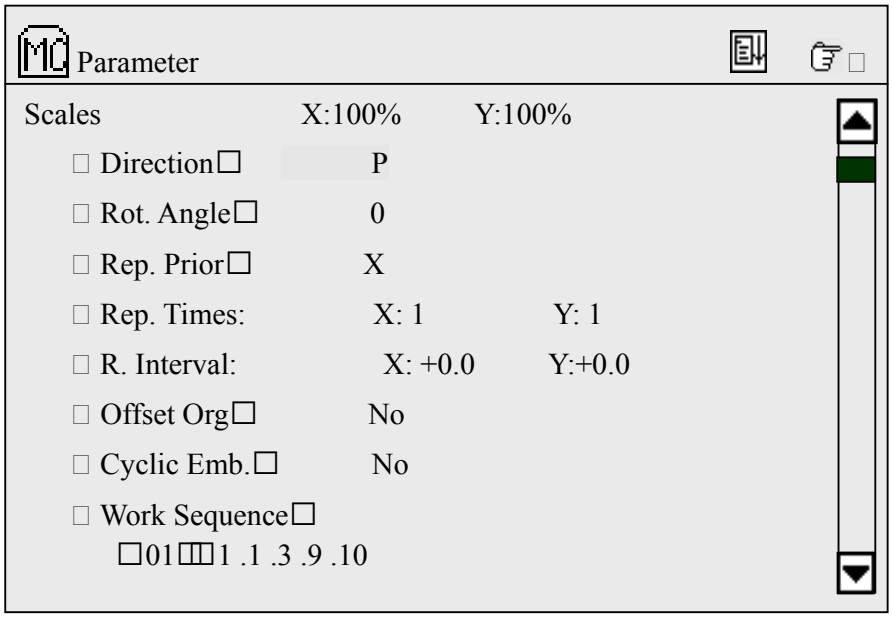


6) The system begins the design input, during which the screen shows its progress bar. When the input is finished, the system will automatically enter the operation of parameter input if the system is under embroidery preparation mode; the system will ask whether to embroider the latest input design if it is under embroidery confirmation mode.





If the user chooses “No”, the system will return to the main menu after he presses the confirmation key “ ⮌ ”. If he choose “Yes” by the keys“⇧⇩”, the system will enter the parameter menu for parameter setting.



7) If you don't want to change its setup, press "ESC" to return to the main screen and the system will automatically enter the embroidery confirmation mode with an icon " ". (If you want to change parameter values, please refer to Part IV.)

2. Preparation before embroidery

You need to do the follow work too before embroidery:

□ Set the fabric ready and press " PU PD " to move the frame to the beginning position.

□ Ensure that the system is under normal embroidery mode".

□ Decide whether to use the work sequence. The sequence is displayed in darkness when it's ineffective.

□ Ensure that the main shaft has stopped at 100 degree, namely the LED

indicator is on. If not, move the main shaft to the position manually.

You can press the startup button to start embroidery after the above procedure.

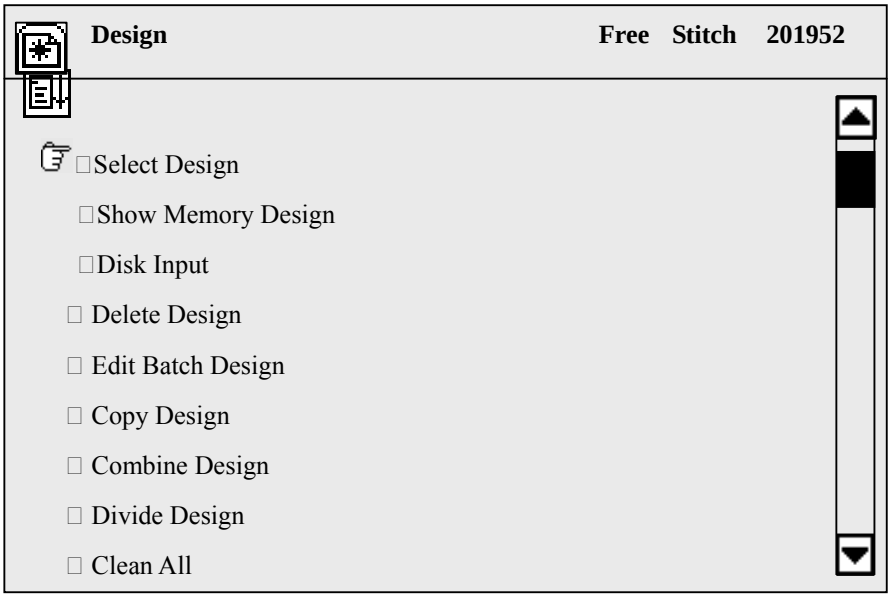
3.3 Select Memory Design for Embroidery

Before embroidering, you have to select a design and confirm first.

Operation:

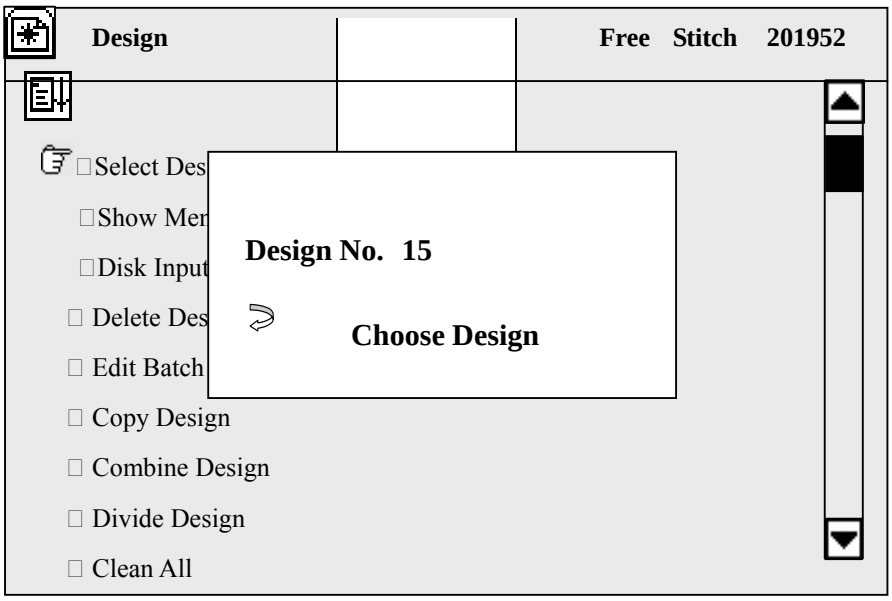
□ Ensure in the main screen that it's under the mode " ". If not, press " " and " "to return to the embroidery preparation mode " ".

□press " " to enter the design operation menu:

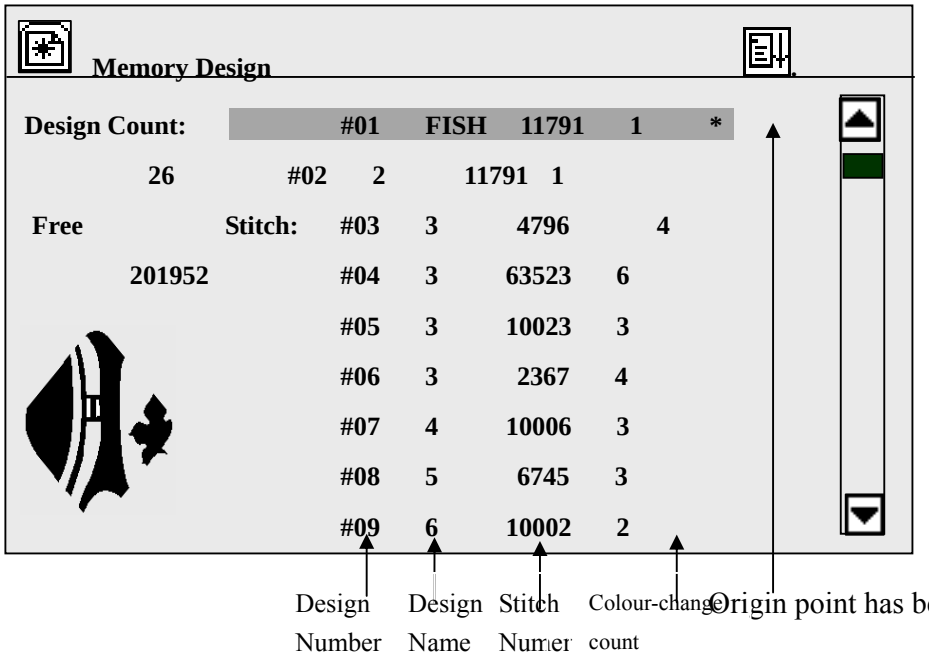


Press " "to enter the first menu item and the following prompt will appear. If you have known the number of the memory design intended for embroidery, you can input the number by pressing the numerical keys, e.g. keys "1" and "5" for No. 15, and then confirm the input by " ". If design No.15 exists, it will be set for embroidery and the screen will switch to the

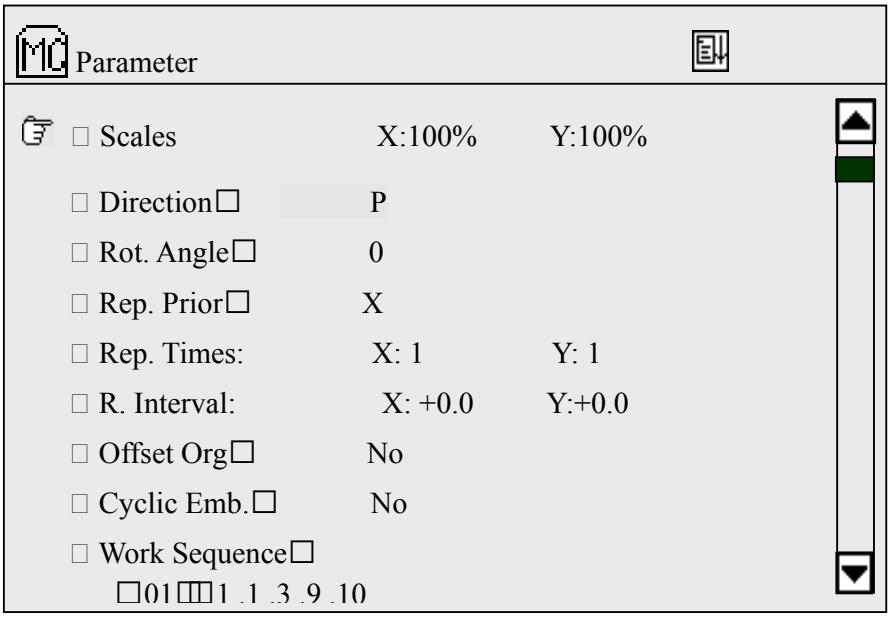
parameter operation menu (refer to Part IV). If design No.15 doesn't exist, the confirmation operation won't be accepted. Then you need to press " CL " to clear and then input/select a new number.



□ If you press " ⏎ " according to the prompt in the above menu (you haven't input the design number or have pressed " CL " to clear the input number), the design directory of the memory will be displayed in the screen:



Press"⇧⇩⇦⇨ "to select the design for embroidery. The⇧⇩keys " "are for moving the cursor upwards/dowr ⇦ ⇨ PU PD " are for turning the pages. After you press " " to confirm the selection, the screen will switch into the parameter menu.



□If you don't change the parameters, you can press "ESC" key to exit. Refer to Part IV for parameter setting.

(5)In the above operations you can press "ESC" to return to the main screen at any time.

□After selecting a new design, you can press " " to enter the embroidery confirmation mode " ", and then start to embroider.

Part IV Setting Parameters

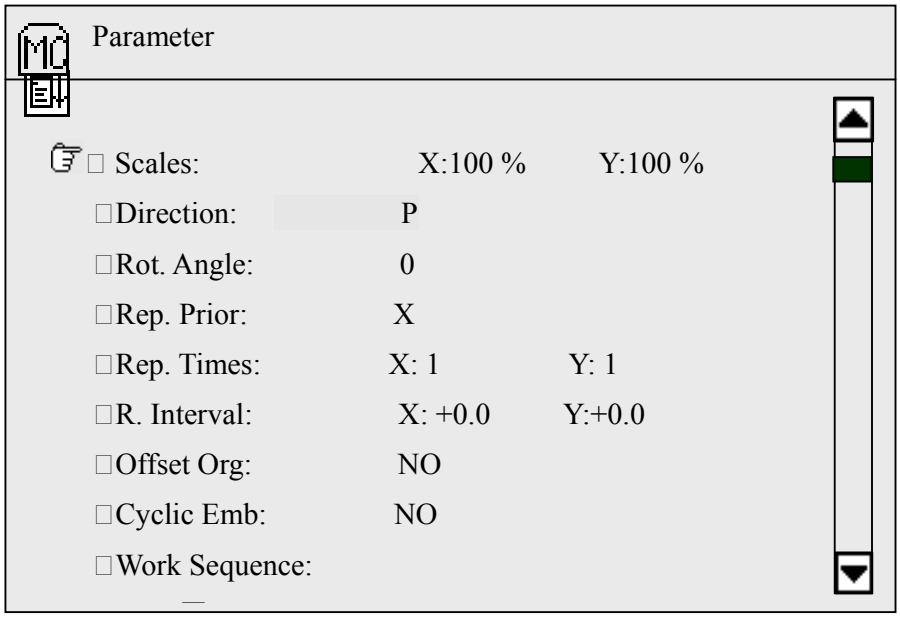
4.1 Parameter Menu

Under the embroidery preparation mode and embroidery confirmation mode, you can enter the parameter menu. Some options in it are unavailable in certain cases, when they are displayed in darkness.

The parameters (except the 7th and 8th) in the first page are set and stored with each design separately.

Operation:

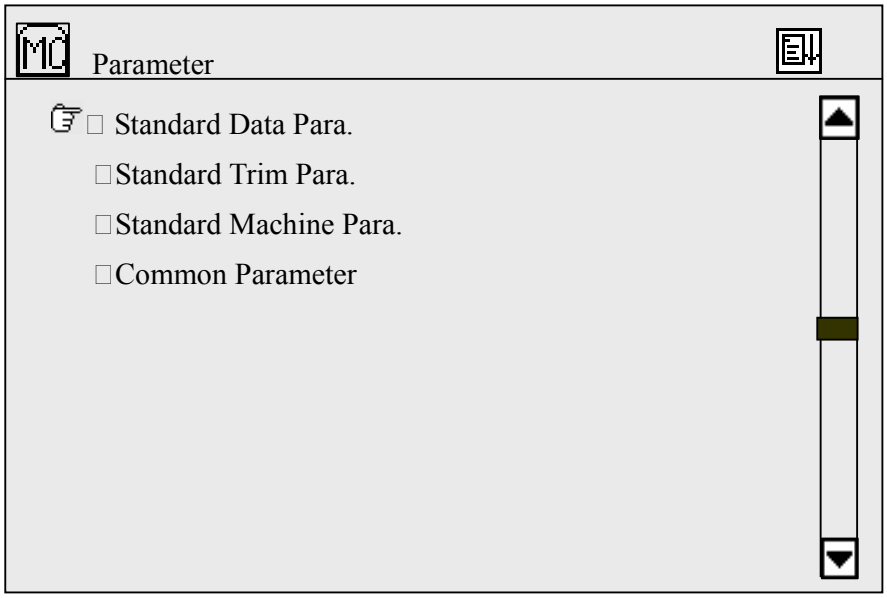
□ Press "MC"to enter the parameter setting menu. Or after you select the design for embroidery and confirm you can enter the parameter menu under the mode " ". The first page of the menu is as follows:



□ You can switch between the two pages of parameter menu by pressing

“ PU PD ”.

The second page of parameter menu:



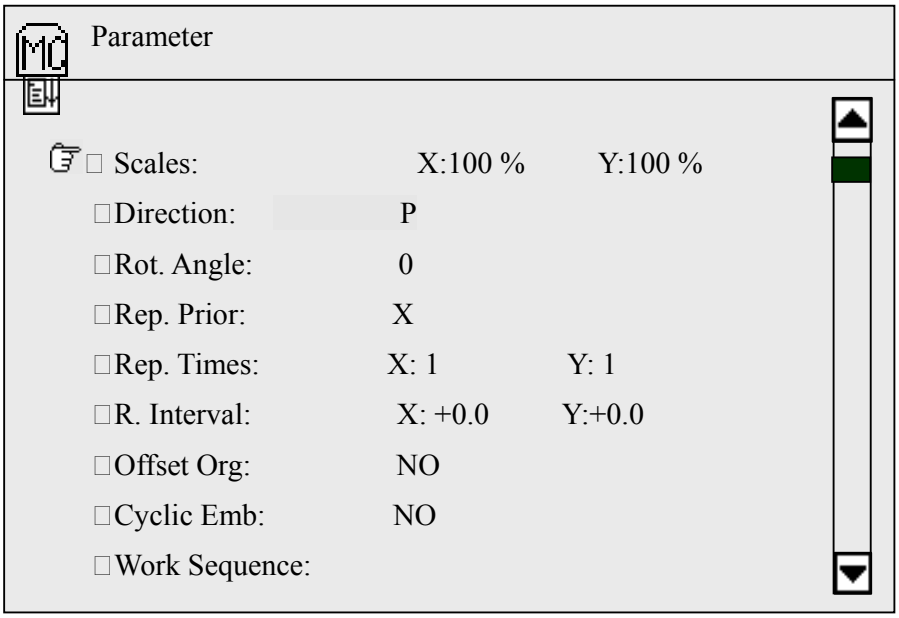
□ When a menu option is highlighted, press “ ⇧ ⇩ ” or the numerical key to select it and press the confirmation key “ ⮌ ” to enter its sub-menu.

4.2 Real Time Rotation and Scaling up/down

This parameter is to set image scales, rotation direction and angle for embroidery.

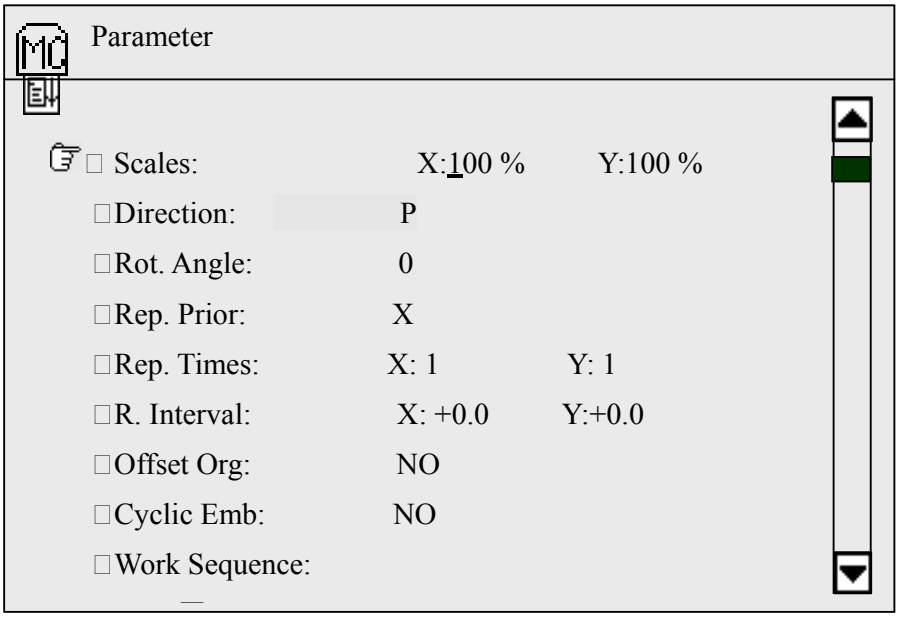
Operation:

□ Under the mode “ ”, press “ ” to enter the parameter menu, which is as follows:



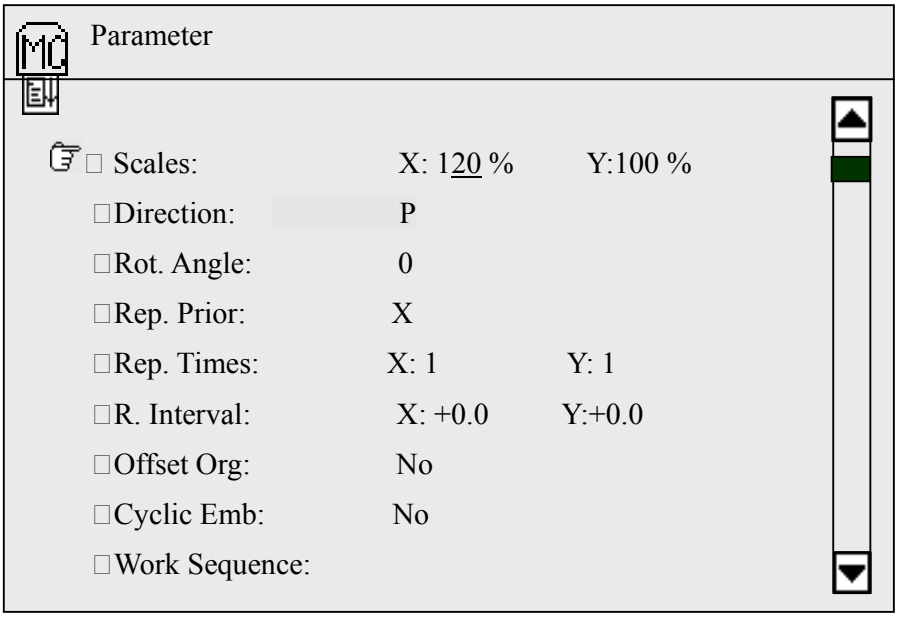
Press“ ⇧ ⇩ ” to move the icon “☞” to select a parameter, and press ” to confirm the selection. Then you can change the parameter value. Please read the following example.

□ In the above menu screen, press“ ” to set the scale in the □ direction. A cursor "_" appears in the screen.

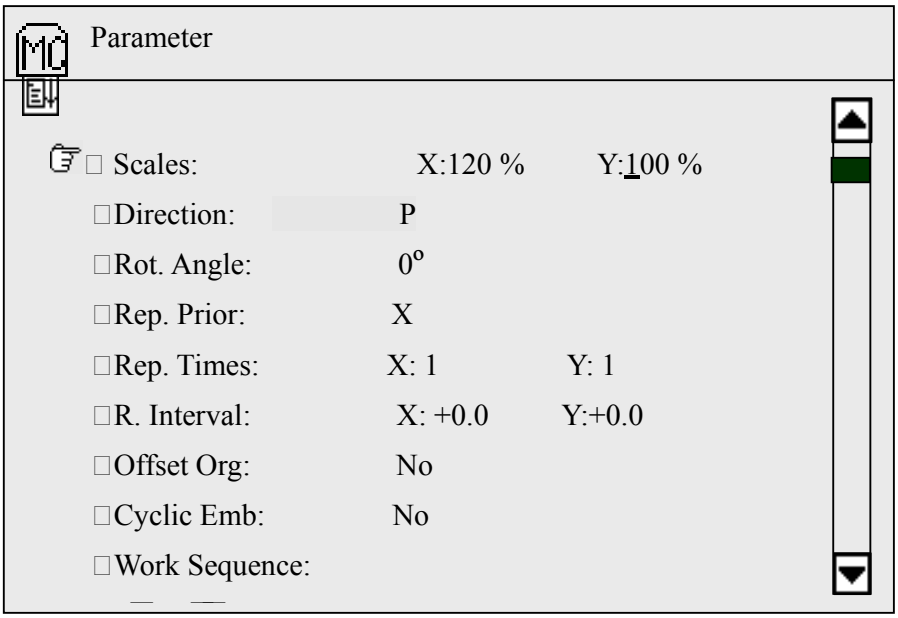


Input numbers to set the X scale 50□200(□). E.g. "1", "2" and "0" are for

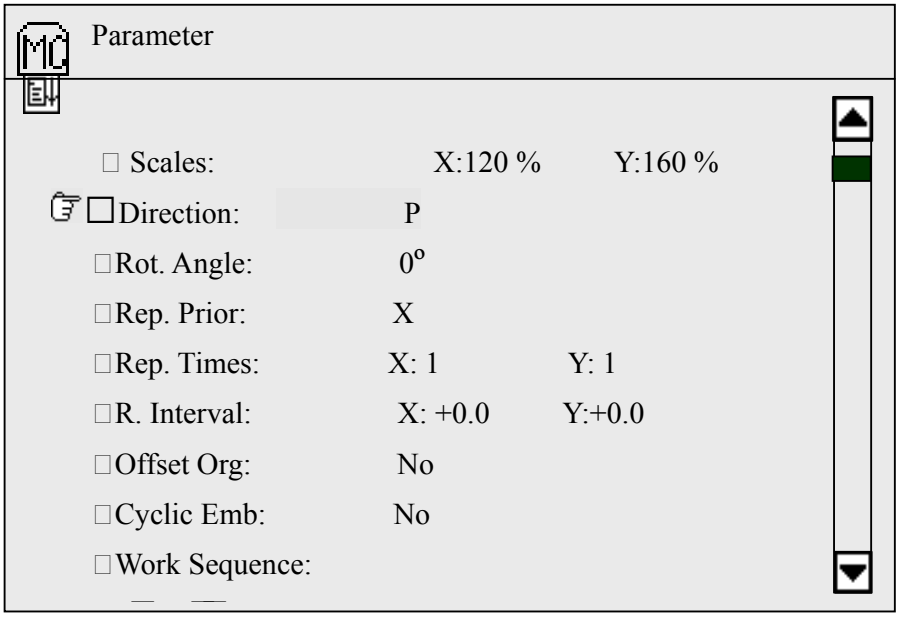
120%. Press " ⮌ " and the screen is as follows:



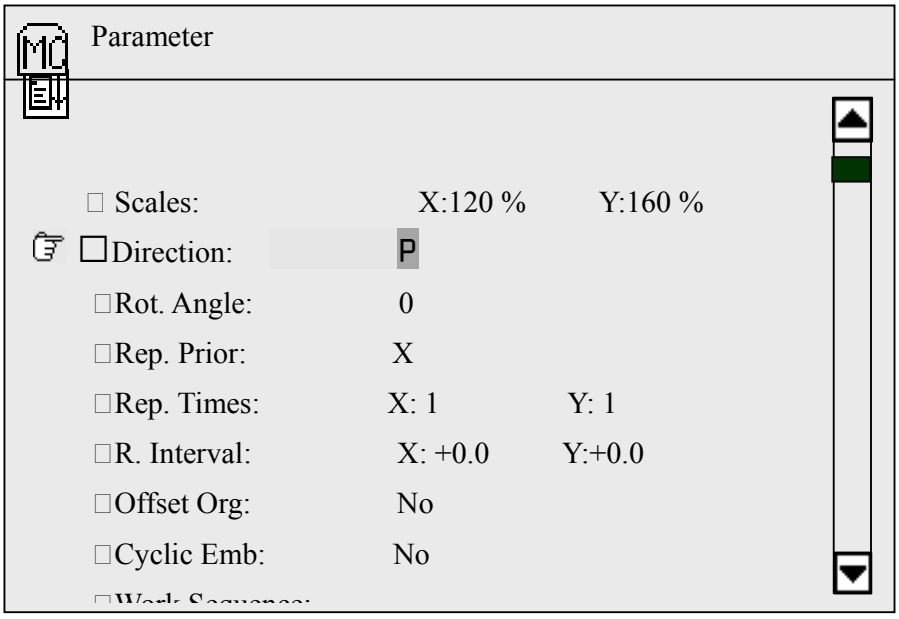
□ Press" ⮌ " to input the □ scale where there is a cursor "_". It is as the follows:



Input numbers to set the X scale 50□200(□). E.g. "1", "6" and "0" are for 160%. Press " ⇄ " and the screen is as follows:

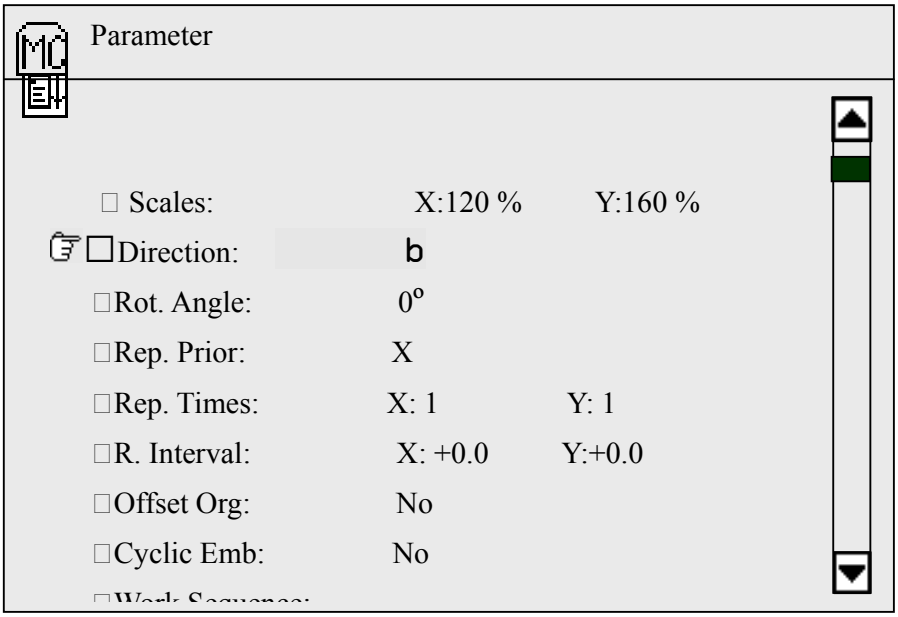


□ Press the key " ⇄ " to set the design direction. A square cursor appears in the screen. It is as follows:

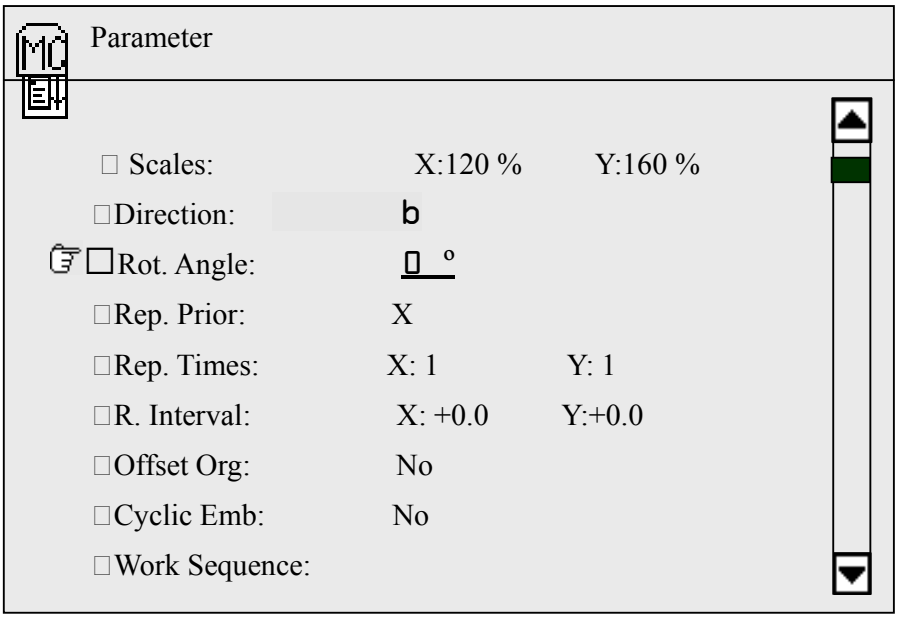


Press " ⇕ " to select one of the eight directions for the design, e.g. select

"**b**" and then confirm the selection by pressing" ⮌ ". The screen shows as follows:

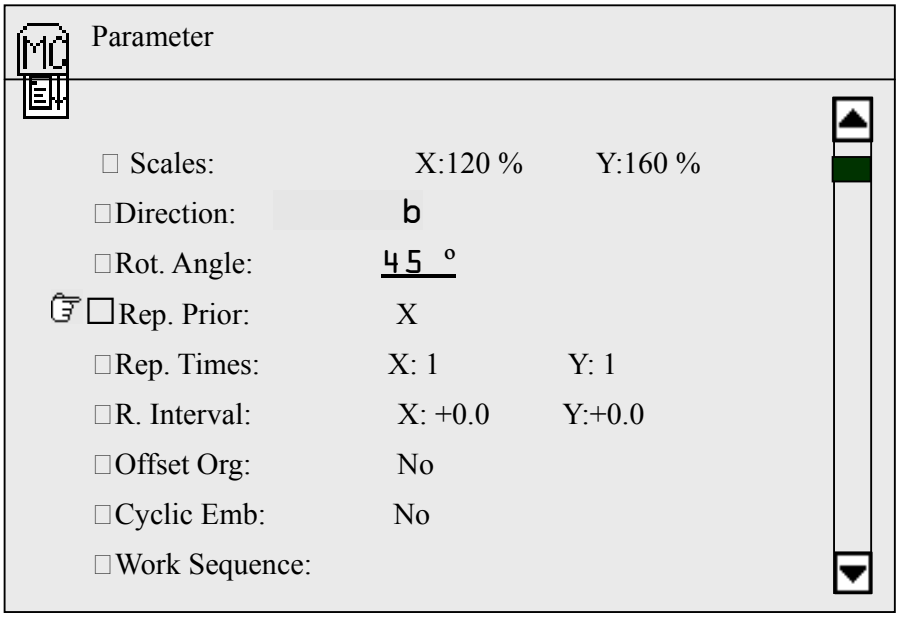


- Press" ⮌ " to set the rotation angle, which is marked by a cursor "□":



Input the new value of the rotation angle between 0 and 89 by pressing

numerical keys. For example, “4” and “5” are for 45 °. Then confirm it by pressing “ ”:



4.3 Setting Repetition Embroidery

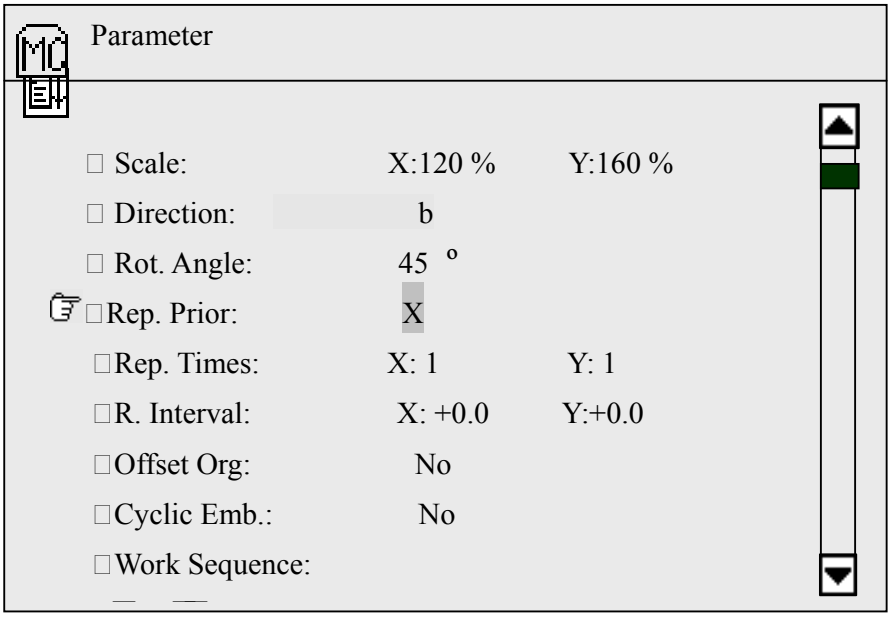
The machine has the function of normal repetition embroidery: the machine completes one design and then automatically moves to another position to embroider the last finished design again.

The maximum repetition times in each of X and Y direction is 99. So the maximum total repetition is 9801.

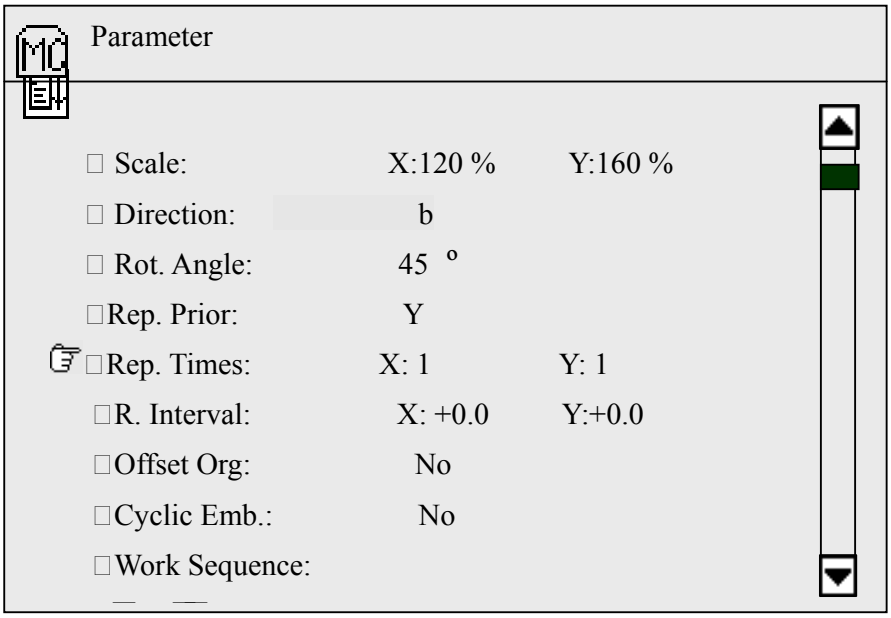
Operation:

□ Under the“ ” mode enter the parameter menu (e.g. by pressing“ ”).

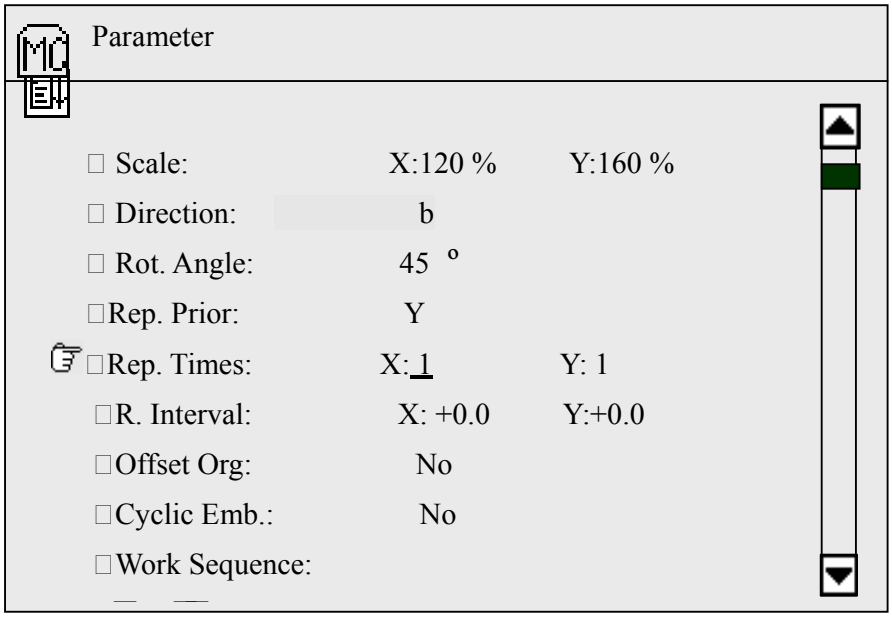
Press“ ⇧ ⇩ ” key to select the parameter on repetition and confirm the selection by pressing “ ”. A square cursor shows where to input:



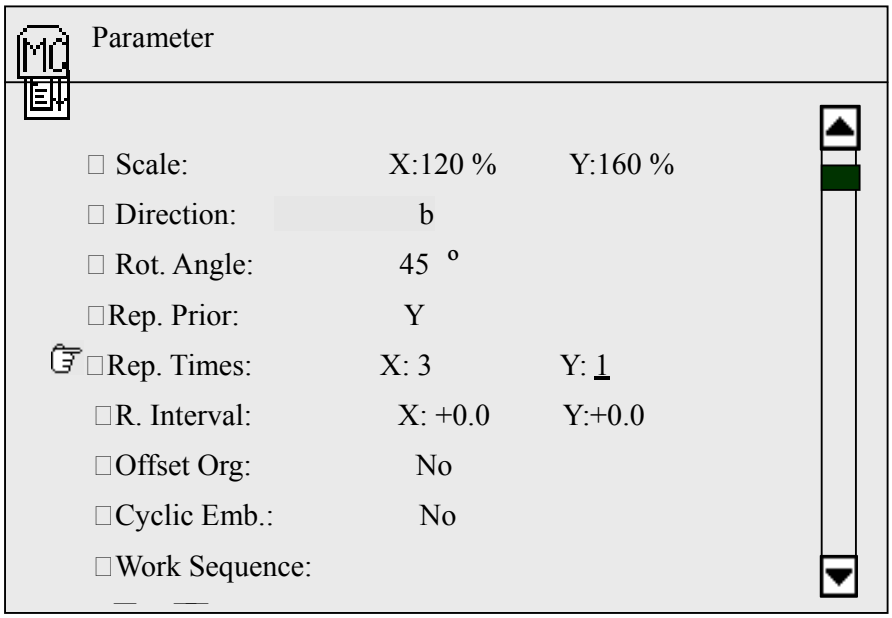
Press " ⇧ ⇩ " to select the prior repetition direction between X and Y, and then press" ⮌ " to confirm.



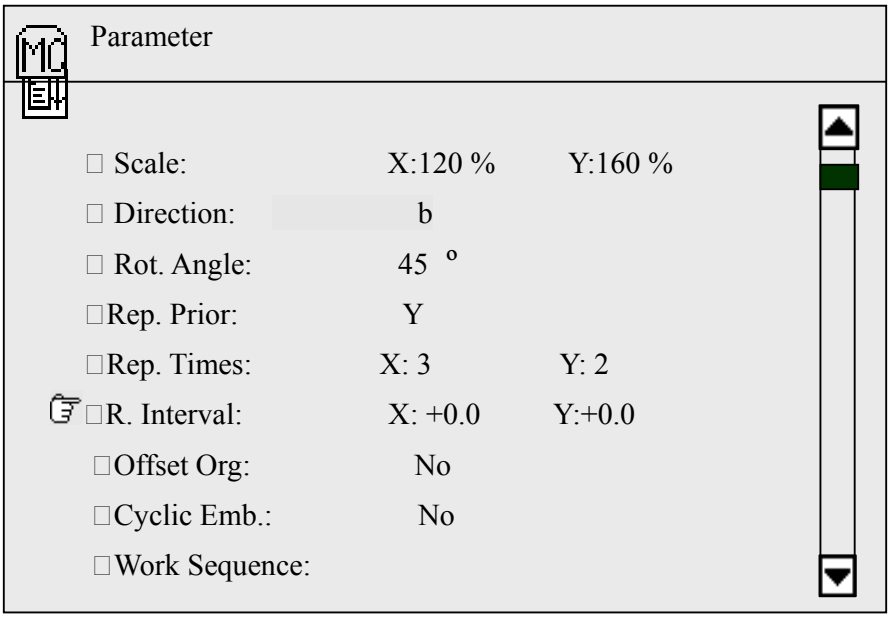
□ Press" ⮌ " to set the parameter Repetition times. Input the number where there is a cursor "—".



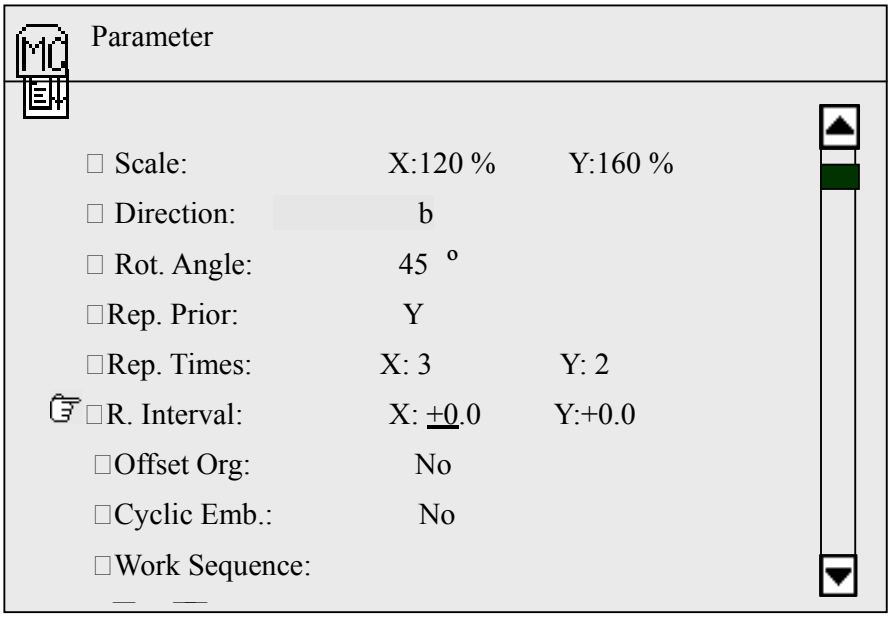
Input the normal repetition times in X direction between 1 and 99. E.g. press “3” and “ ⇄ ”to set the value as 3, .



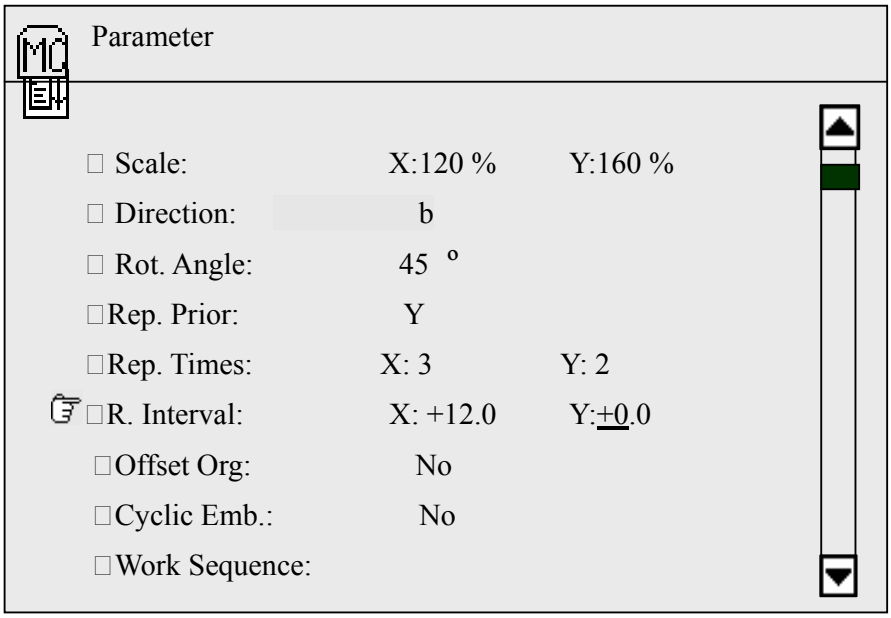
□ Input the new repetition times (1~99) for Y direction. E.g. press “2” and “ ⇄ ”.



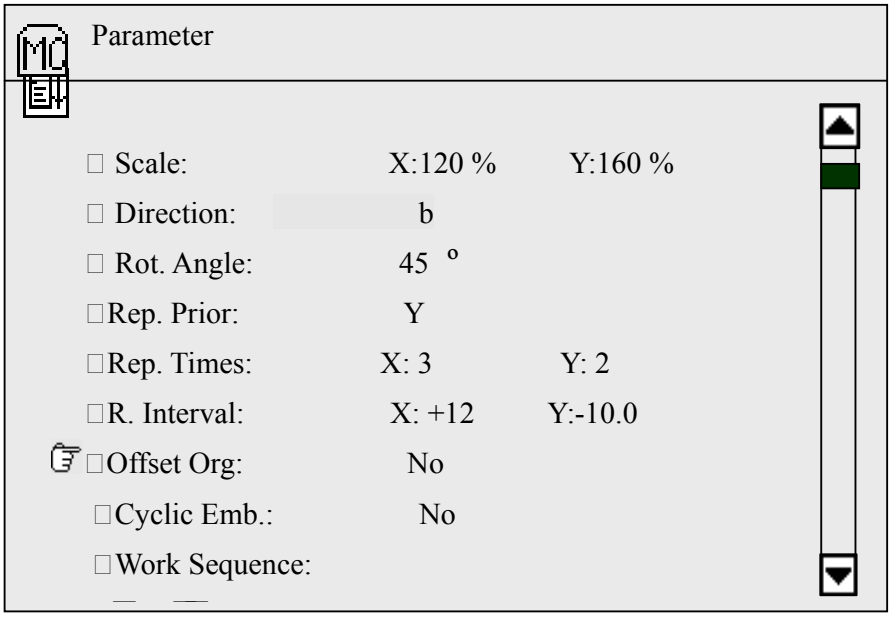
□ Press“ ⮌ ” to set the repetition interval. A cursor shows the place to input.



Input the new X-direction interval value between -999.9 and +999.9(mm). E.g. press "1" and "2" to set the value as +12(mm) and then press “ ⮌ ” to confirm. The system will show you to set the new Y-direction interval.

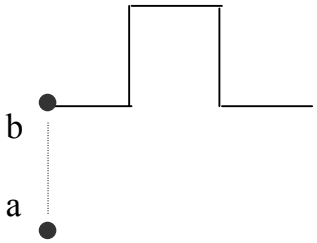


Input the new Y-direction interval between -999.9 □s+999.9(mm). E.g. press the keys "+/-","1" and "0" to set the value as -10 (mm). And then press the key " ⮌ " to confirm.



4.4 Offset Point

The offset point is set under all modees except the embroidery confirmation mode. It can be any point except start point. See the following picture:

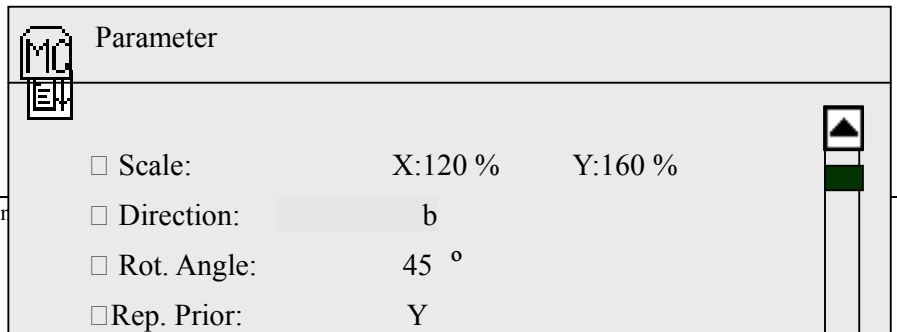


a□Offset point
b□Start point

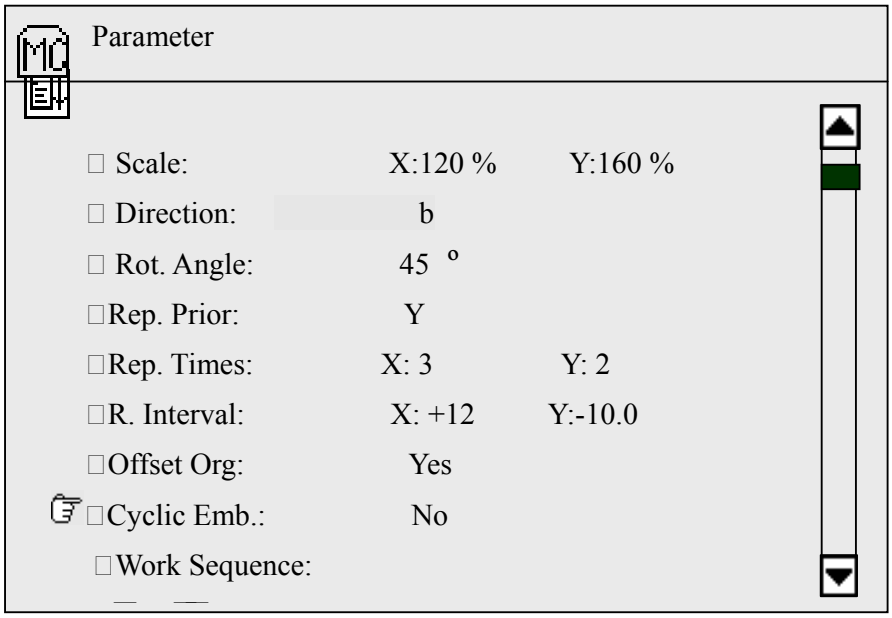
If the offset point has been set, the frame stays at the offset point (a) before embroidery. Press the start button and the frame will move automatically to the start point (b). Press the start point again and the embroidery will begin. After embroidery the machine stops. Press the start button again and the frame will return to the offset point (a) if the frame hasn't return to the point (a) already and whether auto origin point return has been set or not. Press the start button again and the above actions will restart.

□ Under the mode "", press"" to enter the first page of parameter menu.

□ Press the keys " ⇧ ⇩ " or "7" to move the cursor to option 7. and then press" " to enter the setting of offset point. It is as follows:

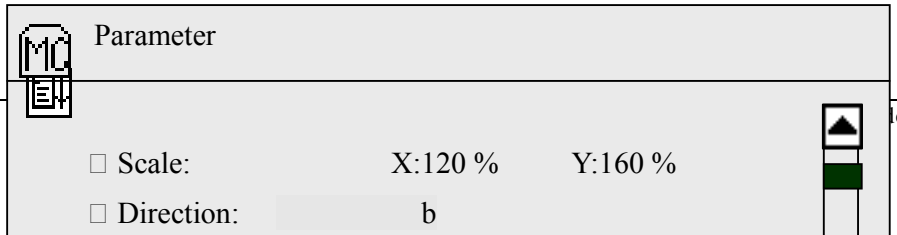


Press " ⇧⇩⇦⇨ " to move frame to the offset point and then press " ⮌ " to confirm the setting. The following picture will be shown.

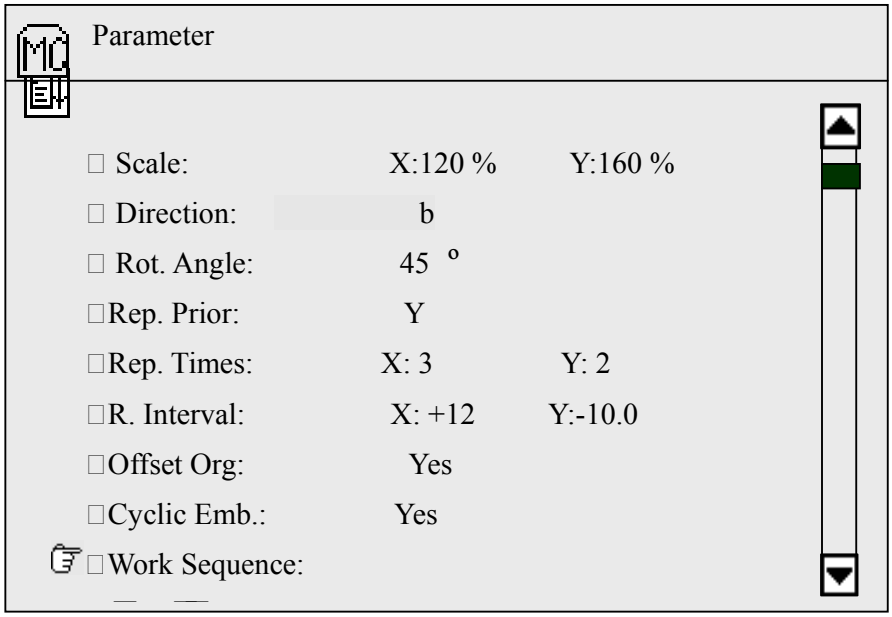


4.5 Cyclic Embroidery

Press the key " ⮌ " to set the cyclic embroidery. A square cursor will show where to input:



Press “⇧ ⇩ ” to select “Yes" or "No" and then press“ ” key to confirm the selection.



4.6 Work Sequence

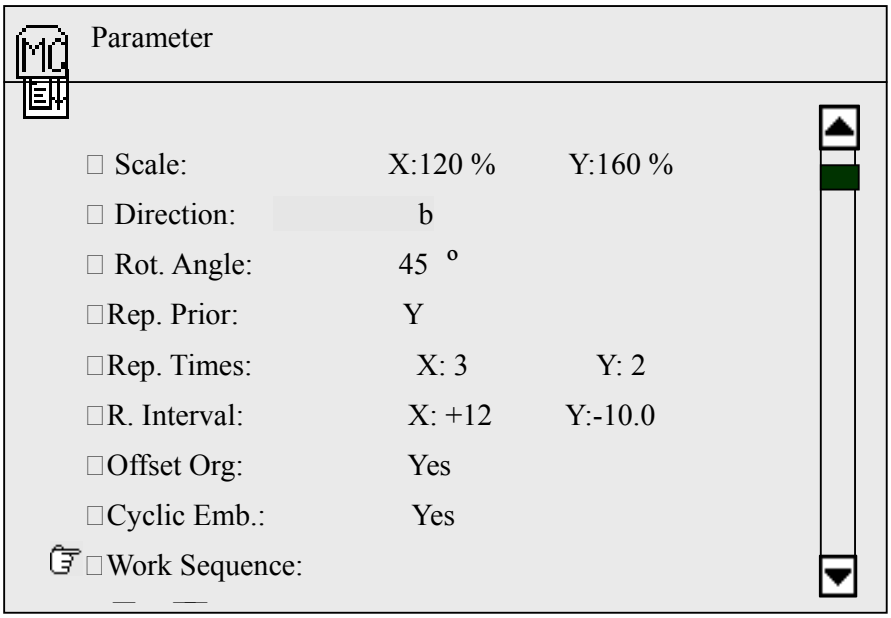
Work sequence is a function set to improve the embroidery efficiency and change color automatically. Based on design’s color blocks, it can be set according to the color difference or the user’s wills.

The work sequence can be only used in the main screen. Press the key "" to let the work sequence work. And the icon "" will show in the main screen.

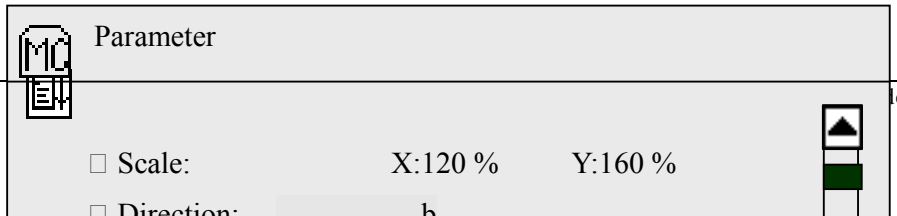
Operation:

□ Press the key "" to enter the first page of parameter menu.

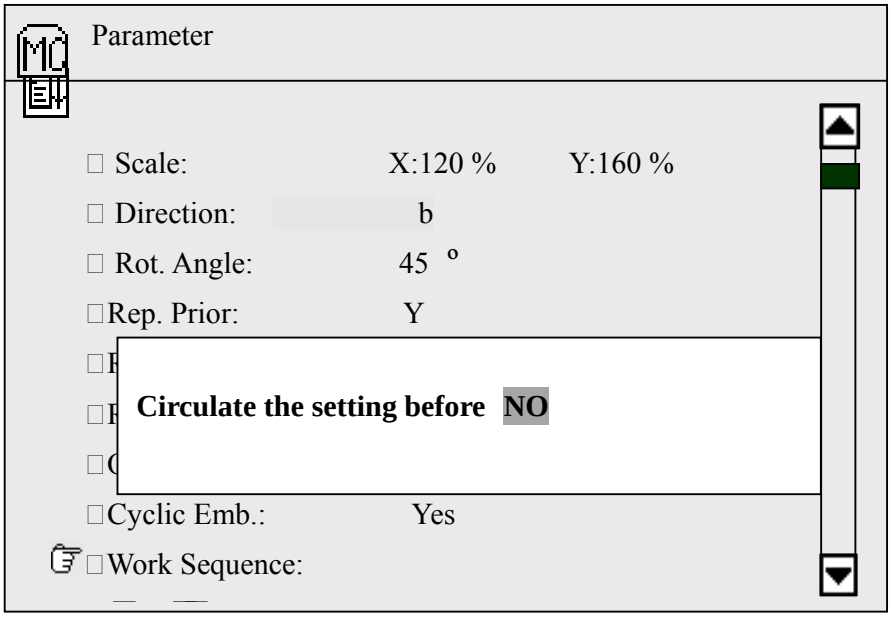
□ Press the key " " or "9" and then " " to enter the setting of the work sequence. The cursor "__" will show you where to input.



Input the numbers, which can't be larger than 15. To input a number larger than 10, press the key "10+" first and then another digit. After the corresponding stitch position is selected, there will be a square cursor in the stitch mode and the setting of the first work sequence is finished. It is shown as follows:



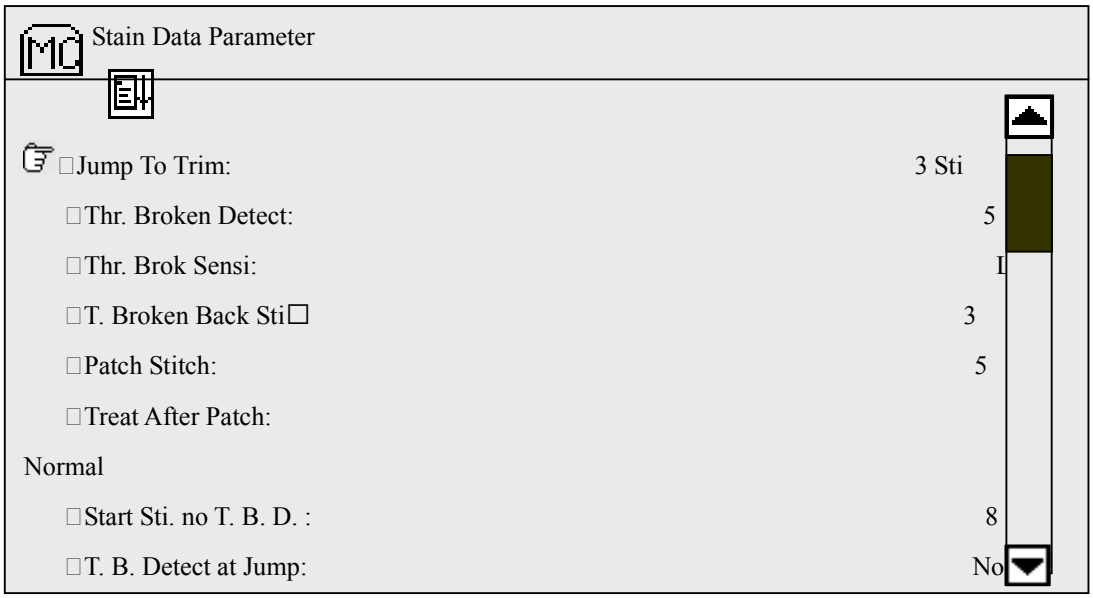
Then set the second work sequence, and press “ ” after setting. It is shown as follows:



If “Circulate the setting before” is set as “No”, the following setting will keep unchanged. If it is set as “Yes”, the setting after the cursor will repeat the setting before continuously.

4.7 Standard Embroidery Data Parameter

This is to set the data parameters concerning the standard embroidery. Their options and default values are shown in the appendix.



Jump to Trim: (Options: No, 1-7)

It is to decide how to deal with the jump stitch codes in the design. When the parameter is set as “No”, it means jumping and no trim. Otherwise if the continuous jump stitches are less than the set value, there will be jumping and no trim; if the continuous stitches are larger than or the same as the set value, there will be jumping to trim.

When it is jumping and no trim, the machine will jump stitch in case of the jump stitch codes; if it is jumping to trim, the machine will act as if over-frame, namely automatic stop, moving frame and automatic start.

Thread broken detect: (Options: 3~7, No)

When this parameter is set as "Yes", the machine will automatically judge

whether there is thread broken. If it happens, the machine will stop automatically and show the thread broken icon. “3~7” is to set how many stitches after the thread broken the machine will begin to test. When the parameter is set as “No”, the machine won’t test whether there is thread broken.

Thread Broken Sensitivity (Options: Low, High)

This can help to improve the sensitivity of thread broken detection.

Thread Broken Back Stitches: (Options: 0~9)

The parameter is to set how many stitches the machine will automatically return when the machine detects a thread break and stops automatically in case “Thr. Broken Detect” is set “3~7”. If the parameter value is 0, there will be no returning. If the value is larger than 0, there will be auto return and the returned stitches is the set value.

Patch Stitch: (Options: 0~9)

This parameter is to decide when the patching mode will end. If this parameter is set as 0, the patching mode will end at the returning point. If the parameter value is larger than 0 (e.g. A stitches), the patching mode will end A stitches before the returning point.

Treat After Patch: (Options: Normal, Reduce, Stop)

This is to set the machine speed after patching. If it is “Normal”, the machine will keep the normal embroidery speed. If it is “Reduce”, the machine

will embroider several in lower speed and then return to the normal speed. If it is “Stop”, the machine will stop automatically and the machine will continue normal embroidery after it is stared again.

Start Sti. no T. B. D.: (Options: 0~15)

This parameter is to decide in how many stitches after patching the machine won’t check whether there is thread break.

T. B. Detect at Jump: (Options: Yes, No)

This is to decide whether to check thread break during jump stitch in embroidery.

Long Sti. Divide: (Options: No, 7~12)

This parameter is to decide whether to divide the long stitches in embroidery and the stitch length in dividing.

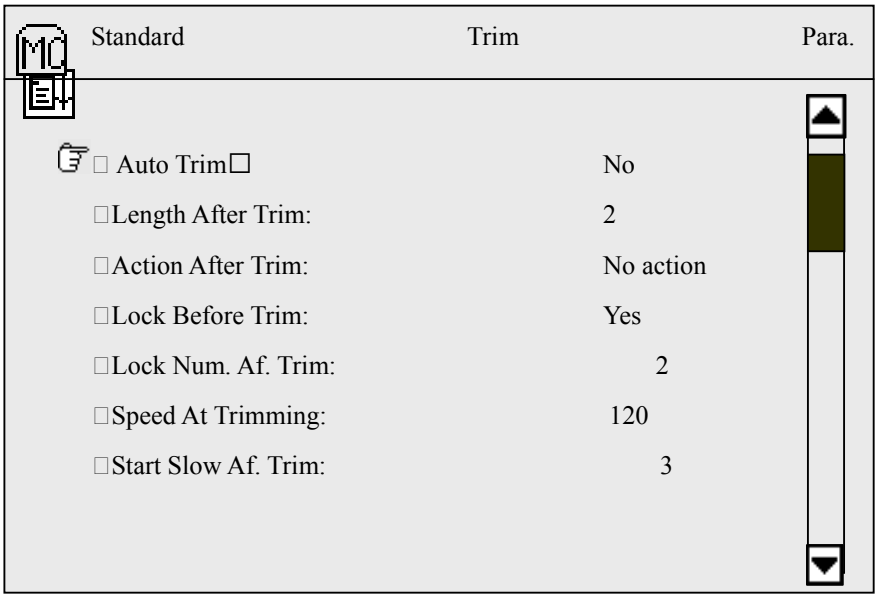
If the stitch is too long, the main shaft will reduce its rotation speed. The longer the stitch is, the lower the speed will be. The machine can divide the long stitch (longer than the set value) to two or more stitches according to the set value, and then jump to finish it.

Jump Length: (Options: 4.5, 6.5)

This is to set the division unit length which is used for dividing the long stitches in embroidery or for dividing the long stitches into jump stitches in design scaling up/down and rotation. Its measurement unit is mm.

4.8 Standard Trim Parameters

These are the parameters concerning the trimming in standard embroidery. Refer to the appendix for their options and default values.



Auto Trim: (Options: Yes, No)

This parameter is to decide whether the machine will trim automatically at the end of embroidery and for operations like color change and over-frame. Some types of machines aren't equipped with auto trim device.

Length After Trim: (Options: 1~4)

This parameter is to adjust the length of thread residue caused by trimming. The smaller the parameter value is, the shorter the length of thread residues become.

Action After Trim: (**Options**: No Action, Move Needle, Frame to Y, Frame to

X)

This parameter is to set the action after trimming. This action is to separate the thread from the mechanical parts like trimming cutter.

Lock Before Trim: (Options: Yes, No)

Locking is the measure to prevent the fabric from moving away in the last stitch before trimming. This parameter is to decide whether to lock stitch before trimming.

Lock Num. Af. Trim: (Options: 0, 1, 2)

This parameter is to set how many stitches to lock after trimming.

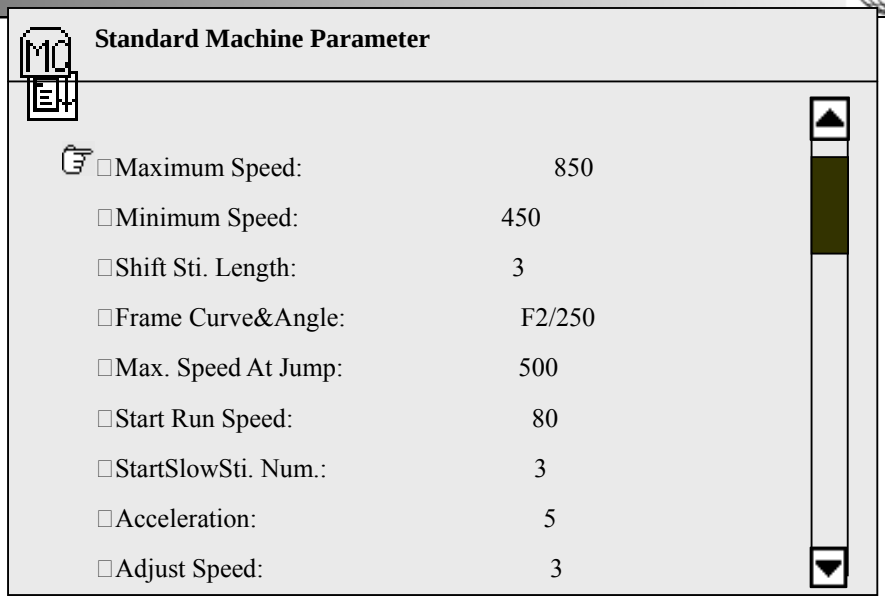
Speed At Trimming: (It is 120 now.)

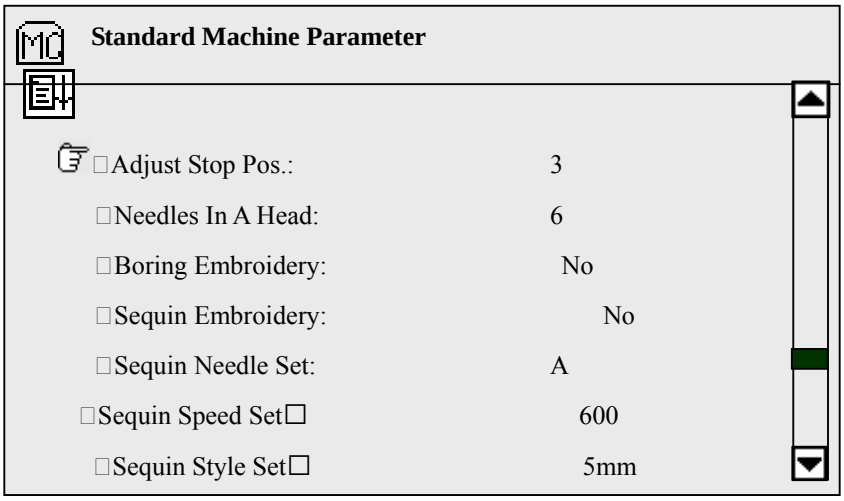
Start Slow Af. Trim: (Options: 1~9)

This is to set how many slow start-up stitches will be after trim.

4.9 Standard Machine Parameters

These are the machine parameters concerning the standard embroidery. Refer to the appendix for their options and default values.





Maximum Speed: (Options: 650, 700, 750, 800, 850, 900, 950, 1000)

This is to set the maximum rotation speed of main shaft in embroidery.

Minimum Speed: (Options: 400,450)

This is the minimum speed the machine will automatically set according to the size of stitch codes.

Shift Sti. Length (Options: 2~7)

This is to set a stitch length from which the speed will decrease from the maximum speed. Its measurement unit is mm. Moreover this parameter can decide every stitch speed together with “Maximum Speed” and “Minimum Speed”.

When the machine sets the rotation speed automatically according to the stitch length, the “Maximum Speed” will be applied for the stitches shorter than the “Shift Sti. Length”. And for the stitches longer than the “Shift Sti. Length”, the speed will decrease from the “Maximum Speed” for every more mm. of stitch length. When the stitch increases to 12 mm, the speed will decrease to the “Minimum Speed”.

The three parameter values should be set according to the real situations of the machine and embroidery, in order to prevent the speed is too high and the driving force is not enough.

Frame Curve&Angle: (Options: F1, F2, F3/230, 240, 250, 260)

The frame curve means that the frame-moving speed change fit a certain curve. The frame angle means that the frame starts to move when the main shaft rotates to a certain angle. Different frame curve and angle will cause different embroidery effects. The user can set these parameters according to different machine parameters, electric parameters and fabric thickness.

Max. Speed At Jump: (Options: 400~750)

This is to limit the main shaft speed during jump stitch code.

Start Run Speed: (Options: 120~150)

This parameter is to set the start-up rotation speed of the main shaft at the start-up.

Start Slow Sti. Num.: (Options: 1~9)

This parameter is to set how many slow start-up stitches are for the startup.

Acceleration: (Options: 1~10)

This parameter is to set the acceleration for the speed to rise after the slow startup stitches. The larger the parameter value is, the more quickly the machine speed rise from the startup speed to the maximum speed.

Adjust Speed: (Options: 1~5)

This parameter is to make the real speed nearer to the set speed. It is used to compensate for the gap between the real speed and the set speed which often happens with season change.

Adjust Stop Pos.: (Options: 0~ 20)

This parameter is to make the machine stop at the 100 degrees more accurately. The user can increase the parameter value to stop the main shaft at a larger angle. Therefore the user can adjust the value between 0 and 20 by judging whether the shaft exceeds the stop position (100 degrees).

Needles In A Head: (Options: 3~15)

This is to set the needle number in the plain embroidery head. The value has to be the same to the real situation. Don't forget to set this parameter after changing the main board or recovering the default setup.

Boring Embroidery: (Options: Yes, No)

This parameter is set for the machines equipped with boring embroidery devices. The parameter should be set as "Yes" for the machines with boring needles. Otherwise it should be "No".

Sequin Embroidery: (Options: Yes, No)

This parameter is set for the machines equipped with sequin embroidery devices. The parameter should be set as "Yes" for the machines with such devices. Otherwise it should be "No".

Sequin Needle Set: (Options: A, B)

This parameter is set as "A" when the first needle is sequin needle. This parameter is set as "B" when the last needle is sequin needle.

Sequin Speed Set: (Options: 400~900)

When "Sequin Embroidery" is set as "Yes", adjust this parameter to set the embroidery speed. When "Sequin Embroidery" is set as "No", this parameter is displayed in darkness.

Sequin Style Set: (Options: 3mm, 4mm, 5mm, 7mm, 9mm)

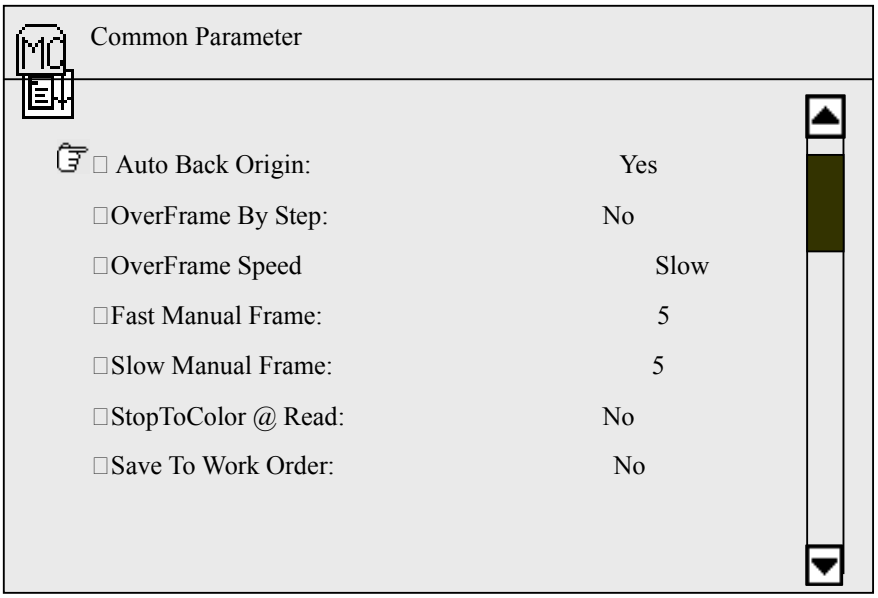
This parameter is to set the size of sequin embroidery. The change will be

effective at the next power-on.

Rope Embroidery: (Options: Yes, No)

Set this parameter as “Yes” to enable rope embroidery in the machine equipped with rope embroidery devices. Set it as “No” to close this function.

4.10 Common Parameters



Auto Back Origin: (Options: Yes, No)

When this parameter is set as “Yes”, there will appear at the end of embroidery a prompt “Return to start point or offset point, press any key to continue”. If press a key and the frame hasn’t been at the origin point, the frame will return to the origin point.

Overframe By Step: (Options: Yes, No)

It is to decide whether to do over-frame directly or by step in case of jump

stitch codes in designs. This operation is prohibited in embroidery confirmation mode.

Overframe Speed: (Options: Slow, Fast)

This parameter is to select the frame-moving speed as high or low in case of machine over-frame. The user can select according to the need.

Fast Manual Frame: (Options: 0 ~9)

This parameter is to set the speed for the fast manual frame-moving. The user can choose according to the need.

Low Manual Frame: (Options: 0 ~9)

This parameter is to set the speed for the low manual frame-moving.

Stop To Color @ Read: (Options: Yes, No)

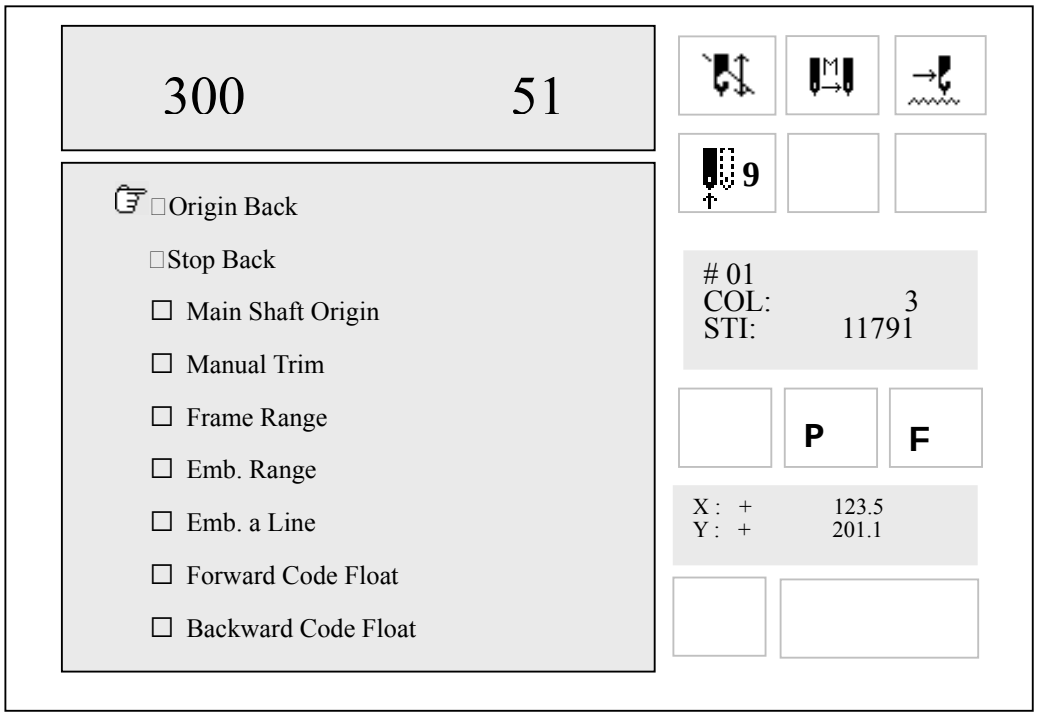
This parameter is to decide whether to transform the stop codes to color-change codes when the designs are input from floppy disk.

Save to Work Sequence: (Options: Yes, No)

When the work sequence is not effective, the user will manually change color according to designs. When this parameter is set as “Yes”, the machine will automatically save the color-change sequence as the work sequence, which can be used in the next embroidery.

Part V Manual Operation

Press the manual operation key“ ” on the keyboard to enter the operation. Under the non embroidery confirmation mode“ ”, the following menu will appear:



5.1 Origin Back

Operation: While the machine stops, select “Origin Back” and click “ ” to confirm, and then the machine will automatically return to the start point.

5.2 Stop Back

If the frame has been moved or other operations have been performed after the machine stopped, the user can do this operation to move the frame back to the stop point.

Operation: Under the embroidery confirmation mode“ ” enter the

manual operation menu, select the second item “Stop back” by keys “ ⇧⇩”, click “ ” to confirm, and then the machine will return to the stop point.

5.3 Main Shaft Origin

This operation is to bring the main shaft to the origin point when the indicator LED is not on (which means the main shaft hasn’t return to the origin point) and the machine can not start.

Operation: Enter the manual operation menu, use keys “ ⇧⇩ ” to select the third item " Main Shaft Origin", click the confirmation key“ ”, and then the main shaft will rotate to stop near 100 °, which can also be performed by pressing shortcut key on the panel. At this time the indicator LED is on and the embroidery can start after the startup key is pressed.

5.4 Manual Trim

When the parameter “Auto Trim” is set as “No”, the user can be free to trim manually according to color-change codes or thread-cut codes. The manual trim can also be performed by pressing the shortcut key on the control panel.

5.5 Frame Range

This operation is to move the frame along the range of the design (scaled up/down or repetition embroidered) for a circle, in order to check the design’s position in the frame and to avoid over-frame.

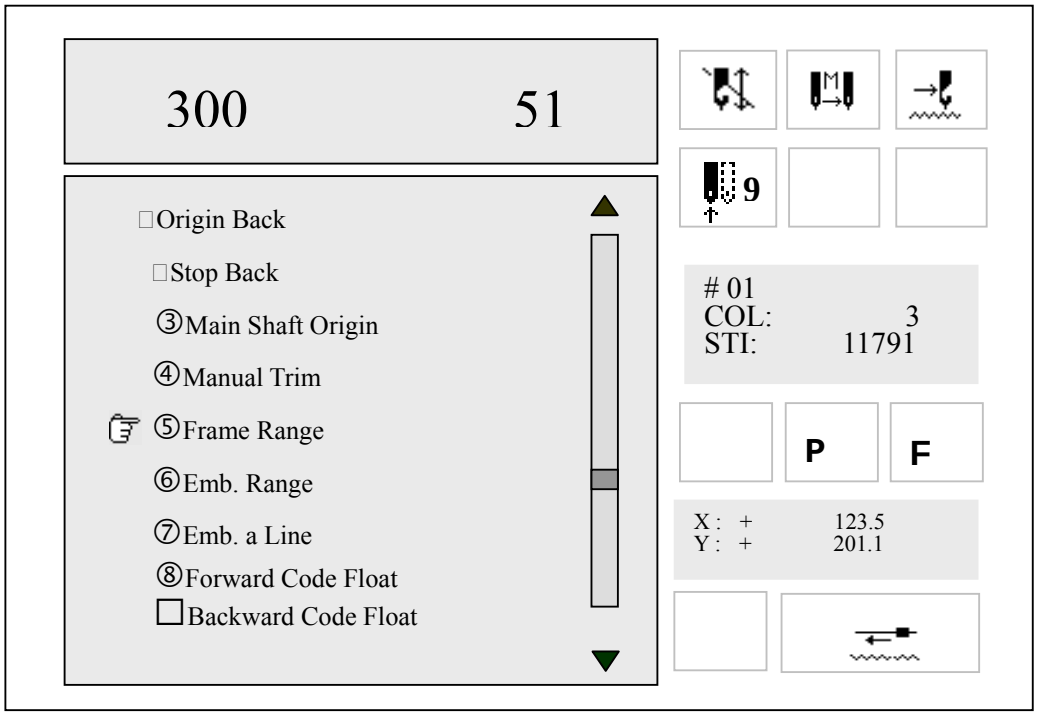
 Press keys “ ⇧⇩⇦ ⇨ ” to move the frame to the start point, click the key ”, and there will be a prompt for starting the operation “Frame Range”.

□ Press the startup key, and the frame will move along the design range from the start point to the stop point. Then the display will return to the main screen.

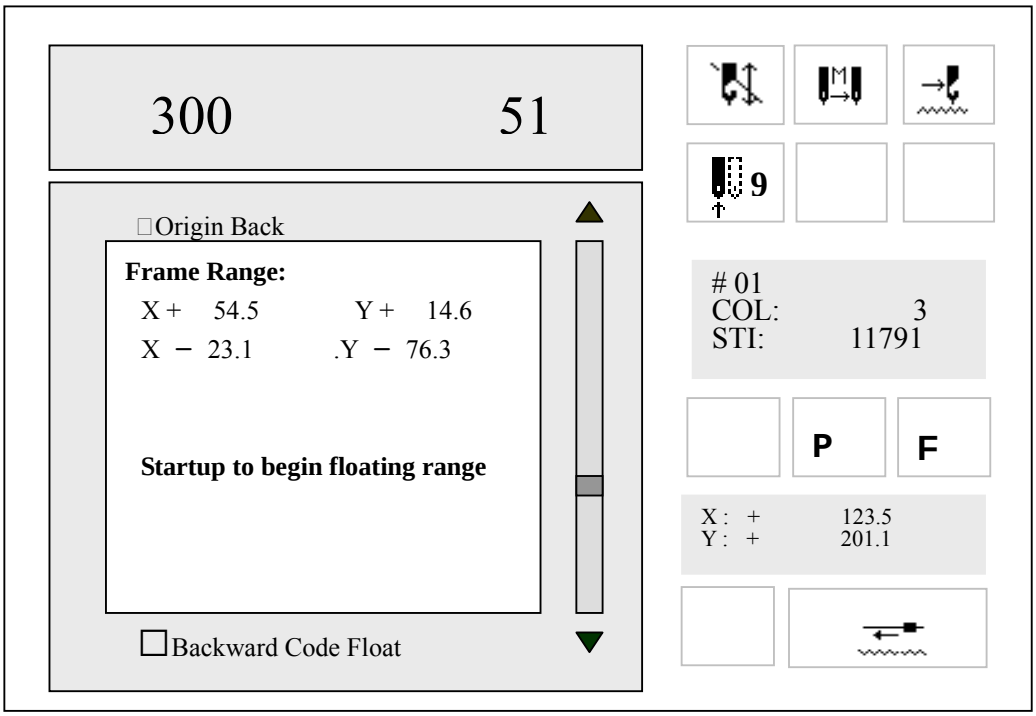
□ If the user wants to exit the operation during the above process, he can press " ESC" and the display will return to the main screen.

After selecting a design, the user can use this operation to check if the design is in the desired position of the frame, so as to use the fabric properly. It's only available under the mode " ".

Operation:



When the main screen is under the mode " ", press the key " " to enter the operation "Frame Range". After a while the design range will be shown in the screen. And there will be a prompt for moving the frame to the start point. Then follow the prompts to continue.



5.6 Embroider Range

The user can do this operation after selecting the design. This is to embroider the design's range and only available under the embroidery preparation mode.

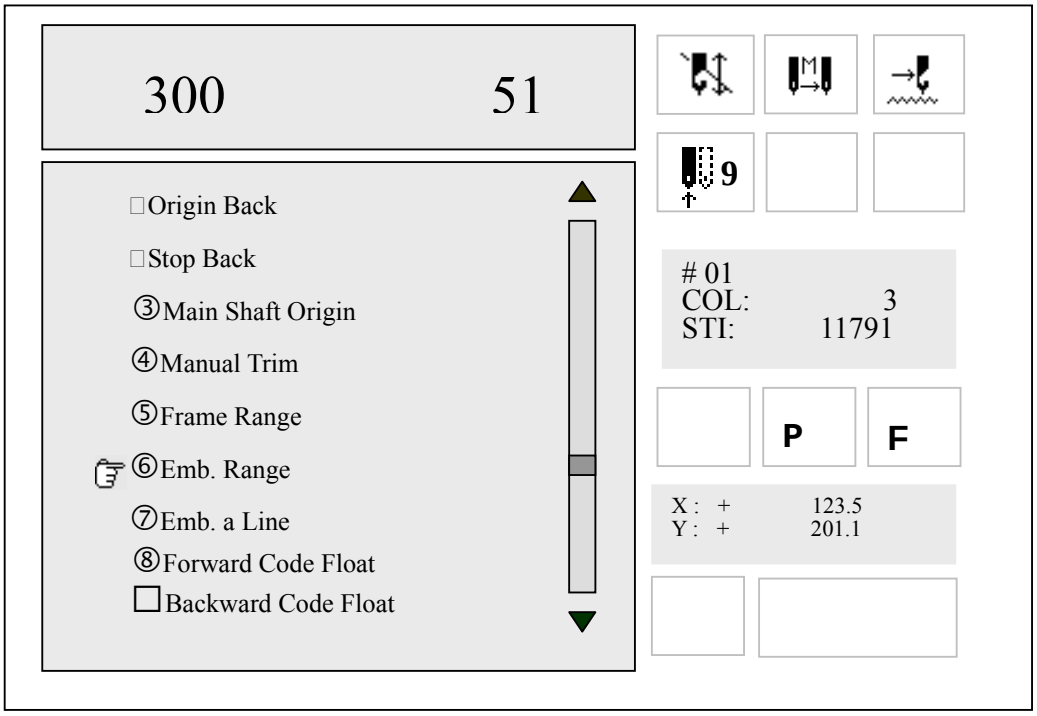
Operation:

When the icon "" (embroidery preparation) is shown in the main screen, press the manual operation key "" to enter the manual operation menu. Then select "Emb. Range" and press the key " ".

The system asks the user to input the stitch length for embroidering range. Press the numerical keys to input it. Its range is 10-60 (1=0.1 mms).

A moment later the system will return to the main screen. Now it's under the embroidery confirmation mode "" and the design number in the main

screen changes to "101".



5.7 Embroider a Line

This function is only available under embroidery preparation mode.

Operation:

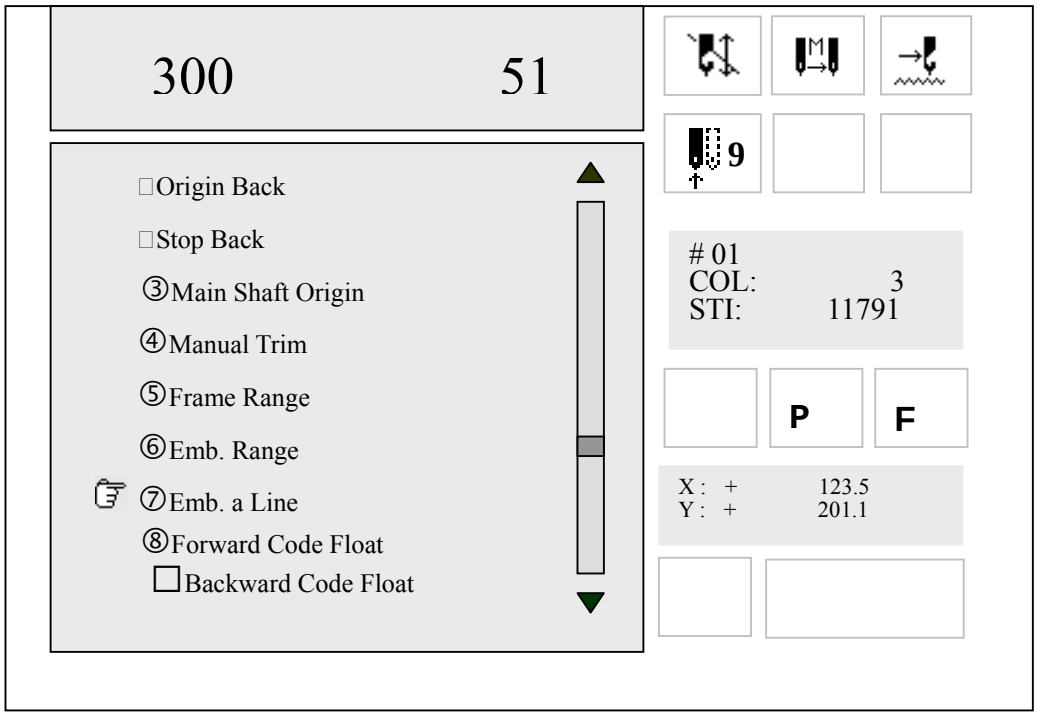
□ In the main screen and under the embroidery preparation mode “ ”, press the manual operation key“ ” to enter the manual operation menu.

□ Press the keys “ ⇧ ⇩ ” to select the option “Emb. a Line”. Or directly press the key 7 to select it. And then press the confirmation key “ ”.

□The system asks the user to input the stitch length for embroidering a line. Press the numerical keys to input it. Its range is 10-60 (1=0.1 mms).

□A moment later the system will return to the main screen. Now it’s under the embroidery confirmation mode “ ” and the design number in the main screen

changes to "102".



□ Now the user can start the embroidery as same as common designs. The design number in the main screen will change back to the former one after the embroidery.

5.8 Forward Code Float

This operation is to move the frame to the next stop code in the design quickly, so as to let the machine start embroidery from any point.

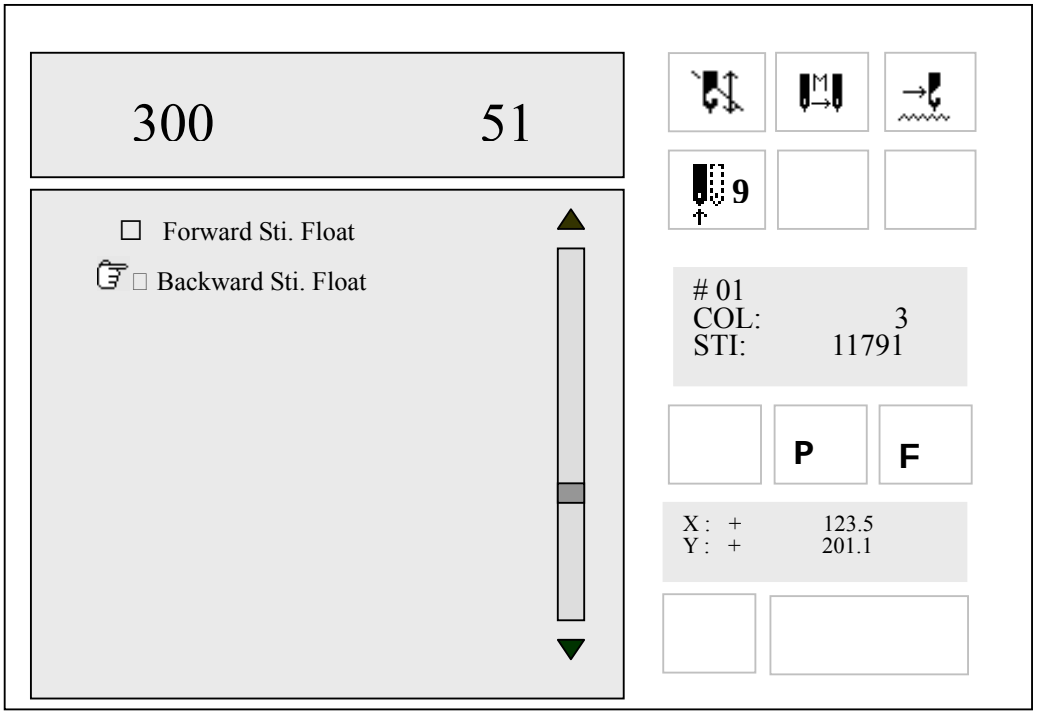
Operation: When the machine stops under the embroidery confirmation mode "", select the option "Forward Code Float" in the first screen of manual operation menu, press the confirmation key" ", and then the machine will float forward to the next stop code or color-changing code and stop there.

5.9 Backward Code Float

This operation is to move the frame backward to the last stop code in the design quickly, so as to let the machine start embroidery from anywhere.

Operation: When the machine stops under the embroidery confirmation mode "", select the option "Backward Code Float" in the first screen of manual operation menu, press the confirmation key"", and then the machine will float backward to the last stop code or color-changing code and stop there.

The second screen: Enter the manual operation menu, and turn to the second screen.



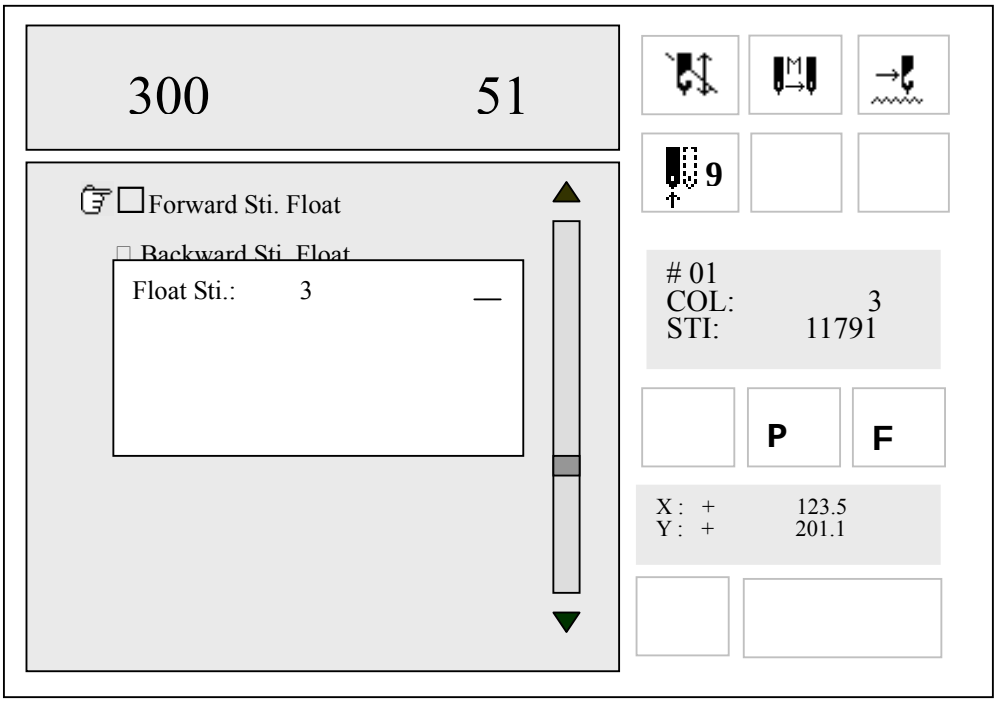
5.10 Forward Sti. Float

Operation:

In the main menu and under the embroidery confirm mode"", press

the key " " to enter the manual operation menu. Press the key " " to enter the second screen.

□ Press the key " ⇧⇩" to select the option "Forward Sti. Float", press the confirmation key" ", and then there will be a prompt in the screen asking the user to input the stitches to float.



□ Press the numerical keys to input the stitches for floating. Press the confirmation key" "□and then the frame will move forward the input stitches in high-speed.

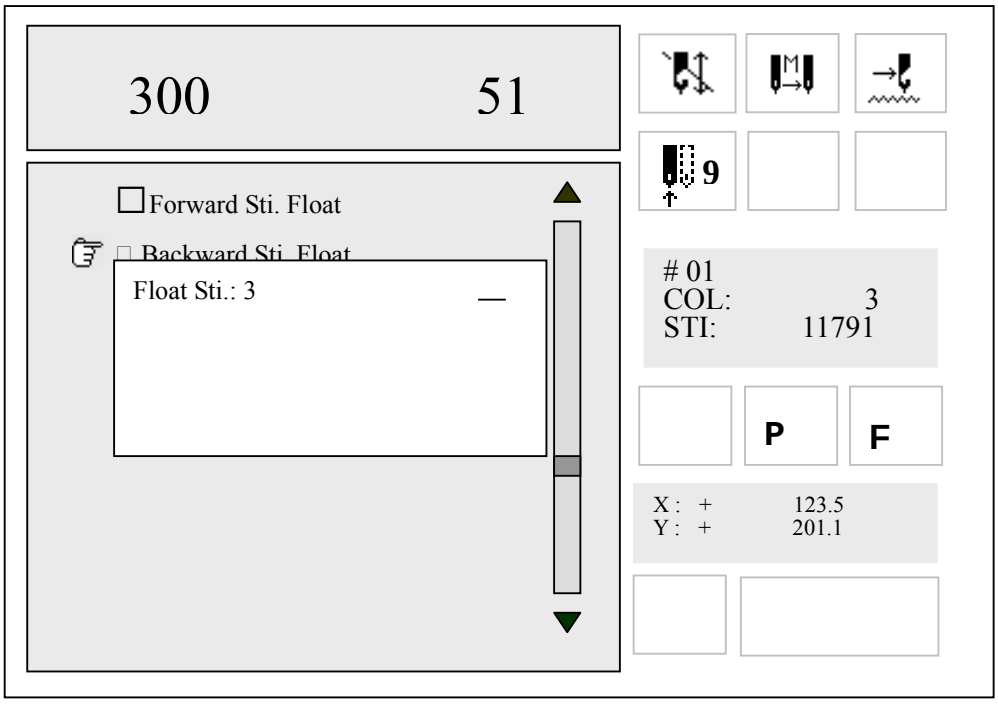
5.11 Backward Sti. Float

□ In the main menu and under the embroidery confirm mode" ", press the key " " to enter the manual operation menu. Press the key

“ PU PD ” to enter the second screen.

□ Press the key “ ⇧⇩ ” to select the option “Backward Sti. Float”, press the confirmation key“ ⮌ ”, and then there will be a prompt in the screen asking the user to input the stitches to float.

□ Press the numerical keys to input the stitches for floating. Press the confirmation key“ ⮌ ”□and then the frame will move backward the input stitches in high-speed.



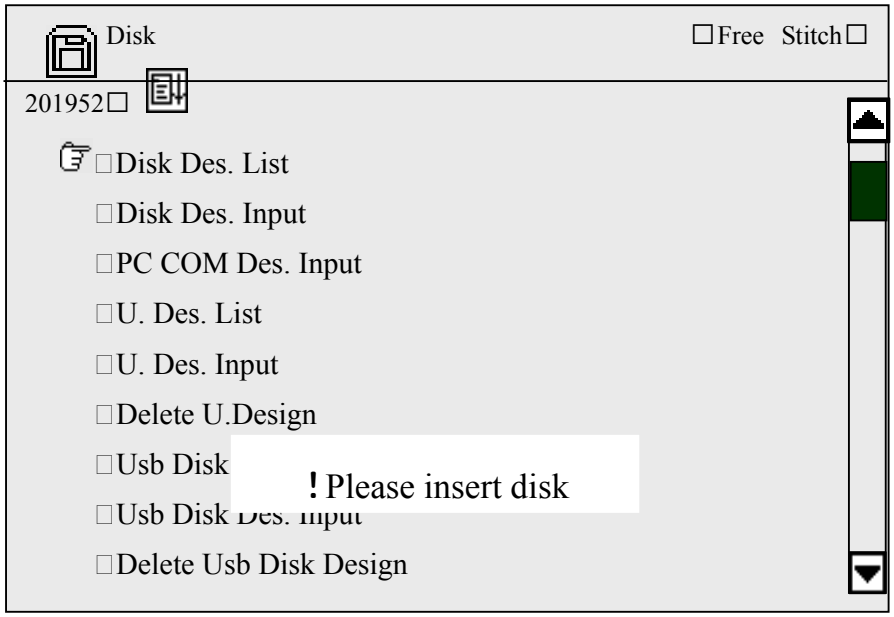
Part VI Disk Management

6.1 List Floppy/USB Disk Directory

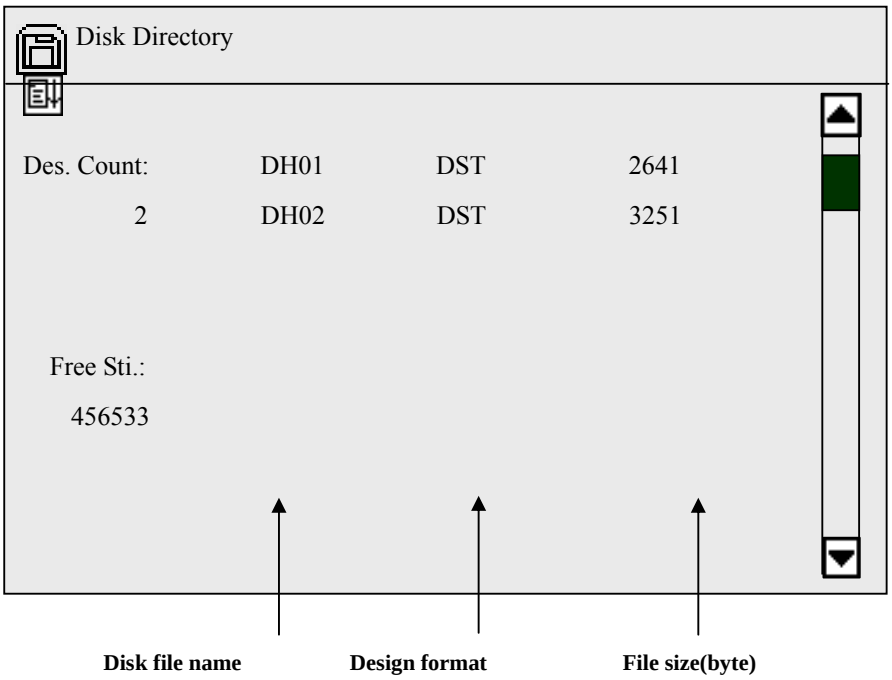
This operation is to view the directory of files in formats of ".DSB", ".DST", and ".DSZ", and free space in the floppy disk and USB disk.

Operation:

□ When the main screen is being displayed, press the key " " to enter the disk management menu.



□ Press the key "1" and the confirmation key " " to list the directory of disk files. ("1" for files in floppy disk, "4" for files in USB flash disk and "7" for files in USB disk) Then the floppy driver light goes on and begins to read the directory. The file directory is shown as follows:



□ If the design file directory is more than one page, the user can press " PU PD " to enter the next page.

□ Press the key "ESC" to return to the menu of the upper level.

6.2 Disk Design Input

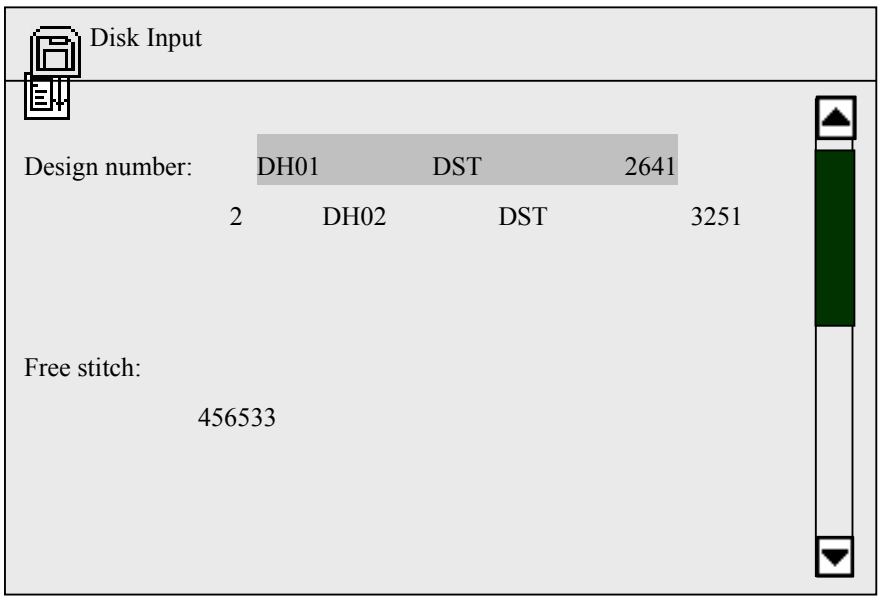
This operation is to recognize the design files (".DSB", ".DST" and ".DSZ") in floppy disks of TAJIMA format or BARUDAN FDR format, and input the design files to the machine memory. After this operation, the scale parameter will be restored to the standard value (refer to appendix) and its X/Y repetition will be restored to 1.

Operation:

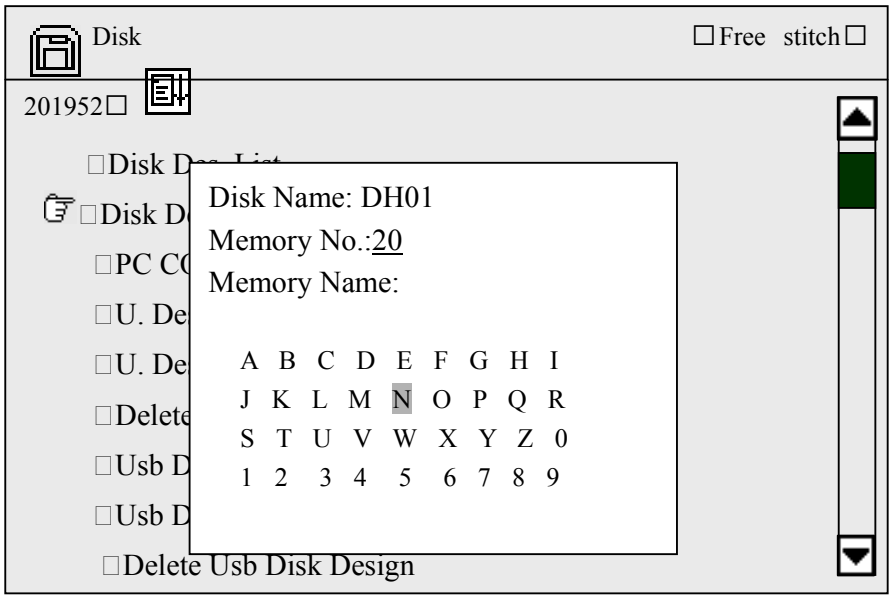
□ Under the main screen, press the key " " to enter the disk management menu.

□ Press "2" and the confirmation key " "to enter the disk input menu.

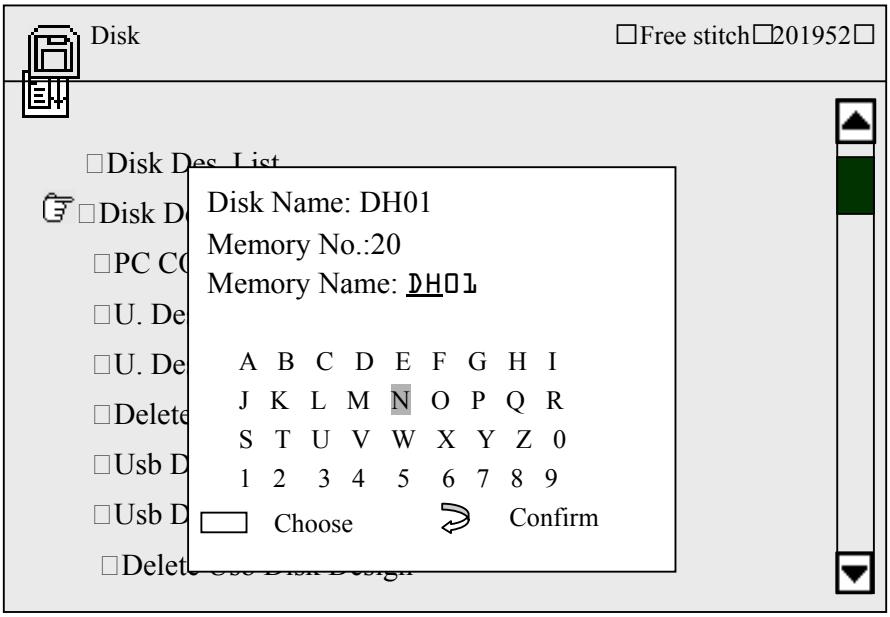
("2" for floppy disk, "5" for USB flash disk and "8" for USB disk) Then driver light goes on and the driver begins to read the directory and display it on the screen. Press the key " ⇧ ⇩" to select a design and press " ⮌" to confirm the selection.



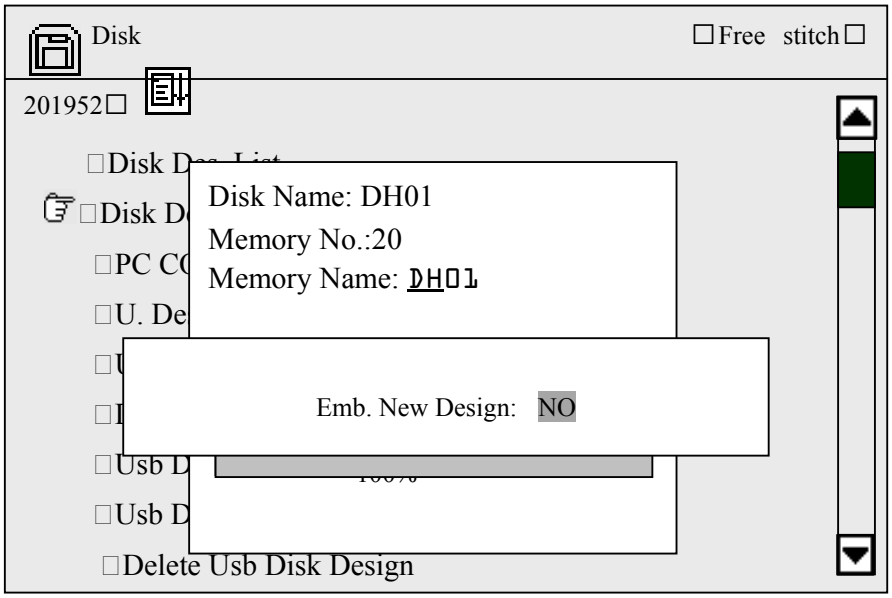
 Then the system will provide and display an available design number (minimum) which the user can change. For example, if the system provides a minimum number 20 and the user wants to use 65, press "6", "5" and "⮌". If the number has been used, confirmation will fail. Otherwise continue the following operations.



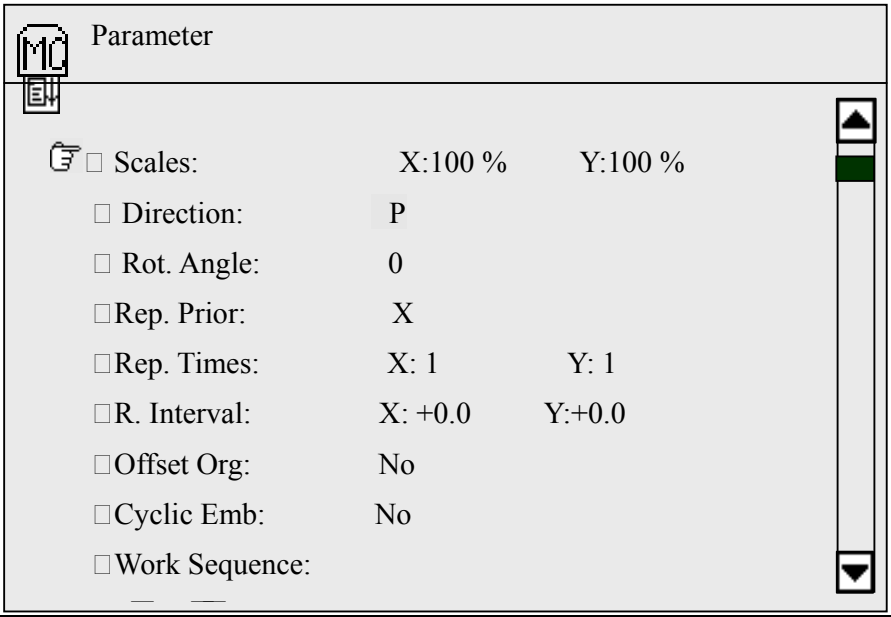
☐ The system asks to input the design name in memory (memory name). If the user uses the disk name as memory name, press the key "↵". Otherwise press the keys "⇧⇩ ⇦ PU ⇨ PD " to select a character and then press the key "▭" to input. After input of the whole name, press "↵" to confirm the name or press "CL" to input a new name.



□The system starts to input the selected design file. A progress bar is displayed in the inputting process. Immediately after the input, if the system is under embroidery preparation mode, it will enter the parameter input operation; if the system is under the embroidery confirmation mode, the system will ask whether to embroider the input design immediately.



Press“ ⇧⇩ ” to select "Yes", then press ”, and the system will enter the parameter setting operation.



6.3 PC COM Design Input

This is to download designs from the PC to the machine's memory via third-party punch softwares.

Operation:

(1) Under the main screen and the mode "", press the key "".

(2) Press the keys "3" and "", and then the screen will pop up a prompt that the design is being transferred and the system is waiting for the transferring instructions from PC.

(3) Select a design and transfer it via third-party punch software.

6.4 Delete USB/Floppy Disk Design

This is to delete from the Tajima format disks the design files in formats of ".DSB", ".DST" and ".DST".

Operation:

(1) Under the main screen and the mode "", press the key "". (The operations for USB and floppy disks are similar. The following is for USB disk.)

(2) Then press "6" and ""to enter the option "Delete U. Design". The machine reads the directory of the USB disk and displays it.

(3) Press "PU PD and "to select design.

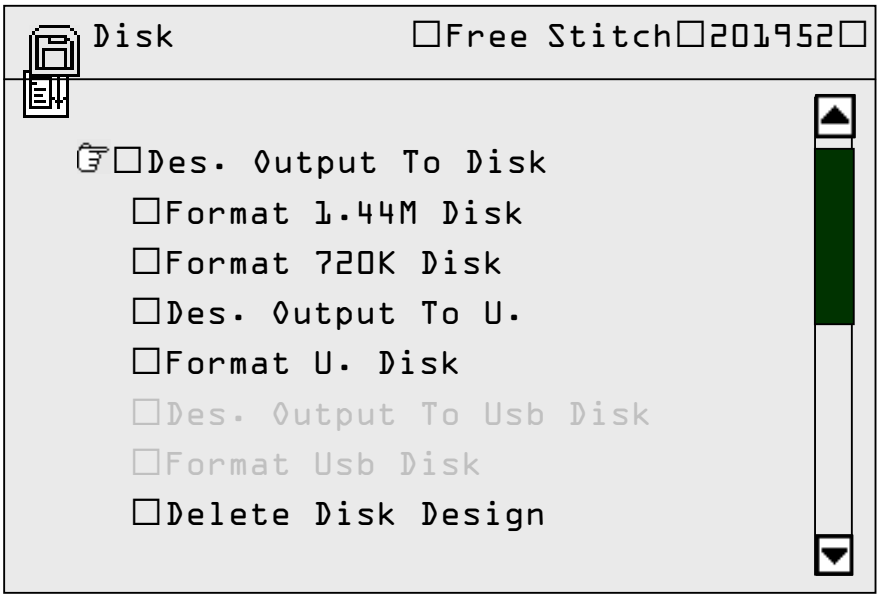
(4) Press "" to confirm and delete the design file or press "ESC" to exit and return to the main screen.

6.5 Des. Output to Floppy/USB Disk

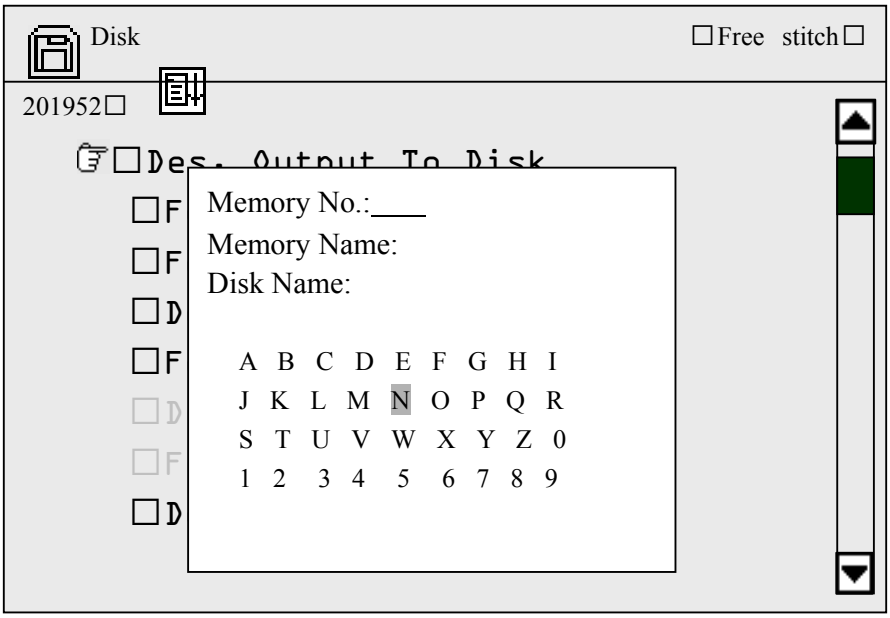
This is to save the memory designs to the Tajima format disk in the "DSB." format.

Operation:

□ Press the key " " under the main screen to enter the disk management menu. Then turn to the second page.



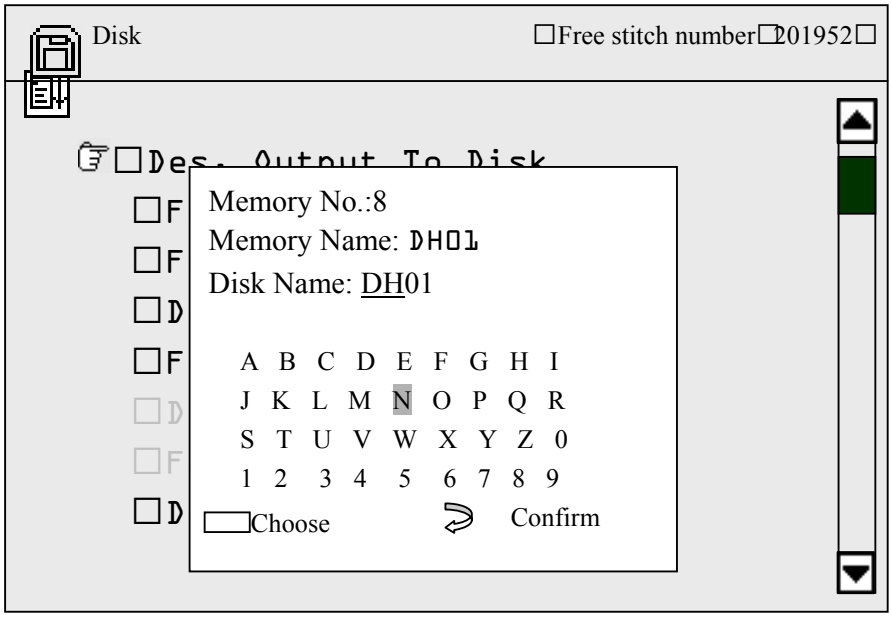
(2) Press "↵"and the system will ask to input the memory No. of the design for output. (Press "4" and "↵" for output to USB flash disk. Press "6" and "↵" for output to USB disk. The following is for output to floppy disk.)



□ Press the numerical key to input the design's memory number, or press "↵" to enter the memory design directory to select by pressing keys "⇧ ⇩" and "↵". (Refer to Part III)

□ Press the key "↵". If there is no design of the input No. in the memory, the confirmation will fail. Otherwise the system will display its memory name and ask to input its disk name.

□ If the user wants to use the design's memory name as its disk name, press the key "↵". Otherwise press "⇧ ⇩ ⇦ PU ⇨ PD "and "▭" to select characters, and then press "↵" to confirm the input name or press "CL" to cancel and input a new name.



 The output begins and a progress bar appears in the process. The system will return to the main screen after the output.

6.6 Format Disk

The machine can format the 1.44M/720K floppy disk and USB disk in DOS format. A new disk has to be formatted before use.

Operation:

 Under the main screen and the mode “ ”, press“ ” to enter the disk management menu. Then press “ PU PD ” to enter its second page.

 Press "2" to select "Format 1.44M Disk" or "3" to select “Format 720k Disk” or “5” to select “Format U. Disk” or “7” to select “Format Usb Disk”.

 Press“ ” to confirm the operation of formatting. A progress bar will appear and after the formatting the system will return to the main screen.

Note: This machine model hasn’t support USB driver yet, so all the USB-concerned options of the disk management menu are unavailable and

displayed in darkness.

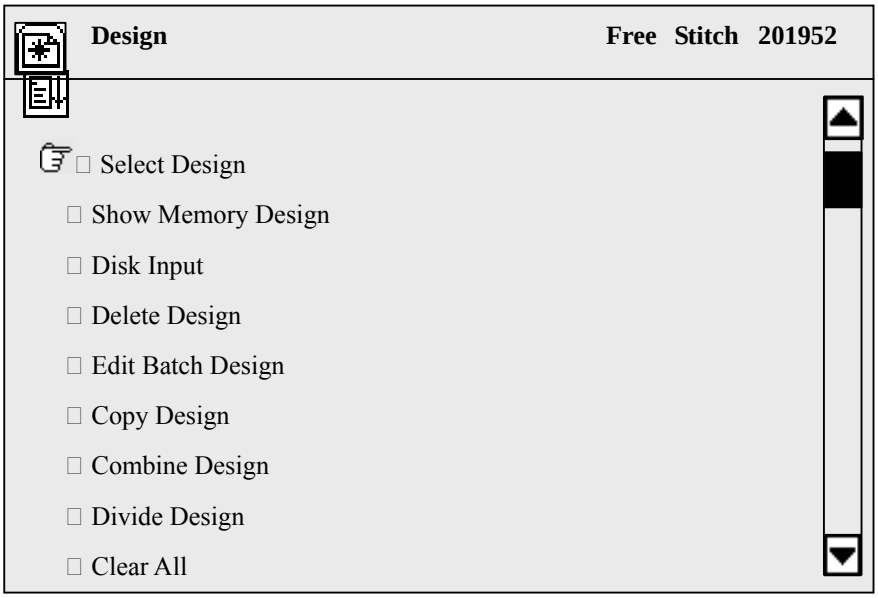
Part VII Memory Design Operation

7.1 Enter the Memory Design Operation Menu

It's possible to enter the memory design operation menu under both the embroidery preparation mode and the embroidery confirmation mode. But some menu options are displayed in darkness in some cases when they are unavailable to operation.

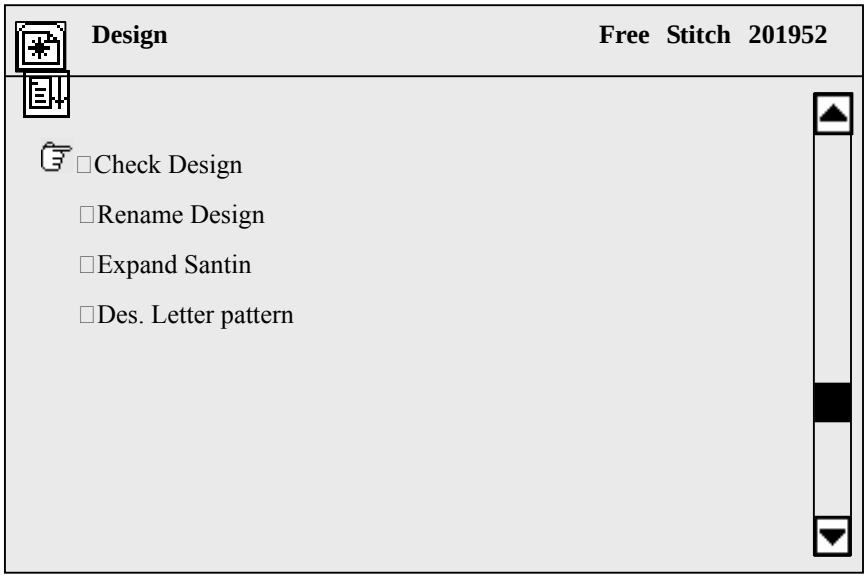
Operation:

□Under the main screen press" " to enter the design operation menu and its first page is as follows:



□ Press keys " PU PD ' to switch between the two pages.

The second page:



□ Press keys "⇧ ⇩" or numerical keys to select a menu option. Then press the confirmation key "⏎" to enter its submenu.

7.2 Select Design for Embroidery

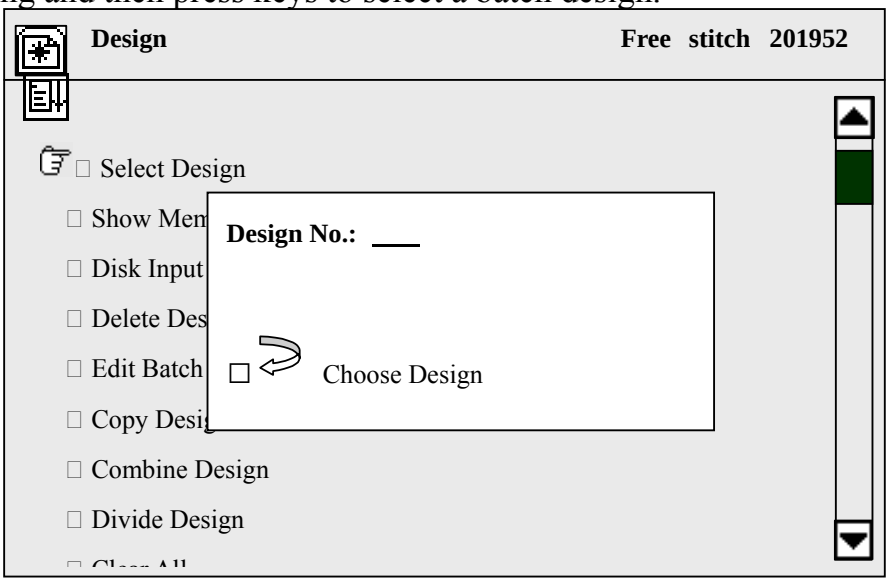
This operation is to select a design in memory for embroidery, which is only possible under the embroidery preparation mode.

Operation:

□ Under the main screen and the embroidery preparation mode, press the key " " to enter the design operation menu.

□ Press the confirm key "⏎" to enter the first menu option. The following prompt will appear. If the design's memory No. is known, press numerical keys to input the number. For example, press "1", "5" and then "⏎" to select No. 15. If there design No. 15 in the memory, it will be set for embroidery and the parameter setting menu will appear. Refer to Part IV for setting parameters. If design No. 15 doesn't exist, the selection confirmation

will fail and the user can press "CL" to clear the input number and select/input a new one. If some designs in memory have been edited as a batch design and saved, the new batch design will be named by a□i. To embroider a batch design press the switch key to take the mode of alphabet inputting and then press keys to select a batch design.



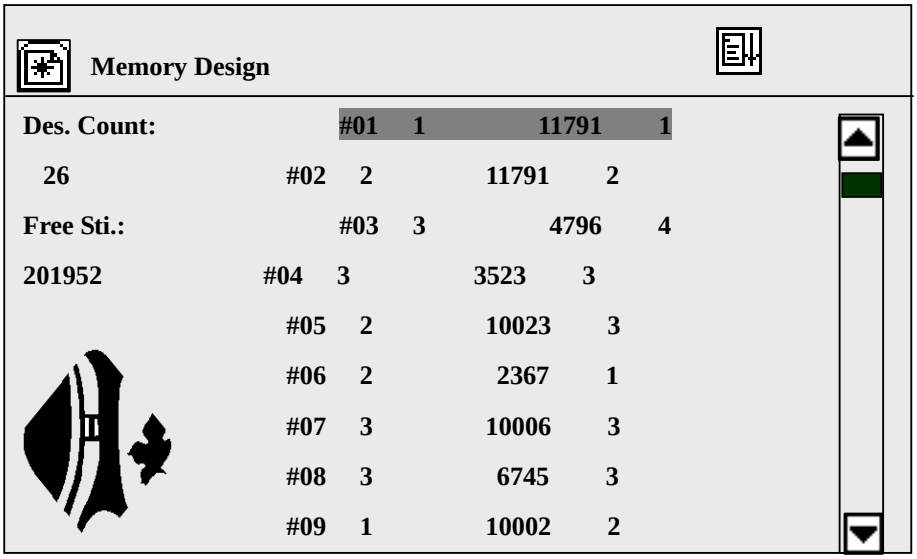
□ If the user press "↵" directly without inputting a number or after pressing "CL" to cancel the input, the directory of memory designs will be displayed on the screen.

Press keys "⇧ ⇩ ⇦ ⇨" to select a design intended for embroidery. (" " is ⇧ ⇩ moving the cursor upward and downward. " ⇦ PU ⇨ PD " is for turning pages.)

Press the key "↵" to confirm selection. After that the screen will turn to the parameter setting menu.

□ If the user doesn't change parameter setup, press "ESC" to exit and

return to the main screen. For parameter setting refer to Part IV.



 In the above operation, the user can press " ESC" to exit embroidery to return to the main screen at any time.

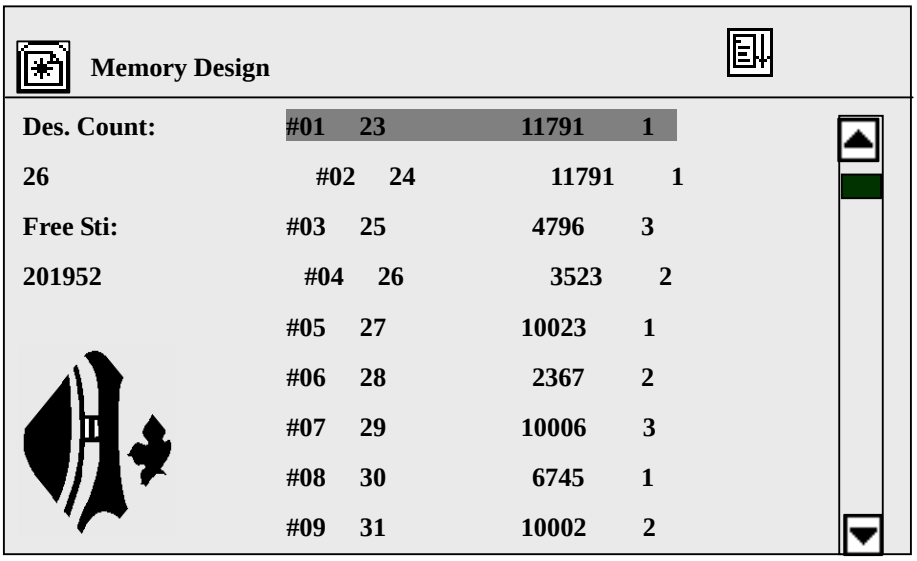
7.3 Show Memory Design

This operation is to list the memory designs and show their parameters.

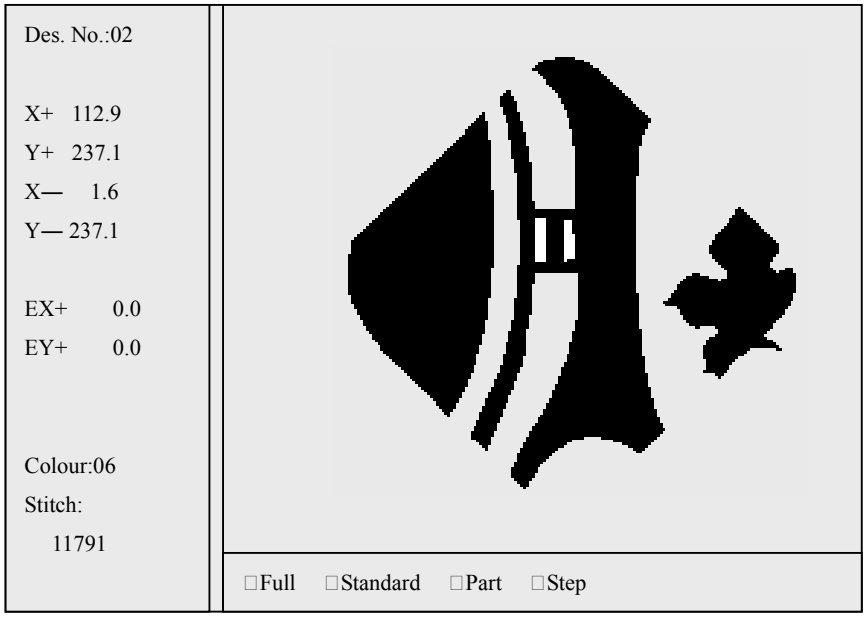
Operation:

 Under the main screen, press“ ” to enter the memory design operation menu.

 Press "2" or “⇧⇩” to move the cursor to the second option, and then press the confirm key “⏎” to enter the memory design list:



□ Press keys "⇧⇩" to select a design in memory and then press "↵" to enter its screen:



The left side of the screen displays the design's basic information, including design No., coordinates of the 4 boundary lines, coordinates of the stop point, number of design colors and number of stitches. The design can also be displayed in different ways to show details clearly.

7.4 Disk Input

This operation is the same to “Disk Des. Input” in disk operation.

Operation:

 Press the key “ ” under the main menu to enter the memory design operation menu.

 Press the key “3” to select the third option “Disk Input” and then press the confirm key “”.

 The floppy driver light is on and begins to read the disk directory and then display it. Press “ PU PD ” and “ ” to select the design, and then press “” to confirm the selection.

 Then the system will provide and display an available design number (minimum) which the user can change. For example, if the system provides a minimum number 20 and the user wants to use 65, press “6”, “5” and “”. If the number has been used, confirmation will fail. Otherwise continue the following operations. If the user wants to input a new number, please press “CL” first.

The system asks to input the design name in memory (memory name). If the user uses the disk name as memory name, press the key “”. Otherwise press the keys “ PU PD ” to select a character and then press the key “” to input. After input of the name, press “” to confirm the input or press “CL” to input a new name.

□ The system starts to input the selected design file. A progress bar is displayed in the inputting process. Immediately after the input, if the system is under embroidery preparation mode, it will enter the parameter input operation; if the system is under the embroidery confirmation mode, the system will ask whether to embroider the input design immediately. To embroider a new design, press“⇧ ⇩” to select "Yes", then press“⮌”, and the system will enter the parameter setting operation. (Refer to Part IV for parameter setting.) To embroider the original design, press “⇧ ⇩” to choose “No” and then press “⮌” to confirm. Then the system will return to the main screen.

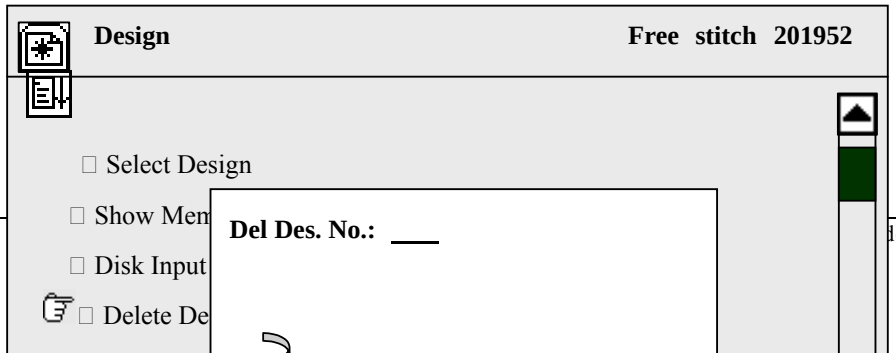
7. 5 Delete Memory Design

This operation must be done under the embroidery preparation mode “ ”.

Operation:

□ Under the main screen and the mode “ ”, press “ ” to enter the memory design operation menu.

□ Press“ ” , and the following screen will appear.



□ Select the design. (Press numerical keys to input the design's memory number, or press "↵" to enter the memory design directory and press "⇧⇩" to select the design.) Then press the key "↵" to delete the selected design.

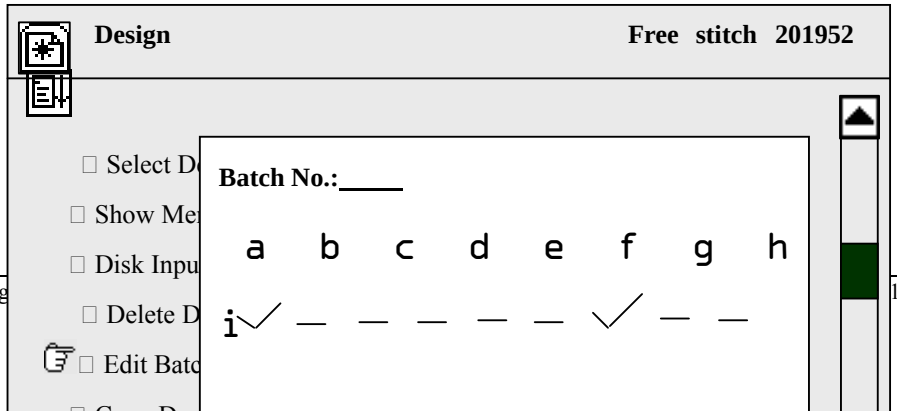
7. 6 Edit Batch Design

This operation is to edit batch design. Design interval is the distance from the start point of the current design to the start point of the first design.

Operation:

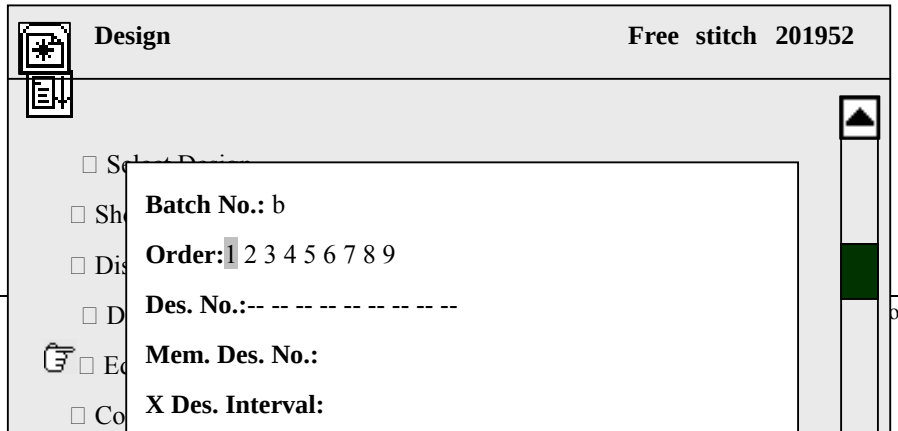
□ Under the main screen and the mode "↕", press " " to enter the memory design editing menu.

□ Press "5" and "↵"□and the system will ask to input the batch design number.

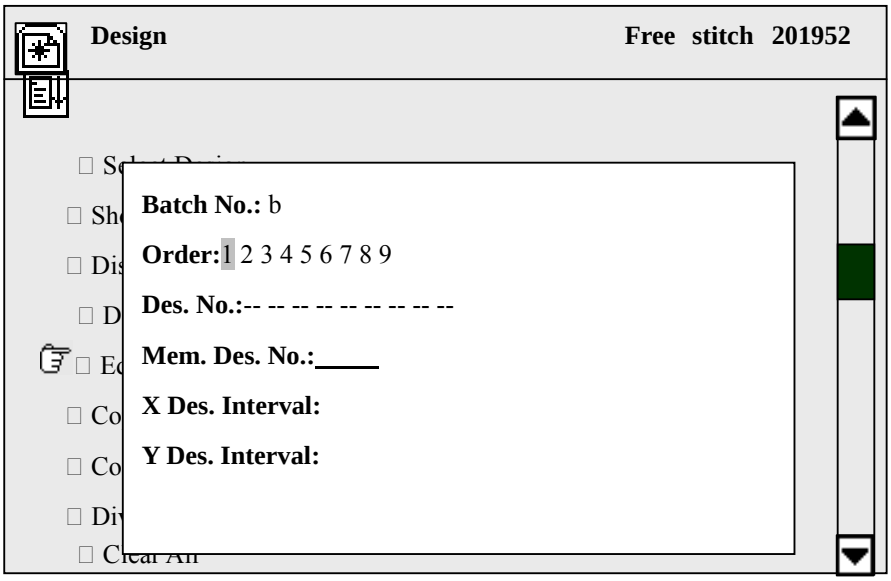


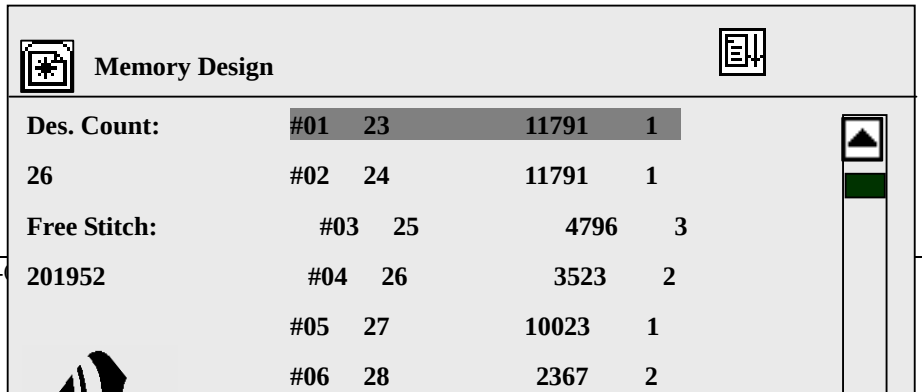
Note: Batch design number can be chosen in a~i. Below the batch number in the above screen is the situation of the numbers (whether they are vacant). The number with "√" means that it has been used by a batch design in the memory. The number with "___" below hasn't been used for design number and is available to new batch designs.

□ Press a key chosen from "a" to "i" to input the batch design number. The system will enter the batch design editing screen and the current design to edit is set as No. 1.

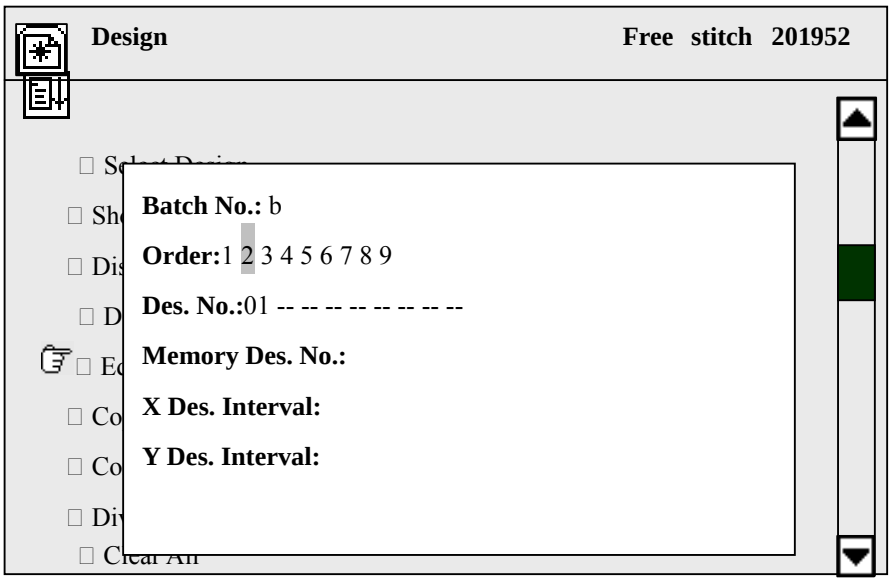


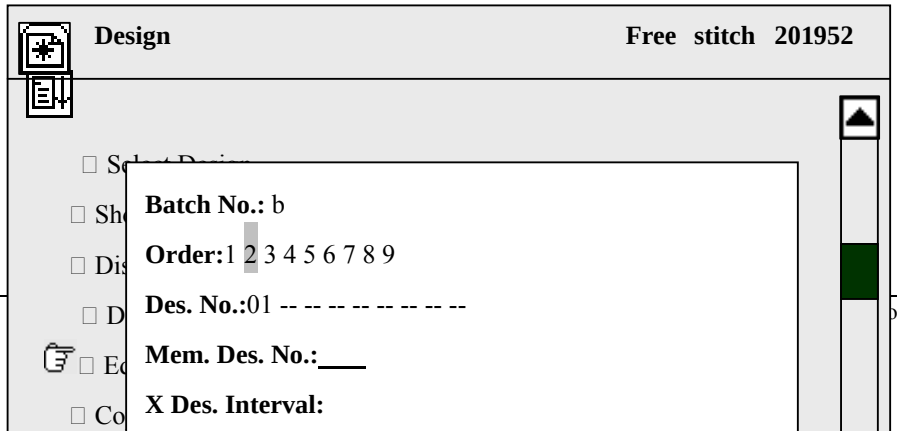
□4□Press the confirmation key again and the system will ask to input the design's memory number. Input the design number directly or press "↵" to enter the memory design directory and press "⇧⇩" to select design. (Refer to Part III) Press the key "↵" to confirm the selection.

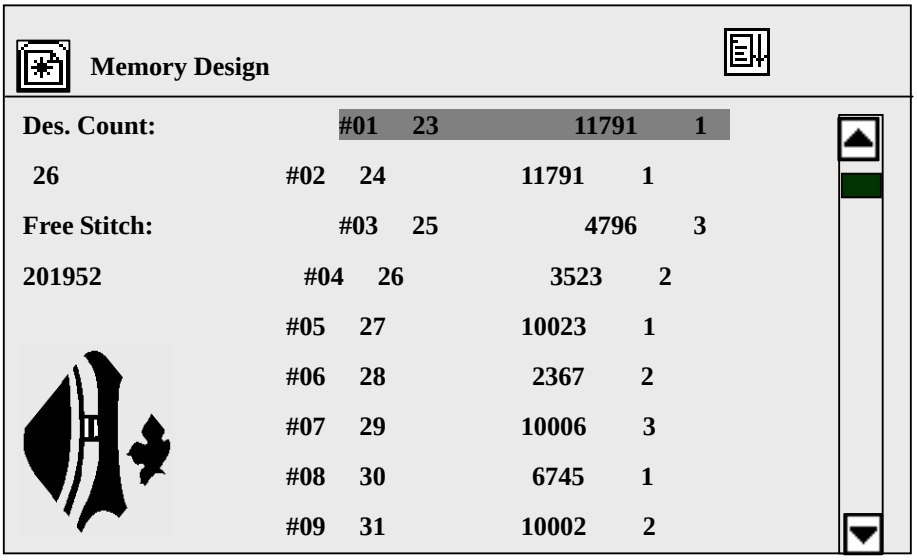


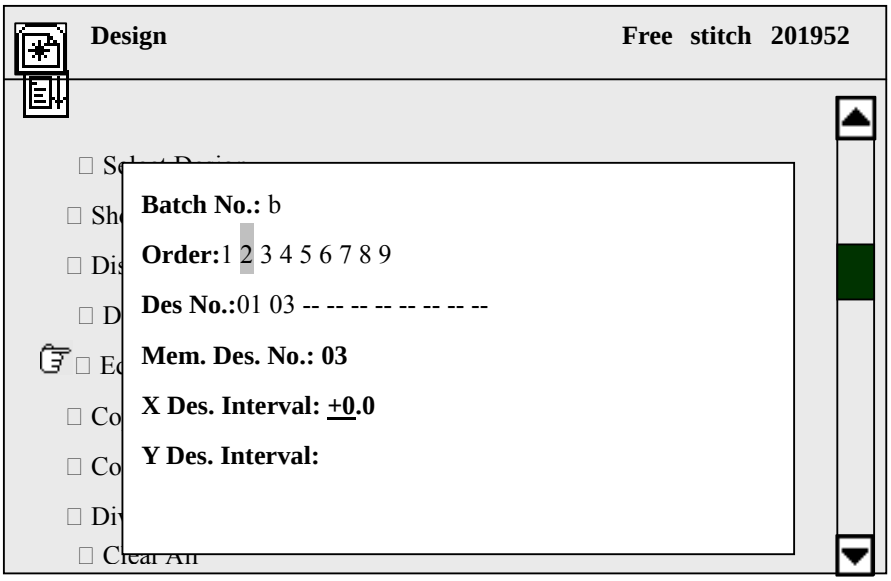


☐5☐Select the first design for the batch design and press the confirmation key. Then the cursor moves to the number 2. Press the confirmation key "↵" again and the system will ask to input the second design's number. Input or select the design number (the same operation to the first design), and the system will ask to input the X-direction interval.

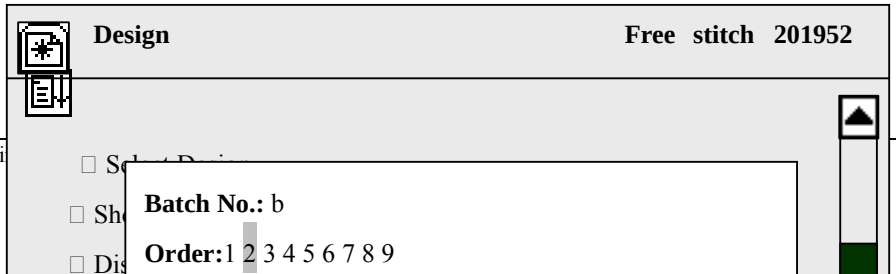




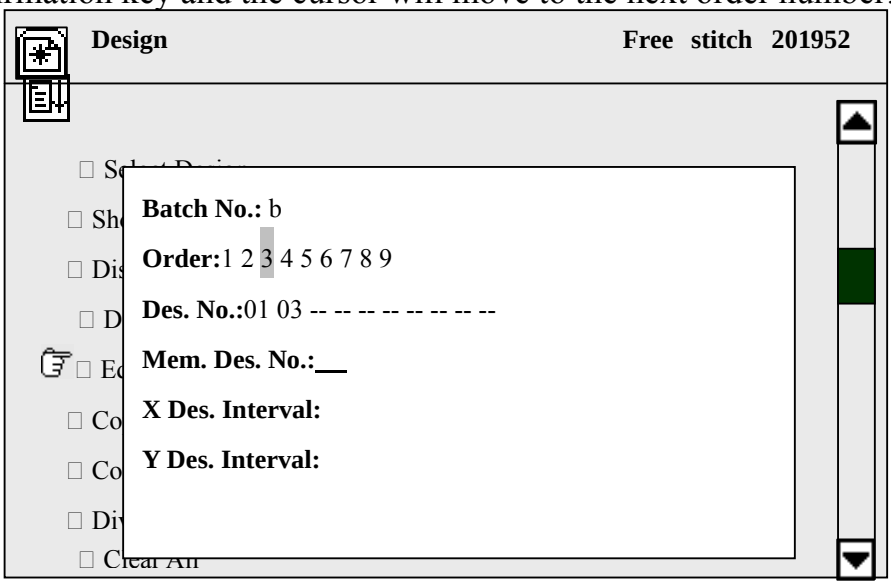




☐6☐Press the numerical keys to input the X direction interval. Press the confirmation key and the system will ask to input Y direction interval:

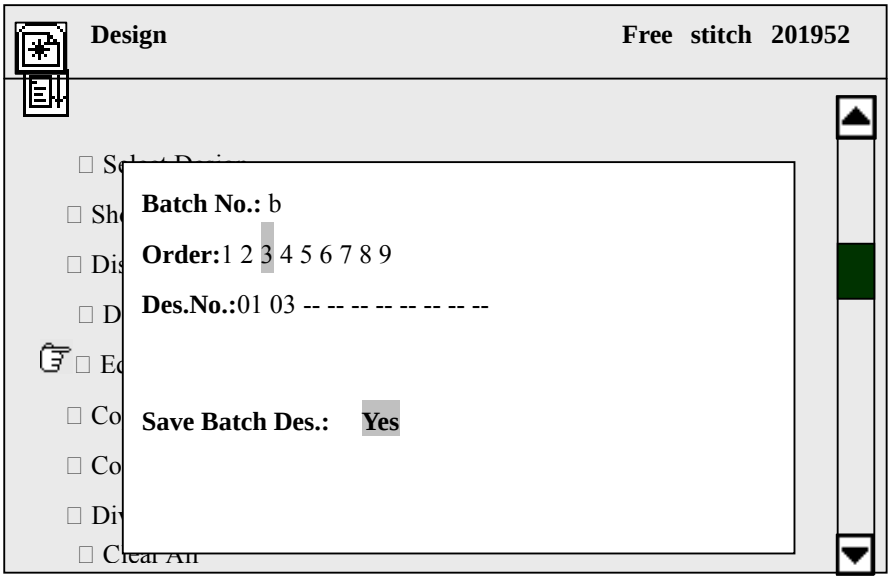


☐7☐Press the numerical keys to input the Y direction interval. Press the confirmation key and the cursor will move to the next order number:



☐8☐Repeat the options (5) to (7) so as to input more. For checking a group of parameters, press the keys " PU PD " to move the cursor to the parameters. To change a parameter value, move the cursor to the parameter, press "↩" and do according to operations (5) to (7). To exit in the process, press "ESC" to return to the design operation menu. When the user has input the intervals and pressed "ESC", the system will ask whether to save the batch

design. After this operation the system will return to the design operation menu.



Press "⇧⇩" to select whether to save this batch design. And press "⏎" to confirm the selection and return to the design operation menu.

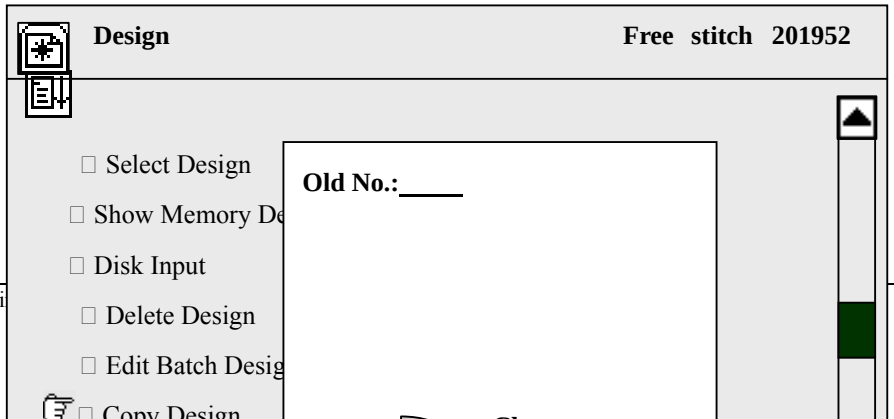
7. 7 Copy Design

This operation is to copy a memory design and save it as a new design in the memory.

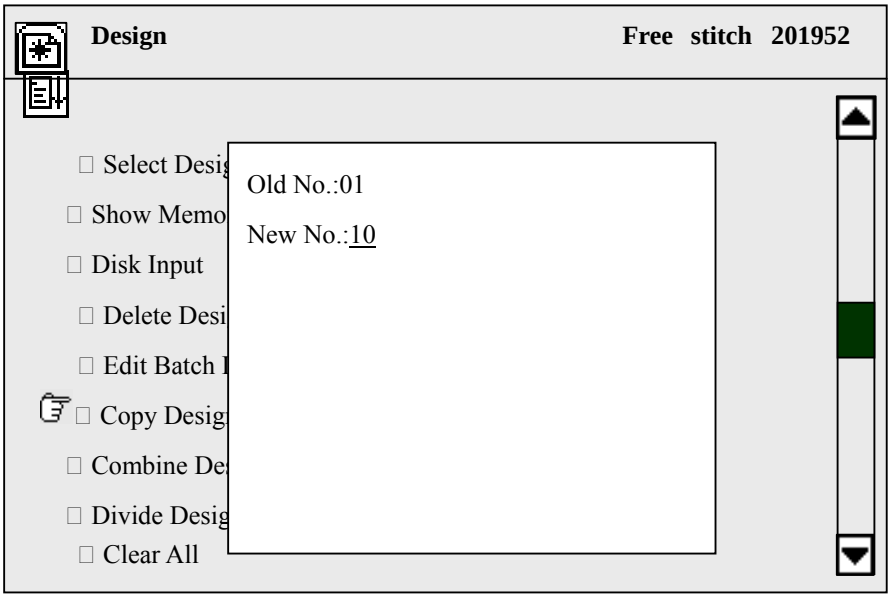
Operation:

□ Under the main menu, press "" to enter the memory design operation menu.

□ Press "6" to select the sixth option "Copy Design". Press "⏎" and the system will ask for the memory number of the design to copy.

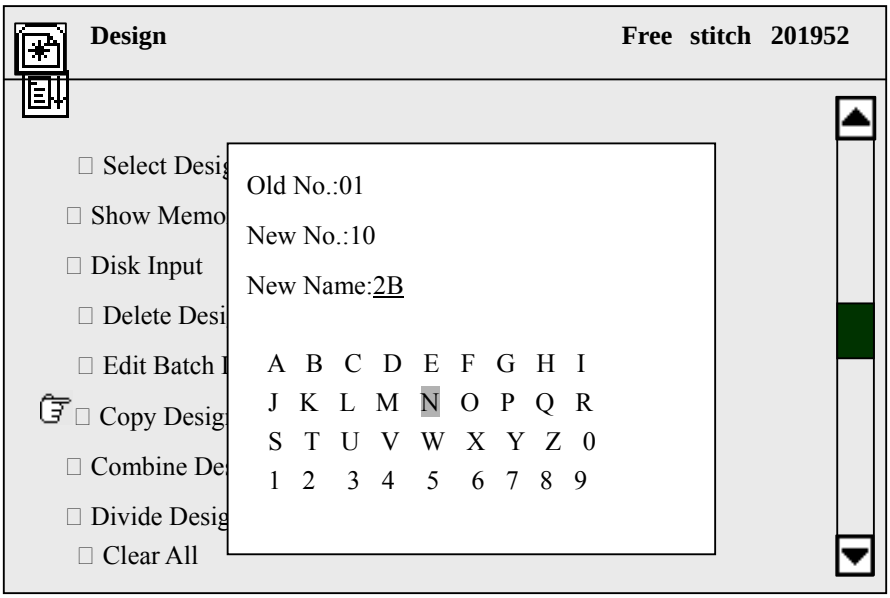


□ Press the numerical keys to input the memory number of the target design or select it by pressing "↵" to enter the memory design directory and pressing "⇧⇩" and "↵" to select. If there is no such a design in memory, the confirmation will fail. Otherwise the system will provide a minimum vacant design number for the new design.



□ The user can input a new number by pressing numerical keys and then "↵". (If the input number has been used by another design, confirmation will fail.) The system will ask to input a new name. With the new design number and name confirmed, the machine begins to copy the design. After copying the

system will return to the design editing menu.



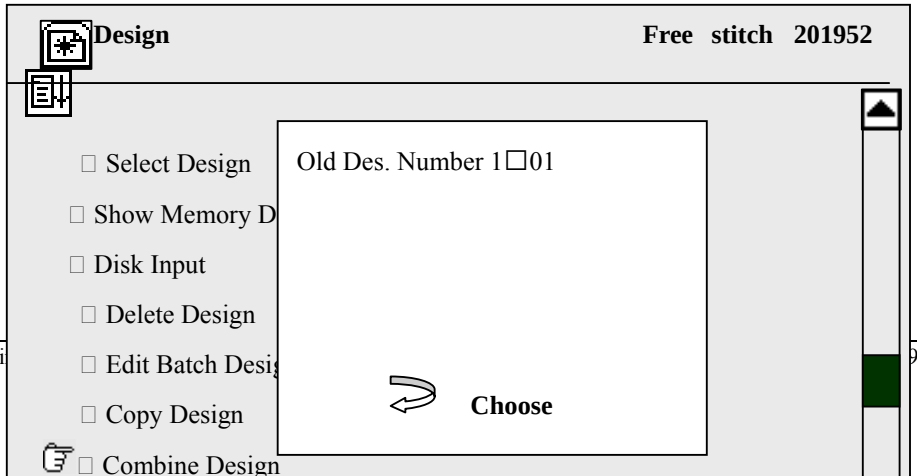
□ In the above operation the user can press "ESC" to exit and return to the design operation menu.

7. 8 Combine Design

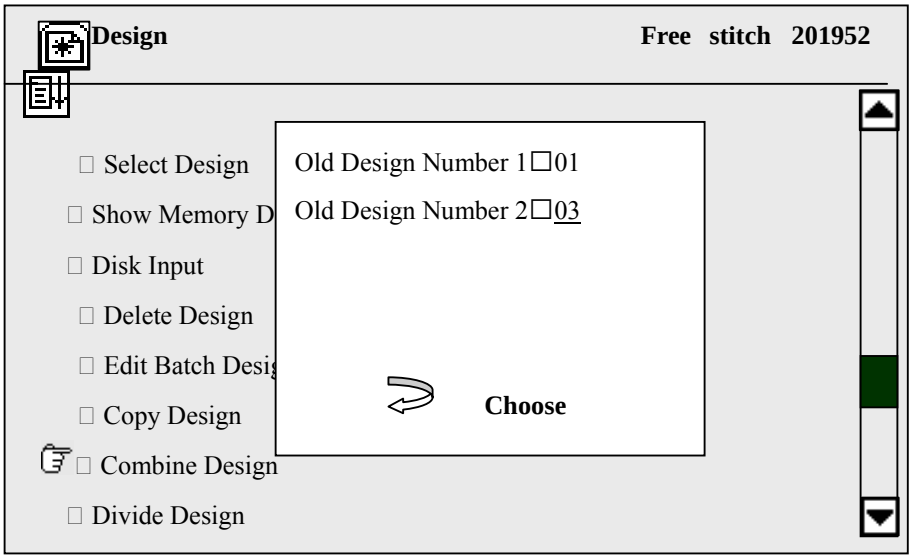
This operation is to combine two memory designs into one and save it as a new design in the memory.

Operation:

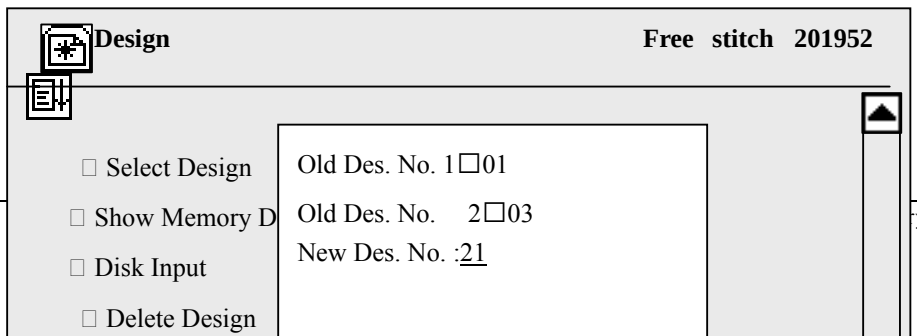
□ Under the main screen, press " " to enter the memory design operation menu and then select the seventh option "Combine Design" and press "".

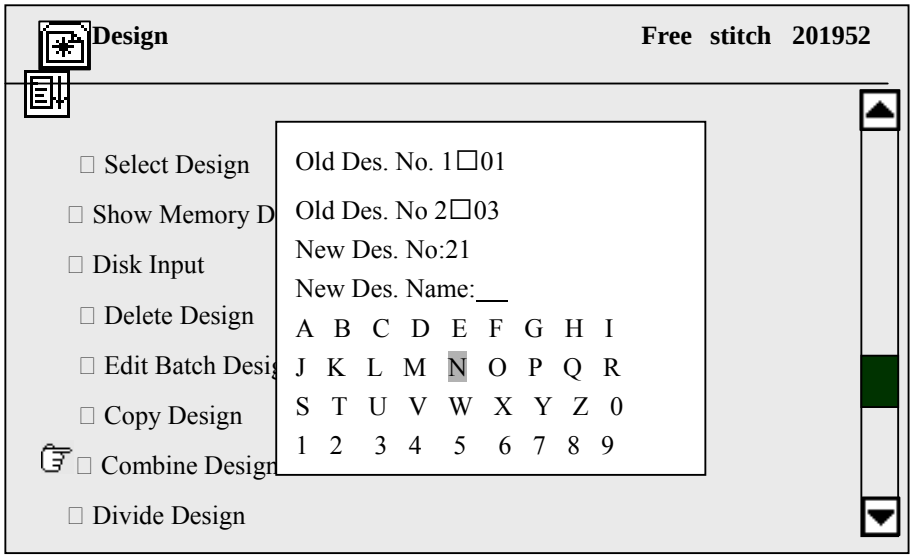


(2) Press numerical keys to input the memory number of the first design, or press"↵" to enter the design directory and then select. (Refer to Part III.) Press the key "↵". If the input design number doesn't exist, the confirmation will fail. Otherwise the system will ask to input the design number of the second design.

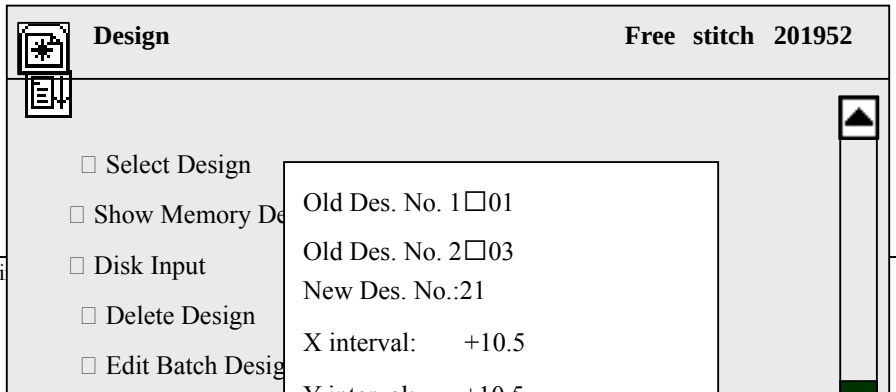


(3) Input the memory number of the second design in the same way with operation (2). Then the system will provide and display the minimum available memory number for the new design.





(4) The user can also input a new number by pressing numerical keys and "↵". If the number has been used by another design, the confirmation will fail. Otherwise the system will ask to input the interval between the two designs.



(5) Press numerical keys to input X-direction interval (-999.9mm□ +999.9mm). Press "↵" and the system will ask to input □-direction interval.

(6) Press numerical keys to input Y-direction interval (-999.9mm□ +999.9mm). Press "↵" and the machine will begin combining designs. After this operation the system will return to the design editing menu.

7. 9 Divide Design

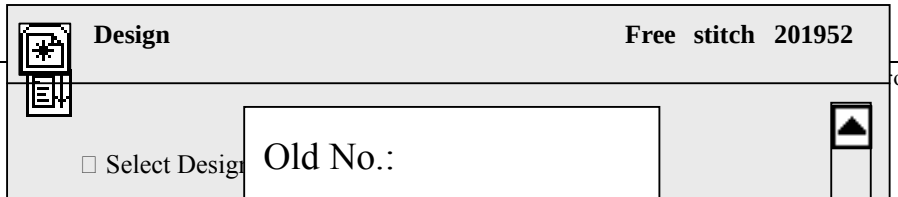
This operation is to divide one design into two and save them in the memory.

Operation:

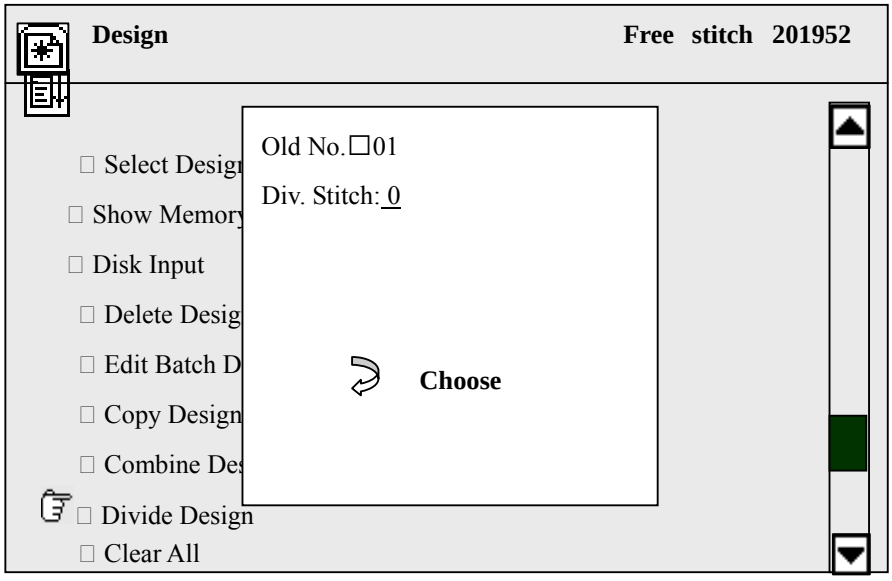
□ Under the main screen, press " " to enter the memory design editing menu.

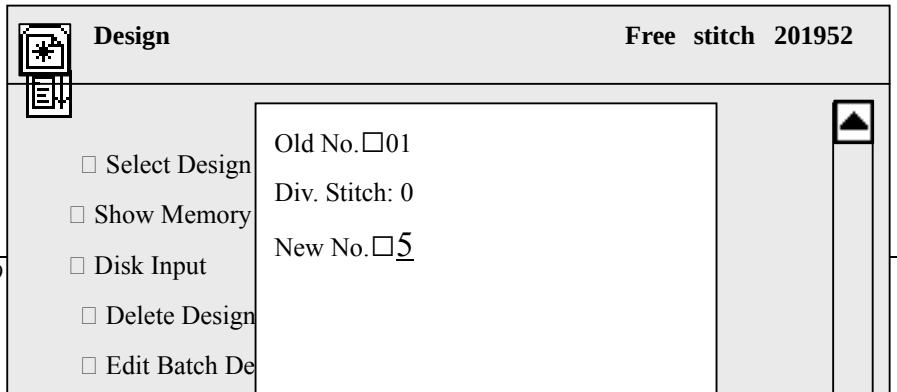
□Press" ⇧ ⇩ " to select and enter the option "Divide Design". The system will ask to input the design number of the target design.

□ Press numerical keys to input the number of a memory design or choose one from the memory design directory. Then the system will ask to input dividing stitches.

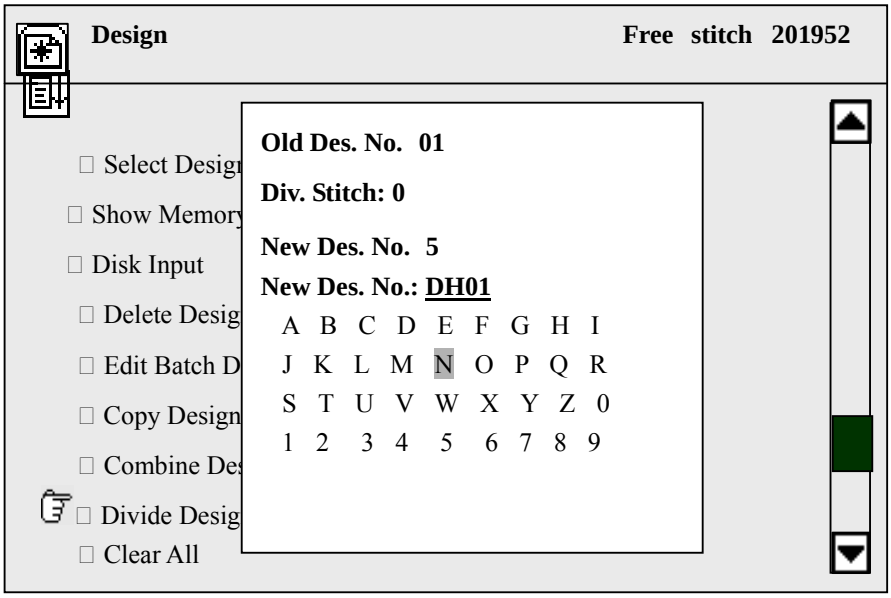


□ Press numerical keys to input the stitch number (1-60000) of the dividing point in the target design. Press "↵" and the system will provide and display a minimum available design number.





□ Confirm the system-provided number or input and confirm a new design. Then the system will ask to input or confirm the name of the first new design.



□ Press the confirmation key "↵" or input a new name and then confirm. The system will save the part of design before the dividing point as the first new design. And the system will ask to input the number of the second new design.

□ Confirm the system-provided number or input a new number and confirm. Then the system will ask to confirm or input the name of the second

new design.

□ Press the confirmation key "↵" or input a new name and confirm. Then the system will save the part of design after the dividing point as the second new design. After the operation the system will return to the design operation menu.

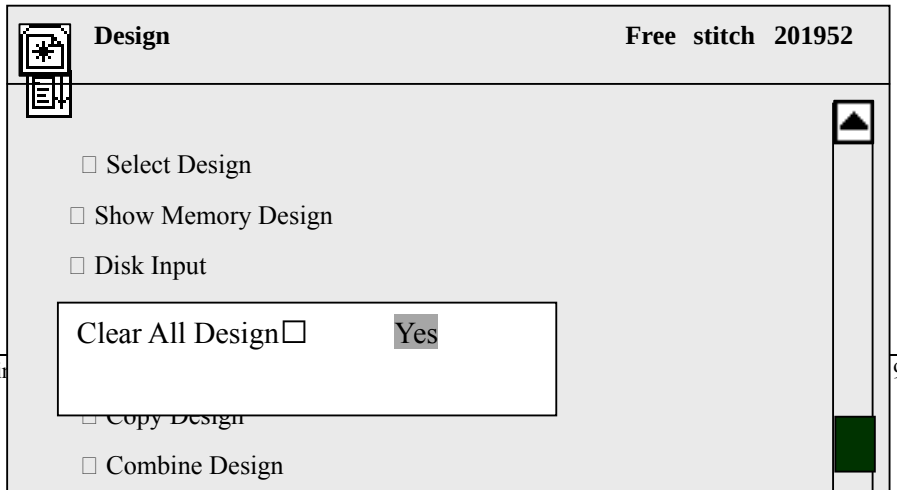
7. 10 Clear All

This is to delete all the designs in the memory. Please take caution.

Operation:

□ Under the main screen and the mode "↕", press" " to enter the design operation menu.

□ Press "⇧⇩" to select the option "Clear All" and then press "↵". Then the system will ask to confirm the operation.



□ Press "↵" to confirm "Yes" and the system will clear all designs in the memory and return to the design editing menu. Otherwise select "No" to exit the operation and return to the design editing menu.

7. 11 Check Design

If something is wrong with the design in embroidery, the user can use this operation to check whether the design is correct and judge the malfunction cause.

Operation:

□ Under the main screen, press " " to enter the memory design operation menu. Then press "⇦PU ⇨PD" to turn to the second page.

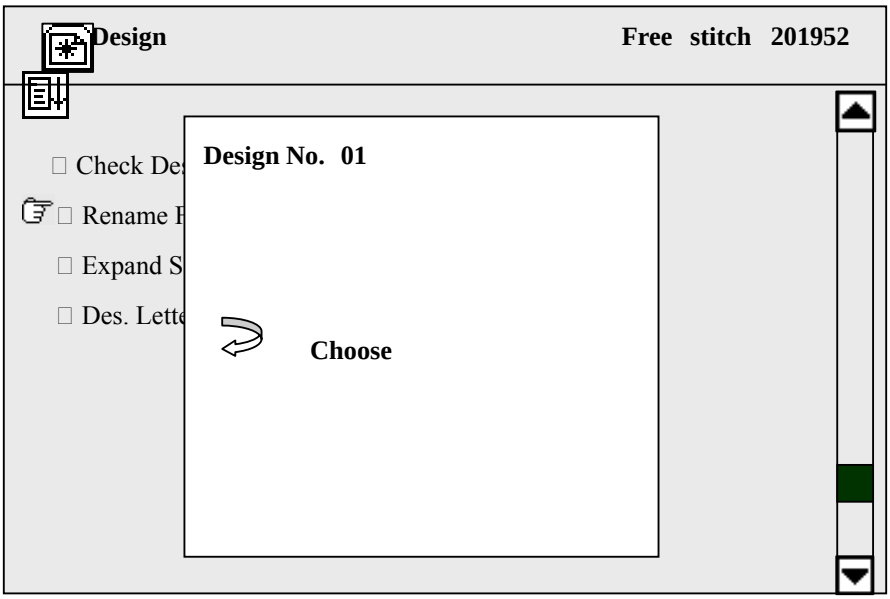
□ The cursor is before the option "Check Design". Press "↵" and the system will ask to input the design number.

□ Press numerical keys to input the number or select one from the design directory. The system will check the selected design. When the system finds the design is correct, the screen will display "Design Right". If the system finds the design is wrong, the screen will display "Design Wrong".

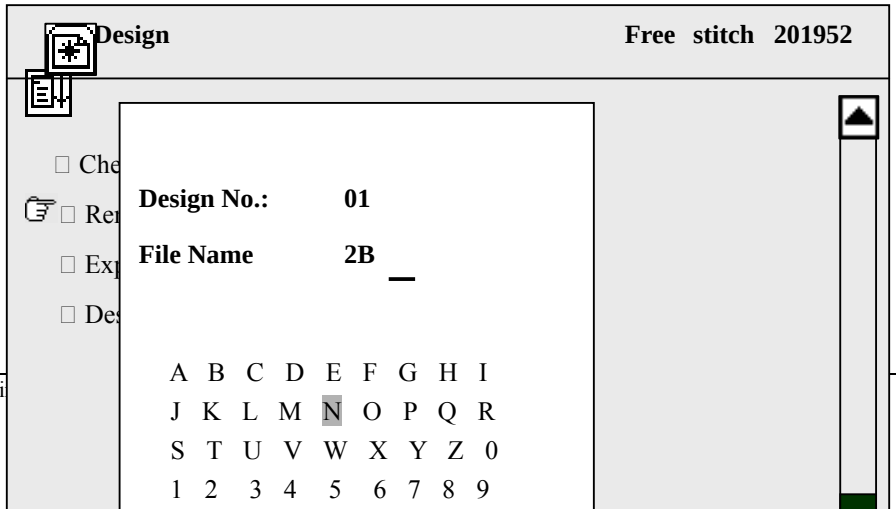
7. 12 Rename File

On the second screen of design operation menu, there is an option to

change the design's name. Follow the prompts to select the design and the following screen will appear.



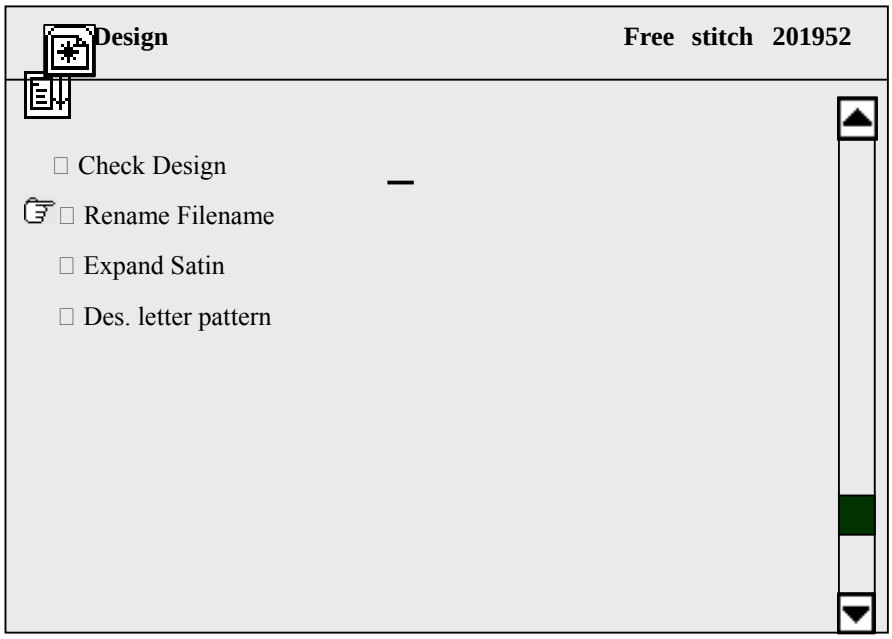
Input a new design/file name for the selected design.



Press the confirmation key to confirm the input and the system will complete the change and return to the design operation menu.

7. 13 Expand Satin

On the second screen of design operation menu, there is an option for expanding satin to create a new design.



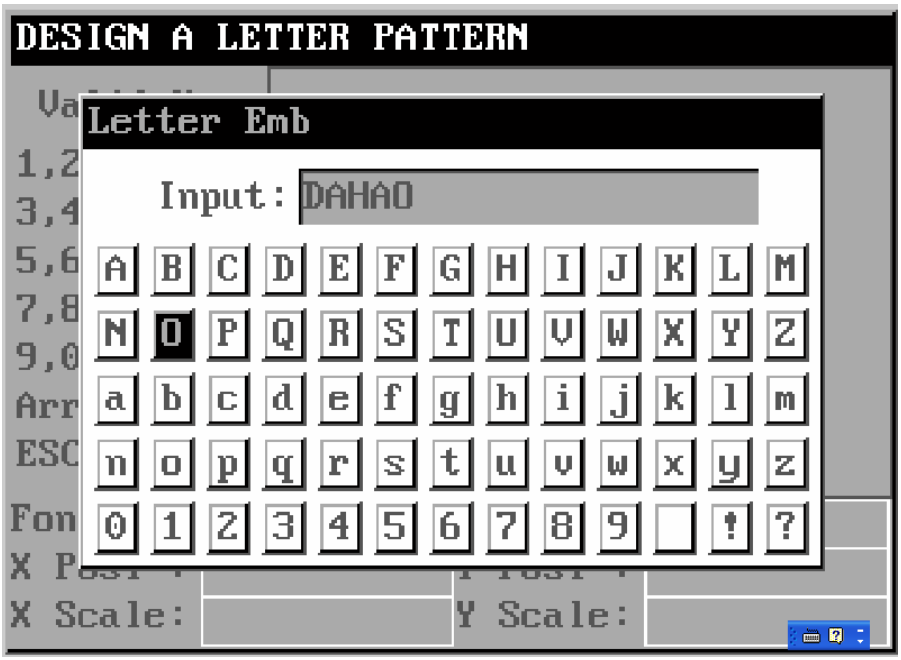
This function is designed to compensate for the satin stitch difference caused by the mechanical difference of machines. This is to widen or narrow the satin stitch to the desired width.

7.14 Design letter pattern

This system has 28 different fonts for the 26-letter English alphabet (capital and small) and digits 0~9. The user can arrange the letters and digits at will to make a new design.

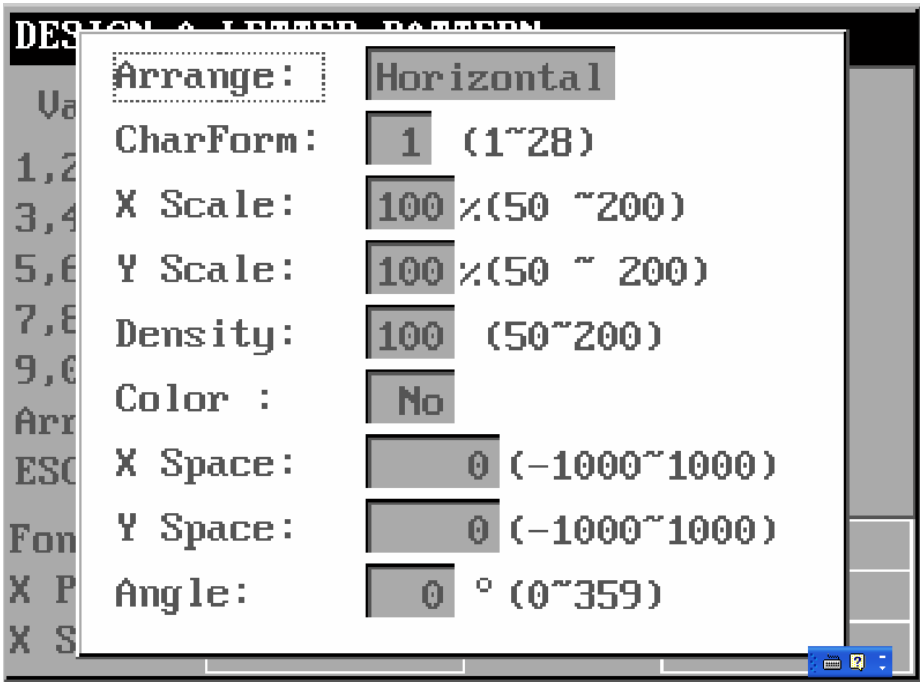
Operation:

(1) Enter the second page of the design operation menu and select the option "Des. letter pattern". The following screen will be displayed.



(2) Press the direction keys to select the desired letters and digits, and press "↵" to confirm.

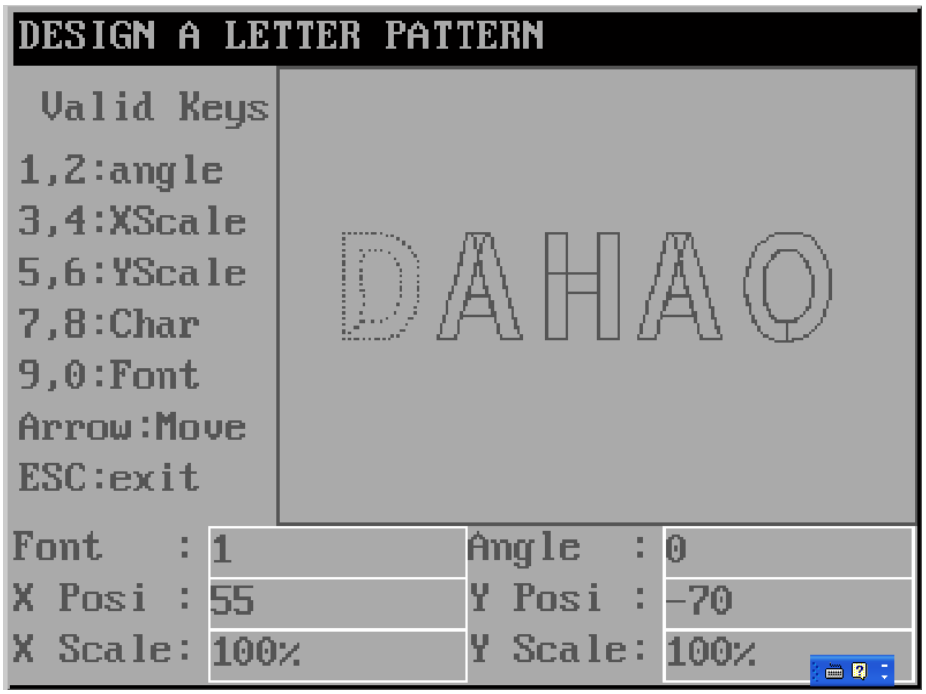
(3) Press "ESC" to enter the following screen. Set the parameters of the letter designs.



□ Set the letter design's parameters. Press "⇧⇩" to select items and press "⇨" to set values. In the setting table, the measurement unit is percentage for X/Y scales and (Satin Stitch) Density, mm for X/Y Space, degree for Angle. After setting, press "ESC" to enter the next step.

☐ When "Arc" is selected for "Arrange", the computer will ask to input the parameters for the arc, including the coordinates of the start, middle and end points. Then press "ESC" to enter the next step. If it's not "Arc", omit this step.

□ The design's outline is displayed in the screen as follows. The user can adjust the design's positions, fonts, angles and scales according to the prompts on the left. Then press "ESC" to end the operation.



□ The system asks, “Generate Design?” “No” is to cancel the above operation. Select “Yes” and then press “Yes” to enter the next step.

□ The system creates the letter design and display it in the screen. Press “Esc” to exit the display.

□ The system ask whether to save the letter design. “No” is to cancel this above operation. “Yes” is for the nest step.

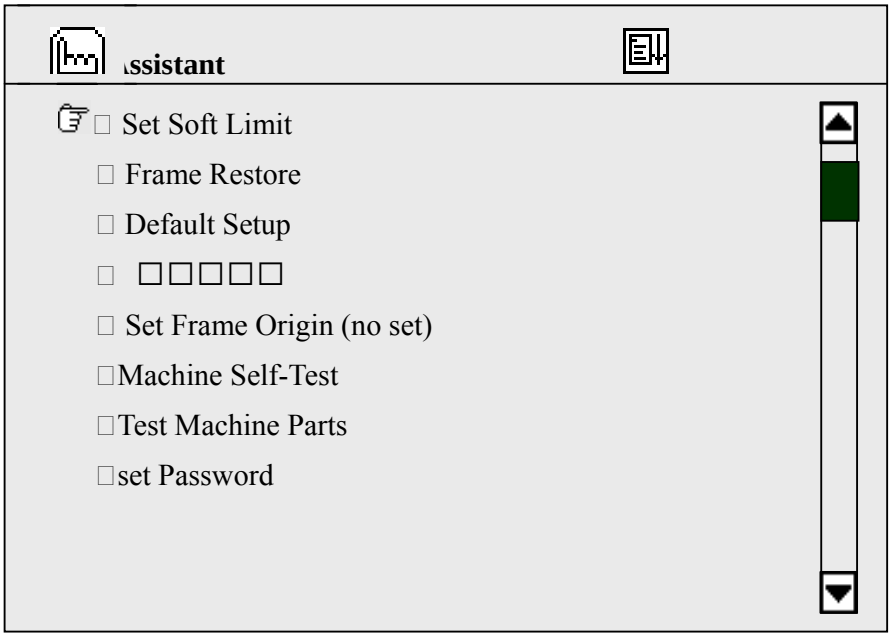
□ Input the new design number and press “ ” to save the design.

□ Then the system will return the disk management menu.

Part VIII Assistant Function

Operation:

□ Under the main screen and the non embroidery confirmation mode, press "" to enter " Assistant" menu:



Then press numerical keys and " " to enter different submenus.

To exit from the assistant management menu, press " ESC" key to return to the main screen.

8.1 Set soft Limit

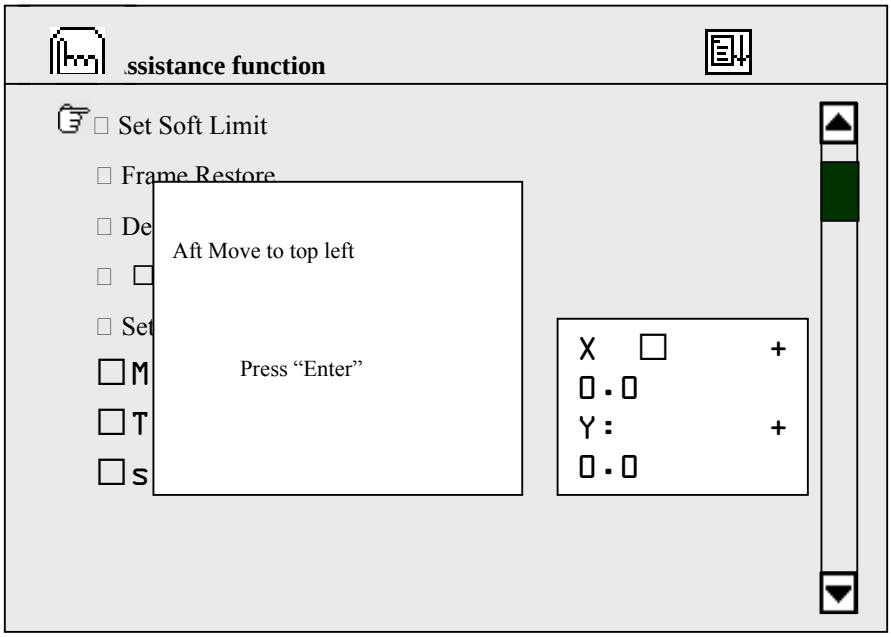
This function is to set the embroidery range of the frame by software, so as to ensure embroidery safety.

Operation:

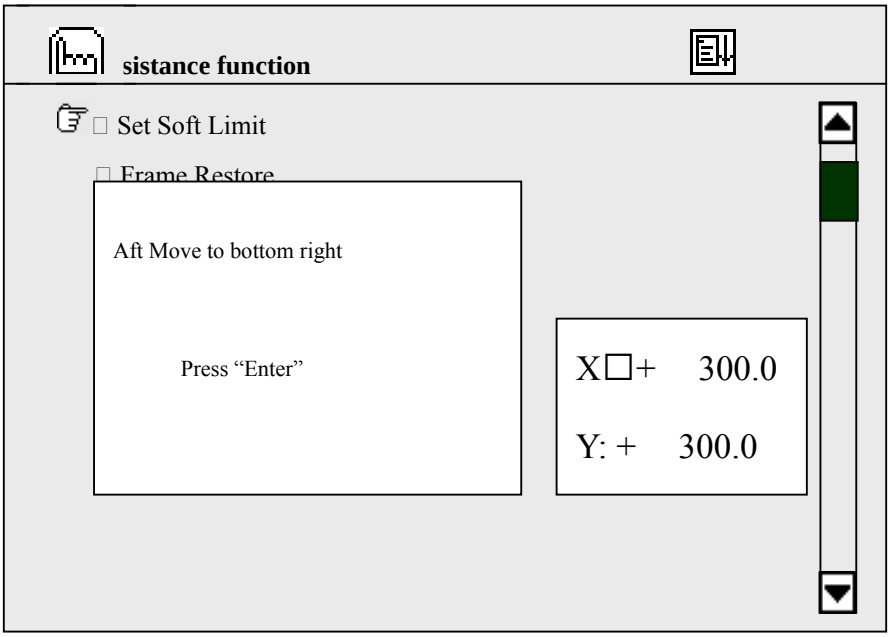
□ Under the main screen, press "" to enter the assistant management

menu.

□ Press the key "1" or select the option “Set Soft Limit” by “⇧⇩”, and then press “⏎” to confirm. The following screen will be displayed.



□ Press the frame-moving keys to move the frame to a point and press “⏎” to set the point as the top left point.



□ Press the frame-moving keys to move the frame to another point and press "↩" to set the point as the bottom right point. Now the soft limit is set with the frame.

8.2 Frame Restore

Accidental power-off may take place during embroidery. When power is on again, embroidery can continue if the frame hasn't been moved away. If the frame has been moved away and the origin point has been set, the user can use this "Frame Restore" function to restore the frame to the position where the frame was when power-off, so as to continue embroidery.

If the origin point hasn't been set, the option "Frame Restore " will be in darkness and unavailable for operation.

If the origin point has been set, the option "Frame Restore " will be in brightness and available for operation.

Operation:

□ Under the main menu, press "☞" to enter the assistant function menu.

□ Press the key "2" or select the option "Frame Restore" by pressing keys "⇧⇩". If the frame origin point has been set, the option will be displayed in brightness. Press "↩" and the frame will move to the origin point first and then to the position where it was when power-off.

8.3 Default Setup

This operation is to set the parameter or variable values as the default or

standard ones.

Some default setup:

Current stitch: 0

Stitches count: 0

Current set rotation speed: 600

Frame displacement (display) □: 0.0 □: 0.0

Embroidery mode: Normal embroidery

Manual frame-moving speed: Low speed

Operation:

□ Under the main menu and the mode “ ”, press “ ” to enter the assistant management menu.

□ Press keys “⇧ ⇩” to select the option “Default Setup”.

□ Press “ ” to restore default setup and then return to the assistant management menu. Otherwise press “Esc” to exit the operation and return to the assistant management menu.

8.4 Switch to the English Language

Operation:

□ Under the main menu and the mode “ ”, press “ ” to enter the assistant management menu.

□Press keys “⇧ ⇩” or press "5" to select the option “□□□□□”, and then press “ ”. All the options will be switched to Chinese.

8.5 Set Frame Origin

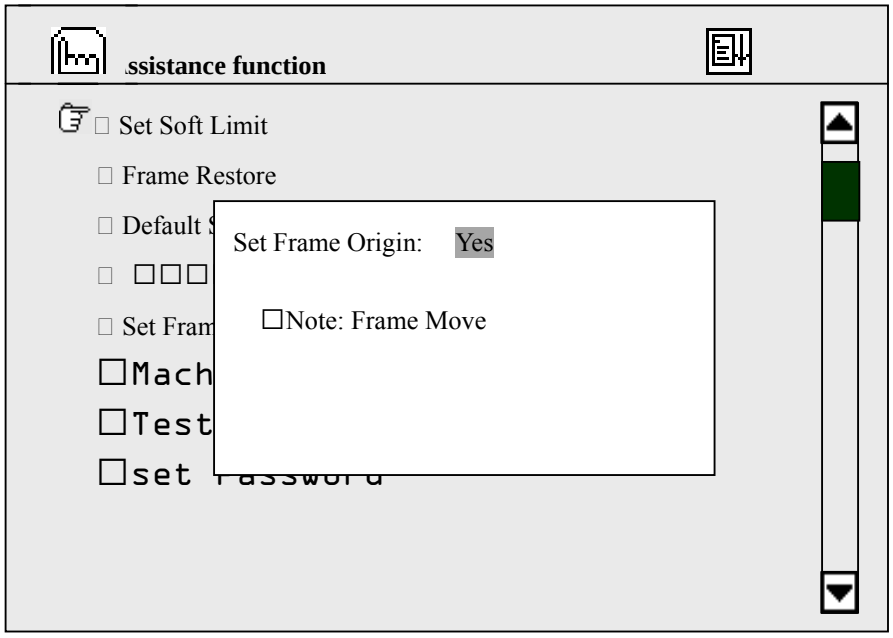
This function is to set the frame’s origin point, which is the premise for

"Frame Restore" and "saving the design origin point and restoring the design origin point".

Operation:

□ Under the main menu and the mode "", press "" to enter the assistant management menu.

□ Press "⇧⇩" or "5" to select the option "Set Frame Origin". Then press "" and the following screen will be displayed



□ Press "⇧⇩" to choose "Yes" (or "No") and press "", and the frame will move to the origin point and then back. After this the option "Set Frame Origin" in the assistant function menu is followed by "have set" and the second option "Frame Restore " is in brightness and available for operation.

8.6 Machine Self-Test and Test Machine Parts

These functions are provided for machine maintenance. "Machine Self-Test" is to check the computer control's circuits. And "Test Machine Parts" is to check

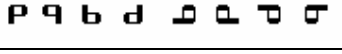
the mechanical parts. Refer to the maintenance manual for details.

8.7 Set Password

Setting password can protect the machine from the undesired results from accidental parameter changes. After password is set, the user has to input the password before changing the parameter values.

Appendix

Real-time Scale parameters

Parameter	Choice	Standard value
□ Scale(□)	50□200	100
□ Scale(□)	50□200	100
Design direction		
Rotation angle(°)	0□89	0

Repetition Parameters

Parameter	Choice	Standard value
Rep. Prior	□,□	□
Rep. Times (X)	1□99	1
Rep. Times (Y)	1□99	1
Repetition Interval (X)	-999.9□+999.9	0
Repetition Interval (Y)	-999.9□+999.9	0

Switch Parameters

Parameter	Choice	Standard value
Thread broke detect	Yes□No	Yes
Auto Back Origin	Yes□No	Yes
Start Slow Af. Trim	1,2,3,4,5,6,7,8	3
Adjust Stop Position	0,1,2,3,4,5,6	3

Malfunction Table

Code	Cause
E--01	Disk failure
E—02	Wrong disk format
E—03	No disk
E—04	Write protect
E—05	No free space in disk directory
E—06	No free space in disk
E—07	Formatting fail
E—08	No design end code
E—11	Startup without embroidery confirm
E—12	Already return to origin point
E—13	Not exit embroidery confirm
E—14	Memory parameter lost
E—15	Memory design lost
E—16	No design in memory
E—17	No free design numbers
E—18	Memory design number does not exist
E—19	No enough memory space
E—20	Back-frame forbidden set in parameter
E—50	Encoder abnormal
E—51	Stop position abnormal
E—52	Frame exceed limits
E—53	Stepping motor abnormal
E—54	Color- change exceeds limit
E—55	Color-change exceeds 2 sec.
E—56	Color-change half return abnormal
E—57	Needle position abnormal
E—58	Main motor exceed 2 sec.
E—59	Color-change motor reverse

E—60	Frame software limit
E—63	No frame-moving angle
E—70	No zero point signal
E—74	Cutter not in the right position
E—75	Trimming motor overtime
E—220	Special malfunction 0
E—221	Special malfunction 1
E—222	Special malfunction 2
E—230	Special malfunction 3

ED□2006-03

Owner's Manual

Computerized Embroidery Machine

B E C S – 09S SERIES

This solution guide is ment to give you a quick reference to most common errors on the machines. If the error persists after perfoming the procedure, you may need to contact your technician for further assistence.

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