Dahao

Computerized Embroidery Machine

BECS – 18 SERIES

Owner's Manual





INDEX

СНАРТ	R 1 GENERAL DESCRIPTIONS	1-1
1-1	Before Use	1-1
1-2	Main Features	1-2
1-3	MAIN FUNCTIONS	1-2
СНАРТ	R 2 NAMES OF PARTS ABOUT ELECTRICAL CONTROL SYSTEM	[2-1
2-1	OPERATION CONTROL PANEL	2-1
2-2	OPERATION BAR AND TURN SHAFT BUTTON	2-2
2-3	DARNING SWITCH	2-2
СНАРТ	R 3 HOW TO START EMBROIDERY	
3-1	SUMMARY	3-1
3-2	INPUT A DESIGN INTO MEMORY FROM FLOPPY DISK	3-4
3-3	PREPARATION BEFORE EMBROIDERING	3-6
3-4	SELECT A PATTERN FOR EMBROIDERY AND CONFIRM TO EMBROIDER THE F	ATTERN 3-6
3-5	NORMAL EMBROIDERING, RETURNING AND DARNING EMBROIDERING	3-8
3-6	RELEASE EMBROIDERY CONFIRMATION STATUS	
СНАРТ	R 4 NORMAL EMBROIDERY AND IDLING	4-1
4-1	RELATIONS BETWEEN NORMAL EMBROIDERY AND IDLING	4-1
4-2	LOW-SPEED IDLING	4-1
4-3	HIGH-SPEED IDLING	4-1
4-4	RELEASE OF LOW-SPEED/HIGH-SPEED IDLING	4-2
4-5	POSITIONING IDLING (EXCEPT SOME MODELS OF MACHINE)	4-2
СНАРТ	R 5 COLOR-CHANGING OPERATION	
5-1	MANUAL NEEDLE-CHANGE (COLOR-CHANGING) WHEN STOP	5-1
5-2	MANUAL COLOR-CHANGING AND MANUAL START DURING EMBROIDERING	5- 1
5-3	AUTOMATIC COLOR-CHANGING AND MANUAL START (OR AUTOMATIC STA	ART)
	DURING EMBROIDERY	5-1
5-4	SETTING AUTOMATIC COLOR-CHANGING SEQUENCE (OR COLOR LINE)	5-3
5-5	STORING THE MANUAL COLOR-CHANGING NUMBER INTO COLOR LINE	5-3

INDEX



5-6	THE (COLOR-CHANGING SPEED	5-5
CHAPT	ER 6	SETTING DESIGN DIRECTION	6-1
CHAPT	ER 7	FRAME OPERATIONS	7-1
7-1	Man	UAL FRAME SHIFTING	7-1
7-2	Retu	RNING TO ORIGIN POINT	7-1
7-3	Retu	RNING TO THE STOP-EMBROIDERY POINT	7-2
CHAPT	ER 8	EMBROIDERY SPEED (MAIN SHAFT SPEED)	8-1
8-1	Setti	ING THE LIMIT SPEED	8-1
8-2	Setti	ING EMBROIDERING SPEED	8-2
CHAPT	ER 9	TRIMMING THREAD	9-1
9-1	AUTC	MATIC TRIMMING THREAD	9-1
9-2	MAN	UAL TRIMMING THREAD	9-1
CHAPT	ER 10	DISK OPERATIONS	10-1
10-1	Dire	CTORY LISTING OF DISK	10-1
10-2	INPUT	PATTERN FROM DISK TO MEMORY	10-1
10-3	OUTP	UT PATTERN FROM MEMORY TO DISK	10-2
10-4	Dele	TING THE PATTERN IN FLOPPY DISK	. 10-3
10-5	Form	IATTING A 720KB DISKETTE	10-4
10-6	Form	IATTING A 1.44MB DISKETTE	10-5
CHAPT	ER 11	DISPLAYING PARAMETERS AND FRAME (PICTURE)	11-1
11-1	VIEW	ING THE COMMON PARAMETERS	11-1
11-2	CLEA	RING ACCUMULATED STITCH COUNT AND X/Y DISPLACEMENT	11-2
11-3	Swite	CHING OF DISPLAY BETWEEN CHINESE AND ENGLISH	11-2
CHAPT	ER 12	ASSISTANT OPERATION AND SETTING THE PARAMETERS	12-1
12-1	Setti	NG OF MAGNIFICATION, ROTATION AND REPETITION	12-1
12-2	OPER	ATIONS OF PATTERN PERIPHERY	12-3
12-3	Setti	ING THE OFFSET POINT	12-5
12-4	Setti	ING FRAME PROTECTION WHEN POWER OFF (PRESETTING OF PROTECTING	
	Fram	IE POSITION WHEN POWER OFF)	12-7

INDEX



12-5	FRAME RESTORING AFTER POWER OFF	12-7
12-6	SETTING THE MACHINE PARAMETERS	
12-7	COMPENSATING OF SATIN STITCHES	
CHAPT	ER 13 MANAGEMENT OF PATTERN IN MEMORY	
13-1	SELECT A PATTERN FOR EMBROIDERY	13-1
13-2	LIST THE PATTERN IN MEMORY	13-1
13-3	INPUT A DESIGN INTO MEMORY FROM FLOPPY DISK	
13-4	COPY THE PATTERN	
13-5	Delete the Pattern	
13-6	DIVIDE THE PATTERN	
13-7	Splice two Patterns	
13-8	EDITING THE PACKED PATTERN	
13-9	CLEAR ALL PATTERNS IN MEMORY	13-6
CHAPT	ER 14 EDIT OF THE PATTERN IN MEMORY	
14-1	ENTERING THE EDIT OF PATTERN IN MEMORY	14-1
14-2	How to Edit a Stitch	14-2
14-3	RAPIDLY SEARCHING A STITCH	14-3
14-4	RAPIDLY SEARCHING A SPECIAL STITCH	14-3
14-5	BLOCK OPERATION	14-4
14-6	Help for Editing	14-5
14-7	SAVING THE EDITING PATTERN AND EXIT	14-5
14-8	QUITTING THE EDITING	14-6
CHAPT	ER 15 OPERATIONS HELP	
CHAPT	ER 16 MOONOGRAMMING AND MAKING A HIGH-SPEED PA	TTERN 16-1
16-1	MONOGRAMMING (OPTIONAL)	16-1
16-2	MAKING A HIGH-SPEED PATTERN	
CHAPT	ER 17 COMPILE THE PACKED PATTERN AND EMBROIDERI	NG PATTERN17-1
17-1	COMPILE THE PACKED PATTERN	
17-2	COMPILE THE EMBROIDERING PATTERN	

CHAPTER 18 INITIALIZE THE SYSTEM PARAMETERS DURING ELECTRIFYING. 18-1



CHAPT	ER 19 ADDING PATCH CODES TO A DESIGN	19-1
CHAPT	ER 20 TURN THE MAIN AXIS AT 100 DEGREE MANUALLY	20-1
CHAPT	ER 21 SHIFT THE FRAME TO MAKE A NEW DESIGN	21-1
CHAPT	ER 22 SETTING THE CYCLIC EMBROIDERING	22-1
CHAPT	ER 23 ADJUST THE MACHINE'S BRAKING(FOR MANUFACTURER)	23-1
23-1	SUMMARY	23-1
23-2	THE FUNCTION OF "ADJUST BRAKE (OPTION)"	23-1
23-3	SETTING PARAMETERS OF "SET BRAKE PARA." AND "MAIN MOTOR PARA	A."23-2
23-4	TEST FOR ADJUSTING THE MACHINE'S BRAKING	23-5
CHAPT	ER 24 LET THE NEEDLE SEW DOWN AND MOVE THE FRAME	24-1
CHAPT	ER 25 NO OUTPUT OF THE PATTERN IN MEMORY	25-1
25-1	SUMMARY	25-1
25-2	SETTING A PASSWORD FOR "NO OUTPUTTING DESIGN"	25-1
25-3	CANCELING THE PASSWORD FOR "NO OUTPUTTING DESIGN"	25-1
CHAPT	ER 26 EMBROIDERING MANAGEMENT AND ERROR STATICS	26-1
26-1	MANAGEMENT INFORMATION IN THE MAIN PICTURE	26-1
26-2	STATISTIC ABOUT EMBROIDERING	26-1
-	STATISTIC ABOUT EMBROIDERING	

All rights reserved. Beijing JING DAHAO Computer Control Equipment Co., Ltd.

Chapter 1 General Descriptions

1-1 Before Use

Thanks for using the Computerized Embroidery Control System of DAHAO Company. You are appreciated that you do read this manual carefully in order to operate the machine correctly and effectively. Besides, you should keep well this manual for later use.

1. Notice and Safety

To avoid of fire, electric shock and injury, you must abide by the following items:

	The machine's power system is strictly restricted on its nameplate, and if
<u>Notice</u>	the input voltage fluctuation is over 10 percent, one voltage regulator is
	necessary for it.
Notice The power wires must be fixed and have safety protection ways.	
	The machine should be grounded with the earth terminal, or you may be
∠! Notice	struck by electricity.
Notice	The non-specialist may not do the maintenance of the circuit board.
Notice	Do not open the circuit box while power on.
	If necessary, open the door of circuit box after switching off the power.
<u>Notice</u>	And you must wait more than 1 minute to let the capacitors discharge
	before touching the circuit boards.
Forbidding	Don't touch the running parts while embroidering.
Forbidding	Don't run the machine if the running parts have not shields.
	Don't expose the machine to humidity gas, poisonous gas, water, and
V Forbidding	dust.
Forbidding	Don't test the insulation of the circuit loop.
Notice	Don't use the circuit parts that are not from our company.
Notice	Replacing fuse must abide by the specification.

2. Common Notices



Notice	The power switch has the current protection. If the current protection switch cuts off, you can turn on it after more than 3 minutes.
Notice	If the lamp of floppy disk driver is on, don't move out the floppy disk.
Notice	Please use the floppy disks of good quality.
Notice	To avoid losing data, the disks should be far from the magnetic materials, such as magnet, TV set.
Notice	The machine should have a dry, clean and ventilated environment.
Notice	The manual should be conserved well for later use.
Notice	Don't alter the machine arbitrarily by yourself.

1-2 Main Features

1. Adjusting Speed

The main shaft speed can be changed manually, or be changed automatically with the length of stitches during embroidering.

2. Stepping Precision

The minimum of stepping precision is 0.1 mm.

3. Trimming

The machine can trim thread by pressing keyboard manually, or do it automatically during color-changing or at the end of embroidering.

4. Thread Break Detect

During embroidering, the machine will automatically stop and light the red lamp if the thread is broken or is run out of.

5. Stitch Range

The stitch range is 0.1 mm -- 12.7 mm.

6. Color-changing Function

While processing one color-changing stitch, the machine can change color manually, or change color automatically according the preset color line.

1-3 Main Functions

1. English or Chinese Display



The operation interface shows figures and characters, and the character language can be selected between English and Chinese by yourself, which will refresh the display in real time. Graphic icons also note the keys of keyboard. These ways do reduce the language limit effectively.

2. Design Storage Capacity

The system memory can store 500,000 stitches, which can be extended for user's order.

- Maximum of Memory Design Count The maximum is 99.
- 4. Design Input from Floppy Disk

The computer can read a variety of designs through floppy disk driver, such as TAJIMA DSB, TAJIMA DST, BARUDAN FDR, BARUDAN FDRIII, BARUDAN HD, ZSK.

5. Design Output to Floppy Disk

The design in computer can be output to floppy disk as DSB format.

6. Repetition Embroidery

The machine can increase embroidery productivity by repetition embroidery. And it can do embroidery directly in the way of usual repetition, but in the way of partial repetition, the computer must first compile the ready-for-embroidery design to one normal design and the machine then embroider the compiled normal design.

7. Cyclic Embroidery

The machine also can increase embroidery productivity by preset cyclic embroidery, by which the machine automatically starts another same embroidery when one embroidery is finished.

8. Combining Design

A new design can be formed by combining several normal designs at different size ratio, rotation angle, figure direction and relative distance, which is called combined design and has a extension name of PAR. It can be embroidered in one time.

- 9. Compiling Design
 - A. Compiling the ready-for-embroider design

After selecting a normal design and presetting the parameters (such as size ration, rotation angle, figure direction, repetition), the computer can compile the ready-for-embroider design to a new normal design.

B. Compiling the combined design

Also, one combined design can be compiled to a new normal design.



10. Editing the Normal Design

A normal design can be edit stitch by stitch (or by several amounts of continuous stitches) in full screen.

11. Patching Embroidering

This function can set a patch code after the color code or stop code, and when the machine embroiders the patch code, it will halt and move frame out for patching. After stick a patch, user would pull the operation bar to let the frame move back and continue embroidering.

12. Adjusting the Brake

For various machines, this function can make the machines stop correctly, which means that the main shaft stops at 100 degree.

Chapter 2 Names of Parts about Electrical Control System

2-1 Operation Control Panel

Operation Control Panel of model BECS-18 is as following:

JING DAHAO	
Image: Decision of the second seco	
	5
3 Embroidery Controller	

This control panel consists of: ①LCD displayer, ② function keys, ③ numberal keys,
④ frame-moving keys, ⑤ embroidery confirmation key, ⑥enter key.

2-2 Operation Bar and Turn Shaft Button

- 1. Operation bar (embroidery bar under the table)
 - Stop status: pull the bar right to begin embroidery (including idle running in high or low speed) and pull the bar left to return (including idle running in high or low speed)

Running status: pull the bar right to the end to embroider slowly and release to normal speed and pull the bar left to stop embroidery.

Turn Shaft Button(over the operation bar case, on the right under the table)
 To press the button to make the main shaft rotate one cycle and stop at 100°.

2-3 Darning Switch

1. Thread Break Detecting Device of 3 place

There is a switch on every head of machine. When the switch is up, this head is in normal embroidering mode and when it is in the middle, this head is in darning mode and when it is down this head is in stop mode.

2. Thread Break Detecting Device of 2 place

On every head of the machine, there is a darning switch, and it can be move with hand to the up, middle or down position, but it is stop only at the middle or down position. When the switch is pushed to up position, it can not stay at up position, and the lamp is red, which hints that this head is in darning mode. In addition, while thread breaking during embroidering, the lamp is automatically changed into red and this head is in darning mode. When the switch is at middle position, this head is in darning mode if the lamp is red, or this head is in normal embroidering mode if the lamp is green. When the switch is pushed to down position, the lamp is off, which hints that this head is in stop mode. When the switch is pushed to middle position from down position, the lamp will be green and the head is in normal embroidering mode.

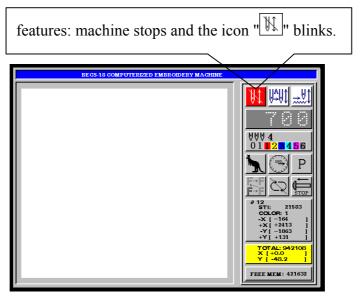
Chapter 3 How to Start Embroidery

3-1 Summary

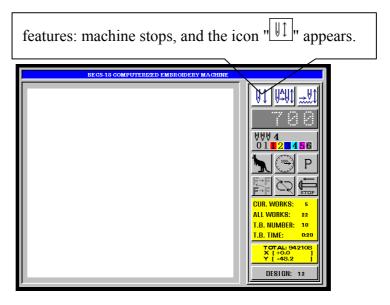
3-1-1 System's Working Statuses

The working statuses of computer embroidery machine can be divided into 3 statuses:

1. Preparation status:

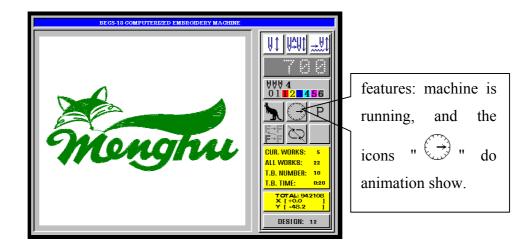


2. Embroidery confirmation status:



3. Embroidery running status

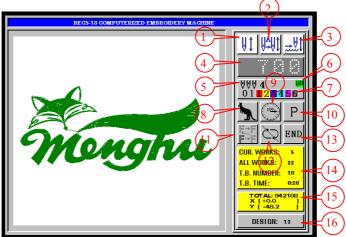




How to Switch among the above work statuses?

- In preparation status, after selecting pre-embroidery design and setting the parameters, first press "IV" key, and then press "IV" key, now the machine is in embroidery confirmation status. Finally, pull the embroidery bar to right to embroider, which means the machine is in embroidery running status.
- 2. In embroidery running status, pull the bar left to stop, now the machine is in embroidery confirmation status (Again, pull the bar right, the machine goes into embroidery running status).
- 3. In embroidery confirmation status, first press "IV" key, and then press "IV" key to release embroidery confirmation status, now the machine goes into preparation status.
- 3-1-2 Descriptions of the Icons of the Embroidery Information

On the right of LCD on main picture, the computer shows the embroidery information as following figuration:





- 1. \square : The machine is in embroidery confirmation status.
 - $\frac{1}{2}$: The machine is in preparation status.
- 2. \square The machine is in auto-color and auto-start mode.
 - $\underbrace{\| \overset{\mathtt{A}}{\rightarrow} \|}_{:}$ The machine is in auto-color and manual-start mode.
 - $\xrightarrow{\mathbf{m}}$: The machine is in manual-color mode.
- 3. \overrightarrow{W} : The machine is in normal embroidery status.



- The machine is in high-speed idling.
- The machine is in low-speed idling.
- 4. This value is the shaft speed.
- 5. This number is the needle number.
- 6. UP: The icon indicates that the machine now has an offset point, otherwise, the machine does not have the offset point.
- 7. These data is the Automatic Color-changing Sequence (or Color Line).
- 8. **"**: Manual frame-shifting is in high-speed.
 - Manual frame-shifting is in low-speed.
- 9. The machine stops correctly (the main shaft is at 100 degree). The machine stops wrong.
 - $\frac{1}{2}$: The animation indicates that the machine is running.
 - ترسيد: The machine is embroidering the jump stitch.
- 10. P: These 8 icons display embroidery direction of design.
- 11. F→III: The embroidery design does not repeat in X or Y directions.
 F→F

 \overrightarrow{F} : The embroidery design repeats in X or Y directions.

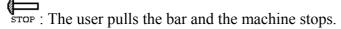


- The machine is not set cyclic : The machine is set cyclic embroidery. 12 embroidery.
- : The thread is broken. 13.



END: The machine finishes embroidering the design.

The machine is changing color (which means changing needle).



- 14. In embroidery confirmation status, the computer shows "Current Works", "All Works", "Thread Break Number", and "Thread Break Time". In preparation status, the computer shows the information of pre-embroidery design.
- 15. In the area, the computer displays the "Total Stitches", "X Move" and "Y Move".
- 16. In embroidery confirmation status, the computer shows the No. of embroidery design. In preparation status, the computer shows the free memory of computer.
- 3-1-3 Descriptions of Menu Item's Status

The user interface of computer has a lot of menus, which display the ways of keyboard operation. Usually, one number will be displayed at the front of menu item, which is the serial number of the menu item.

If the number is replaced by the icon " \otimes ", the menu item can not be entered into.

3-1-4 How to Embroider for the First Time?

The machine embroiders according to the design in store. Before a new machine is used normally for the first time, the computer should initialize the parameters (See Chapter 12). Then, all patterns in memory should be cleared (See Chapter 13). Again, input the desired pattern to memory store (See Section 3-2). After that, you can select a pattern in memory and confirm to embroider pattern (See Section 3-4). Now, the machine goes into embroidery confirm status. Finally, pull the embroidery bar to right to start embroidering the pattern.

3-2 Input a Design into Memory from Floppy Disk

Reading disk pattern into memory can be performed both in the operations of "Disk Management" and "Design Management".

Operation 1: (by the operation of "Disk Management")



1. Press """ key (in embroidery preparation status), the computer shows as following:

	DISK MANAGEMENT	
	(1)DISK DIR	
Ŧ	2 INPUT	
	③OUTPUT (DSB)	
	(4)DEL FILE	
	⑤FORMAT 720K	
	⑥FORMAT 1.44M	
	⑦INSTALL LETTER LIBS	
	③DELETE LETTER LIBS	
	DESIGN A LETTER PATTERN	
	ARROW: MOVE, ENTER: CONFIRM	

- 2. Press "⁽¹⁾", "⁽¹⁾" or digital key"2" to move the cursor to "INPUT", and then press
- 3. The LCD will display the file name in floppy disk, go on according to the prompt.
- 4. Select a disk pattern and press "-" key.
- 5. Input the number of pattern in memory and press "[]" key, and wait a moment to end the reading operation.

Operation 2: (by the operation of "Design Management")

1. Press "I key (in embroidery preparation status), the computer shows as following:

	DESIGN MANAGEMENT		
	①SELECT DESIGN FOR EMB.		
	②SHOW MEMORY DESIGN		
(F	③DISK INPUT		
~	(4)COPY		
	(5)EDIT		
	©DELETE		
() DIVIDE			
	®COMBINE		
	9PACKED DESIGN		
	OCLEAR ALL		
	ARROW: MOVE, ENTER: CONFIRM		

2. Press "⁽¹⁾", "⁽¹⁾" or digital key"3" to move the cursor to "DISK INPUT", and then press "¹, key.



3. According to the prompt, insert disk, select a disk pattern and input the number of pattern and finally confirm to finish the disk reading operation.

3-3 Preparation before Embroidering

Setting the contents below should be finished or confirmed before embroidering in embroidery preparation status. Such as: (1) automatic color-changing or manual color-changing, which is to change color automatically when there is color-changing code during embroidering or to change color manually after machine stops. (2) automatic start or manual start, which is to start automatically or manually after automatic color-changing, and if it is automatic color-changing, the color line should be set. (3) besides, it is necessary to set figure direction(see Chapter 6), the rotation angle of figure, size ratio and number of repeating embroidery.(see Chapter 12).

3-4 Select a Pattern for Embroidery and Confirm to Embroider the Pattern

1. Select a pattern for embroidery

Operation:

(1) Press "E: key (in embroidery preparation status), the computer shows as following:

	DESIGN MANAGEMENT		
Ţ	①SELECT DESIGN FOR EMB.		
	②SHOW MEMORY DESIGN		
	③DISK INPUT		
	(4)COPY		
	5EDIT		
	© DELETE		
	(7)DIVIDE		
	© COMBINE		
	9PACKED DESIGN		
	OCLEAR ALL		
	ARROW: MOVE, ENTER: CONFIRM		

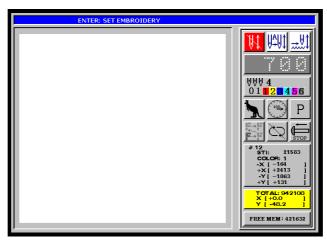
- (2) The cursor is at "SELECT DESIGN FOR EMB.", and press ", key.
- (3) LCD displays the memory designs, and automatically display the figure of design at which the cursor is. If the count of designs is more than 10, you can use "O", "O" key to turn to other pages.
- (4) According to the prompt, press "⁽¹⁾", "⁽¹⁾" to move the cursor to select one design, and press "⁽¹⁾" key.



- (5) If the computer has saved the set parameters of this design and the current parameters are different from them, the prompt is "RESTORE PARAMETERS?", and you can select "YES" or "NO" with "⁽¹⁾", "⁽¹⁾" keys and "⁽¹⁾" key to decide whether the computer restore the saved parameters.
- (6) Press "[-]" key to select the design for embroidering, or other key to give up this operation.
- (7) After selecting the design for embroidering, the computer will prompts: "PRESS [HOME] KEY TO RESTORE ORIGIN" if the origin point of this design has saved into the computer, users can press "fore," key to move the frame to the saved origin point, or press other keys to escape.
- 2. Confirm to embroider a pattern

Operation:

(1) Press "[!!!]" key, the computer shows as following:



- (2) Press " key to confirm embroidery, or press other key to escape.
- (3) If the design origin point is not saved or the saved origin point is not the same with the frame position, the computer will prompts: "PRESS [HOME] KEY TO SAVE ORIGIN", users can press "HOME", key to save the origin point, or press other keys to escape.
- (4) If the computer has not saved the set parameters of this design or the saved parameters are different from current parameters, the prompt is "SAVE PARAMETERS?", and you can select "YES" or "NO" with "⁽¹⁾", "⁽¹⁾" keys and "^[1]"



key to decide whether the computer save the current parameters.

(5) In the main picture, the icon "[1]" appears and the machine enters into the embroidery confirmation status. Now, you can pull the bar to start embroidery.

3-5 Normal Embroidering, Returning and Darning Embroidering

In embroidery confirmation status (the icon "[1]]" appears), push the darning switch of machine head that will perform normal embroidery to go to the normal embroidering mode, and push the darning switch of machine head that will not embroider to go to the darning mode, and then pull the operation bar to right and release it to let the machine start normal embroidery. (when you pull the bar right and don't release it , the machine will embroider in lower speed.) During embroidering, pull the bar left, the machine will stop.

After the machine stops, pull the operation bar to left and the frame will return to its last position along original path. Pull the bar one time, the frame return one needle step. Pull the bar continuously and the frame will return one needle step after another continuously. After the frame return 10 needle steps continuously, the frame can return continuously even when you release the bar.(This may be different according to different machine types). When the frame return continuously, release the bar and pull it left again, the frame will stop returning.

The aim of returning is usually to perform darning embroidery. After the returning stops, push the darning switch of machine head that will perform darning embroidery to go to the darning mode, and then pull the operation bar to right and the machine head will start darning embroidery while other heads don't. When the frame goes to the point where the frame begins to return, other heads whose darning switches are in normal embroidering mode will start to embroider.

3-6 Release Embroidery Confirmation Status

You should release embroidery confirmation status when you want to embroider other patterns after finishing embroidering one pattern or to revise size ratio, rotating angle, the repetition, figure direction, or to do the operation of "Disk Management" and "Design Management".

Operation:

(1) Press "IV " key, the computer shows as following:





(2) Press "-" key to release embroidery confirmation status according to the prompt (or press other keys to abandon), and then enter into the embroidery preparation status (the icon " blinks.).

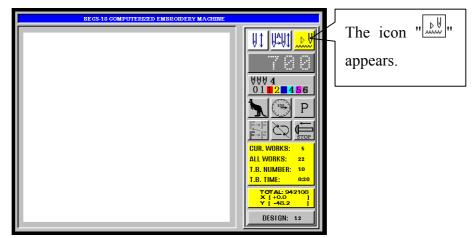
Chapter 4 Normal Embroidery and Idling

4-1 Relations between Normal Embroidery and Idling

Functions as idling, returning, etc. are intended for the convenience of darning. Low-speed idling, high-speed idling or positioning idling can be used in the light of different positions. In the states of idling, the returning also cover low-speed idling returning, high-speed idling returning and positioning idling returning.

4-2 Low-speed Idling

Operation: Press ", key when machine stops until the following display appears:

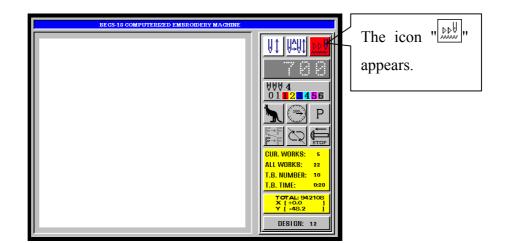


After setting low-speed idling, the main shaft remains inactive when pulling bar for normal embroidery, but the frame runs forward along the stitch trace. When pulling bar for returning, the main shaft keeps inactive, but the frame returns along the stitch trace.

4-3 High-speed Idling

Operation: Press ", key when machine stops until the following display appears:

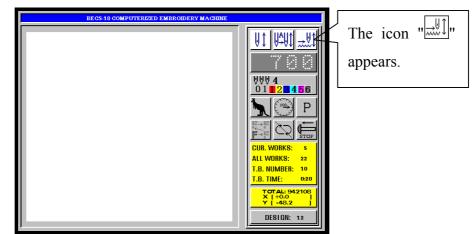




After setting high-speed idling, the main shaft and frame remain inactive, the count increases based on a unit of 100 stitches. After pulling the bar for halting, the frame moves directly to the actual position of the current count. When pulling bar for returning, the main shaft and frame keep inactive, but the count decreases. After pulling the bar for halting, the frame returns directly to the actual position of the current count.

4-4 Release of Low-speed/High-speed Idling

Operation: Press " key when machine stops until the following display appears:



This is the state of normal embroidery.

4-5 Positioning Idling (except some models of machine)

The positioning idling can make the frame directly runs forwards (or backwards) to an assigned counting position, or to a latest color-changing position, or even to a latest stop-code position.

Operation:



(1) Press " key (in embroidery confirm state), the menu appears as following:

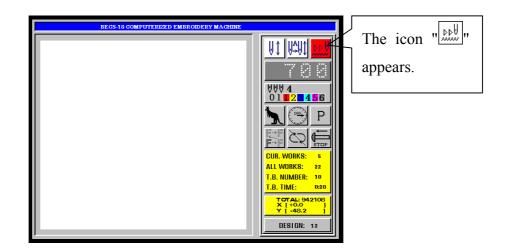
COTHER MAN	NAGEMENT
 SET DESIGN PARAS ②FRAME TO POINT (OPTIONAL) ③DESIGN RANGE'S OPERATIONS ④OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⊗COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB. → OFF 	①HI-SPEED DESIGN 2 ②COMPILE PACKED DESIGN ③COMPILE EMBROIDER. DESIGN ⊗FRAME TO MAKE DESIGN ⊗ADD PATCH CODE TO DESIGN ⊗ADJUST BRAKE (OPTION) ⊗TO MAKE TRUE DESIGN RANGE ⑧TO SET ALL HEADS PATCH→N ⑨LET NEEDLE DOWN AND MOVE FRAME ⑩NO OUTPUTTING DESIGN→OFF
⊗PRE-DISPLAY THE DESIGN→N (2)LCD COLORS (FOR MANAGER) (3)SELECT SHOWING COLORS (4)SET EMB. FRAME RANGE (8)MACHINE SELF-TEST (6)TEST ENCODER (7)TEST MAIN SHAFT SPEED (8)TEST MACHINE PARTS3	
ARROW OR NUMBER: MOVE, ENTER: CONFIRM	

(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "2" to move the cursor to "FRAME TO POINT (OPTIONAL)", and then press "¹," key. The positioning idling menu displays as following:

Ē	OTHER MANAGEMENT ①FORWARD STI. ②BACKWARD STI. ③NEXT COLOR ④LAST COLOR
	⑤NEXT STOP ⑥LAST STOP
ARI	OW OR NUMBER: MOVE, ENTER: CONFIRM

- (3) Press "⁽¹⁾", "⁽¹⁾" key to select the desired positioning idling, and then press "^[]" key.
- (4) Continue the operation for different positioning idling according to the prompts respectively.
- (5) The computer automatically exits to the main picture, which is as following:





- (6) The user can pull the bar to finish the positioning idling.
- (7) Finally, the user can press " key to let the computer to go to normal embroidery status.

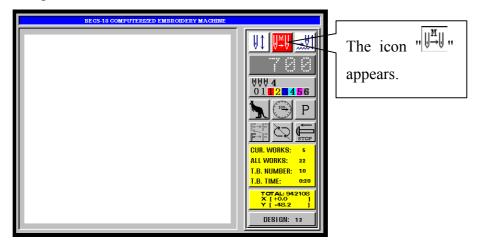
Chapter 5 Color-changing Operation

5-1 Manual Needle-change (Color-changing) when Stop

Press the digital key to carry out manual color-changing when the machine stops.

5-2 Manual Color-changing and Manual Start during Embroidering

To set manual color-changing and manual start, the user just presses "[[]]]" key until the main picture is as following.



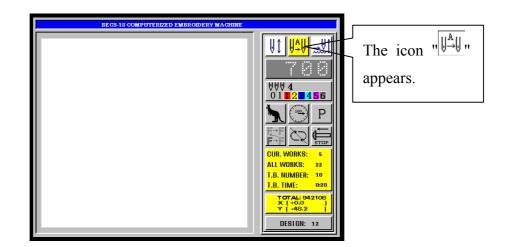
If the machine is set into manual color-changing and manual start, manually perform the color-changing and select the first needle position before starting embroidering operation, then pull bar to start embroidery.

When the color-changing code is processing during embroidering operation, the machine will halt automatically and the icon " $\forall \forall \forall \forall$ " appears for manual color-changing. At the moment, the operator should press the digital key to carry out manual color-changing. After the required needle position having been set, pull the operation bar to start embroidery (manual start).

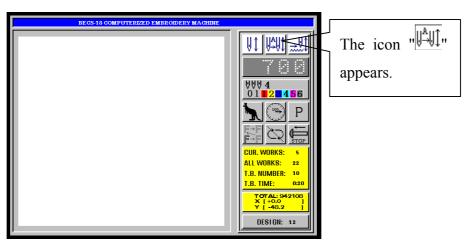
5-3 Automatic Color-changing and Manual Start (or Automatic Start) during Embroidery

To set automatic color-changing and manual start, press "(I))" key until the main picture is as following.





To set automatic color-changing and manual start, press "^[]] key until the main picture is as following.



If the machine is set into automatic color-changing, the color-changing sequence (or be called color line) should be set in advance before the embroidery confirmation status.

When pulling the operation bar to start embroidery, the computer will carry out color-changing according to the needle position set in the color line (excluding the condition that the current needle position conforms to the needle position set in the color line), then start embroidering.

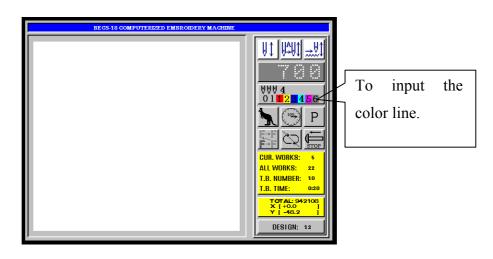
When the color-changing code appears during embroidering, the machine will automatically halt and change to the assigned needle position according to the needle number set in the color line. In case of setting as automatic start, the machine will automatically continue embroidering, whereas setting as manual starting, the operator must pull the operation bar to start embroidering.



5-4 Setting Automatic Color-changing Sequence (or Color Line)

The automatic color-changing sequence is intended for the operation of the machine that has been set as automatic color-changing, and offers automatic color-changing sequence. Operation:

(1) Press "Wey, the main picture is as following:



- (2) Press the digital key in order to input the number of needle position one by one.
- (3) You can press ", ", ", keys to move the cursor.
- (4) Press the related digital key to insert the number of needle position at the cursor, and press "⁽¹⁾" key for clearing the number of needle position.
- (5) Press "Wey or " key to end the operation and exit.

5-5 Storing the Manual Color-changing Number into Color Line

In embroidery confirmation status, if the machine carries out manual color-changing, the computer will store the manual color-changing number into color line or not according the setting of "STORE MANUAL-COLOR". It functions as following: A) During embroidering, if one number in color line is wrong, you can execute the manual color-changing, and then the computer will automatically store the correct number into color line. B) If you embroider a new design first time and you can not decide the color line, you can set the color line using the setting of "STORE MANUAL-COLOR ".

After finishing embroidering a design, the machine automatically change the setting of "STORE MANUAL-COLOR" to "No".

Operation:



(1) Press "E" key, the menu appears as following:

COTHER MANAGEMENT							
 ⊗SET DESIGN PARAS ②FRAME TO POINT (OPTIONAL) ③DESIGN RANGE'S OPERATIONS ④OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⊗COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB. →OFF 	①HI-SPEED DESIGN2②COMPILE PACKED DESIGN③COMPILE EMBROIDER. DESIGN③COMPILE EMBROIDER. DESIGN⊗FRAME TO MAKE DESIGN⊗ADD PATCH CODE TO DESIGN⊗ADJUST BRAKE (OPTION)⊗TO MAKE TRUE DESIGN RANGE⑧TO SET ALL HEADS PATCH→N⑨LET NEEDLE DOWN AND MOVE FRAME⑩NO OUTPUTTING DESIGN→OFF						
 ⊗PRE-DISPLAY THE DESIGN→N 3 ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ©TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS 							
ARROW OR NUMBER: MOVE, ENTER: CONFIRM							

(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "7" to move the cursor to "SET MACHINE PARAS",

and then press "-" key.

(3) The computer displays as following:

SET MACHIN	NE PARAS
①START ANGLE: 2 8 0 1 ②T. B. BACK STI.: 0 ③T. B. DETECT: Y ④OVERFRAME BY STEP: N ⑤ JUMP&TRIM: DONOT TRIM ⑥PATCH COUNT: 1 STITCH ⑦NEEDLES: 9 ⑧TRIM MODE: 3 ⑨STORE MANUAL-COLOR: N ⑩AUTO ORIGIN: Y	①INITIALIZE SYSTEM!2②MAX. SPEED:8 5 0③JUMP STITCH SPEED:5 0 0④MINMUM SPEED:2 5 0⑤SHIFT LENGTH:7 • 0⑥SET RUN SPEED:8 0⑦STARTUP STITCHES:3⑧STARTUP ACCE.:1 0⑨STITCHES AFTER TRIM:2⑩SPEED AFTER TRIM:8 0
(1)HIGH FRAMING SPEED: 2 0 (2)LOW FRAMING SPEED: 1 5 (3)DISPLAY STI. OR NOT: Y (4)SET BRAKE PARA.: 1 1 (5)STOP TO COLOR: N (6)CTION AFTER TRIM: FRAME TO Y (7)BORING: N (8)MAIN MOTOR PARA.: 1 (9)COLOR-CHANGE SPEED: 1 2 (10)ROUNDS FOR BRAKE: 1	(1) D I P 1: 0 4 (2) D I P 2: 0 (3) D I P 3: 0 (4) D I P 4: 0 (5) D I P 5: 0 (6) D I P 6: 0 (7) SPEED WHEN OVERFRAME: 1 (8) LOCK STITCH WHEN TRIM: Y (9) HOOK ANGLE BY MOTOR: (9) HOOK ANGLE BY MOTOR: 0 (10) SPEED WHEN TRIMMING: 8
ARROW OR NUMBER: MOV	'E, ENTER: CONFIRM

(4) Press "1", "1" or digital key "9" to move the cursor to "STORE



MANUAL-COLOR ", and then press "

- (5) Press "1", "1" key to select "Y" or "N".
- (6) Press "-" key.

5-6 The Color-changing Speed

The color-changing speed can be adjusted for the specific machine, which execute the color-changing operation by stepping motor. The speed adjusting is for meeting the need of different mechanical characteristic.

(1) Press "I" key, the menu appears as following:

COTHER MANAGEMENT							
 ⊗SET DESIGN PARAS ②FRAME TO POINT (OPTIONAL) ③DESIGN RANGE'S OPERATIONS ④OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⊗COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB. →OFF 	①HI-SPEED DESIGN 2 ②COMPILE PACKED DESIGN ③COMPILE EMBROIDER. DESIGN ③FRAME TO MAKE DESIGN ◎FRAME TO MAKE DESIGN ◎ADD PATCH CODE TO DESIGN ◎ADJUST BRAKE (OPTION) ◎TO MAKE TRUE DESIGN RANGE ⑧TO SET ALL HEADS PATCH→N ⑨LET NEEDLE DOWN AND MOVE FRAME ⑩NO OUTPUTTING DESIGN→OFF						
 ⊗PRE-DISPLAY THE DESIGN→N 3 ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS 							
ARROW OR NUMBER: MOVE, ENTER: CONFIRM							

(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "7" to move the cursor to "SET MACHINE PARAS",

and then press "-" key.

(3) Press "⁽¹⁾" key twice to turn to page 3, which is as following:



K SET MACH	INE PARAS						
①START ANGLE:2801②T. B. BACK STI.:0③T. B. DETECT:Y④OVERFRAME BY STEP:N⑤JUMP&TRIM:DONOT TRIM⑥PATCH COUNT:1STITCH⑦NEEDLES:9⑧TRIM MODE:3⑨STORE MANUAL-COLOR:N⑩AUTO ORIGIN:Y	①INITIALIZE SYSTEM!2②MAX. SPEED:8 5 0③JUMP STITCH SPEED:5 0 0④MINMUM SPEED:2 5 0⑤SHIFT LENGTH:7 • 0⑥SET RUN SPEED:8 0⑦STARTUP STITCHES:3⑧STARTUP ACCE.:1 0⑨STITCHES AFTER TRIM:2⑩SPEED AFTER TRIM:8 0						
①HIGH FRAMING SPEED: 2 0 3 ②LOW FRAMING SPEED: 1 5 3 ③DISPLAY STI. OR NOT: Y 4 ④SET BRAKE PARA.: 1 1 5 ⑤STOP TO COLOR: N 6 ⑥CTION AFTER TRIM: FRAME TO Y 7 ⑦BORING: N 8 ●COLOR-CHANGE SPEED: 1 2 1 ⑩ROUNDS FOR BRAKE: 1 1	1 D I P 1: 0 4 2 D I P 2: 0 3 D I P 3: 0 4 D I P 4: 0 5 D I P 5: 0 6 D I P 6: 0 7SPEED WHEN OVERFRAME: 1 5 8LOCK STITCH WHEN TRIM: Y 9HOOK ANGLE BY MOTOR: 0 (bSPEED WHEN TRIMMING: 8 0						
ARROW OR NUMBER: MOVE, ENTER: CONFIRM							

- (4) Press "⁽¹⁾", "⁽¹⁾" or digital key "9" to move the cursor to "COLOR-CHANGE SPEED", and press "⁽¹⁾" key.
- (5) Press "⁽¹⁾", "⁽¹⁾" key to select the data, and greater data represents higher speed.
- (6) Press "-" key.

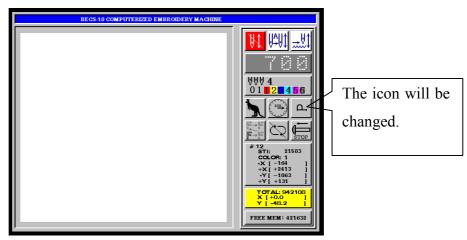
Chapter 6 Setting Design Direction

Before embroidery confirmation, you can set the design direction for embroidering. When the display of design direction is "P", the design embroidering direction is identical to its original direction. Take the embroidering of letter "F" as an example to explain the relations between the embroidered pattern and the design direction:

Design Direction	р	d	d	d	q	q	b	q	р
Embroidered Pattern	F	Ш	-	П	ГГ	F	F	F	F

Operation:

In embroidery preparation status, press " $\left[\frac{1}{\sqrt{2}}\right]$ " key to change the design direction until the desired direction is selected.



Chapter 7 Frame Operations

7-1 Manual Frame Shifting

Press eight direction keys: $\textcircled{\ }$, " $\r{\ }$

7-2 Returning to Origin Point

After manual frame shifting being made, this function can make the frame return to the position before manual frame shifting. After halting in the halfway of embroidering operation or halting at the end of embroidering operation, this function can make the frame return to the starting point of pattern.

Operation:

(1) Press " $\frac{1}{1000}$ " key, the main picture appears as following:



- (2) Press "[__]" key to confirm the operation, or press other key to quit.
- (3) During the operation of "Returning to Origin Point", pulling the bar to left will stop moving the frame to origin point.
- (4) If you stop moving the frame to origin point and later want to do the operation, you can do step (1) and (2) again.



7-3 Returning to the Stop-embroidery Point

This function is intended for darning operation. After halting in the halfway of embroidering operation, press the manual frame-shifting key to shift the frame out (for darning). After the completion of darning, this function can make the frame return to the stop-embroidery point.

Operation:

- (1) Press the manual frame-shifting key to shift the frame out (for darning).
- (2) Press "^[1] key, the main picture appears as following:



(3) Press ", key to confirm the operation, or press other key to quit.

Chapter 8 Embroidery Speed (Main Shaft Speed)

In the process of embroidery, the main shaft speed of the embroidery machine will change by computer according to the stitch length of pattern. The low speed is intended for long stitch embroidery, whereas high speed for short stitch. However, users can set the limit speed, what is called "SETTING LIMIT SPEED". The highest embroidery speed can increase or decrease within the limit speed.

The limit speed ranges from 250 rpm to 850 rpm.

8-1 Setting the Limit Speed

This setting specifies the limit value for the highest embroidery speed.

Operation:

(1) Press "I" key, the menu appears as following:

COTHER MA	ANAGEMENT
 ⊗SET DESIGN PARAS ②FRAME TO POINT (OPTIONAL) ③DESIGN RANGE'S OPERATIONS ④OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⊗COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB. →OFF 	①HI-SPEED DESIGN 2 ②COMPILE PACKED DESIGN ③COMPILE EMBROIDER. DESIGN ③COMPILE EMBROIDER. DESIGN ◎FRAME TO MAKE DESIGN ◎ADD PATCH CODE TO DESIGN ◎ADJUST BRAKE (OPTION) ◎TO MAKE TRUE DESIGN RANGE ⑧TO SET ALL HEADS PATCH→N ⑨LET NEEDLE DOWN AND MOVE FRAME ⑩NO OUTPUTTING DESIGN→OFF
 ⊗PRE-DISPLAY THE DESIGN→N ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS 	
ARROW OR NUMBER: M	OVE, ENTER: CONFIRM

(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "7" to move the cursor to "SET MACHINE PARAS",

and then press "___" key.

(3) Press "⁽¹⁾" key to go to page 2, which is as following:



	CHINE PARAS
①START ANGLE:2 8 01②T. B. BACK STI.:0③T. B. DETECT:Y④OVERFRAME BY STEP:N⑤JUMP&TRIM:DONOT TRIM⑥PATCH COUNT:1 STITCH⑦NEEDLES:9⑧TRIM MODE:3⑨STORE MANUAL-COLOR:N⑩AUTO ORIGIN:Y	Image: Constraint of the system Image: Constand of the system Image: Constand
①HIGH FRAMING SPEED: 2 0 ②LOW FRAMING SPEED: 1 5 ③DISPLAY STI. OR NOT: Y ④SET BRAKE PARA.: 1 1 ⑤STOP TO COLOR: N ⑥CTION AFTER TRIM: FRAME TO Y ⑦BORING: N ⑧MAIN MOTOR PARA.: 1 ⑨COLOR-CHANGE SPEED: 1 2 ⑩ROUNDS FOR BRAKE: 13	② D I P 2: 0 ③ D I P 3: 0 ④ D I P 4: 0 ⑤ D I P 5: 0
ARROW OR NUMBER: 1	MOVE, ENTER: CONFIRM

- (4) Press "⁽¹⁾", "⁽¹⁾" or digital key "2" to move the cursor to "MAX. SPEED", and press
- (5) Press "1", "1" key to select the value, and press " \checkmark " key.
- (6) Press " \mathbb{E} " to end the operation.
- (7) Press " \mathbb{E} " to go to the main picture.

NOTE: The factory default value is recommended for the limit speed.

8-2 Setting Embroidering Speed

It specifies the running speed during embroidering operation.

Operation:

- Press " key. When pressing once the key, the speed will raise 10 rpm. When having been reached the limit speed, the speed will not raise any more.
- (2) Press " key. When pressing once the key, the speed will reduce 10 rpm. When reducing to 250 rpm, the speed will not reduce any more.

Chapter 9 Trimming Thread

9-1 Automatic Trimming Thread

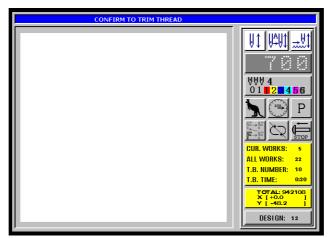
When operations such as color changing, frame jumping, etc. are required in embroidery, as well as at the end of embroidering, the machine can trim thread automatically. In the event of user wants to cut thread at other moment, he can do it by manual trimming thread.

9-2 Manual Trimming Thread

This function can be executed by pressing several keys.

Operation:

(1) Press "" key, the main picture appears as following:



(2) Press "[__]" key to trim thread, or press other key to quit.

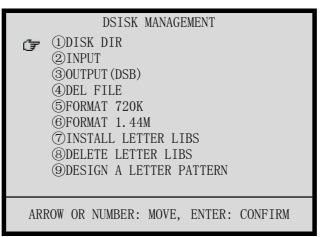
Chapter 10 Disk Operations

10-1 Directory Listing of Disk

This operation is able to view the pattern stored in disk, as well as file name, file length and free space of disk.

Operation:

 Insert the pattern disk into floppy disk driver, and press "D" key, the disk operation menu appears as following:



- (2) The cursor will be at "DISK DIR", press" key.
- (3) The LCD will display the file in floppy disk. If the file count is greater than 10, you can press "⁽¹⁾" or "⁽²⁾" key to turn to other pages.
- (4) Press "⁽¹⁾", "⁽¹⁾" key to select the pattern, and press "^[1]" or "^[1]" key to view it.
 During the viewing, you can press "⁽³⁾" or "^[1]" key to vary the display speed. Press "^[1]" to end the display.
- (5) Press " \mathbb{E} " or " \mathbb{D} " key to quit the disk operation.

10-2 Input Pattern from Disk to Memory

Operation:

(1) Insert the pattern disk into floppy disk driver, and press "" key, the disk operation menu appears as following:



	DSISK MANAGEMENT
(7	 DISK DIR INPUT OUTPUT (DSB) DEL FILE FORMAT 720K FORMAT 1.44M
	(7)INSTALL LETTER LIBS (8)DELETE LETTER LIBS (9)DESIGN A LETTER PATTERN
ARI	ROW OR NUMBER: MOVE, ENTER: CONFIRM

- (2) Press "⁽¹⁾", "⁽¹⁾" key or digital key "2" to move the cursor at "INPUT", press", key.
- (3) Press "⁽¹⁾", "⁽¹⁾" key to select the pattern (you can press "^[1]" key to view it), and press "^[1]" key.
- (4) At the bottom of LCD, the computer will show the minimum available number of pattern (recommended for use). If you use it as the new pattern number, press " key to confirm, and then begins the disk reading operation. If disagreeing to use the pattern number, press digital keys to enter the pattern number you want. In the event of having error in entering numeral, press " " key to clear it. After entering the pattern number, press " " key for setting. When there is any conflict between the entered pattern number and the pattern number existed in memory, the machine will refuse to accept this entry; therefore you should enter another pattern number and press " key. After the pattern number having been proved to be correct, then begins to read the pattern from disk to memory. Upon the completion of pattern reading, it will return to the disk operation menu.
- (5) Press " \mathbb{E} " or " \mathbb{D} " key to quit the disk operation.

10-3 Output Pattern from Memory to Disk

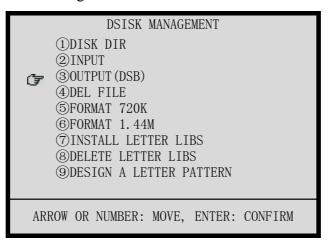
It stores the pattern in memory to disk in a binary format. Coordinating to the use of "Input Pattern from Memory to Disk", this function is able to complete the operation of copying a pattern from a disk to another disk.

When the computer has set "NO OUTPUTTING DESIGN" to "Yes", the operator should



first set it to "No" before he output pattern from memory to disk. For details, see chapter 25. Operation:

(1) Insert the pattern disk into floppy disk driver, and press """ key, the disk operation menu appears as following:



(2) Press "⁽¹⁾", "⁽¹⁾" key or digital key "3" to move the cursor at "OUTPUT(DSB)", press" yes.

(3) Press "⁽¹⁾", "⁽¹⁾" key to select the memory pattern, and press "^[], "⁽¹⁾" key.

- (4) Press digital keys to enter the disk file name, press "-----" key to begin saving the pattern into disk (or press "Ex" key to give up the operation). After finishing the save, the disk operation menu appears.
- (5) Press " \mathbb{E} " or " \mathbb{D} " key to quit the disk operation.

10-4 Deleting the Pattern in Floppy Disk

Operation:

 Insert the pattern disk into floppy disk driver, and press "D" key, the disk operation menu appears as following:



	DSISK MANAGEMENT (DDISK DIR (2)INPUT (3)OUTPUT (DSB) (4)DEL FILE (5)FORMAT 720K (6)FORMAT 1.44M (7)INSTALL LETTER LIBS (8)DELETE LETTER LIBS (9)DESIGN A LETTER PATTERN	
	ARROW OR NUMBER: MOVE, ENTER: CONFIRM	
(2) Press " ⁽¹⁾ ",	" ⁽¹⁾ " key or digital key "4" to move the cursor at "DEL FILE",	
press" - " key		
(3) Press " $\textcircled{1}$ ", " $\textcircled{1}$ " key to select the pattern (you can press " \square " key to view it), and		
press " $-$ " key to delete the pattern or press " $\frac{1}{100}$ " to give up.		
(4) Press " \mathbb{H} " or " \mathbb{D} " key to quit the disk operation.		
)-5 Formatting a 7	20KB Diskotto	

10-5 Formatting a 720KB Diskette

It carries out formatting of a double density 3.5 inch diskette in DOS format.

Operation:

 Insert the pattern disk into floppy disk driver, and press """ key, the disk operation menu appears as following:

	DSISK MANAGEMENT
Ť	 (1)DISK DIR (2)INPUT (3)OUTPUT (DSB) (4)DEL FILE (5)FORMAT 720K (6)FORMAT 1. 44M (7)INSTALL LETTER LIBS (8)DELETE LETTER LIBS (9)DESIGN A LETTER PATTERN
AR	ROW OR NUMBER: MOVE, ENTER: CONFIRM

(2) Press "⁽¹⁾", "⁽¹⁾" key or digital key "5" to move the cursor at "FORMAT 720K",



press" - " key.

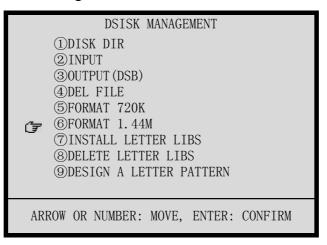
- (3) Press "-" key to format disk (or press " to give up), after finishing the operation, the disk operation menu will appear.
- (4) Press " \mathbb{H} " or " \mathbb{D} " key to quit the disk operation.

10-6 Formatting a 1.44MB Diskette

It carries out formatting of a high density 3.5 inch diskette in DOS format.

Operation:

(1) Insert the pattern disk into floppy disk driver, and press """ key, the disk operation menu appears as following:



- (2) Press "⁽¹⁾", "⁽¹⁾" key or digital key "6" to move the cursor at "FORMAT 1.44M", press" " key.
- (3) Press "-" key to format disk (or press " to give up), after finishing the operation, the disk operation menu will appear.
- (4) Press " \mathbb{E} " or " \mathbb{D} " key to quit the disk operation.

Chapter 11 Displaying Parameters and Frame (Picture)

11-1 Viewing the Common Parameters

Operation:

(1) Press " key, if the pre-embroidery design is normal design, the computer will show the following figure:

DESIGN No.:	12	ROTATE:	0
DESIGN ATT.:	NORMAL DESIGN	X-SCALE:	100
CURRENT:	0	Y-SCALE:	100
OVERALL:	942108	REP. PRIOR:	X PRIOR
X-MOVE:	+0.0	REP. MODE:	NORMAL REP.
Y-MOVE:	-48.2	X-REPS:	1
SPEED:	700	Y-REPS:	1
NEEDLE:	1	X-INTERVAL:	+0.0
OFFSET:	Ν	Y-INTERVAL:	+0.0
FREE MEMORY:	421632	PRIOR MODE:	ROTATE PRIOR

(2) if the pre-embroidery design is packed design, the computer will show the following figure:



	(DISPLAY	EMB. INFO.]	
	DESIGN No.: DESIGN ATT.: CURRENT: OVERALL: X-MOVE: Y-MOVE: SPEED: NEEDLE: OFFSET: FREE MEMORY:	PACKED DESIGN 0 942108 +0.0 -48.2 700 1 N	
С	KEY: CLEAR,	OTHER KEY: EX	IT

11-2 Clearing Accumulated Stitch Count and X/Y Displacement

Operation:

- (1) Press " \square " key, the computer will show the common parameters on LCD.
- (2) Press "⁽¹⁾" key to clear "Overall Stitch Count" and "X/Y Move".

11-3 Switching of Display between Chinese and English

1. Changing the Chinese display into English display (in Chinese display)

Operation:

(1) Press "E" key, the menu appears as following:



【辅助	管理】
 ※设定放大、旋转及反复 ②定位空走 ③花样周边操作 ④另外起点设置→未设 ⑤断电框保护设置 ⑥断电框保护恢复 ⑦设定机器参数 ※内存花样平包针补偿 ⑦CHANGE TO ENGLISH ⑩设置循环绣开或关→关 	①生成高速花样 ②从组合花样生成基本花样 ③从刺绣参数生成基本花样 ◎移框生成花样 ◎花样增加贴布绣功能 ◎刹车调整(限定功能) ◎普通花样产生轮廓花样 ⑧设置是否所有机头补绣→否 ⑨针停下位后移框 ⑩禁止花样输出→关
 ⊗是否刺绣前预显花样→否 3 ②选择屏幕颜色(维修人员使用) ③选择花样显示颜色 ④刺绣范围的软件设置 ⑧机器自检(用于维修) ⑥编码器自检(用于维修) ⑦主轴转速自检(用于维修) ⑧机器部件测试 	
上下键或数字键移动	光标,回车选择菜单

(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "9" to move the cursor to "CHANGE TO ENGLISH",

and then press "-" key. The LCD displays in English.

2. Changing the English display into Chinese display (in English display)

Operation:

(1) Press "^L" key, the menu appears as following:

COTHER M	ANAGEMENT
 ⊗SET DESIGN PARAS ②FRAME TO POINT (OPTIONAL) ③DESIGN RANGE'S OPERATIONS ④OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ※COMPENSATION ④转换成中文显示 ⑩TO SET CYCLIC EMB. →OFF 	①HI-SPEED DESIGN 2 ②COMPILE PACKED DESIGN ③COMPILE EMBROIDER. DESIGN ③COMPILE EMBROIDER. DESIGN ◎FRAME TO MAKE DESIGN ◎ADD PATCH CODE TO DESIGN ◎ADJUST BRAKE (OPTION) ◎TO MAKE TRUE DESIGN RANGE ⑧TO SET ALL HEADS PATCH→N ⑨LET NEEDLE DOWN AND MOVE FRAME ⑩NO OUTPUTTING DESIGN→OFF
 ⊗PRE-DISPLAY THE DESIGN→N ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS 	
ARROW OR NUMBER: N	IOVE, ENTER: CONFIRM



(2) Press "①"、"①" or digital key "9" to move the cursor to "转换成中文显示", and then press "-" key. The LCD displays in Chinese.

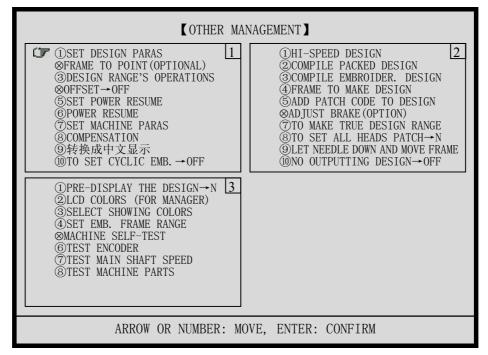
Chapter 12 Assistant Operation and Setting the Parameters

12-1 Setting of Magnification, Rotation and Repetition

This operation is able to set the magnification factor (50% ~ 200%), angle of rotation (0° ~ 89°) of a pattern, as well as repetition if necessary in embroidery.

Operation: (in embroidery preparation status)

(1) Press " key, the menu appears as following:



(2) The cursor will be at "SET DESIGN PARAS", and press "-" key to enter the next menu as following:

	SET DES	IGN PARAS
(T	- ①ROTATE:	0
	②X-SCALE:	100
	③Y-SCALE:	100
	④REP. PRIOR:	X PRIOR
	⑤REP. MODE:	NORMAL REP.
	[®] X-REPS:	1
	\bigcirc Y-REPS:	1
	<pre>⑧X-INTERVAL:</pre>	+0.0
	<pre> ⑨Y-INTERVAL:</pre>	+0.0
	<pre>①PRIOR MODE:</pre>	ROTATE PRIOR
A	RROW OR NUMBER: N	MOVE, ENTER: CONFIRM

(3) Press "⁽¹⁾", "⁽¹⁾" and "¹" key to select the following parameters for revising them:



(1) Angle of rotation $(0^{\circ} \sim 89^{\circ})$

Use digital key, "⁽⁾ and "⁽⁾ keys to input data. This angle is an angle at which a pattern rotating counterclockwise according to the selected design direction.

(2) X magnification (50% \sim 200%)

Use digital key, "⁽⁾ and "⁽⁾ keys to input data. This magnification is a transverse magnification of a pattern.

(3) Y magnification

Use digital key, "^(C)" and "^(L)" keys to input data. This magnification is a longitudinal magnification of a pattern.

(4) Repetition sequence (X priority or Y priority)

Use "⁽¹⁾", "⁽¹⁾" and "^[1]" keys to perform the inputting. X priority presents the repetitive embroidery line by line in transverse direction during repetition. Y priority presents the repetitive embroidery row by row in longitudinal direction.

(5) Repetition mode (usual or partial)

Use "⁽¹⁾", "⁽¹⁾" and "^[1]" keys to perform the inputting. Usual repetition refers to the embroidering operation that after a complete pattern having been embroidered, the same pattern will be embroidered in the next position, i.e. the repetitive embroidery is performed by a complete pattern after another. Partial repetition refers to the embroidering operation that after a pattern having been embroidered with stitches of one color, the embroidery will be continued in the corresponding position of the next pattern with the same color stitches until this color repetition is completed, and then the embroidering operation will repeat with another color stitches until the repetitive embroidery is made with all color-stitches, i.e. the completion of the repetition of a complete pattern is based on the repetition of each part.

For partial repetition, you must compile the pre-embroidering pattern into a normal pattern, and embroider the normal pattern. (See Chapter 17)

(6) Frequency of X repetition $(1 \sim 9)$

Use digital key, "^(C)" and "^(L)" keys to input data. The frequency of X repetition presents the number of transversal repetition, i.e. the frequency of repetitive embroidery in a line.

(7) Frequency of Y repetition $(1 \sim 9)$



Use digital key, "^(C)" and "^(L)" keys to input data. The frequency of Y repetition presents the number of longitudinal repetition, i.e. the frequency of repetitive embroidery in a row.

(8) X repetition distance (unit: mm)

Use digital key, "(I)", "+/-" and "-" keys to input data. X repetition distance presents the distance between the starting points of two adjacent patterns in transverse direction during repetition (accuracy: 0.1mm).

(9) Y repetition distance (unit: mm)

Use digital key, "(U)", "+/-" and "-" keys to input data. Y repetition distance presents the distance between the starting points of two adjacent patterns in longitudinal direction during repetition (accuracy: 0.1mm).

(10) Priority modes (magnification priority or rotation priority)

Use "0", "0" and " \dashv " keys to perform the inputting. When selecting X magnification dissimilar to Y magnification and with rotating angle, the magnification priority and rotation priority can give different embroidery results.

- (4) Press "" or "" key to end setting the parameters.
- (5) Press " \square " or " \square " key to go to the main picture.

12-2 Operations of Pattern Periphery

Operation:

(1) Press " key, the menu appears as following:



COTHER MAN	JAGEMENT
①SET DESIGN PARAS 1 ⊗FRAME TO POINT(OPTIONAL) ③DESIGN RANGE'S OPERATIONS ⊗OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⑧COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB.→OFF	①HI-SPEED DESIGN2②COMPILE PACKED DESIGN③COMPILE EMBROIDER. DESIGN④FRAME TO MAKE DESIGN④ADD PATCH CODE TO DESIGN◎ADD PATCH CODE TO DESIGN◎ADJUST BRAKE (OPTION)⑦TO MAKE TRUE DESIGN RANGE⑧TO SET ALL HEADS PATCH→N⑨LET NEEDLE DOWN AND MOVE FRAME⑩NO OUTPUTTING DESIGN→OFF
(1)PRE-DISPLAY THE DESIGN→N 3 ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS	
ARROW OR NUMBER: MO	VE, ENTER: CONFIRM

(2) Press "⁽¹⁾", "⁽¹⁾" key or digital "3" to move the cursor to "DESIGN RANGE'S OPERATIONS", and press "^[1]" key to enter the next menu as following:

OTHER MANAGEMENT
🕞 ①SHOW RANGE
@MOVE FRAME ALONG RANGE
③GENERATE DESIGN OF RANGE
ARROW OR NUMBER: MOVE, ENTER: CONFIRM

- (3) According to the prompt, press "⁽¹⁾", "⁽¹⁾" and "^[1]" keys to complete the following operations:
 - (1) Showing periphery

After selecting pattern but before starting embroidery, check the peripheral range of the pattern.

(2) Moving frame along the periphery

After selecting the pattern but before starting embroidery, the frame will run a cycle along the periphery for checking whether it exceeds the limits.



(3) Generating a new periphery pattern

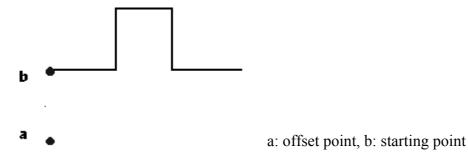
This operation can be carried out after selecting the pattern but before starting embroidery, which can produce a peripheral pattern of the current pattern. The peripheral pattern can be embroidered separately.

In case user's embroidering periphery can be achieved by embroidering the peripheral pattern, and the peripheral pattern has a central "+" line, if the length of the central "+" line is insufficient, the No. 99 pattern can be used for supplementary embroidery. Therefore, the operation is especially convenient for positioning operation.

- (4) Press " \square " or " \square " key to end the operations of pattern periphery.
- (5) Press "I" or "E" key to go to the main picture.

12-3 Setting the Offset Point

What is called offset point can be an arbitrary point beyond the starting point of the pattern as shown in the following figure:



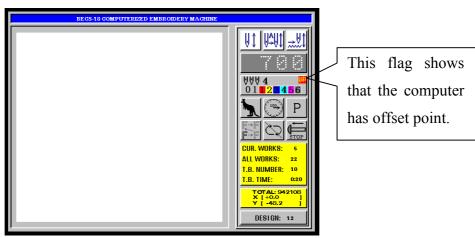
When you select a pattern and make the machine enter into the embroidery confirmation status, the system will clear the offset point. Operations for setting offset point and embroidering is as following:

- (1) Select a pattern for embroidering and make the machine enter into embroidery confirmation status. (See Section 3-4)
- (2) Press ", ", ", ", ", ", and ", to move the frame to the starting point of pattern.
- (3) Press " key, the menu appears as following:



COTHER MANAGEMENT	
 ⊗SET DESIGN PARAS ②FRAME TO POINT (OPTIONAL) ③DESIGN RANGE'S OPERATIONS ④OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⊗COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB. →OFF 	①HI-SPEED DESIGN 2 ②COMPILE PACKED DESIGN ③COMPILE EMBROIDER. DESIGN ⊗FRAME TO MAKE DESIGN ⊗ADD PATCH CODE TO DESIGN ⊗ADJUST BRAKE (OPTION) ⊗TO MAKE TRUE DESIGN RANGE ⑧TO SET ALL HEADS PATCH→N ⑨LET NEEDLE DOWN AND MOVE FRAME ⑩NO OUTPUTTING DESIGN→OFF
 ⊗PRE-DISPLAY THE DESIGN→N 3 ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS 	
ARROW OR NUMBER: MOVE, ENTER: CONFIRM	

- (4) Press "⁽¹⁾", "⁽¹⁾" key or digital "4" to move the cursor to "OFFSET", and then press
- (6) Press "-" key to continue, and the computer go to the main picture.



(7) Pull the bar and start embroidering.

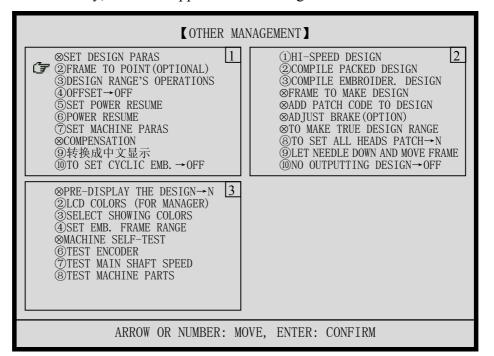
Note: The offset point is also the point to which the frame moves automatically while patching.



12-4 Setting Frame Protection when Power Off (Presetting of Protecting Frame Position when Power Off)

Operation:

(1) Press "key, the menu appears as following:



- (2) Press "⁽¹⁾", "⁽¹⁾" key or digital "5" to move the cursor to "SET POWER RESUME", and then press "^[1]" key.
- (3) Continue the operation according to the prompt, the frame will shift automatically to the absolute origin (both X axis and Y axis can be stopped by a limit switch), then return to the starting point before the frame shifting.
- (4) The main picture will automatically appear after it.

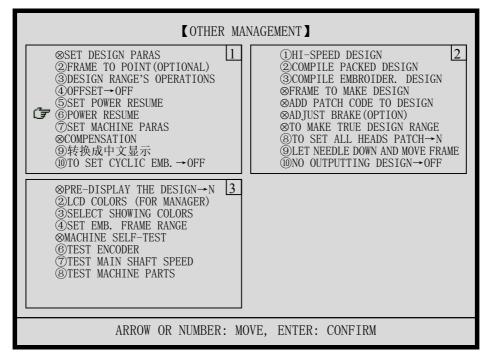
12-5 Frame Restoring after Power Off

In case of frame having been shifted after power off, this operation can be used to restore the frame position before power off when the power is on again. The proper performance of this operation is based on the presetting of protecting frame position before power off. In addition, if the power is off in the process of embroidering operation and the frame has not been shifted, you also can pull the operation bar to continue embroidering after power is on again.

Operation:



- (1) Turn the main shaft to the stopping position at 100 degrees
- (2) Press " key, the menu appears as following:



- (3) Press "⁽¹⁾", "⁽¹⁾" key or digital "6" to move the cursor to "POWER RESUME", and then press "-" key.
- (4) Continue the operation according to the prompt, the restoration of frame position can be achieved.
- (5) The main picture will automatically appear after it.

12-6 Setting the Machine Parameters

Operation:

(1) Press "E" key, the menu appears as following:



COTHER MAN	JAGEMENT
 SET DESIGN PARAS ②FRAME TO POINT (OPTIONAL) ③DESIGN RANGE'S OPERATIONS ④OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⊗COMPENSATION ⑨转换成中文显示 ⑪TO SET CYCLIC EMB. →OFF 	①HI-SPEED DESIGN2②COMPILE PACKED DESIGN③COMPILE EMBROIDER. DESIGN③FRAME TO MAKE DESIGN⊗ADD PATCH CODE TO DESIGN⊗ADJUST BRAKE (OPTION)⊗TO MAKE TRUE DESIGN RANGE⑧TO SET ALL HEADS PATCH→N⑨LET NEEDLE DOWN AND MOVE FRAME⑩NO OUTPUTTING DESIGN→OFF
 ⊗PRE-DISPLAY THE DESIGN→N ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS 	
ARROW OR NUMBER: MOVE, ENTER: CONFIRM	

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "7" to move the cursor to "SET MACHINE PARAS", and then press "¹," key.
- (3) The machine parameters are in 3 pages (you can press "⁽¹⁾") or "⁽²⁾" key to turn to other pages), which are as following figures. The parameters can be revised using "⁽¹⁾", "⁽¹⁾", digital keys, "⁽¹⁾" and "⁽¹⁾" keys.

[SET MACHINE PARAS]		
(J) START ANGLE: 2 8 0 1 (2) T. B. BACK STI.: 0 (3) T. B. DETECT: Y (4) OVERFRAME BY STEP: N (5) JUMP&TRIM: DONOT TRIM (6) PATCH COUNT: 1 STITCH (7) NEEDLES: 9 (8) TRIM MODE: 3 (9) STORE MANUAL-COLOR: N (10) AUTO ORIGIN: Y	①INITIALIZE SYSTEM!2②MAX. SPEED:8 5 0③JUMP STITCH SPEED:5 0 0④MINMUM SPEED:2 5 0⑤SHIFT LENGTH:7 • 0⑥SET RUN SPEED:8 0⑦STARTUP STITCHES:3⑧STARTUP ACCE.:1 0⑨STITCHES AFTER TRIM:2⑩SPEED AFTER TRIM:8 0	
①HIGH FRAMING SPEED: 2 0 ②LOW FRAMING SPEED: 1 5 ③DISPLAY STI. OR NOT: Y ④SET BRAKE PARA.: 1 1 ⑤STOP TO COLOR: N ⑥CTION AFTER TRIM: FRAME TO Y ⑦BORING: N ⑧MAIN MOTOR PARA.: 1 ⑨COLOR-CHANGE SPEED: 1 2 ⑩ROUNDS FOR BRAKE: 1	1 D I P 1: 0 4 2 D I P 2: 0 3 D I P 3: 0 4 D I P 4: 0 5 D I P 5: 0 6 D I P 6: 0 7SPEED WHEN OVERFRAME: 1 5 8LOCK STITCH WHEN TRIM: Y 9HOOK ANGLE BY MOTOR: 0 10SPEED WHEN TRIMMING: 8 0	
ARROW OR NUMBER: MO	OVE, ENTER: CONFIRM	



- (4) Press " $\underbrace{\mathbf{F}}_{\mathbf{E}\mathbf{C}}$ " to end the operation.
- (5) Press " $\underbrace{\mathbb{E}}$ " to go to the main picture.

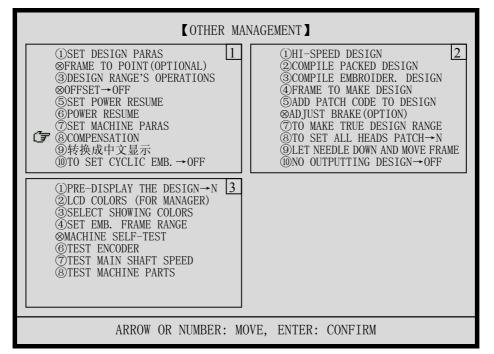
Note: for details, see chapter 28 about "Table of the Machine Parameters".

12-7 Compensating of Satin Stitches

This operation is able to search automatically the satin stitches of the assigned pattern and carry out compensation as required, thus obtaining a widening or narrowing result of satin stitches. After compensating of satin stitches, a new pattern will be created but the source pattern keeps unchanged.

Operation: (in embroidery preparation status)

(1) Press " key, the menu appears as following:



(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "8" to move the cursor to "COMPENSATION", and

- (3) Select the source pattern according to the prompt.
- (4) Input the X and Y compensation value, which ranges from -0.2 mm to +0.3 mm.
- (5) Input the number of destination pattern.
- (6) Wait a moment, the new destination pattern will be created.
- (7) Press " $\underbrace{\mathbb{E}}$ " to go to the main picture.

Chapter 13 Management of Pattern in Memory

Attentions: This design management must be done in the embroidery preparation status.

13-1 Select a Pattern for Embroidery

This function selects a pattern for the preparation-embroidering pattern. See section 3-4.

13-2 List the Pattern in Memory

This operation lets the operator able to view the pattern stored in memory, the pattern count, free memory, and also display the pattern information, such as color-changing times, stitch count, X range, Y range.

Operation:

(1) Press "(E)" key, the computer shows the design management menu as following:

	DESIGN MANAGEMENT
	①SELECT DESIGN FOR EMB.
(F	②SHOW MEMORY DESIGN
	③DISK INPUT
	(4)COPY
	(5)EDIT
	©DELETE
	(7) DIVIDE
	OMBINE
	@PACKED DESIGN
	<pre>@CLEAR ALL</pre>
	ARROW: MOVE, ENTER: CONFIRM

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"2" to move the cursor to "SHOW MEMORY DESIGN", and then press "^[-]" key.
- (3) Directory of pattern in memory is listed on screen and the pattern at the cursor is displayed automatically. In case of the directory exceeding one page, use "⁽¹⁾" or "⁽²⁾" key for viewing.
- (4) Press "⁽¹⁾", "⁽¹⁾" key to move cursor, and press "^[]" key to view the pattern in detail.
- (5) Now, you can view the pattern according to the prompt.
- (6) Press " $\underbrace{\mathbf{F}}_{\mathbf{E}}$ " to end viewing.



(7) Press "" or "" to end the design management.

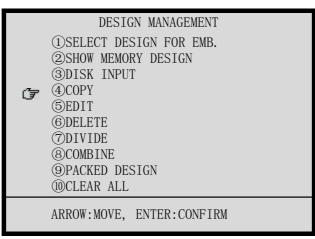
13-3 Input a Design into Memory from Floppy Disk

This operation can be seen in section 3-2.

13-4 Copy the Pattern

Operation:

(1) Press " key, the computer shows the design management menu as following:



- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"4" to move the cursor to "COPY ", and then press
- (3) Press "⁽¹⁾", "⁽¹⁾", "⁽¹⁾" and "⁽²⁾"key to select the source pattern, and then press
- (4) According to the prompt, input the number of destination pattern, and press " key to begin the copying.
- (5) Press "" or "" to end the design management.

13-5 Delete the Pattern

It deletes a pattern in the memory.

Operation:

(1) Press " key, the computer shows the design management menu as following:



	DESIGN MANAGEMENT
(Ŧ	 1)SELECT DESIGN FOR EMB. (2)SHOW MEMORY DESIGN (3)DISK INPUT (4)COPY (5)EDIT (6)DELETE
	 ⑦DIVIDE ⑧COMBINE ⑨PACKED DESIGN ⑩CLEAR ALL
	ARROW: MOVE, ENTER: CONFIRM

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"6" to move the cursor to "DELETE", and then press
 "⁽¹⁾" key.
- (3) Press "⁽¹⁾", "⁽¹⁾", "⁽¹⁾" and "⁽²⁾"key to select the pattern, and then press "^[1]" key

to go to next step or press " \mathbb{E} " key to quit.

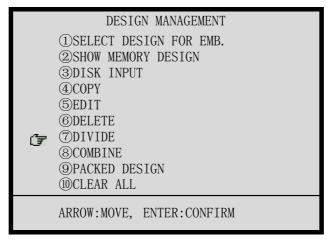
- (4) After the computer deletes the pattern, it will go to the design management menu.
- (5) Press "B" or "B" to end the design management.

13-6 Divide the Pattern

This operation is intended for dividing the pattern in memory into two new patterns and keeping the source pattern in memory unchanged.

Operation:

(1) Press "EV" key, the computer shows the design management menu as following:



(2) Press "⁽¹⁾", "⁽¹⁾" or digital key"7" to move the cursor to "DIVIDE", and then press



"-" key.

- (3) Press "⁽¹⁾", "⁽¹⁾", "⁽¹⁾" and "⁽²⁾"key to select the source pattern, and then press
- (4) After the prompt, input a stitch count (the first divided pattern has the stitches of the count number).
- (5) Input the number of first divided pattern.
- (6) Input the number of second divided pattern.
- (7) The computer does the dividing, and then will go to the design management menu.
- (8) Press "B" or "B" to end the design management.

13-7 Splice two Patterns

Operation:

(1) Press "It key, the computer shows the design management menu as following:

	DESIGN MANAGEMENT
	-
	(1)SELECT DESIGN FOR EMB.
	②SHOW MEMORY DESIGN
	③DISK INPUT
	(4)COPY
	5EDIT
	© DELETE
	(7)DIVIDE
(F	© COMBINE
	(9) PACKED DESIGN
	OCLEAR ALL
	ARROW: MOVE, ENTER: CONFIRM

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"8" to move the cursor to "COMBINE", and then press "^[1]" key.
- (3) Press "⁽¹⁾", "⁽¹⁾", "⁽¹⁾" and "⁽²⁾"key to select the first source pattern, and then press
- (4) Press "⁽¹⁾", "⁽¹⁾", "⁽¹⁾" and "⁽²⁾"key to select the second source pattern, and then press "⁽¹⁾" key.
- (5) According to the prompt, input the distance between the end stitch of first pattern and



the beginning stitch of second pattern.

- (6) Input the number of destination pattern.
- (7) The computer does the splicing, and then will go to the design management menu.
- (8) Press "Press" or "Press" to end the design management.

13-8 Editing the Packed Pattern

The packed pattern means a pattern group packed from several (less than 100) normal patterns in memory after setting parameters, which is intended for continuous embroidery automatically.

Operation:

(1) Press "(E)" key, the computer shows the design management menu as following:

	DESIGN MANAGEMENT
	①SELECT DESIGN FOR EMB.
	②SHOW MEMORY DESIGN
	③DISK INPUT
	(4)COPY
	(5)EDIT
	©DELETE
	(7) DIVIDE
	OMBINE
(F)	<pre> @PACKED DESIGN </pre>
2	<pre>@CLEAR ALL</pre>
	ARROW: MOVE, ENTER: CONFIRM

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"9" to move the cursor to "PACKED DESIGN", and then press "^[1]" key.
- (3) The lower side of screen prompts you to enter the number of packed pattern. Input "0" for abandoning editing operation, or input a non-existent number of pattern for creating a packed pattern, or input an existent packed pattern for editing it. Whereas input a number of existent normal pattern in memory, then you must repeat the input.
- (4) Enter into the menu of editing packed pattern:



	SERIES: 1	
Ţ,	<pre>①DESIGN No: ②DIRECTION: ③ROTATE: ④X-SCALE: ⑤Y-SCALE: ⑥X INTERV TO No1: ⑦Y INTERV TO No1:</pre>	0 P 0 100 100 +0. 0 +0. 0
	PAGE:OTHERS, ESC:RET	URN

You must input the following parameters for each packing normal pattern: number of pattern in memory, design direction, angle of rotation, X magnification, Y magnification, X distance relative to the first pattern and Y distance relative to the first pattern.

Pressing "O" and "O" key, you can set several patterns. After completion, press "O" key to store the packed pattern and return to the design management. Or press "O" key and decide whether you save the packed pattern, then return to the design management.

(5) Press "" or "" to end the design management.

13-9 Clear All Patterns in Memory

This operation is intended for clearing all patterns in memory, be careful to use it! Operation:

(1) Press "By" key, the computer shows the design management menu as following:

	DESIGN MANAGEMENT
	(1)SELECT DESIGN FOR EMB.
	②SHOW MEMORY DESIGN
	③DISK INPUT
	(4)COPY
	(5)EDIT
	©DELETE
	() DIVIDE
	(8)COMBINE
	⁽⁹⁾ PACKED DESIGN
(Tar	(O)CLEAR ALL
2	<u> </u>
	ARROW: MOVE, ENTER: CONFIRM
	,,



- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"0" to move the cursor to "CLEAR ALL", and then press "⁽¹⁾" key.
- (3) The lower side of screen prompts you to check whether or not you clear all patterns. Press "⁽¹⁾", "⁽¹⁾" keys to change [YES] or [NO]. Select [YES] and press "⁽¹⁾" key to clear all patterns. If select [NO] and press "⁽¹⁾" key or press "⁽¹⁾" key to give up the operation.
- (4) Press "" or "" to end the design management.

Chapter 14 Edit of the Pattern in Memory

Adopting the most convenient, direct-viewing and full-screen editing mode, the function of editing pattern in memory has more advantages, such as: easy editing, flexible, faultless.

This function is able to directly carry out edit of the pattern with stitch count of less than 65 thousand. For the oversize pattern, indirect edit can be made. As for the oversize pattern, it is recommended to divide the pattern into several sub-patterns (the sub-patterns to be edited have stitch count of less than 65 thousand) which will then be edited respectively, and finally several sub-patterns are spliced in order. Owing to the oversize patterns appear seldom, therefore the contradiction between editing speed and editing oversize pattern will be solved easily.

14-1 Entering the Edit of Pattern in Memory

Operation:

(1) Press "(1) key, the computer shows the design management menu as following:

	DESIGN MANAGEMENT
	()SELECT DESIGN FOR EMB.
	②SHOW MEMORY DESIGN
	③DISK INPUT
	(4)COPY
(₹	(5)EDIT
_	©DELETE
	⑦DIVIDE
	OMBINE
	③PACKED DESIGN
	<pre>(ID)CLEAR ALL</pre>
	ARROW: MOVE, ENTER: CONFIRM

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"5" to move the cursor to "EDIT", and then press
- (3) The lower side of screen prompts: "EDIT NEW DESIGN?", you can press "⁽¹⁾",
 - "^(I)" keys to change [YES] or [NO]. If you select [YES] and press "^[]" key, you should input the number of new pattern. If you select [NO] and press "^[]" key, then you can select an existent normal pattern for editing.
- (4) After editing the pattern (See the following sections), the design management



appears.

(5) Press "" or "" to end the design management.

14-2 How to Edit a Stitch

After entering to the function of editing pattern in memory, the data of pattern will be displayed on the screen:

3	+ 0	+ 0
3	+ 0	+ 50
3	+ 6	- 50
3	+ 0	+ 50
3	+ 6	- 50
3	+ 0	+ 50
3	+ 6	- 50
7	+ 0	+ 1
	STITCH :	1

Of which data on a line presents a stitch. The first row is the code of the stitch. Its codes are as following. The second row is the value of X (unit: 0.1 mm) and the third row is the value of Y (unit: 0.1 mm).

- 0: invalid stitch
- 3 : satin stitch
- 4: jumping
- 5: frame jumping
- 6: absolute jumping
- 7: color-changing
- 8 : stop
- 9: towel embroidery

1. Modifying a stitch

You can use " \bigcirc ", " \bigcirc ", " \bigcirc ", " \bigcirc ", " \bigcirc " and " \circlearrowright ", " \bigcirc " keys to move the cursor, and use digital key to input numeral. It is necessary to point out that the range of X and Y values of stitch length is $-127 \sim +127$. In case the input value is out of the range, the machine will not confirm this entry. For instance, when changing "+126" to "+63", first



move the cursor underneath "+", then press " $^{+/-}$ ", " 6 " and " 3 " keys.

2. Deleting a stitch

Use "0", "0", "0", and "0" keys to move the cursor underneath the stitch to be deleted, then press "0" key to delete the stitch. And the deleted stitch is stored for using it for inserting a stitch.

3. Inserting a stitch

Use "⁽ⁱ⁾", "⁽ⁱ⁾", "⁽ⁱ⁾", and "^(j)" keys to move the cursor underneath a stitch, press

<u>Attention must be paid that when a pattern requires adding one stitch, inserting a</u> <u>stitch must be used.</u>

14-3 Rapidly Searching a Stitch

Operation:

(1) Press " \mathbb{R} " or "?" key to enter into the following menu:

	PRESS ? KEY TO DO:
Ţ	 ①GO TO STI. ②GO TO CODE ③BLOCK ④HELP ⑤SAVE & EXIT ⑥QUIT

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"1" to move the cursor to "GO TO STI.", and then press "⁽¹⁾" key.
- (3) Input the stitch number to which the cursor will go.
- (4) The cursor will directly go to the stitch.

14-4 Rapidly Searching a Special Stitch

Operation:

(1) Press " \mathbb{E} " or "?" key to enter into the following menu:



```
PRESS ? KEY TO DO:

1 GO TO STI.

2 GO TO CODE

3 BLOCK

4 HELP

5 SAVE & EXIT

6 QUIT
```

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"2" to move the cursor to "GO TO CODE", and then press "⁽¹⁾" key.
- (3) Input the code of stitch which the computer will search backwards from the current stitch.
- (4) If finding the code, the cursor will directly go to the stitch with this code.

14-5 Block Operation

The block means a part of continuous stitches of the pattern in memory. Its function is intended for performing rapid operations to these continuous stitches: copying, moving, deleting and merging several patterns in memory.

Operation:

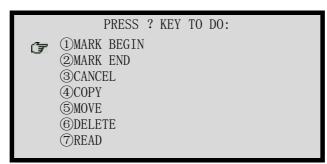
(1) Press "
 [?] or "
 [?] key to enter into the following menu:
 PRESS ? KEY TO DO:
 1GO TO STI.
 2GO TO CODE

SAVE & EXIT

③BLOCK

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"3" to move the cursor to "BLOCK", and then press
- (3) the block operation menu is as following figure:





These functions interpret as following: "MARK BEGIN" is defined as block beginning. "MARK END" is defined as block end. "COPY" refers to copy the block to the position of cursor. "MOVE" refers to move the block to the position of cursor. "DELETE" refers to delete all stitches in the block. "READ" means that the machine will take a pattern (you first input the number of pattern) as a block and read the block at end of editing pattern.

14-6 Help for Editing

Operation:

(1) Press "[1]" or "[2]" key to enter into the following menu:

	PRESS ? KEY TO DO:
4	 ①GO TO STI. ②GO TO CODE ③BLOCK ④HELP ⑤SAVE & EXIT ⑥QUIT

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"4" to move the cursor to "HELP", and then press
 "⁽¹⁾" key.
- (3) Display the help relating to "HOW TO EDIT A PATTERN", press any key to end it.

14-7 Saving the Editing Pattern and Exit

Operation:

(1) Press " \mathbb{H} " or "?" key to enter into the following menu:



	PRESS ? KEY TO DO:	
	①GO TO STI.	
	②GO TO CODE	
	③BLOCK	
	(4)HELP	
Ŧ	(5) SAVE & EXIT	
-	©QUIT	

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key"5" to move the cursor to "SAVE & EXIT", and then press "^[1]" key.
- (3) The computer begins to save the pattern, and then exit the editing.

14-8 Quitting the Editing

Operation:

(1) Press " \mathbb{R} " or "?" key to enter into the following menu:

	PRESS ? KEY TO DO:
	①GO TO STI.
	②GO TO CODE
	③BLOCK
	(4)HELP
	⑤SAVE & EXIT
(77	©QUIT
-	

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "6" to move the cursor to "QUIT", and then press
- (3) The computer prompts you to save the editing pattern, and you can select [YES] or [NO], then press ", key to go to the design management operation.
- (4) The computer exits the editing.

Chapter 15 Operations Help

This function helps users to perform the operations and displays prompting message. Operation:

- (1) At the main picture, press "?" key to enter the help-show frames
- (2) Press any key to turn to other frames till exit.

Chapter 16 Moonogramming and Making a High-speed Pattern

16-1 monogramming (optional)

If there is a "Disk of Letter Library" with your embroidery machine, you can embroider any text with 28 fonts at will. In the disk there are 28 kinds of forms of written or printed characters which 26 capital letters of English alphabet, or 26 small letters of English alphabet, or digits 0~9. Users can create monograms in horizontal line, vertical line, or three-point arc.

For the first time, users must install the letter library from "Disk of Letter Library" to memory, which will run out about 200,000 stitches store and can be set free by the operation of "Deleting the letter library".

1. Installing the letter library

Operation:

(1) Press "" key (in embroidery preparation status), the following figure appears:

DISK MANAGEMENT
(1)DISK DIR
2 INPUT
③OUTPUT (DSB)
(4)DEL FILE
⑤FORMAT 720K
⑥FORMAT 1.44M
⑦INSTALL LETTER LIBS
®DELETE LETTER LIBS
-
ARROW: MOVE, ENTER: CONFIRM
ARROW, MOVE, ENTER, CONFIRM

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "7" to move the cursor to "INSTALL LETTER LIBS", and then press "⁽¹⁾" key.
- (3) Insert the disk of letter library according to the prompt, and press "-", key.
- (4) Wait for about 6 minutes to copy files.
- (5) Do the operation of "Listing the pattern in memory" (Seeing section 13-2) to check if the letter library is installed correctly. If so it were, the file count should increase by 56. Otherwise do the operation of "Deleting letter library" first and then do this operation again.
- 2. Deleting letter library



Operation:

- (1) Press """ key (in embroidery preparation status), the following figure appears:
 - DISK MANAGEMENT (DISK DIR (2)INPUT (3)OUTPUT(DSB) (4)DEL FILE (5)FORMAT 720K (6)FORMAT 1.44M (7)INSTALL LETTER LIBS (2)DELETE LETTER LIBS (3)DELETE LETTER LIBS (3)DESIGN A LETTER PATTERN ARROW: MOVE, ENTER: CONFIRM
- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "8" to move the cursor to "DELETE LETTER LIBS",

and then press "-" key.

- (3) Press "⁽¹⁾" or "⁽¹⁾" key to select [YES] and press "^[1]" key to delete the letter library, what will free about 200,000 stitches store.
- 3. Monogramming

Operation:

(1) Press """ key (in embroidery preparation status), the following figure appears:

	DISK MANAGEMENT	
	(1)DISK DIR	
	2 INPUT	
	③OUTPUT (DSB)	
	(4)DEL FILE	
	5FORMAT 720K	
	©FORMAT 1.44M	
	(7) INSTALL LETTER LIBS	
	③DELETE LETTER LIBS	
(F	(9) DESIGN A LETTER PATTERN	
	ARROW: MOVE, ENTER: CONFIRM	

- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "9" to move the cursor to "DESIGN A LETTER PATTERN", and then press "^[]" key.
- (3) Then enter into the setting parameters of the characters as follows figure. After setting



 (1) ARRANGE: (2) CHAR FORM: (3) X SCALE: (4) Y SCALE: (5) DENSITY: (6) COLOR: (7) X SPACE: (8) Y SPACE: (9) ANGLE: 	HORIZONTAL 1 100 100 100 N +0. 0 +0. 0 0
--	--

the parameters, press " \mathbb{E} " key to go to next step.

- (4) For the "ARC" arrangement, you should input the interrelated parameters, and press
 "Ext" key to go to next step after finishing setting the parameters.
- (5) Input all the characters according to the characters' code printed on the LCD, and press "," key to go on, or press "Etc" key to exit.
- (6) The system shows the letter pattern, and you can adjust the letters about their positions, forms, angles, scales, etc. Press "Est" key to go on.
- (7) The system asks you to select [YES] to create the letter pattern, or select [NO] to exit.
- (8) The system shows the pattern, and you press "Esc" key to end the showing.
- (9) Select "YES" to save the pattern, or select "NO" to give up the pattern.

16-2 Making a High-speed Pattern

If the stitch length is greater than 7.0mm during embroidering, the main shaft speed will slow down. And if you hope it does not occur, you can make a high-speed pattern from the pattern and embroider with the high-speed pattern, which will not make the main shaft slow down.

Operation:

(1) Press "^[L]" key, and then press "^(C)" key, the menu appears as following:



①SET DESIGN PARAS 1 ØFRAME TO POINT(OPTIONAL) ③DESIGN RANGE'S OPERATIONS	ANAGEMENT (F) (1)HI-SPEED DESIGN (2)COMPILE PACKED DESIGN (3)COMPILE EMBROIDER. DESIGN (4)COMPILE EMBROIDER. DESIGN
⊗OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⑧COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB.→OFF	(④)FRAME TO MAKE DESIGN ⑤)ADD PATCH CODE TO DESIGN ⊗ADJUST BRAKE (OPTION) ⑦)TO MAKE TRUE DESIGN RANGE ⑧)TO SET ALL HEADS PATCH→N ⑨)LET NEEDLE DOWN AND MOVE FRAME ⑩)NO OUTPUTTING DESIGN→OFF
 ①PRE-DISPLAY THE DESIGN→N ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS 	
ARROW OR NUMBER: MOVE, ENTER: CONFIRM	

- (2) The cursor will be at "HI-SPEED DESIGN", and then press ", key.
- (3) Select the pattern, and press ", key.
- (4) Input the number of the new high-speed pattern.
- (5) The system will create the new high-speed pattern automatically.
- (6) Press the key " \mathbf{F} " to go to the main picture.
- (7) If necessary, embroider the new pattern.

Chapter 17 Compile the Packed Pattern and Embroidering Pattern

17-1 Compile the Packed Pattern

Operation:

- (1) Press "E" key, and then press "" key, the menu appears as following: **[**OTHER MANAGEMENT] ©SET DESIGN PARAS ②FRAME TO POINT(OPTIONAL) ③DESIGN RANGE'S OPERATIONS 1)HI-SPEED DESIGN 2)COMPILE PACKED DESIGN 2 ③COMPILE EMBROIDER. DESIGN ⊗FRAME TO MAKE DESIGN ⊗ADD PATCH CODE TO DESIGN ④OFFSET→OFF ⑤SET POWER RESUME ⊗ADJUST BRAKE (OPTION) 6 POWER RESUME ©TO MAKE TRUE DESIGN RANGE ⑧TO SET ALL HEADS PATCH→N ⑦SET MACHINE PARAS ⊗COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB.→OFF ③LET NEEDLE DOWN AND MOVE FRAME ⑩NO OUTPUTTING DESIGN→OFF ⊗PRE-DISPLAY THE DESIGN→N ②LCD COLORS (FOR MANAGER) 3 **SELECT SHOWING COLORS** ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST **©TEST ENCODER** ⑦TEST MAIN SHAFT SPEED **®TEST MACHINE PARTS** ARROW OR NUMBER: MOVE, ENTER: CONFIRM
- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "2" to move the cursor to "COMPILE PACKED

DESIGN", and then press "-----" key.

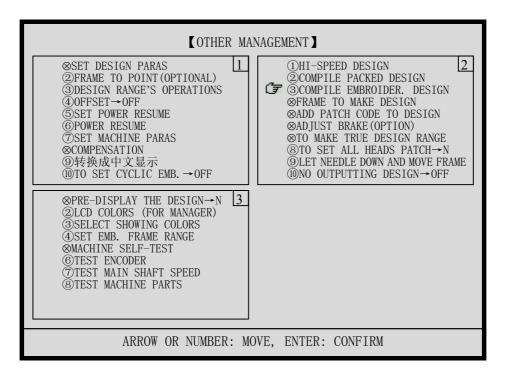
- (3) Select the packed pattern which extension name is "PAR", and press "[__]" key.
- (4) Press "- " key to confirm compiling the packed pattern, or press other key to exit.
- (5) Input the number of new pattern, and the system will create the new normal pattern automatically, which is identical with the packed pattern.
- (6) Press " $\underbrace{\blacksquare}_{\underline{BC}}$ " key to go to the main picture.

17-2 Compile the Embroidering Pattern

Operation:

(1) Press "I" key, and then press "I" key, the menu appears as following:





- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "3" to move the cursor to "COMPILE EMBROIDER.
 DESIGN", and then press "^[1]" key.
- (3) Press " key to confirm compiling the embroidering pattern, or press other key to exit.
- (4) Input the number of new pattern, and the system will create the new normal pattern automatically, which is identical with the embroidering pattern having the embroidering parameters.
- (5) Press " \mathbb{I} " key to go to the main picture.

Chapter 18 Initialize the System Parameters during Electrifying

If some data in the system is illegal by rare chance, which is caused by outside interference or by software bugs, the machine may not work after power-on. To solve this problem, you can initialize the system parameters during electrifying as following: Operation:

- (1) Press and hold "-" key, and turn on the power of machine.
- (2) The system initializes the system parameters and gives a sound, and release off "[__]" key, the machine will start working.

Chapter 19 Adding Patch Codes to a Design

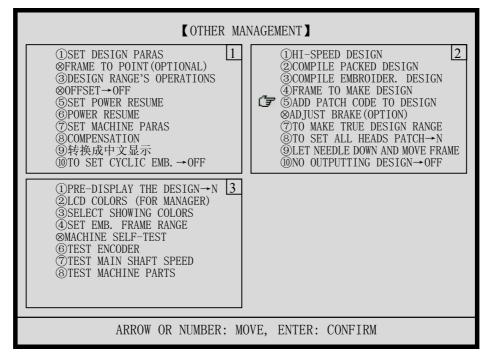
During embroidering, you may want to shift the frame in order to stick a patch expediently. The ways of shifting frame are: manual frame shifting and auto frame shifting.

Manual frame shifting is done as following: First, the machine automatically stops at a stitch of stop code while embroidering. Second, shift the frame to the deserved position by pressing the frame-shifting keys, and stick a patch. Then, press "()" and "()" keys, you will make the frame move to the stop position. Finally, pull the bar to continue embroidering.

Auto frame shifting is done as following: First, add patch codes to the design, which is describe in the next paragraph. Then, select the design and set it into embroidery confirmation status. Again, set the offset point for this design. Finally, pull the bar and start to embroider. The machine will pause at a stitch of patch code and automatically shift the frame to the offset point, which will let you stick a patch expediently. You can pull the bar to continue embroidering after stick the patch.

The operation of adding patch codes to a design is as following:

(1) Press "E" key, and then press "⁽¹⁾" key, the menu appears as following:



(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "5" to move the cursor to "ADD PATCH CODE TO DESIGN", and then press "-" key.



- (3) Select the pattern for being added patch code, and press " key
- (4) According to the prompt, you will be asked to add a patch code for each of color codes and stop codes, or not do so.
- (5) Press " $\underbrace{\mathbb{E}}_{\mathbb{E}}$ " key to go to the main picture.

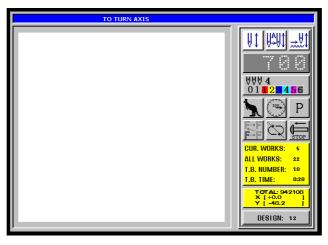
If you add a patch code for the color code, one stop code will be added into the pattern before the color code. So, if you do not want the machine stop while processing the color code, you should delete the stop code using the function "Edit the Pattern in Memory".

Chapter 20 Turn the Main Axis at 100 Degree Manually

Warning: the operation will rotate the main shaft, and the operator should pay attention to it.

If necessary, you can turn the main axis and make the main shaft stops at 100 degree by manually pressing the keys as following:

(1) Press " \bigcirc " key, the main picture appears as following:



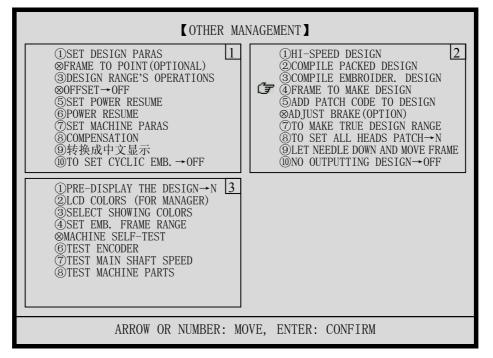
(2) Press "-" key to turn the main axis at 100 degree, or press other key to quit.

Chapter 21 Shift the Frame to Make a New Design

Sometimes, you want to embroider the boundary of a design before embroidering it. The function of "Shift the Frame to Make a New Design" can create such a design, and you can select the new design to embroider the boundary.

Operation:

- (1) In embroidery preparation status, shift the frame to the starting point of pattern.
- (2) Press " key, and then press " key, the menu appears as following:



- (3) Press "⁽¹⁾", "⁽¹⁾" or digital key "4" to move the cursor to "FRAME TO MAKE DESIGN", and then press "^[] key.
- (4) According to the prompt, enter the maximum stitch length.
- (5) Shift the frame along the boundary of deserved design, and press ", key to set the points which are assembled into the pattern trace. Meantime, you can press ", key to vary the stitch code between satin stitch and jump stitch.
- (6) Press " $\underbrace{\mathbf{k}}_{\mathbf{k}}$ " key to end inputting the trace points.
- (7) According to the prompt, input the number of new pattern, and press " key to create the new pattern.
- (8) Press "[si]" key to go to the main picture.

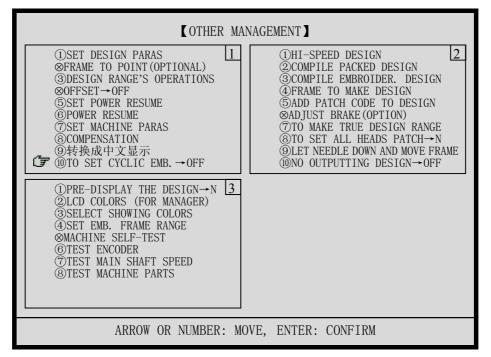
Chapter 22 Setting the Cyclic Embroidering

When the machine is set into the cyclic embroidering, the computer will make the frame return to the starting point and the machine will start embroidering the pattern once again without pulling the bar after the machine has finished embroidering the pattern one time.

This setting will increase the productivity of embroidering.

Operation of setting or canceling of the cyclic embroidering:

(1) Press " key, the menu appears as following:



- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "0" to move the cursor to " TO SET CYCLIC EMB.", and then press "^[-]" key.
- (3) Press "⁽¹⁾", "⁽¹⁾" keys to select "ON" or "OFF", and press "^[1]" key. If the machine is in the cyclic embroidering, the icon "^[1]" will appear. Otherwise, the icon "^[1]" will replace the former icon "^[1]".
- (4) Press " $\underbrace{\mathbb{E}}_{\mathbb{E}}$ " key to turn to the main picture.

Chapter 23 Adjust the Machine's Braking(for Manufacturer)

23-1 Summary

This function is intended for advising the control parameters of machine braking, so let the machine braking be optimal. The computer provides with one of the following two methods.

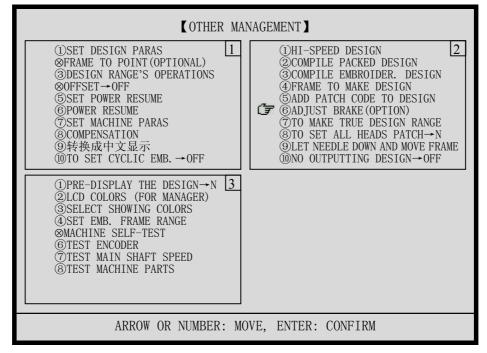
- (1) The function of "ADJUST BRAKE (OPTION)" in "OTHER MANAGEMENT" menu.
- (2) Setting the parameters of "SET BRAKE PARA." and "MAIN MOTOR PARA." in "Setting the Machine Parameters" menu.
- A machine only uses one method to adjust the machine's braking.

23-2 The Function of "ADJUST BRAKE (OPTION)"

Warning: the operation will rotate the main shaft, and the operator should pay attention to it.

Operation:

(1) Press "^[]" key, and then press "^{(]}" key, the menu appears as following:



(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "6" to move the cursor to "ADJUST BRAKE (OPTION)", and then press "^[-]" key. If the function can not be done, you should use



the other method in Section 23-3.

- (3) Now, you can adjust the brake speed. The main shaft spins.
 - a) If the main shaft spins too slowly or does not spin, press "⁽¹⁾" key to fasten or press "⁽¹⁾" key to fasten a little.
 - b) If the main shaft spins too fast, press "⁽¹⁾" key to slow down or press "⁽¹⁾" key to slow down a little.
 - c) If the speed is not fast and the main shaft spins smoothly, press "[]" key to go to next step.
- (4) Now, you can adjust the brake time. First, the main shaft spins one cycle and try to stop at 100 degree. Then, you should check the stop position for pressing a key to adjust the stop position. The adjusting method is as following:
 - a) If the main shaft stops at smaller than 100 degree, press "⁽ⁱ⁾" key to lengthen the time or press "^(j)" key to lengthen the time a little.
 - b) If the main shaft stops at greater than 100 degree, press "⁽¹⁾" key to shorten the time or press "⁽¹⁾" key to shorten the time a little.

23-3 Setting Parameters of "SET BRAKE PARA." and "MAIN MOTOR PARA."

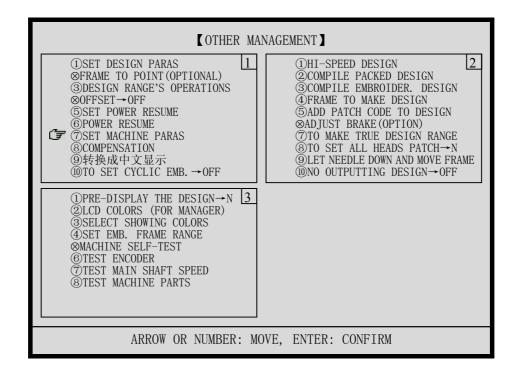
23-3-1 setting the parameter of "SET BRAKE PARA."

This setting is use for adjusting the stop position of main shaft. If the main shaft stops at smaller than 100 degree, increase the value duly. If the main shaft stops at greater than 100 degree, decrease the value duly. The range of the parameter is form 0 to 30, which recommended value is 9 or 0.

Operation:

(1) Press "I" key, the menu appears as following:





(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "7" to move the cursor to "SET MACHINE PARAS",

and then press "-" key.

(3) Press "(3)" key twice to turn to page 3, which is as following:

K SET MACH	IINE PARAS]	
①START ANGLE:2 8 01②T. B. BACK STI.:0③T. B. DETECT:Y④OVERFRAME BY STEP:N⑤JUMP&TRIM:DONOT TRIM⑥PATCH COUNT:1 STITCH⑦NEEDLES:9⑧TRIM MODE:3⑨STORE MANUAL-COLOR:N⑩AUTO ORIGIN:Y	①INITIALIZE SYSTEM!2②MAX. SPEED:8 5 0③JUMP STITCH SPEED:5 0 0④MINMUM SPEED:2 5 0⑤SHIFT LENGTH:7 • 0⑥SET RUN SPEED:8 0⑦STARTUP STITCHES:3⑧STARTUP ACCE.:1 0⑨STITCHES AFTER TRIM:2⑩SPEED AFTER TRIM:8 0	
①HIGH FRAMING SPEED: 2 0 3 ②LOW FRAMING SPEED: 1 5 3 ③DISPLAY STI. OR NOT: Y 4 ④SET BRAKE PARA.: 1 1 5 ⑤STOP TO COLOR: N 6 ⑥CTION AFTER TRIM: FRAME TO Y 7 ⑦BORING: N 8 ⑧MAIN MOTOR PARA.: 1 9 ⑨COLOR-CHANGE SPEED: 1 2 1 ⑩ROUNDS FOR BRAKE: 1 1	1 D I P 1: 0 4 2 D I P 2: 0 3 D I P 3: 0 4 D I P 4: 0 5 D I P 5: 0 6 D I P 6: 0 7SPEED WHEN OVERFRAME: 1 8LOCK STITCH WHEN TRIM: Y 9HOOK ANGLE BY MOTOR: 0 10SPEED WHEN TRIMMING: 8 0	
ARROW OR NUMBER: MOVE, ENTER: CONFIRM		

(4) Press "⁽¹⁾", "⁽¹⁾" or digital key "4" to move the cursor to "SET BRAKE PARA.", and



then press "-" key.

- (5) Press "(1)", "(1)" key to change the value.
- (6) Press "-" key to set the parameter.

23-3-2 setting the parameter of "MAIN MOTOR PARA."

This setting is use for adjusting the match of the main motor and the mechanical parts. The range of the parameter is form 0 to 30, which default value is 0. During braking, if the main shaft wobbles, quivers, or turn around, you should increase the value. Or the main shaft spins too fast, you should decrease the value.

Operation:

(1) Press "E" key, the menu appears as following:

COTHER MANAGEMENT		
①SET DESIGN PARAS ③FRAME TO POINT (OPTIONAL) ③DESIGN RANGE'S OPERATIONS ⊗OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⑧COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB.→OFF	①HI-SPEED DESIGN 2 ②COMPILE PACKED DESIGN ③COMPILE EMBROIDER. DESIGN ④FRAME TO MAKE DESIGN ⑤ADD PATCH CODE TO DESIGN ⊗ADJUST BRAKE (OPTION) ⑦TO MAKE TRUE DESIGN RANGE ⑧TO SET ALL HEADS PATCH→N ⑨LET NEEDLE DOWN AND MOVE FRAME ⑩NO OUTPUTTING DESIGN→OFF	
(1)PRE-DISPLAY THE DESIGN→N 3 ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER (7)TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS		
ARROW OR NUMBER: MOVE, ENTER: CONFIRM		

(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "7" to move the cursor to "SET MACHINE PARAS",

and then press "-" key.

(3) Press "(3)" key twice to turn to page 3, which is as following:



K SET MACHI	NE PARAS	
①START ANGLE:2 8 01②T. B. BACK STI.:0③T. B. DETECT:Y④OVERFRAME BY STEP:N⑤ JUMP&TRIM:DONOT TRIM⑥PATCH COUNT:1 STITCH⑦NEEDLES:9⑧TRIM MODE:3⑨STORE MANUAL-COLOR:N⑩AUTO ORIGIN:Y	①INITIALIZE SYSTEM!2@MAX. SPEED:8 5 0③JUMP STITCH SPEED:5 0 0④MINMUM SPEED:2 5 0⑤SHIFT LENGTH:7 • 0⑥SET RUN SPEED:8 0⑦STARTUP STITCHES:3⑧STARTUP ACCE.:1 0⑨STITCHES AFTER TRIM:2⑩SPEED AFTER TRIM:8 0	
①HIGH FRAMING SPEED: 2 0 3 ②LOW FRAMING SPEED: 1 5 3 ③DISPLAY STI. OR NOT: Y 4 ④SET BRAKE PARA.: 1 1 5 ⑤STOP TO COLOR: N 6 ⑥CTION AFTER TRIM: FRAME TO Y 7 ⑦BORING: N 8 @COLOR-CHANGE SPEED: 1 2 1 ⑩ROUNDS FOR BRAKE: 1 1	1) D I P 1: 0 4 2) D I P 2: 0 3) D I P 3: 0 4) D I P 4: 0 5) D I P 5: 0 6) D I P 6: 0 7) SPEED WHEN OVERFRAME: 1 8) LOCK STITCH WHEN TRIM: Y 9) HOOK ANGLE BY MOTOR: 0 10) SPEED WHEN TRIMMING: 8 0	
ARROW OR NUMBER: MOVE, ENTER: CONFIRM		

- (4) Press "⁽¹⁾", "⁽¹⁾" or digital key "8" to move the cursor to "MAIN MOTOR PARA.", and then press "-" key. (5) Press "(1)", "(1)" key to change the value.
- (6) Press ", key to set the parameter.

23-4 Test for Adjusting the Machine's Braking

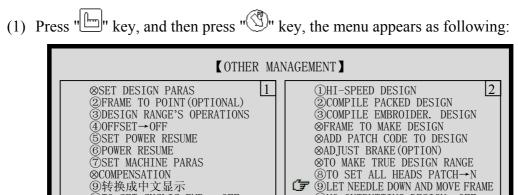
After adjusting the machine's braking using the method of section 23-2 or section 23-3, you should turn the main shaft (Seeing chapter 20) to see whether the machine's braking is satisfactory. If not satisfactory, adjust the braking using the method of section 23-2 or section 23-3.

Chapter 24 Let the Needle Sew Down and Move the Frame

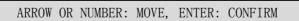
Warning: the operation will rotate the main shaft, and the operator should pay attention to it.

The function is intended for special sewing. After the needles sewing down, the needles will fasten the embroidering cloth, and then the operator can loose the cloth from the frame and move the frame, what is for continuous embroidering in the long cloth.

Operation:



3



(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "9" to move the cursor to "TO LET NEEDLE DOWN

ſ₹

[™]NO OUTPUTTING DESIGN→OFF

AND MOVE FRAME", and then press "-" key.

10TO SET CYCLIC EMB. →OFF

⑦TEST MAIN SHAFT SPEED ®TEST MACHINE PARTS

⊗PRE-DISPLAY THE DESIGN→N ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS
④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST **⑥TEST ENCODER**

- (3) Press "[]" key to confirm the operation, or press other key to give up it.
- (4) Now, you can move the frame to the desired position. Press "-" key to finish.
- (5) After ending the operation, you should turn the main shaft at 100 degree (Seeing chapter 20).
- (6) At the moment, you can continue embroidering.

Chapter 25 No Output of the Pattern in Memory

25-1 Summary

The function will prevent the pattern in memory from being copied illegally. In case the user of machine has set a password for "NO OUTPUTTING DESIGN", the other man can not execute the operation of "OUTPUT (DSB)" in disk management menu. If the user want to do the operation, he must cancel the password for "NO OUTPUTTING DESIGN".

25-2 Setting a Password for "NO OUTPUTTING DESIGN"

Operation:

(1) Press "E" key, and then press "⁽¹⁾" key, the menu appears as following:

COTHER M	IANAGEMENT	
⊗SET DESIGN PARAS 1 ②FRAME TO POINT(OPTIONAL) ③DESIGN RANGE'S OPERATIONS ④OFFSET→OFF ⑤SET POWER RESUME ⑥POWER RESUME ⑦SET MACHINE PARAS ⊗COMPENSATION ⑨转换成中文显示 ⑩TO SET CYCLIC EMB. →OFF	$\begin{array}{c c} \hline (1) \text{HI}-\text{SPEED DESIGN} & 2\\ \hline (2) \text{COMPILE PACKED DESIGN} \\ \hline (3) \text{COMPILE EMBROIDER. DESIGN} \\ \hline (3) COMPILE EMBROIDER. DESIGN \\ \hline (3) \text{COMPILE EMBROIDER. DESIGN \\ \hline (3) \text{COMP$	
 ⊗PRE-DISPLAY THE DESIGN→N ②LCD COLORS (FOR MANAGER) ③SELECT SHOWING COLORS ④SET EMB. FRAME RANGE ⊗MACHINE SELF-TEST ⑥TEST ENCODER ⑦TEST MAIN SHAFT SPEED ⑧TEST MACHINE PARTS 		
ARROW OR NUMBER: MOVE, ENTER: CONFIRM		

(2) Press "⁽¹⁾", "⁽¹⁾" or digital key "0" to move the cursor to "NO OUTPUTTING

DESIGN", and then press " key.

- (3) Press "[-]" key to confirm the operation, or press other key to give up it.
- (4) Input a 4-digital password (except for "0", "00", "000", "0000"), press "-" key to finish.

25-3 Canceling the Password for "NO OUTPUTTING DESIGN"

Having set a password, you can do the steps in section 25-2 and input the password to



cancel it.

In addition, the computer will cancel the password automatically by executing of the operation of "CLEAR ALL" in design management menu.

Chapter 26 EMBROIDERING MANAGEMENT AND ERROR STATICS

26-1 Management Information in the Main Picture

In embroidery confirmation state, user can view the following management information: Current Works, Total Works, Thread Broke Number, Thread Broke Time. As for these definitions, see the next section.

These information are varied with the process of embroidering, they are refreshed and displayed when the machine stop embroidering.

26-2 Statistic about embroidering

The computer can provide some statistic data for the machine manager to settle the embroidering work.

Operation:

(1) Press " , key to show statistic data about embroidering, which is as following:

[EMBROIDERY]

TOTAL TIME:	4:38:45
EMB. TIME:	4:32:19
STOP TIME:	0:6:26
T.B. NUM:	10
T.B. TIME:	0:20
TOTAL WORKS:	22
POWER NUM:	2



NUMBER	COUNT	STITCHES	TIME	WORKS
12	1	21583 2	2:52:45	5
99	1	64 (0:0:43	1
1	1	3200	1:30:18	16
0	0	0 (0:0:0	0
0	0	0 0	0:0:0	0
0	0	0 0	0:0:0	0
0	0	0 0	0:0:0	0
0	0	0 0	0:0:0	0
0	0	0 0	0:0:0	0
0	0	0 0	0:0:0	0

DESIGN

These data are based on the computer real-time clock and the software timing. The software times at the following condition: (1) the machine is electrified. (2) the machine stops from running. (3) the machine start embroidery from stop. (4) the computer enters into "embroidery confirmation". (5) the computer enters into "embroidery preparation". (6) the machine finishes embroidering one normal design. (7) user presses " —" key to show statistic data about embroidering.

So, we can conclude that the computer times from the last timed time to the time of machine power off.

[EMBROIDERY] item gives the data of user's embroidering time, and these definitions are as following:

"TOTAL TIME" is the time that the machine is on.

"EMB. TIME" is the time that the machine is embroidering

"STOP TIME" is the time that the machine stops.

"T.B. NUM" is the amount that computer detects thread broke.



- "T.B. TIME" is the average time from detecting thread broke to pulling the bar to embroider.
- "TOTAL WORKS" is the total count that the machine has finished embroidering the normal designs by one head.

"POWER NUM" is the count that the machine is electrified.

【DESIGN】 item gives the data of the embroidered designs, which is defined as following. In the table, "NUMBER", "COUNT" or "STITCHES" of every row is not same with the data of each other.

"NUMBER" is No. of the embroidered pattern.

"COUNT" is the amount of the normal designs that are contained in the embroidered pattern.

"STITCHES" is the stitch number of the embroidered pattern.

- "TIME" is the total time from selecting the pattern and entering into "embroidery confirmation" to entering into "embroidery preparation".
- "WORKS" is the total amount that the machine embroidered the normal designs by one head while embroidering the pattern.
- (2) At this time, you can press " ①" key to clear all of data, or press other key to continue.
- (3) The LCD will display the error statistic table which contain the last 10 errors' time of each error.



ERROR NUM:	1					
ERROR TYPE	TIME TABLE OF 10 RECENT ERRORS					
CAN NOT HOOK	-	-	-	-	-	
	_	_	_	_	_	
STOP POSITION	_	_	_	_	_	
ERR	_	_	_	-	_	
CONTROL	_	_	_	-	-	
MEMORY LOST	_	_	-	-	_	
STEP MOTOR ERR	_	_	-	-	_	
	_	_	_	-	-	
CHANGE CLR	_	_	_	-	-	
OVERTIME	_	_	_	-	-	
HALF RETURN	_	_	-	-	_	
ERR	_	_	_	-	-	
NEEDLE POSTION	2001:10:30 9:01:45	_	_	_	_	
ERR	_	_	_	_	_	
MAIN MOTOR	_	_	_	-	-	
OVERTIME	-	-	-	-	_	
CHANGE CLR	-	-	_	-	_	
OVERLIMIT	-	-	-	-	_	
CAN NOT TRIM	_	-	-	-	-	
	_	_	_	-	_	

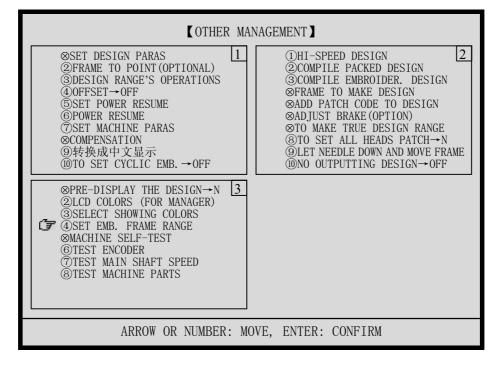
[ERROR]

(4) At this time, you can press " \bigcirc " key to clear all of data, or press other key to exit.

Chapter 27 SETTING THE EMBROIDERY FRAME RANGE

The function sets the range of the embroidery frame. When the frame is out of this range, the machine will give the prompts: "FRAME OVER LIMIT". Operation:

(1) Press "" key, and then press "" key twice, the menu appears as following:



- (2) Press "⁽¹⁾", "⁽¹⁾" or digital key "4" to move the cursor to "SET EMB. FRAME RANGE", and then press "^[]" key.
- (3) The machine will prompt: "MOVE FRAME TO DOWN-LEFT, AND ENTER". You can press " ()", " ()", " ()" keys to move the frame to down-left corner. And press " ()" key to continue.
- (4) The machine will prompt: "MOVE FRAME TO UP-RIGHT, AND ENTER". You can press " ⁽¹⁾", " ⁽¹⁾", " ⁽¹⁾", " ⁽¹⁾" keys to move the frame to up-right corner. And press " ⁽¹⁾" key to end.

Parameter	Recommended Value	Note
START ANGLE	280	The angle of starting to move the frame. Range: 250, 260, 270,280, 290, or 300.
T. B. BACK STI.	0	The return stitch count after detectingthread broken. Range: 0 to 7.
T. B. DETECT	Yes	Thread-broken detecting. Range: Yes or No.
OVERFRAME BY STEP	No	Shift frame step by step while embroidering or continuously.
JUMP & TRIM	3 STITCH	Range: 1 to 7 jump stitch, or don't trim.
PATCH COUNT	1 STITCH	1 stitch or 7 stitch for patch.
NEEDLES	6	The needle number of each machine head. Range: 1 to 9.
TRIM MODE	3	Range: 1 to 4. 1 is the shortesttrimming thread and 4 is the longest.
STORE MANUAL COLOR	No	Store manual color-changing needle into the color line, or not
AUTO ORIGIN	No	After embroider the pattern, the frame automatically returns to the starting point, or not.
INITIALIZE SYSTEM		To initialize the machine parameters.
MAX. SPEED	700	The limit speed of the main shaft ranges from 250 to 850 rpm.
JUMP STITCH SPEED	500	To set the speed for jump stitch.
MINIMUM SPEED	250	Range: 250 to 500 rpm, which is the minimum (shaft) speed whiling embroidering.

Chapter 28 Table of the Machine Parameters



		Dange: 2 to 12 mm When the
	7.0	Range: 3 to 12 mm. When the
SHIFT STITCH LENGTH		computer process the stitch longer
		than this value, the machine will
		slower the speed.
SET RUN SPEED	80	Range: 80 to 150 rpm.
		The parameter is the stitch count
STARTUP STITCHES	3	before the main shaft speed
		accelerates during the machine's
		startup. Range: 1 to 9.
	10	The main shaft speed acceleration
STARTUP ACCE.		during the machine's startup. Range: 1
		to 30.
STITCHES AFTER TRIM	2	The lock stitch count after trimming
STITCHES AFTER TRIM		ranges from 0 to 7.
SPEED AFTER TRIM	80	The speed for locking stitch ranges
SFEED AFTER TRIVI	80	from 60 to 150 rpm.
HIGH FRAME-SHIFTING	20	Range: 1 to 30, and greater value
SPEED	20	stands for faster high frame-shifting.
LOW FRAME-SHIFTING	15	Range: 1 to 30, and greater value
SPEED		stands for faster low frame-shifting.
DISPLAY STI-NUM OR	V	To decide whether the computer
NOT	Yes	display the stitch number.
		Range: 0 to 30. For slippery motor
	0 or 9	driving the main shaft, the
SET BREAK PARA.		recommended value is 9, and 0 is for
		servo motor.
	No	The computer changes the stop stitch
STOP TO COLOR		into color stitch while reading disk
		pattern into memory, or not.
		Range: frame to y, frame to x, or
ACTION AFTER TRIM	FRAME TO Y	shifting the needles.
BORING	No	Boring embroidering is set, or not.



MAIN MOTOR PARA.	0	Range: 0 to 30.
COLOR-CHANGE SPEED	12	The parameter is only for the machine that uses one stepping motor to change color, which ranges from 0 to 30.
SPIN ROUNDS FOR BRAKE	2	For general machine, the value is 2, which ranges from 1 to 2.
DIP1 DIP6		Reserved.
SPEED WHEN OVERFRAME:	1 5	Range: 1 to 30. The greater value is, the speed of shifting frame is faster.
LOCK STITCH WHEN TRIM:	Y	When trimming thread, the machine locks stitch, or not.
HOOK ANGLE BY MOTOR:	0	Range: 0 to 200 degree. User should use the factory default value.
SPEED WHEN TRIMMING:	8 0	Range: 80 to 250 rpm. It is the shaft speed when trimming thread.

Beijing JING DAHAO Computer Control Equipment Co., Ltd.
Addr: 7 Ju-Er Hutong, Jiaodaokou Street, Beijing, 100009 China.
Tel: 86-10-64010613 64014117 64041505 64075196
Hotline: 86-10-64045084 84049877
Maintenance: 86-10-64075198
Support: 86-10-84049875
Fax: 86-10-64075197
Http://www.dahaobj.com
E-mail: dahaobjj@public.bta.net.cn or sale@dahaobj.com