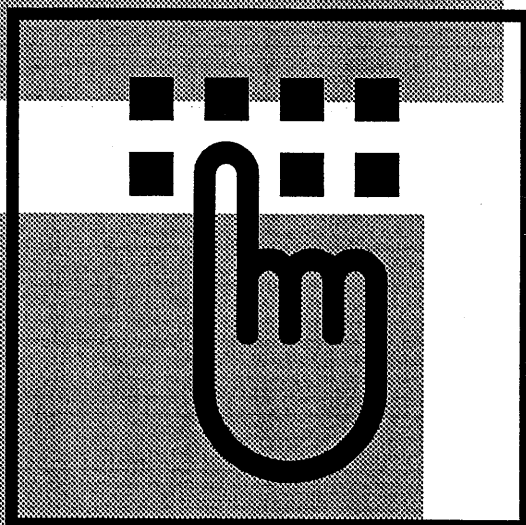
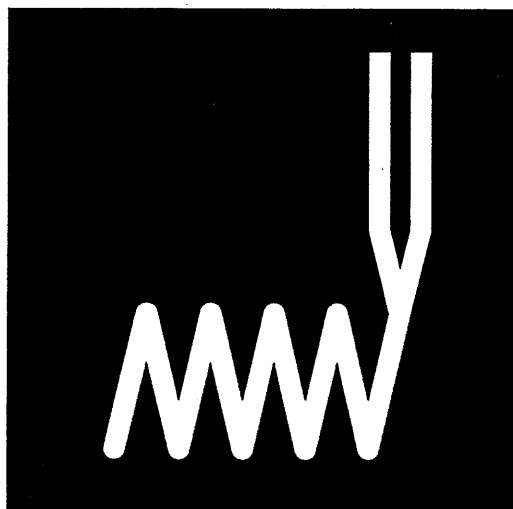
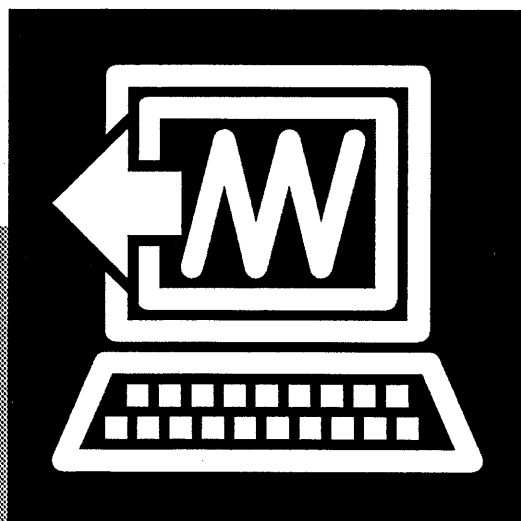
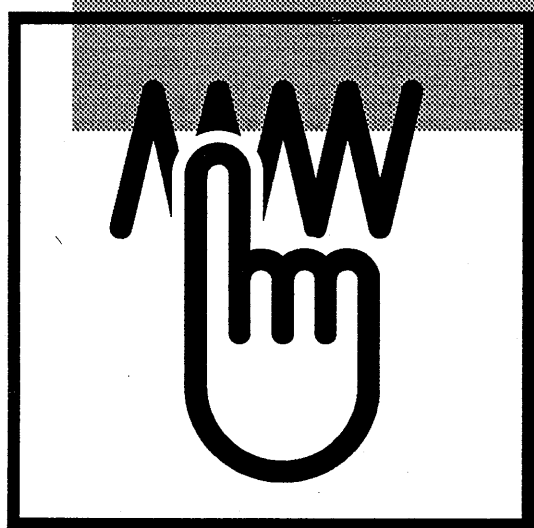


HCG/B_c

MULTI-HEAD ELECTRONIC EMBROIDERY MACHINE INSTRUCTION BOOK



HAPPY



HAPPY Industrial Corporation

EC Declaration of Conformity

The company/manufacturer: **HAPPY Industrial Corporation / Head Office**
9-16, 5-chome, Miyamachi,
Yamagata-city 990-0057 JAPAN

Herewith declares conformity of the product

Designation: **EMBROIDERY MACHINE Series / (Sewing Machine)**
Type/Serial Number, etc: **HCG- type**

With applicable regulations below

EC Directive: **EMC Directive 89/336/EEC amended by:**
91/263/EEC, 92/31/EEC, 93/68/EEC (465)

Machinery Directive 89/392/EEC amended by:
91/368/EEC, 93/44/EEC, 93/68/EEC and 98/373/EC

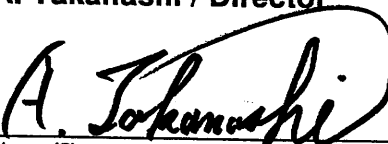
Harmonized European Standards applied:

EN 55011 Group 1 class A:1998 + A1 :1999 and EN 55014; EN 50082-2:1996;
EN 60204-1:1997; EN 60204-3-1: 1990 ; EN 292-1 and EN 292-2; EN 418;

Importer Distributor in EU: **Happy Industrial GmbH, Am Kuemmerling, 10-12,**
D-55294 Bodenheim / Mainz

Division: **Happy Industrial Co.,Ltd / Mechatronics dept.**
A. Takanashi / Director

Yamagata, 2003-10-02
Place and Date


Name/Signature/Position

Note: This Declaration certifies conformity with the above-mentioned Directives, but gives no assurance of properties within the meaning of the Law concerning Product Liability. It becomes invalid if any technical or other modifications are carried out without manufacturers consent.

1. Terminology

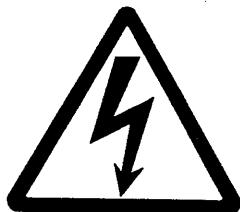
In accordance with all supplied operating and repair manuals and the warnings on the machines and devices themselves.

2. Operation

Encompasses the installation, commissioning (preparation for use) and controls by the operator (actuation, switching ON and OFF, etc.).

3. Servicing

Encompasses the testing and preventive maintenance (inspections and overhauls), maintenance, corrective maintenance (troubleshooting with repair).



>>>> Warning Notices

DANGER means that death, grievous injury or extensive damage to property will occur if the appropriate precautions are not taken.

WARNING means that death, grievous injury or extensive damage to property may occur if the appropriate precaution are not taken.

CAUTION means that minor injury or damage to property may occur if this mark is ignored.

NOTE: means that particular attention is drawn to the interaction of technical processes because they may not be obvious even to qualified personnel.

ATTENTION:

Qualified personnel are persons who, due to their training, experience and instruction and their knowledge of pertinent standards, specifications, accident prevention regulations and operating conditions, have been authorized by the party responsible for the safety of the system to carry out the activities necessary in each case and are capable of recognizing and avoiding possible inherent dangers in doing so. Among other skills, a knowledge of first aid is required.

Basic Information about Safety

Due to their function-related electrical and mechanical properties, the machines can cause extremely serious damage to health and property if they are not used, operated and serviced as intended or if they are tampered with. It is therefore assumed that planning and execution of all mechanical and electrical facilities and transport, operation and servicing will be executed and supervised by responsible, qualified personnel.

Attention, such personnel is in most cases never the operator!

When electric machines or devices are running some of their components are conducting dangerous electricity and/or are subjected to mechanical stress. The persons working on the machine must be appropriately qualified. Correct, safe use of this machine and the device requires proper transport, proper storage, operation as intended and careful servicing. All notes and information on the machines or devices must be observed.

4. Mandatory Manufacturer Advice for Enduser

It is mandatory to install the machine on a safe floor and fix it with the anti-vibration pads.

It is mandatory for all persons to wear ear protection, because depend on operating condition and machine type/ numbers of heads used and speed, the maximum A-rated noise level measured at 1.6 m high and 1 m in front was between 78 dB to 82 dB(A) according to Appendix B clause 1.7.4. f).

In case you do not have a personal ear protection, please contact our local service station, they will be glad to assist and instruct you.

It is under no circumstances acceptable that unskilled person carry out electrical work.

You are not allowed to open and maintain the electrical power cabinet, if you feel it is necessary

please contact our local service, which has specially trained engineers for set up and maintenance. ==> Risk of fire and/or electrical shock.

Before any maintenance is carried out you must switch OFF and pull out the plug.

To avoid any kind of accident we would like to recommend that each person who operates this machines has read and understood the manuals provided and confirmed this by signature.

The machine was inspected according to EN 60204-1 and EN 292-1; 292-2; 418 at present an EMC- evaluation is carried out.

1. ON / OFF switch for Main Power

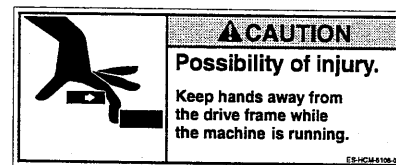
Location: right side on frame;

Attention: in case emergency button is pushed this switch will automatically switch OFF;



2. CAUTION sticker for trapping hazard EN 292,

Please read carefully the instructions on this sticker (the sticker may vary for production reason)



3. Start Button colored white

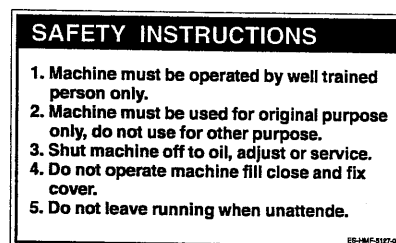
4. Stop Button colored black

5. Thread Cut Button colored blue

6. Forward Button colored yellow



7. Safety Instruction Sticker for servicing, operating and maintaining



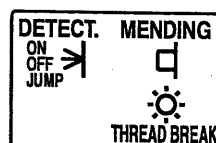
8. Caution Sticker for hot surface

(on all pulse motors, the motors may reach a certain temperature after long time running, which can reach up to 60°C)

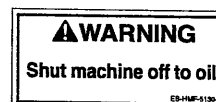


9. Indication Sticker on Head

(please read manual)

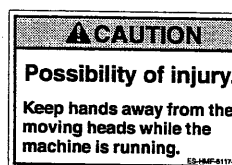


10. Warning sticker for maintenance to pull plug out, before supplying oil



11. Caution sticker for sliding heads

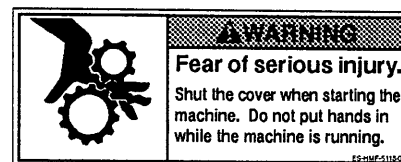
Attention: location and numbers varies from machine types, please make sure before you use the machine;



12. Risk of serious finger and hand injury

Please make sure this cover is always closed and fixed via screw, only for necessary action you are allowed to open it, never leave it open while machine is running.

13. Risk of trapping hazard



14. Power Supply Voltage sticker

Risk of electrical shock or fire if this mark and the selected power to be provided is ignored!

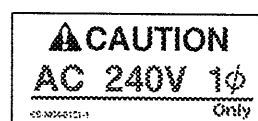
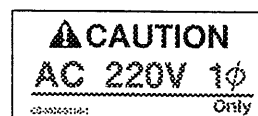
Please always make sure that the external power supply via main plug meets exactly the specified Machine power.

- AC 220 V +/- 10% single phase - AC 240 V +/- 10% single phase
(L = brown; N = light blue; PE = green/yellow)

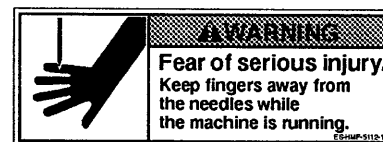
Remarks: For shielded cable the color green or gray is used.

Please make sure all PE connections and for EMC reason all shielded cables are connected, for qualified personnel only.

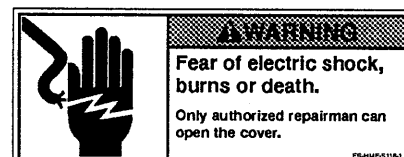
All works on electrical power cabinet must be carried out by authorized and qualified Personnel!



15. Labels: Stitching hazard on all needles;



16. Electrical hazard on all electrical components;



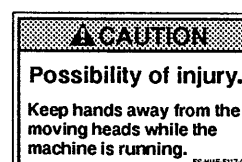
17. Trapping hazard whereas this label can be found;



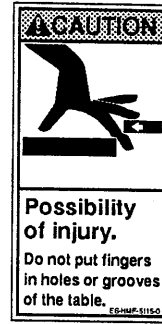
18. Trapping hazard on all moving heads,

due to avoid additional stress for operator we did not cover this area, because for each time the string is broken it would necessary to remove it;

Please consult our local sales department and we will seek a solution.



- 19. All grooves are minimized to 8 mm,**
so that fingers may not enter, however it depends on various
circumstances, the manufacturer can not foreseen.



- 20. Risk of electrical shock**



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In order for you operate this machine properly, please be sure to read this instruction manual.

Please keep it with care after reading and make good use as guidance when you want see how to use the machine.

This instruction book mainly contents as mentioned below.

Note when handling the machine

Major function

Sequence to operation 1

Sequence to operation 2-1

Sequence to operation 2-2

Sequence to operation 3

Maintenance

Trouble and Measures

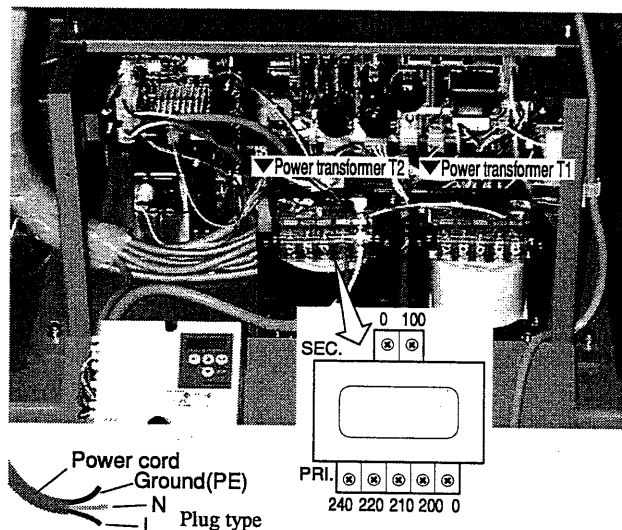
※ Function and Specification are subject to change without notice.

Switch over for power supply and voltage for qualified personnel only 0.8

Switch over for power supply and voltage

- 1 Open cover for the main unit at rear side on the right side of the machine to check that input tap (PRI.) on power transformers T1 and T2 fit power source voltage.
- 2 Connect power source cord to power source.
(PE cord shall be connected to the ground.)
- 3 Turn power on and confirm that voltage of output tap (SEC.) of power transformer is set to 90~110V.
- 4 If voltage is not 90~110V, switch input tap of power transformer. At this moment, input tap of power transformer T1 should be same as power transformer T2.

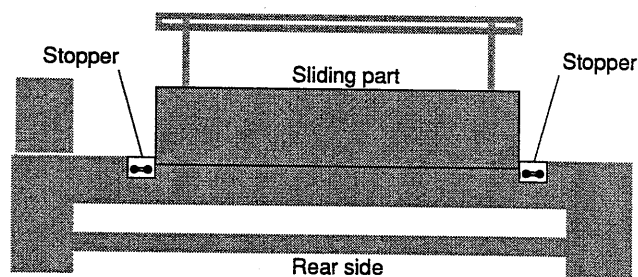
Finish

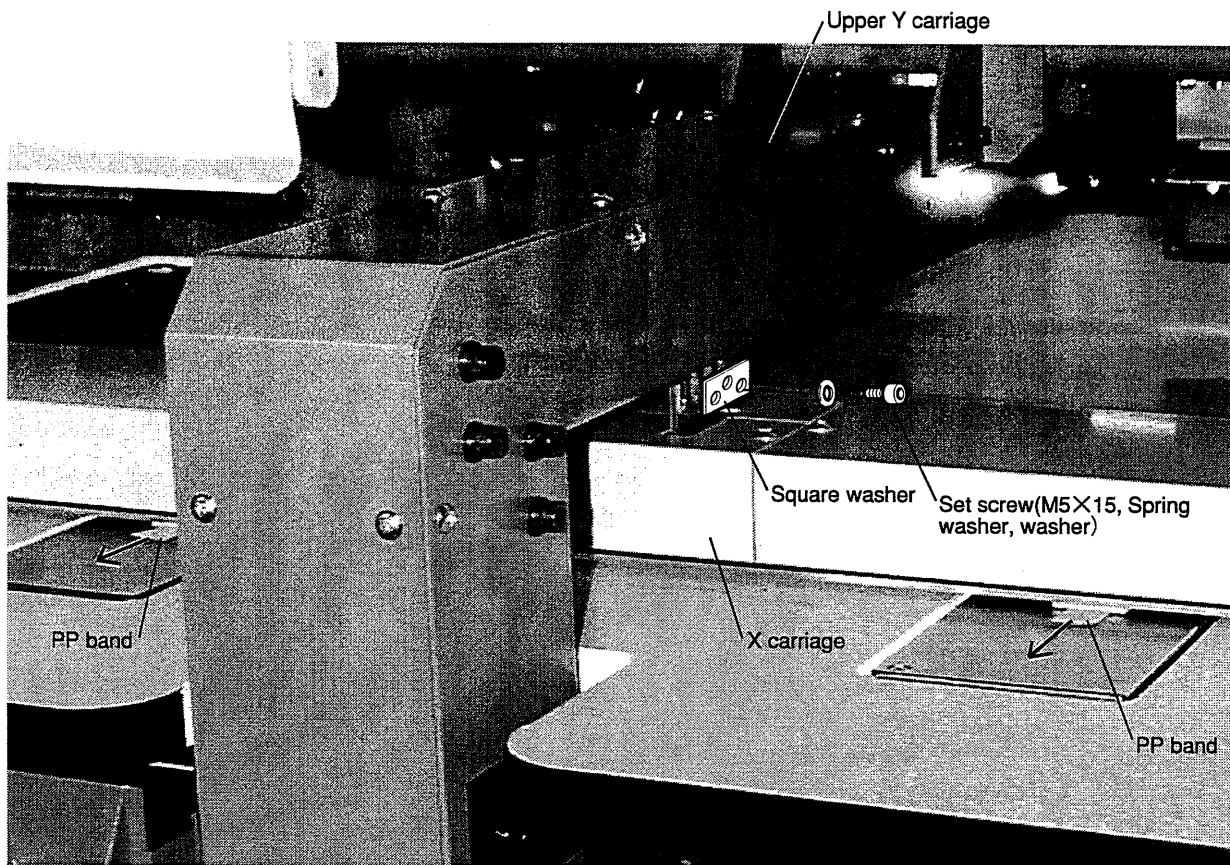


How to remove the stopper

- 1 Remove stopper for needle bar selection on the rear side of the machine.
- ※ Stoppers are installed at factory to prevent sliding part from moving during transportation.

Finish





In order to protect upper Y carriage and X carriage, set screws that join these carriages are taken off when the embroidery machine is shipped from the factory.

Please be sure to join upper Y carriage and X carriage with set screws contained in accessories before you operate the machine.

⚠ Never lift the machine from under with forklift etc. with upper Y carriage and X carriage being joined.

There is a case that these carriages are broken as excessive power is inflicted on these carriages.

When you need to lift the machine from under, please be sure to remove set screws.

1 Fix square washer by 3 set screws as shown in the above picture.

2 Remove PP bands put under X carriage.

※ In order to maintain gap between X carriage and table, please be sure to remove PP bands after you joined upper Y carriage and X carriage.

End

※ Do not run the machine before setting it properly.
Make sure of taking the following steps to set the machine.

1

Remove pipe covers at 4 corners, place block base and rubber mount under bolts and adjust bolts so that the machine becomes level.

At this moment, get caster slightly risen from the floor.

(Block bases and rubber mounts are included in accessories)

(As shown in Fig. 1, levelers should be placed on both sides of head bed with upper cover removed.)

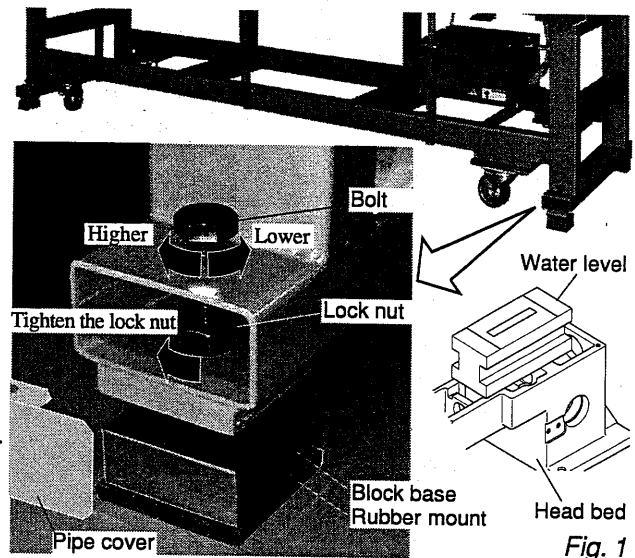


Fig. 1

2

Remove needle plates and bobbin cases from all the heads.

3

Lower the needle holder by pressing down with fingers on Fig. 2.

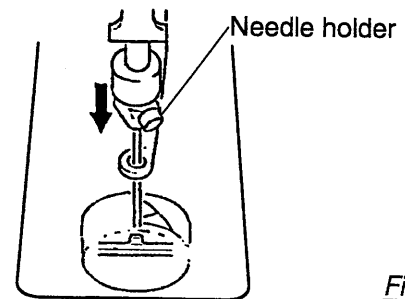


Fig. 2

4

Turn grip in direction shown with arrow mark on Fig. 3 and set the angle of adjusting disc as shown in Fig. 4.

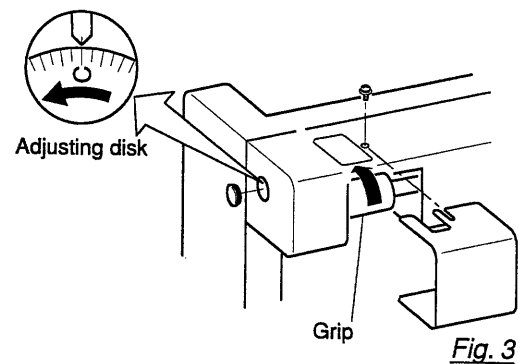


Fig. 3



Fig. 4

5

Confirm needle height of all heads.
Pull white plastic $\varnothing 17$ measuring gauge in and out of rotary hook in fig. 5. If height gauge has a light hit against rotary hook, needle height is correct. However if not, loosen needle bar block screw to adjust, then tighten it after adjustment. (Remove the gauge when finished).

Note: Height gauge is contained in tool box.

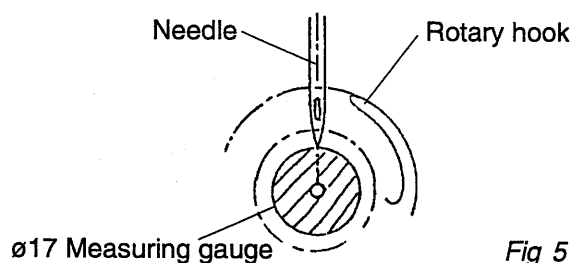


Fig. 5

6

Turn main shaft slightly in direction shown with an arrow mark.
Then set the angle of adjusting disc as shown in Fig. 6.

Seeing the space or timing between needle and tip of rotary hook as shown Fig. 7, 8. If the space is too open or too close, loosen 3 screws of shuttle to adjust. Make sure to tighten 3 screws after adjusted the space.
(The timing is set exactly at the factory. However, there is some case that the timing is changed by impact of transportation.)



Fig. 6

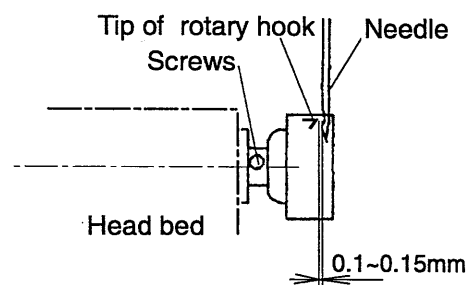


Fig. 7

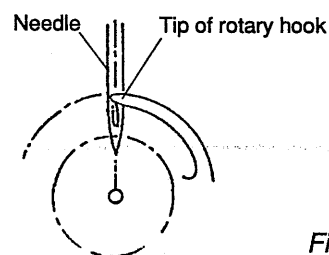


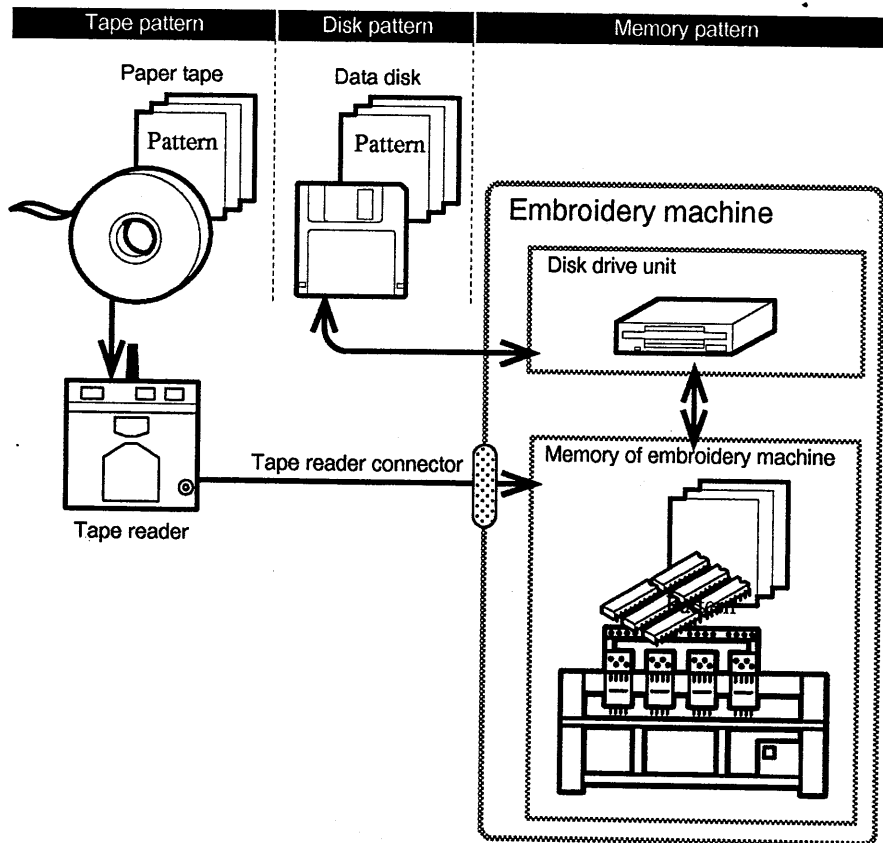
Fig. 8

7

Turn main shaft in direction and set to C point.
Place the bobbin and bobbin case in the hook and replace the needle plate and tighten.

8

Machine is now ready for sewing.



It will be helpful for you to understand pattern data. Pattern data will be classified in the following 3 different status.

Tape pattern

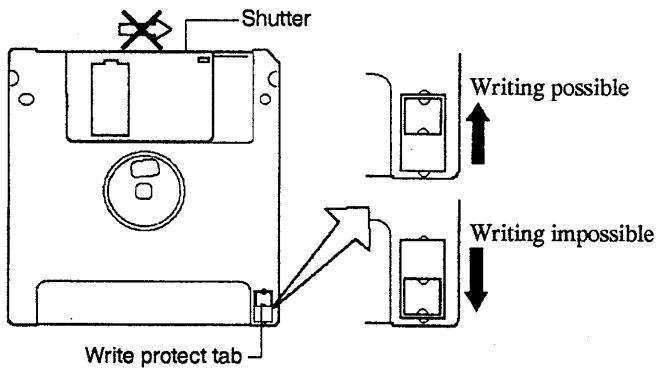
Pattern data are punched on paper tape. A roll of paper tape can store 35,000 stitches only in maximum. Reading takes time and tapes must be wound after reading. Paper tapes are apt to stain and tear. This will cause error when reading.

Disk pattern

Pattern data are stored in data disk. Memory capacity of data disk is far bigger than paper tape and capable of storing up to about 220,000~440,000 stitches per disk. It is easy to store a big amount of data in a small space and change data disk to other data disk. Also data disk can read pattern data in a short time.

Memory pattern

Pattern are stored in memory of the embroidery machine. From these stored pattern, a pattern is selected and embroidered. The machine has capacity of 244,000 stitches as standard.



You can use any floppy disk if it is new or initialized and 3.5" in size.
Please use following 2 different floppy disks.

1. MF2DD (3.5")
2. MF2HD (3.5")

You will be able to use floppy disk repeatedly by repetition of writing and erasure. But it doesn't mean that loaded pattern data last forever.

In course of frequent use of data disk, error may occur or data disk may be destroyed by careless handling.

Unlike paper tape, pattern data in destroyed data disk will not be reinstated.

Therefore you need to pay attention when handling data disk.

- ※ Keep off data disk from magnetic materials. There are some cases that loaded data is washed out.
- ※ Don't apply heat to data disk nor keep in a place of high temperature and high humidity.
- ※ Don't open the shutter of data disk and touch magnetic part inside.
If touched, it may not read and write data.
- ※ Switch write protect tab on the loaded data disk. You will be able to prevent pattern data from erasing by mistake.
- ※ Don't keep data disk in the disk drive unit for a long time. When you don't use the disk drive unit, take out data disk from it.

EASY OPERATION WITH COLOR MONITOR

Adopting TFT COLOR MONITOR and Menu selection realized the Operation visible and easier.

Correspond to various disk format

Possible to read/write Happy disk format and also possible to read other various disk format.

Display in icon

As data are partly displayed in icon and operation keys have icon on top, you will be able to easily recognize contents displayed and functions.

Go to

This function enables to embroider at middle of the Pattern by making designator of number of stitch and color number. At that time, position of Frame will be placed at right point from the start point.

**color number : This composes part of pattern data obtained by dividing pattern data with colour change function code. Needle bar (thread colour) to use is set to colour number.*

Measure to power failure

Even if power suspended in course of embroidery, this function will enable you to recover position of the frame and memory pattern to state immediate before power failure and also to start point of that pattern.

**memory pattern : Patterns stored in memory.*

Automatic recognition of tape format

This function will automatically recognizes binary and ternary tape format, and read them.

Memory function

This machine will be able to store pattern data up to 244,000 stitches (Max. 768,000 stitches) and 99 patterns. Patterns once stored will be retained even if power is cut off.

Combination of patterns

This function enables to combine plural number of patterns and store them in one pattern.

Offset

This function will enable you to set *start point of the frame by pattern. Using this function, you can start the frame from position to do easy manual work and move the frame to position to do embroidery. This function is convenient to exchange hoops etc.

**start point of the frame : This is point where the frame only begins to move before starting embroidery.*

Frame out

By setting move distance of the frame to *color number of pattern, this function will enable you to move the frame to any position automatically after having embroidered that color number. This function is convenient to trim threads while embroidering and also to make applique.

Frame registration

As this function will enable you to register start point by pattern, you can set position of start point automatically after having changed pattern. Or if you move the frame carelessly in course of embroidery, you can recover the frame to its previous position.

Conversion

This function will enable you to rotate pattern in reverse (mirror) view and also in every 90° by simple operation.

Rotation

This function will enable you to rotate pattern in every 1° within scope of -359° ~ +359°.

Scaling

This function will enable you to reduce or enlarge pattern in every 1% within scope of 50 ~ 200%. Also this function will enable you to set magnification length-wise and side-wise independently.

Adjustment of width

This function will enable you to adjust width within scope of -1.0 ~ +1.0 mm designated by pattern, in every 0.1 mm. You will be able to make fine tuning according to properties of fabrics and threads.

Repeat embroidery

This function will enable you to automatically produce pattern in designated quantities in any interval length-wise and side-wise.

Batch sewing

By designating Batch driving mode, enables to embroider any stored pattern in any order, up to 30 pieces in succession. While you are carrying out various settings set to each pattern, you can embroider and this makes combined pattern easily.

Data editing

This function will enable you to edit pattern data in every one stitch. Also you can set the function like jump, color change, thread cut, frame out, embroidery speed etc. and also insert or delete the stitch, change of stitch length is possible so that you can make amendment easily.

Memory pattern displayed by color

You can see all the memory pattern in the color monitor with the designated color of needle and background.

Active pattern display

This function enables to see the actual embroider position.

Zoom Indication

This function enables to the thread shape of the designated needle position by designated magnification.

Various setting display

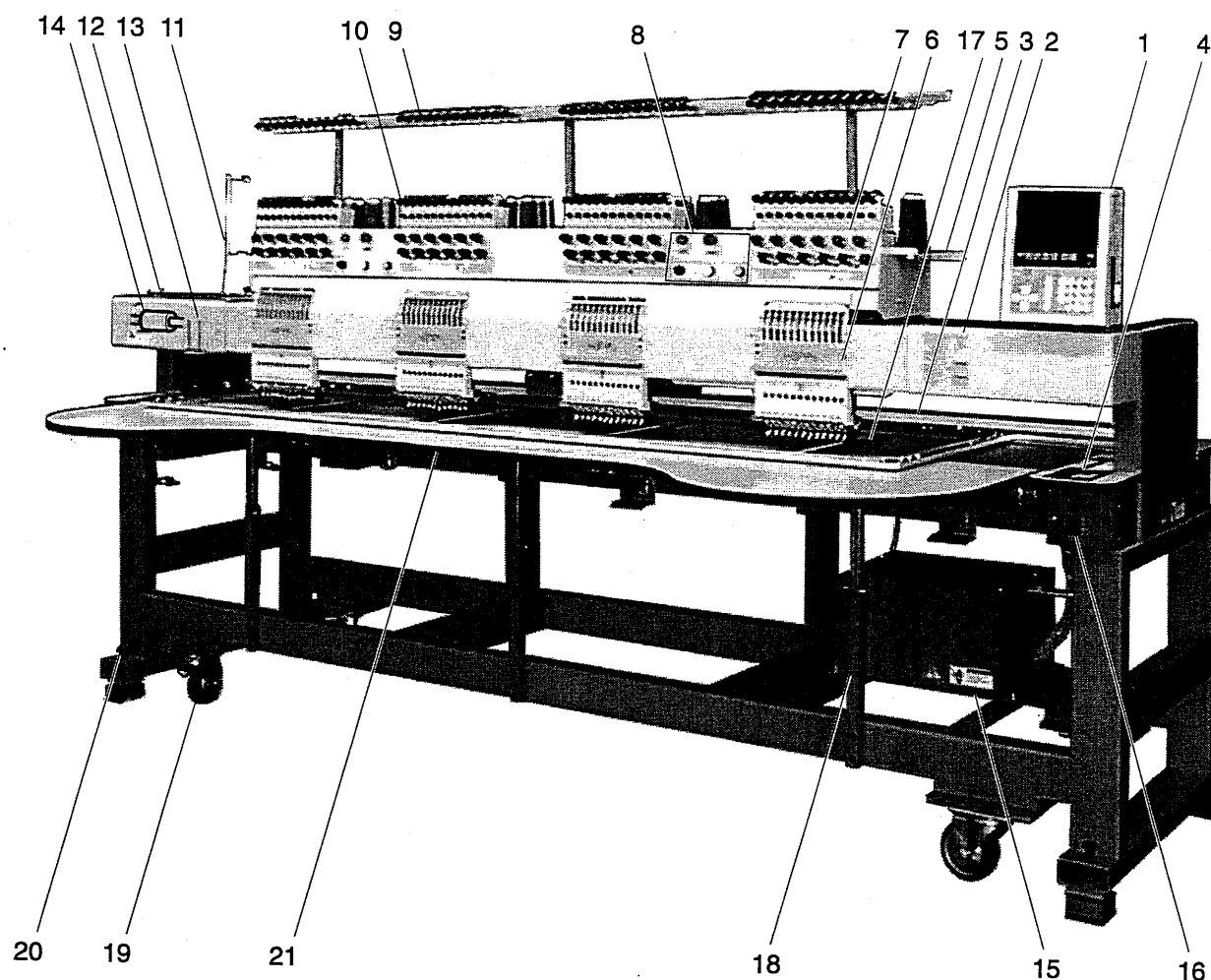
This function enables to understand the state of various setting (scale, angle, offset, etc.) without seeing each items.

Indication of pattern data information List

With this Pattern data list, you can confirm, Name of the pattern, Number of stitch, pattern size, start point.

Guide indication on operation switch

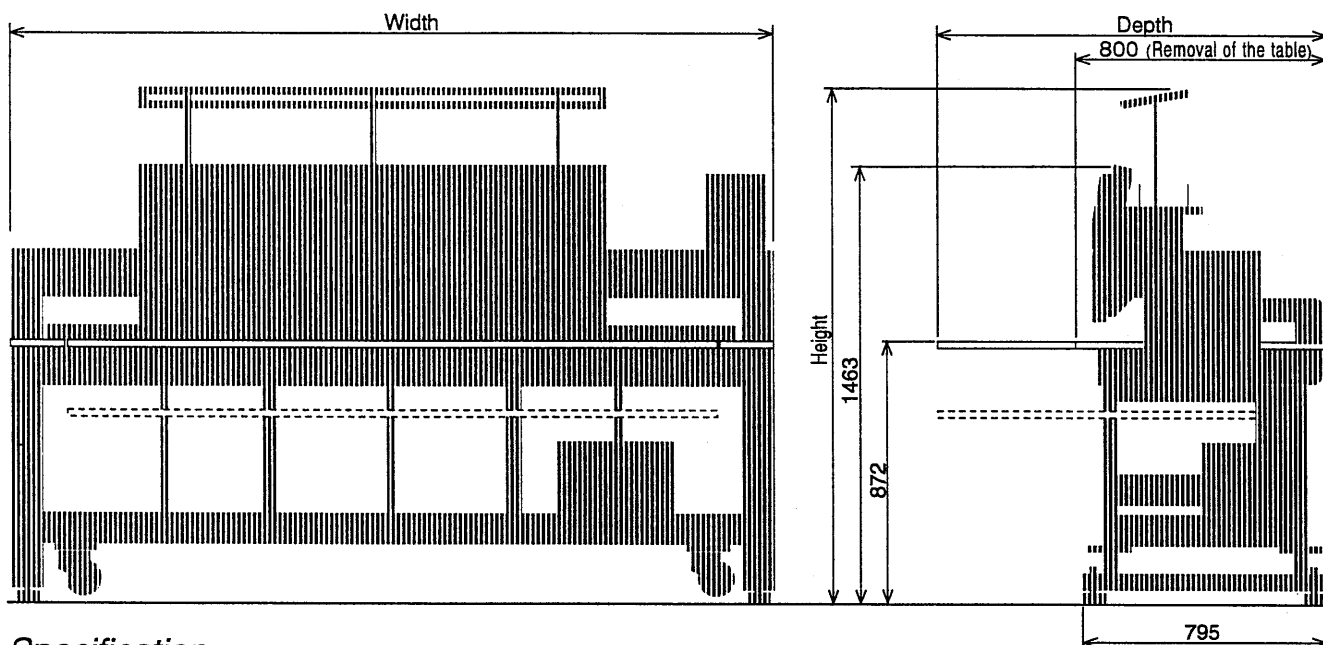
If there is any necessity of special Operation for each function. The explanation will be indicated so that you can operate without reading a manual.



- | | |
|----------------------------------------------------|--------------------|
| 1 Control box | 15 Main unit |
| 2 Needle bar selection unit | 16 Main switch |
| 3 X carriage | 17 Head bed |
| 4 Y carriage | 18 Table stay |
| 5 Thread cone stand | 19 Caster |
| 6 Head | 20 Adjuster |
| 7 Thread tension unit, Thread break detecting unit | 21 Removable table |
| 8 Operation panel | |
| 9 Upper minor tension | |
| 10 Minor tension | |
| 11 Stand for under thread cone | |
| 12 Bobbin winder | |
| 13 Bobbin stand | |
| 14 Main shaft handle | |

SPECIFICATIONS AND OPTIONS

4.1



Specification

Unit : mm

Model	Needle	Head	Needle distance	Embroidery area (Y × X)	Maximum dimension	Weight	Speed
				Tubular frame	Normal	Width×Depth×Height	kg
X=stretch model							rpm
1002B-45TTC	10	2	500	420×440	450×500	1,840×1,270×1,703	490
1202B-45TTC	12	2	500	420×440	450×500	1,840×1,270×1,703	490
1502B-45TTC	15	2	500	420×440	450×500	1,840×1,270×1,703	490
1004B-45TTC	10	2	360	320×320	450×360	2,170×1,270×1,703	530
1204B-45TTC	12	2	360	320×320	450×360	2,170×1,270×1,703	530
X1004B-45TTC	10	4	500	420×440	450×500	2,840×1,270×1,703	690
X1204B-45TTC	12	4	500	420×440	450×500	2,840×1,270×1,703	690
X1504B-45TTC	15	4	500	420×440	450×500	2,840×1,270×1,703	690
1006B-45TTC	10	6	360	320×320	450×360	2,890×1,270×1,703	730
1206B-45TTC	12	6	360	320×320	450×360	2,890×1,270×1,703	730
X1206B-45TTC	12	6	500	420×440	450×500	3,940×1,270×1,703	960
X1506B-45TTC	15	6	500	420×440	450×500	3,940×1,270×1,703	960
1208B-45TTC	12	8	360	320×320	450×360	3,940×1,270×1,703	1030
1508B-45TTC	15	8	360	320×320	450×360	3,940×1,270×1,703	1030

Power source 1 phase 200~240V ±10% 50/60Hz

Electricity consumption 1.0 kwh

Environmental condition Temperature 0~40° C
Moisture 45~85%

※ Sewing area mentioned above shows maximum frame movement, but actual sewing area may be limited by frame to be used.

※ Maximum machine speed may change by sewing condition, such as pattern, material and etc.

Memory device	Capacity	Registered pattern
Memory	About 244,000 stitches About 768,000 stitches (maximum increase)	99 pat.
Data disk	About 220,000 stitches (MF2DD) About 370,000 stitches (MF2HD 1.2MB) About 440,000 stitches (MF2HD 1.44MB)	About 55 pat. About 95 pat. About 110 pat.

※ Specification are subject to change without notice.

Options

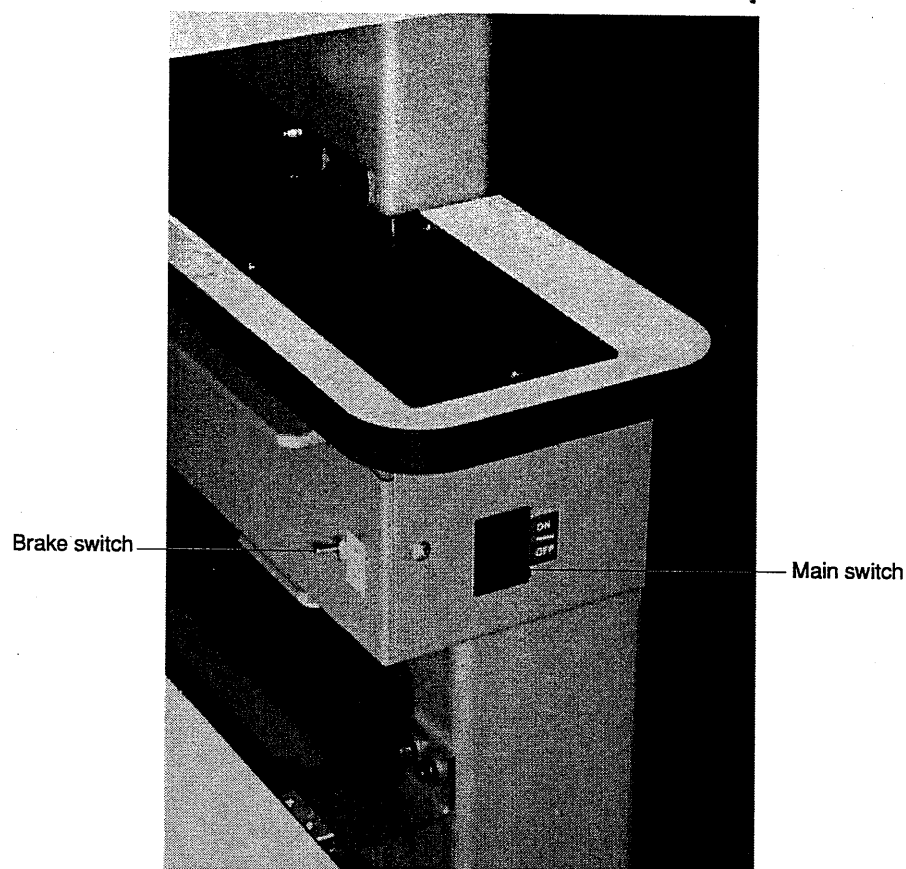
Semi-wide cap frame [Embroidery area (mm) : 70×180]

Holder frame ass'y [PHA-45]

Wide cap frame [Embroidery area (mm) : 75×360]

One-touch frame [PEA-33295]

Socks frame



The main switch & the brake switches at the right from front beneath the machine table.

Main switch

When this switch turns on (1), every power on the machine turns on.

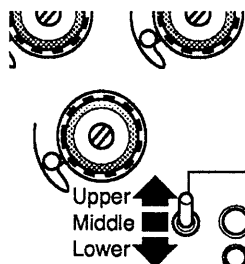
- ※ The machine automatically preserves all necessary pattern data when you turn off power with POWER OFF SWITCH on control panel.
If you turn off power with MAIN SWITCH, error of power failure shows on control panel when you turn on power next time. (Refer to "ERRORS AND MEASURES" to cancel the power failure.)

Brake switch

This switch will change brake switch on the main shaft motor to ON and OFF. Normally run the machine with brake switch turned ON.

When the machine is in stop, brake switch on the main shaft motor will turn on, and you can't turn the main shaft by a hand. When you need to turn the main shaft by a hand in order to clean thread cut blade etc., turn brake switch OFF.

- ※ You will be able to run the machine with brake switch turned OFF, but error (error code No. 50) may frequently come out because of deteriorating of stop accuracy of the main shaft.



Thread break detecting switch

This switch by its position will make the machine as follows:

Position of switch	Action of the machine
Upper Thread break detection "ON"	This switch is normally at this position. Function of thread break detection works. When thread break or frayed threads occurs, thread break lamp blinks and the machine stops.
Middle Thread break detection "OFF"	Function of thread break detection doesn't work.
Lower Individual jump	Head with its switch lowered becomes jump and the machine doesn't embroider.

Mending switch

When you press this switch with the machine in non-operation (including automatic stop by thread break detection), the machine becomes same state as it stops by thread trouble regardless of actual trouble or not, and thread break lamp lights.

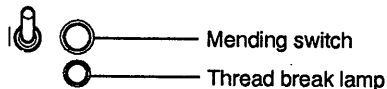
With thread break lamp being lit, return the frame with *trace back to position where you want to mend. When you press this switch and start the machine, it will mend portion not embroidered.

※ When you stop the machine manually, there is a case that thread break lamp doesn't light even if you press this switch, however mending is conducted.

Thread break lamp

When threads break, lamp blinks.

Please mend with instruction below.



1

Move back the frame to any position you want to made with trace back.

**trace back : This is to move only the frame and memory pattern toward reverse direction of sewing with stop button or bar switch.*


2

Press the switch for head you want to mend.

3

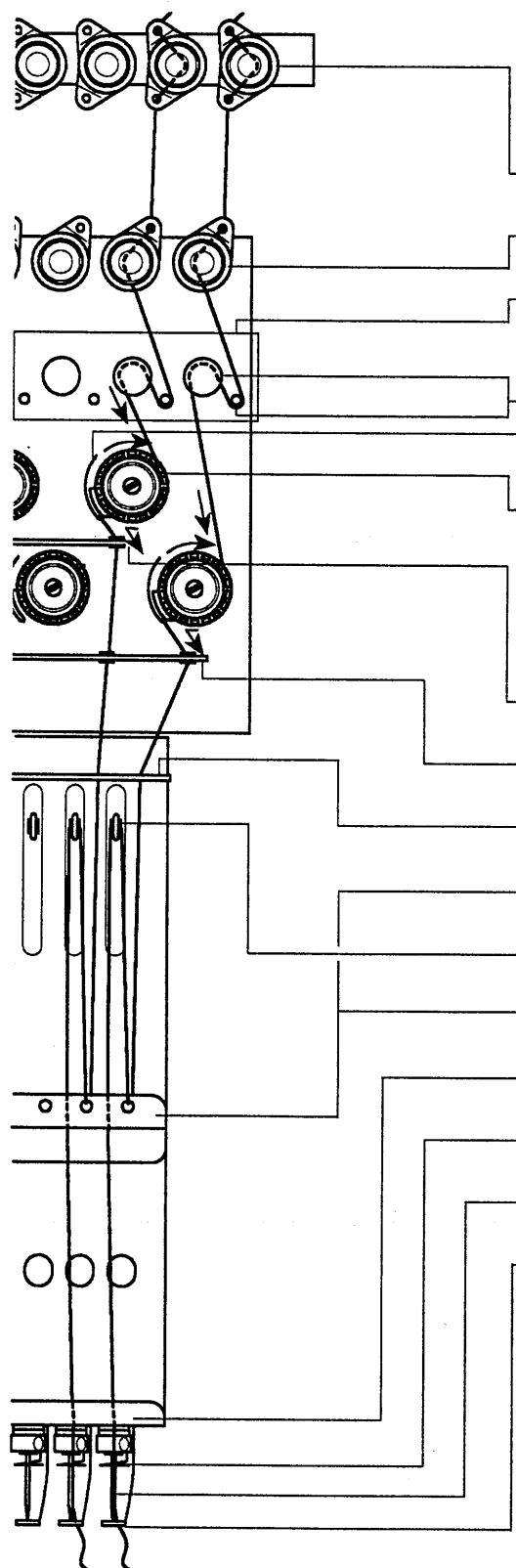
Start the machine.

Start mending. The machine will mend head only where thread break jump lights or blinks. All heads will start to sew 2 stitches before mending finishes. When mending finishes, the machine will go on normal sewing.

 Possibility of injury
After mending all heads start working immediately.
Keep hands away from the needles.

※ In course of mending, when you press this switch for head not conducting mending, the machine will mend from this point.

※ In case thread cut takes place by color change etc. while doing mend sewing, head not doing mend sewing doesn't activate thread cut because its needle doesn't come down.



How to pass upper threads

Pass upper threads in following order according to Fig. 1.

- 1 Minor thread tension upper
- 2 Minor thread tension
- 3 Roller thread guide
(For rotary type thread break detecting device)
- 4 Detecting roller
(For rotary type thread break detecting device)
- 5 Rotary tension disc
Wind upper threads one time around rotary tension disc clock-wise as illustrated in Fig. 1.
- 6 Check spring
- 7 Upper thread guide
- 8 Lower thread guide
- 9 Thread guide plate upper
- 10 Thread guide plate middle
- 11 Take-up lever
- 12 Thread guide plate middle
- 13 Thread guide plate lower
- 14 Needle bar thread guide
- 15 Needle
- 16 Pressure foot

※ When you passed threads, pull upper threads from needle and check if detecting roller moves smoothly.

Fig.1

Thread holding rubber

When you use the machine in alternate heads or run the machine in individual head sewing, thread take up levers for unused heads move and upper threads come off from thread catch holder or thread holding spring. Therefore in order to keep upper threads in place, put thread holding rubber against front panel of unused heads as shown in Fig. 2. By doing this way, you will be able to prevent upper threads from coming off.

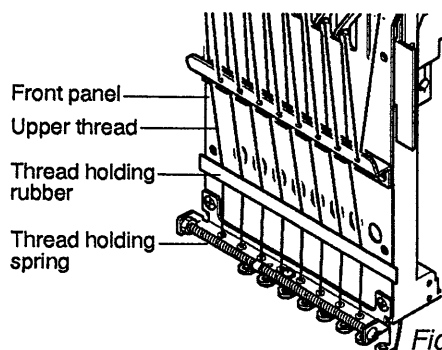


Fig.2

※ When you embroider, please be sure to take out thread holding rubber.

※ Stick removed thread holding rubbers to the machine and keep them.

BOBBIN WINDING

8.0

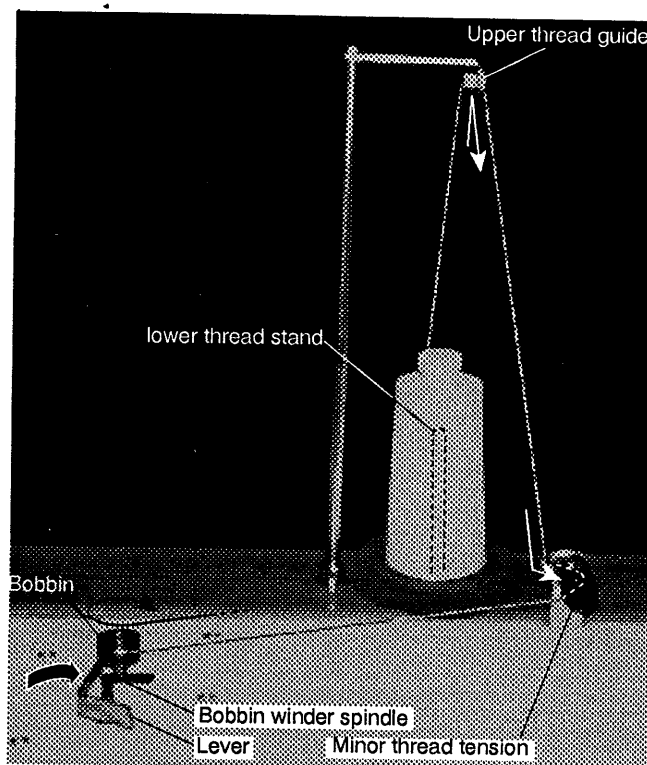
Wind lower thread on to bobbin in the following sequence as illustrated.

1. Place lower thread cone on lower thread stand.
2. Pass lower thread from upper thread guide through to minor thread tension as illustrated.
3. Place bobbin on bobbin winder spindle.
4. Wind lower thread several times on to bobbin clockwise.
5. Turn lever toward an arrow mark.

When the machine is running, bobbin will start to turn and wind lower thread. When the machine finishes winding of lower thread, lever will return to its place and bobbin stops turning.

When you continue lower thread winding, repeat steps 3 - 5.

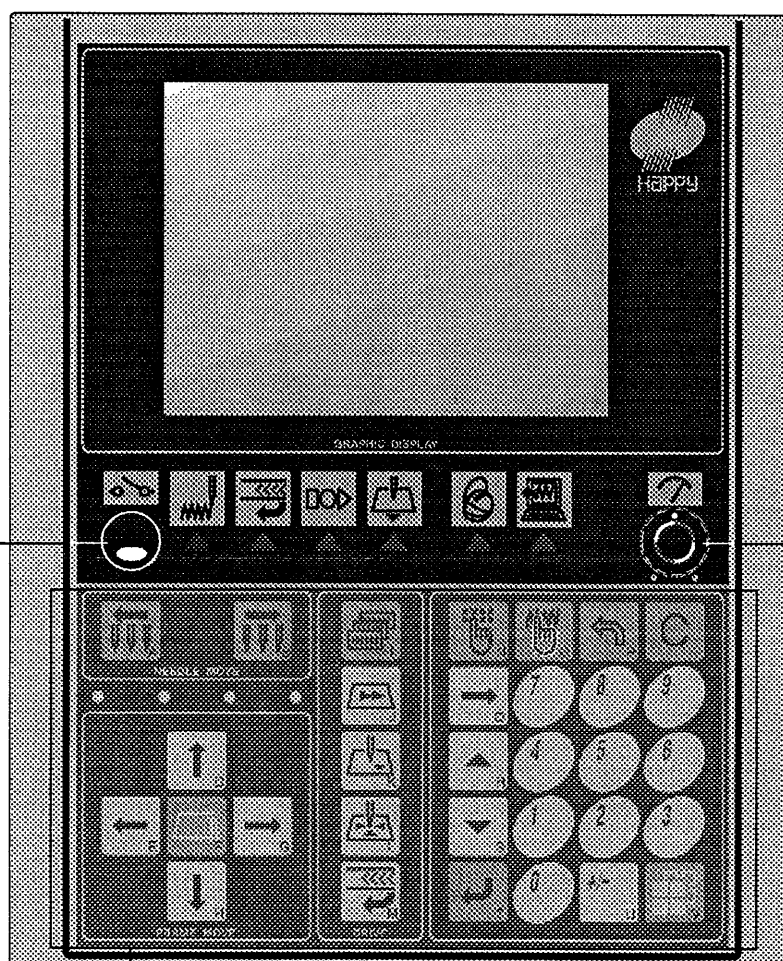
<END>



Power cut switch

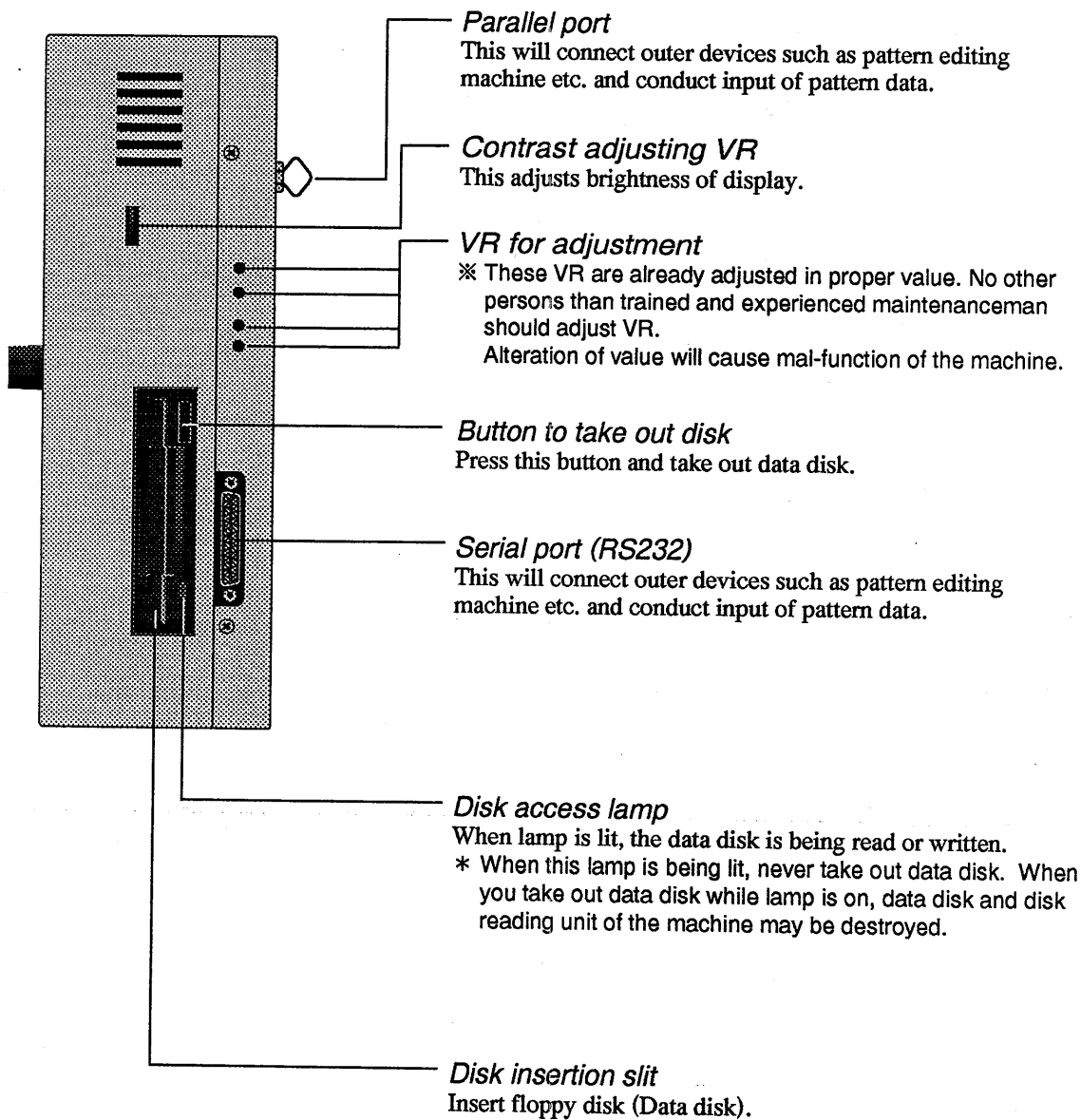
The power will turn off when you press this switch. Usually, when you cut power off, please be sure to use this switch.

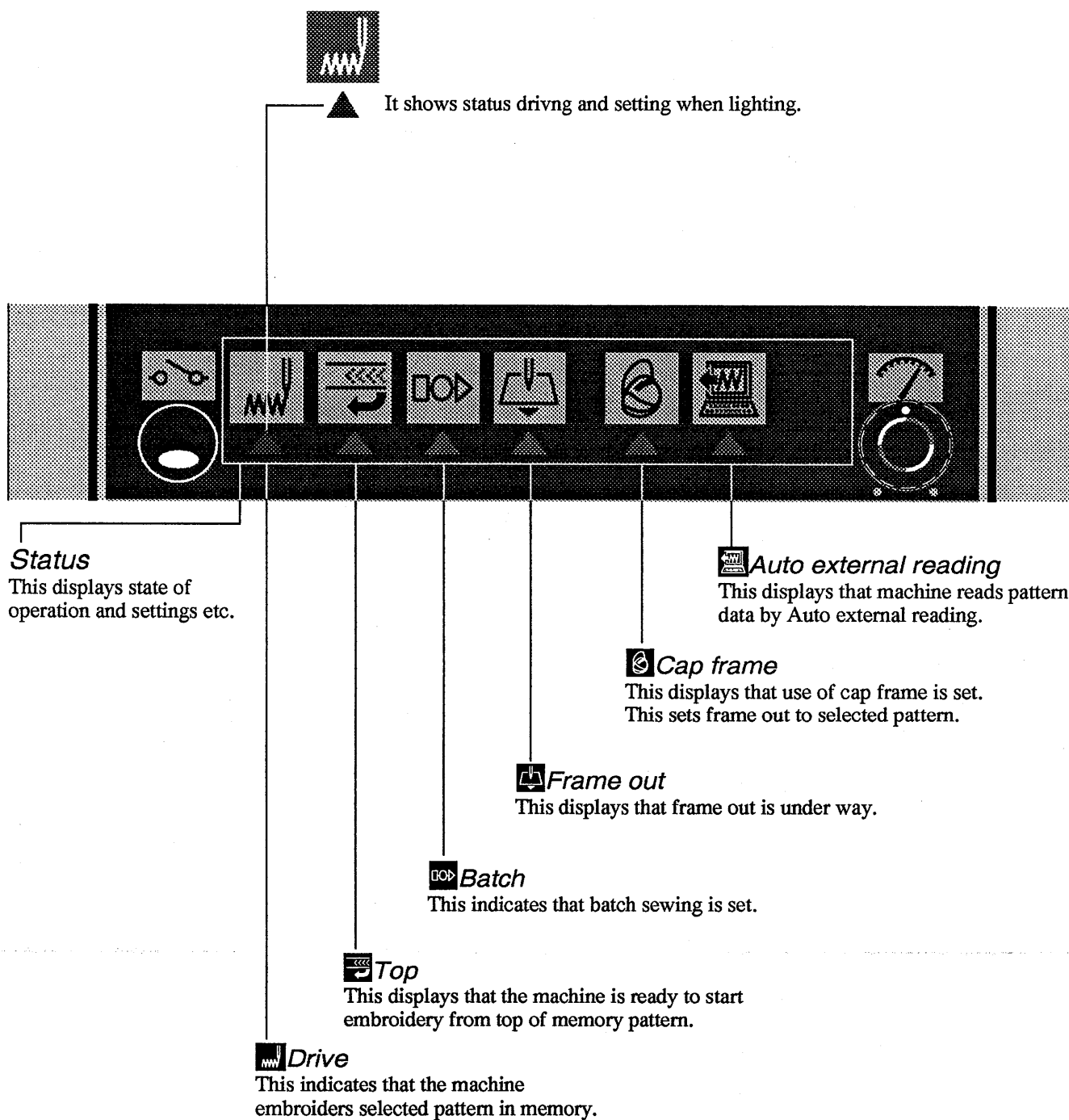
- ※ When you cut power off with main switch on the main unit, the machine will become same state as power failure. When you turn power on again, the machine will display error indicating that power suspended.
- ※ When you turn power off with the main switch in course of embroidering, pattern deformity may occur.
- ※ When noise interference and trouble etc. prevent you from cutting power off with this switch, please cut power off with the main switch.
- ※ When power on with main switch. Refer to the next page. Refer to page of "MAIN SWITCH, BRAKE SWITCH".



Speed control knob
This knob adjust machinespeed from low to high without step

Operation key
This key conducts various operations and settings.

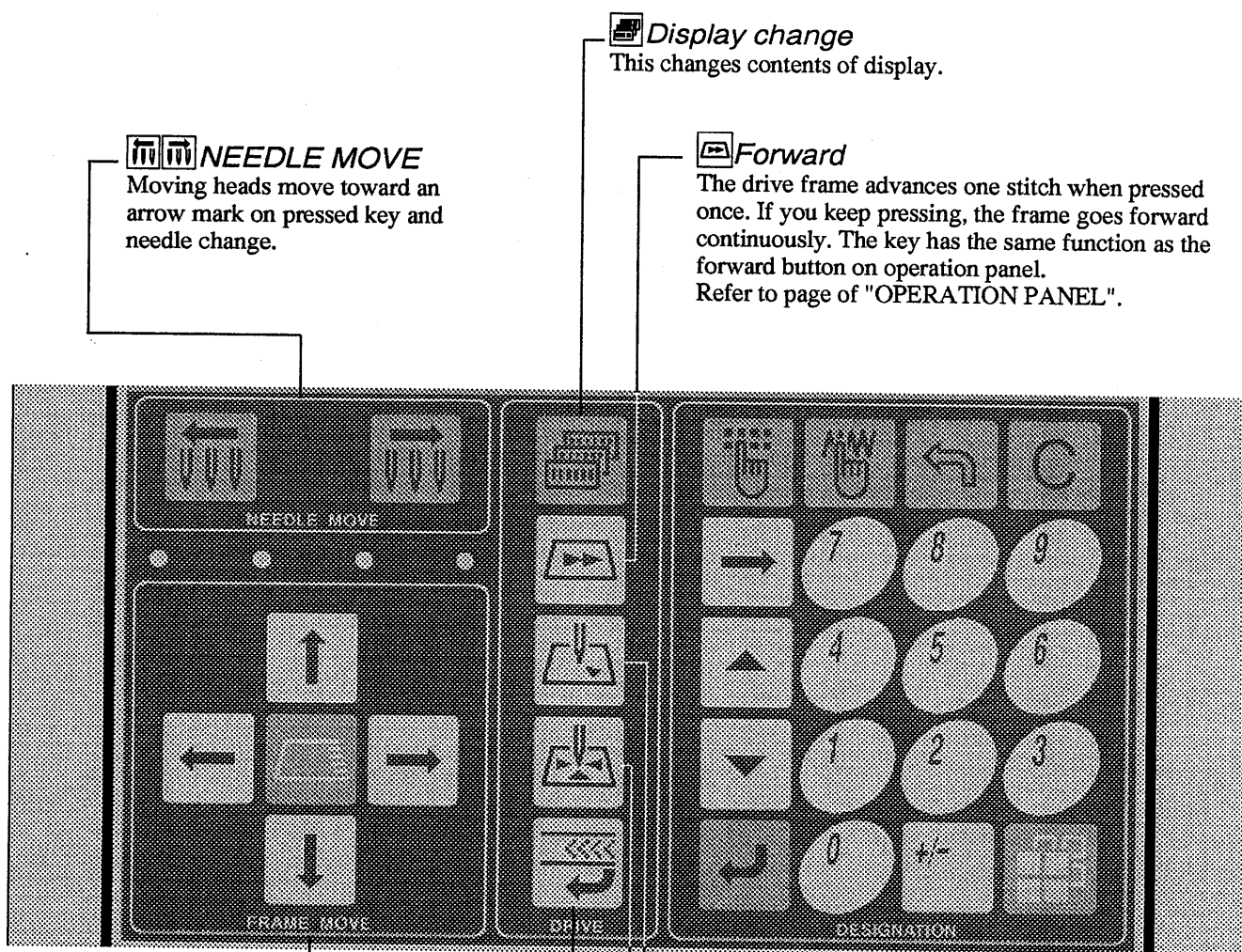




Operation key

Operation keys are located as follows:

Needle move key at left above, frame move key at left down, drive related keys in center and designation related keys at right.



NEEDLE MOVE

Moving heads move toward an arrow mark on pressed key and needle change.

Display change

This changes contents of display.

Forward

The drive frame advances one stitch when pressed once. If you keep pressing, the frame goes forward continuously. The key has the same function as the forward button on operation panel. Refer to page of "OPERATION PANEL".

FRAME MOVE

The frame moves toward direction of an arrow mark on pressed key.

Fast

When you press this key while pressing frame move key, speed to move the frame gets fast.

Position


Even if you move the frame with frame move key during or after embroidery, the frame returns to position before move.

Original point return

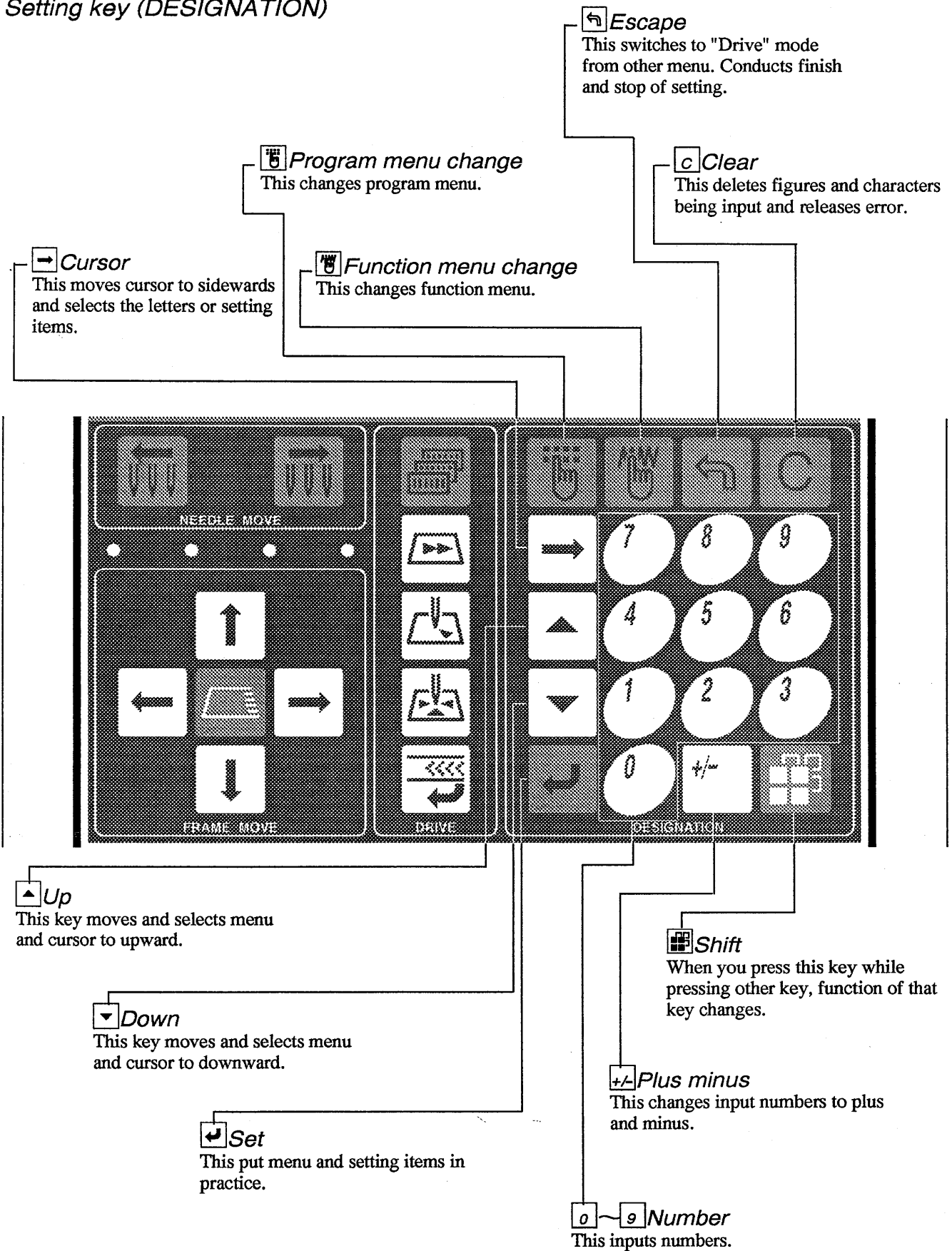
The frame returns to original point of pattern, and position to start sewing returns to top of pattern data. After you returned the frame to original point with this key, the frame will return to position before you press original point return key if you press this key again.

**Original point : This is point where the frame makes the first move when the machine starts embroidery.*

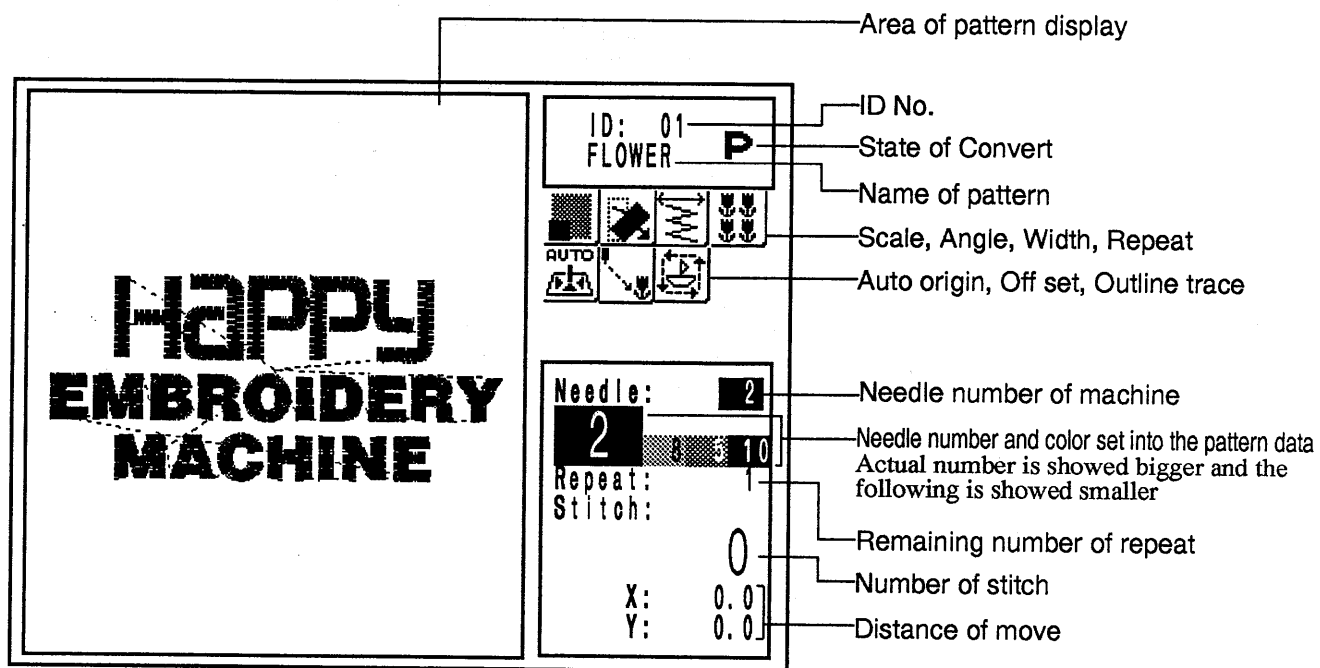
Top key

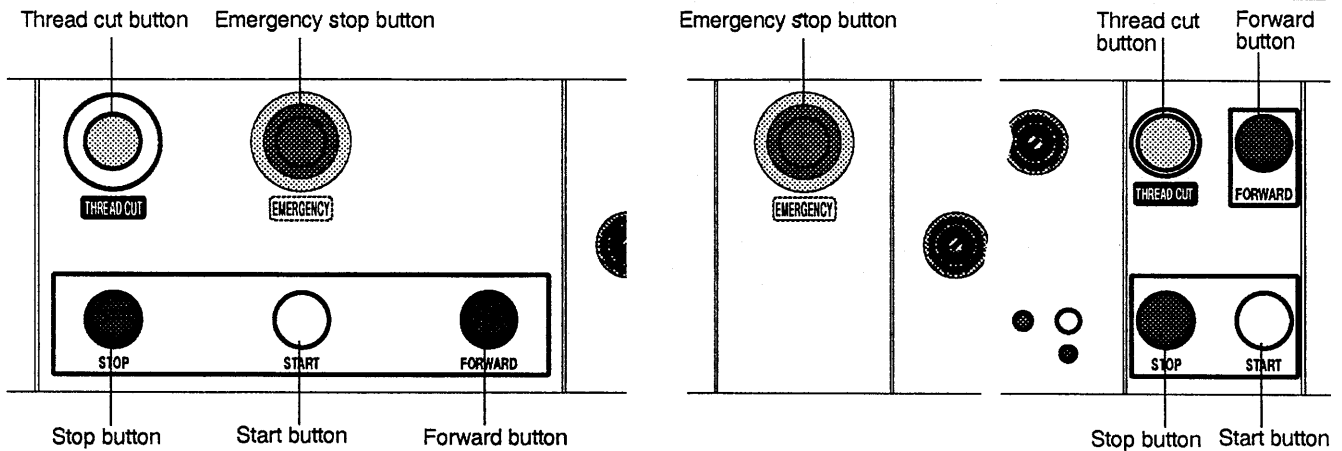
When this key is pushed, part of pattern where sewing starts returns to top of pattern data and status of  lights.

Setting key (DESIGNATION)



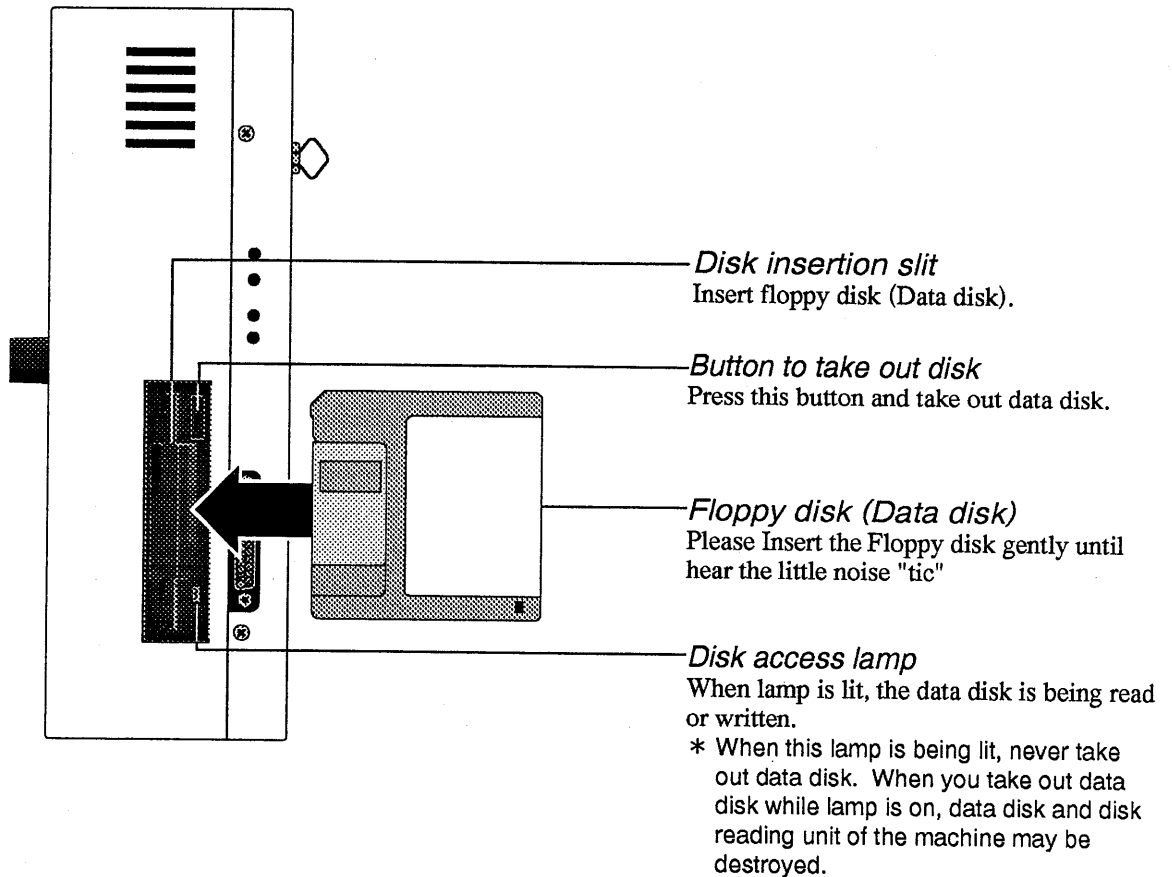
Operation screen





Operation panel is placed between thread tension units.

STATUS of the Machine		Button Operation	Stop	Running	Remark
Emergency button	Push	Push	Pressing this button will put power source off compulsorily machine stops compulsorily. Button will be locked after press it once.	Pressing this button will put power source off compulsorily machine stops compulsorily. Button will be locked after press it once.	Please use this button only for emergency. If you press this button and turn power off while sewing, you may not be able to continue from exact position of embroidery.
	Turn the button right to cancel the lock.	Turn the button right to cancel the lock.			
Thread cut button	Push	Push	When you press the thread cut button. The main shaft will make automatic turn and needles drop one time. Please pay care to this point.		When the machine is in state of jump by the thread break detecting switch, even if let the machine cut under threads, the machine will cut under threads, but will not cut and catch upper threads.
STOP Button	Push	Push	The frame move back one stitch. (*Trace back)	Stop running	*Trace back : This is to move only the frame and memory pattern forward reverse direction of sewing.
	Keep pushing	Keep pushing	The frame keeps moving back. (*Trace back)		
	Keep pushing more than 10 stitches	Keep pushing more than 10 stitches	Function of button is locked. The frame goes back by one stitch in succession when hand is off. When you stop it, push again.		
	Keep pushing more than 20 stitches	Keep pushing more than 20 stitches	Function of button is locked. The frame goes back by 10 stitches in succession when hand is off. When you stop it, push again.		
START Button	Push	Push	The machine starts.		*Slow driving : Machine drives at its minimum revolution.
	Keep pushing	Keep pushing	The machine starts on slow speed.	Revolution is reduced to *Slow driving.	
	Keep pushing for a while	Keep pushing for a while	The machine starts on slow speed untill detach the hand from button.	Revolution is reduced untill detach the hand from button.	
Forward Button	Push	Push	The frame moves forward one stitch. (*Trace forward)		*Trace forward : This is to move only the frame and memory pattern forward sewing direction.
	Keep pushing	Keep pushing	The frame keep moving forward. (*Trace forward)		
	Keep pushing for a while	Keep pushing for a while	Button is locked. The frame keeps moving forward even if you release button. When you stop it, push stop button.		
	Keep pushing for more than a while	Keep pushing for more than a while	Button is locked. The frame keeps moving forward by 10 stitches in succession, even if you release button. When you stop it, push stop button.		



Initialization of each setting item / Standard setting 10.0

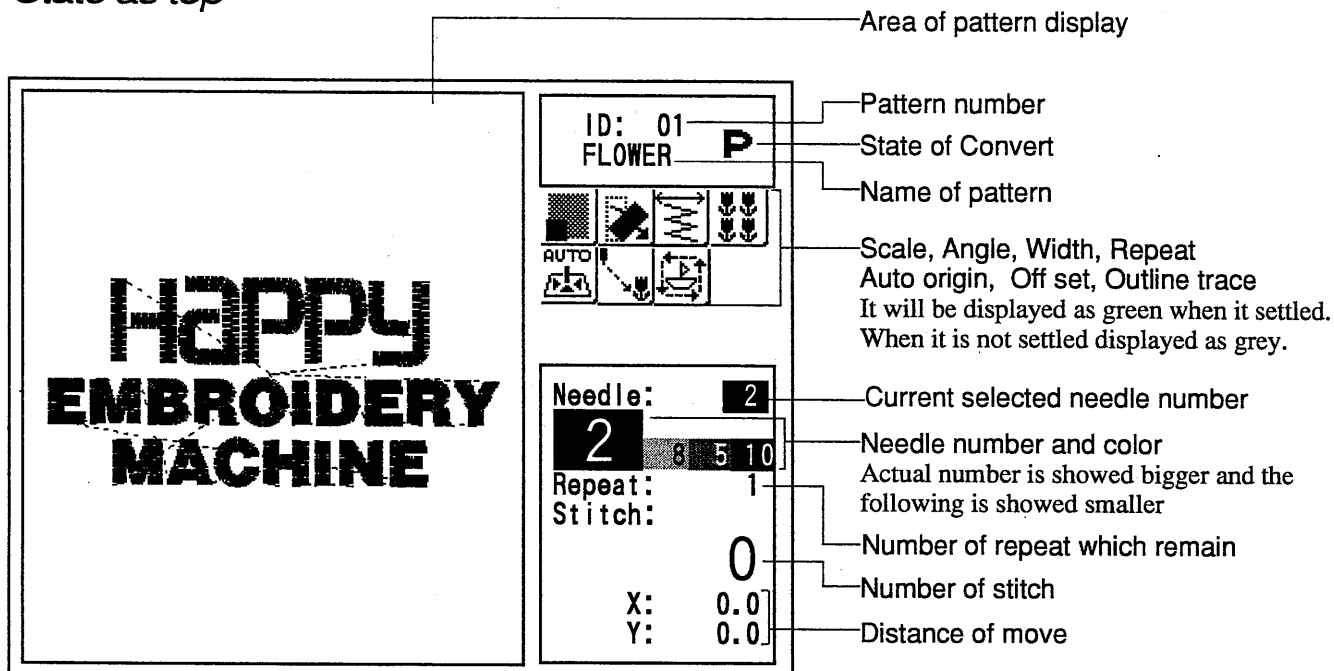
SETTING ITEM	SETTING CONTENTS
1 Keep null (CHG.)	Yes
2 Skip null stitch	No
3 Combine jump	No
4 TRD.break back	Yes
5 All head mending	No
6 Width data limit	13
7 Wide cap mode	No
8 Quick start mode	Yes
9 Auto thread cut	Yes
10 Cut at jump data	3
11 Cut at null jump	Yes
12 CHG. always cut	Yes
13 Stitch sweeper	No
14 Sweep length	4
15 Full length cut	No
16 Thread back long	No
17 All pattern disp	No
<u>18 Data format</u>	Auto
<u>19 Write various setting</u>	No
<u>20 Read various setting</u>	No
21 Speed down when cancell the mending	Yes
22 Trace mode	No
23 Trace data make	No
24 Trace Type	Area
25 Insert lock stitch at the beggining of embroider	Yes
26 Width data all	0.0
27 Preview data make	Yes

Initialization of each setting item / Standard setting 10.1

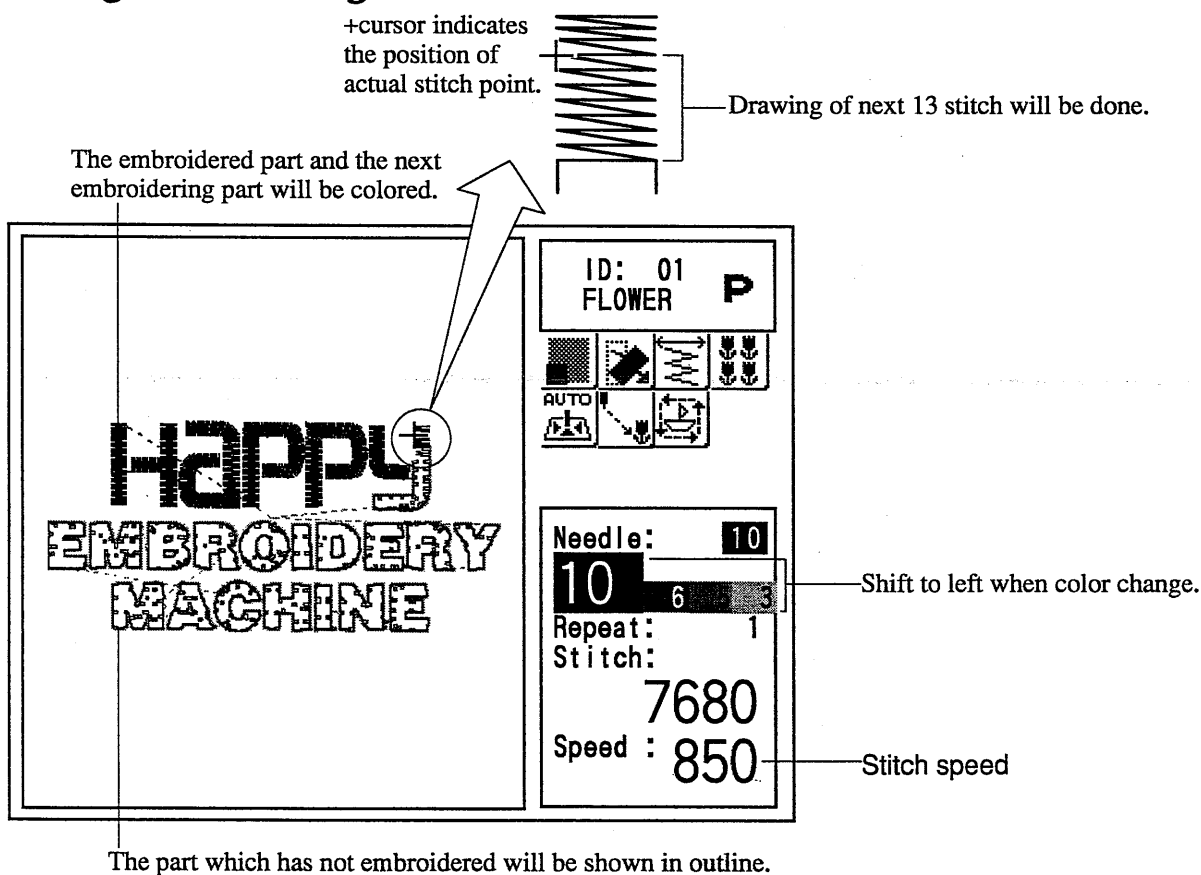
SETTING ITEM	SETTING CONTENTS
<RS232C> Input setting	OFF
<RS232C> Input setting	9600bps
<Setting> Scale	Scale X 100% Scale Y 100%
<Setting> Angle	0°
<Setting> Width	0.0mm
<Setting> Repeat	Quantity X 1 Quantity Y 1 Distance X 0.0 Distance Y 0.0 Priority X
<Setting> Convert	P
<Setting>Auto origin	ON

MONITOR DISPLAY / Displaying the pattern 10.2

State as top

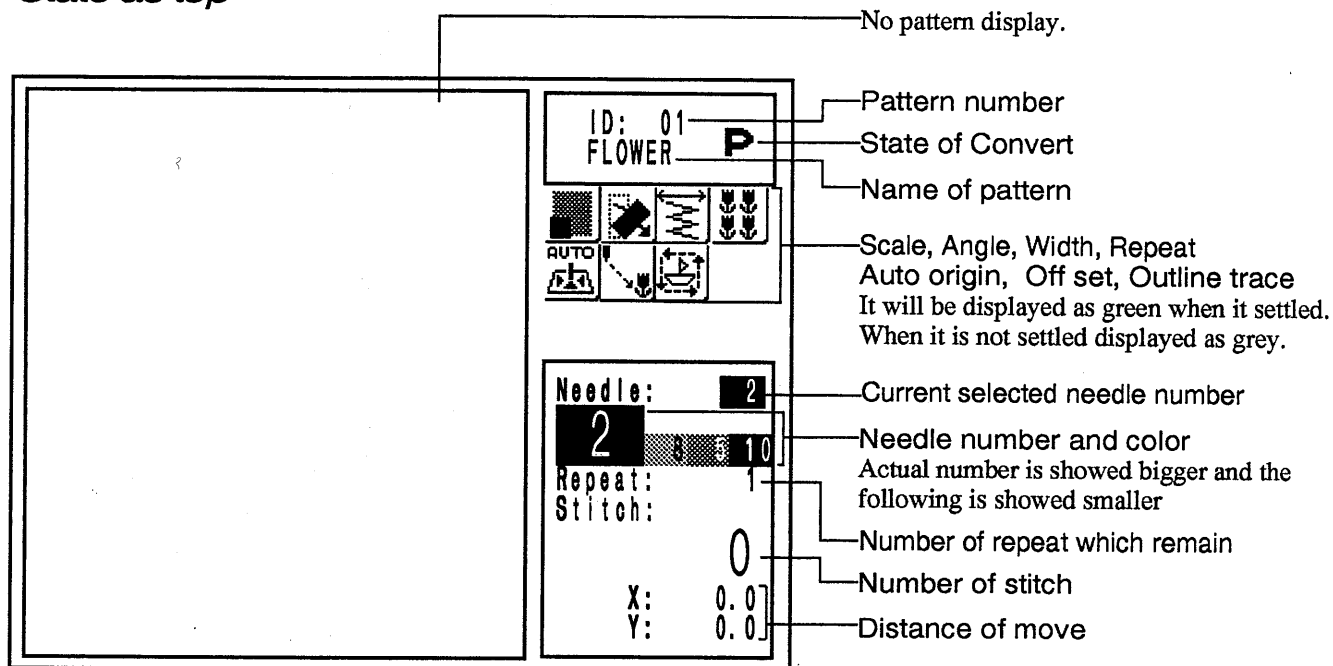


During embroidering

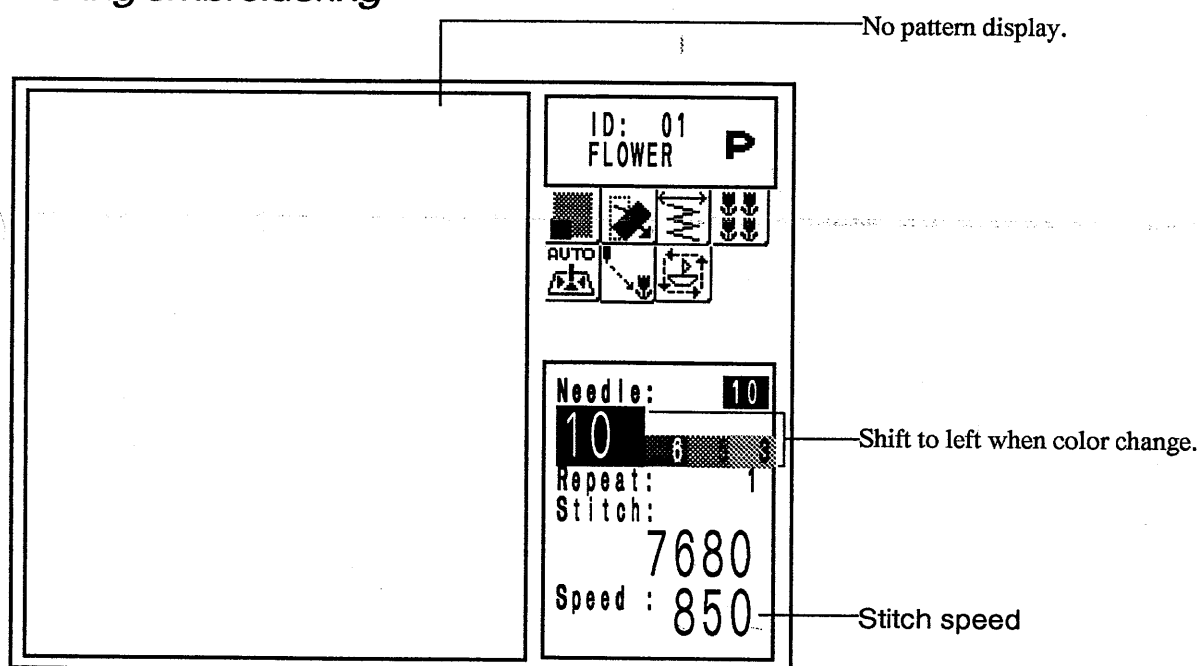


- ※ If the needle number is not set to the color number, the regular color to be assigned automatically.
- ※ Embroider will start after displaying all the pattern in outline, when you start with "Top".
- ※ +cursor indicates the position of actual stitch point.
The pattern will be colored by the progress of embroider.

State as top



During embroidering



Explanation on operation of the machine is made under the following manner

Displays on the control box are shown at the right side of this page and order of operation at the right side


Normally, displays on control box at the right correspond to status immediate after each operation

Order of Operation

1

Operation key and switch

This indicates operation of keys and switches of the machine



 This indicates efficient order of Operation

Menu item

PROGRAM MENU	
PATTERN	◆
SETTING	◆
NEEDLE	◆
OFFSET	◆
FRMOUT	◆
EDIT	◆
BATCH	◆
COLOR	◆
CLOTH	◆
FRAME	◆

Cursor
Indicates the selected item.

2


 + 

When this mark is displayed, it indicates that you press any key while pressing shift key

Supplement of operation : This indicates supplementary explanation or operation or action of the machine against operation

Indicates message.

3




When there are 2 or 3 displays at one key operation, Indicates change of state in continue at on

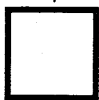
Indicates message.

Indicates message.

It shows the explanation of operation procedure to be continued the next page.



Operation key




In the order of operation, This indicates transformation of display by pushing the left key



This indicates important subject or contents of which you should do in it's subject

This machine has "Function menu" to read pattern data etc. and "Program menu" to select patterns and set various settings. Each menu has various items.



Change to function menu

Press  (function) while lamp for  (drive) of status is on.

The mode changes to "Function menu".

FUNCTION MENU	
DISK	Happy
TAPE	TJM
CREATE	FDR
LOCATE	MEL
POSITION	MELexp
RS-232C	ZSK
FLOPPY	B32
OTHER	

Change to program menu

Press  (program) while lamp for  of status is on.

The mode changes to "Program menu".

PROGRAM MENU	
PATTERN	
SETTING	
NEEDLE	
OFFSET	
FRMOUT	
EDIT	
BATCH	
COLOR	
CLOTH	
FRAME	

Change of items on each menu

Press  .


Items on menu changes from left to right or from up to down.

PROGRAM MENU	
PATTERN	
SETTING	
NEEDLE	
OFFSET	
FRMOUT	
EDIT	
BATCH	
COLOR	
CLOTH	
FRAME	




PROGRAM MENU	
PATTERN	
SETTING	
NEEDLE	
OFFSET	
FRMOUT	
EDIT	
BATCH	
COLOR	
CLOTH	
FRAME	

Returning to "Drive" from each menu

Press  (escape).

Display returns to "Drive" from other item.

 of status lights.

Order of basic operation

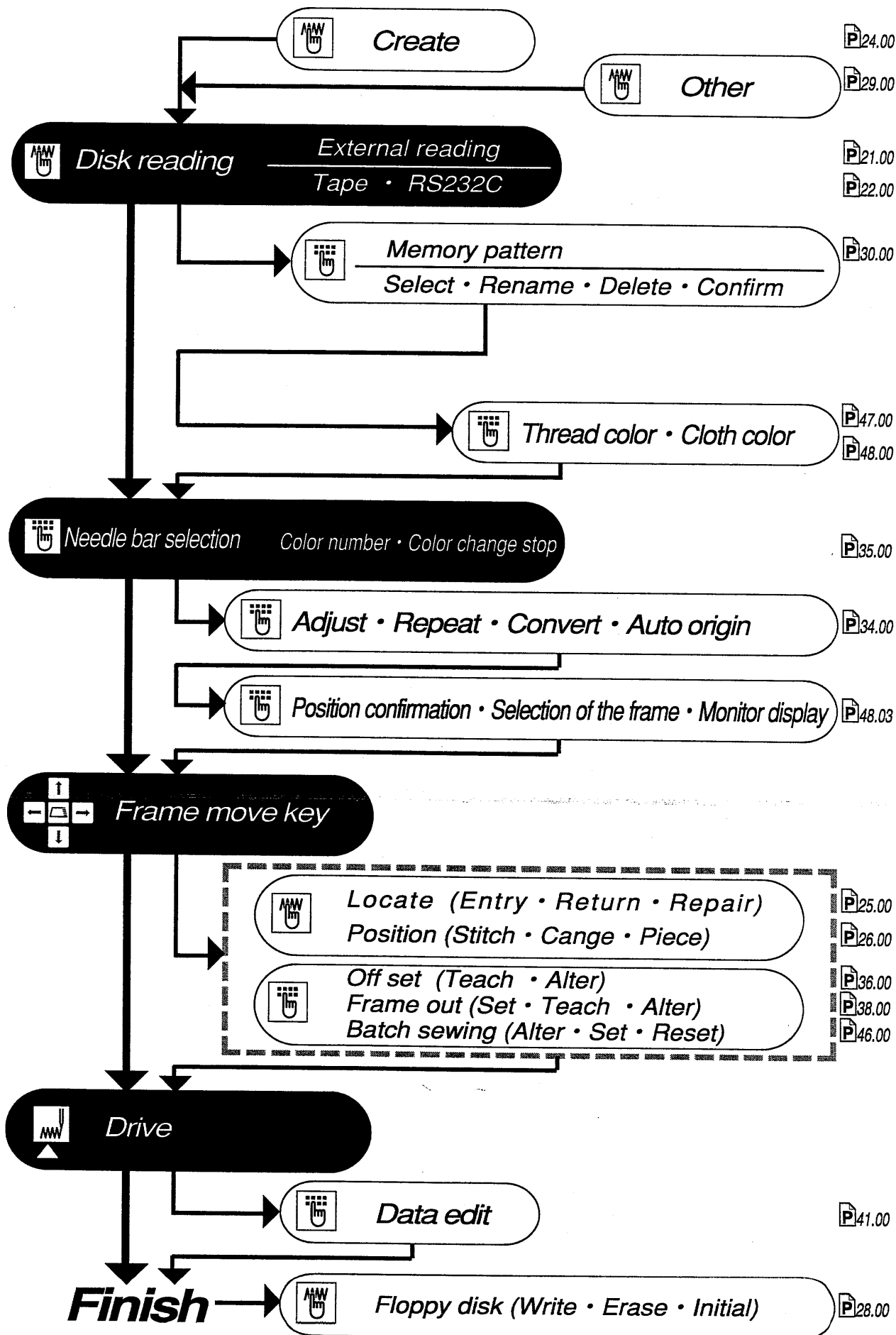


Function menu



Program menu

P Reference



Features of supplemental function / Function menu 12.0

This explains supplemental function on Function mode simply.

MAIN MENU		SUB MENU		Setting item etc.	Setting contents	Feature of supplemental Function	Explanation of Operation
ITEM	FEATURE	ITEM	FEATURE				
DISK	Disk reading	(Disk format selection)				This reads pattern data disk and writes in memory	21.00
		Happy TJM					
		FDR		Reading		This reads pattern data disk and writes in memory continuously	21.04
		MEL					
		MELexp		Join		This connects 2 patterns and writes in memory as 1 pattern	21.10
		ZSK					
		B32					
TAPE	TAPE Reading External reading	(TAPE format selection)	Auto Happy Brd · Zsk	Join		This reads pattern data from tape reader or external device and writes in memory	22.00
						This connects 2 patterns and writes in memory as 1 pattern	
CREATE	Function setting			※ another sheet		This sets basic function of this machine	24.00
Locate	Frame position	Registration	Registration			This registers start position of pattern	25.01
		Registered position	Registered position			When position of the frame change by power suspension, these function will restore the frame to the registered start point	25.03
		Repair	Repair			When position of the frame change by power suspension, these function will restore the frame to the previous position	25.06
POSITION	Position This is to set position of frame and data or designated point			Stitch		This moves the frame to desired number of stitch	26.01
				Change		This moves the frame to first position of desired color number of pattern	26.04
				Peace		This moves the frame to first position of the number of desired repetition	25.06
RS-232C	Setting of RS-232C			RS232 Mode	No · Yes	Serial port is used	27.00
				RS232 Speed	38400 19200 9600 4800 2400	Communication speed (Baud rate) of serial point is selected	27.02
FLOPPY	Floppy disk	Write	Write			This writes memory pattern in data disk	28.00
		Erase	Erase			This deletes any pattern in data disk	28.05
		Initialize	Initialize		2DD(720K) 2HD(1.25M) 2HD(1.44M)	This initializes floppy disk 2DD and 2HD on the market and makes data disk on TAP type	28.09
OTHER	Other	All clear	Clear all the memory pattern			All patterns registered in memory are erased all at once	29.00
		Counter	Reset the stitch counter			This resets cumulative total stitches	29.02

Features of each setting item / Program menu

12.1

This explains each setting item on program mode simply.

MAIN MENU		SUB MENU		Setting item	Setting Area	Feature of setting	Explanation of Operation
ITEM	FEATURE	ITEM	FEATURE				
PATTERN	Memory pattern			Select		This selects pattern stored in memory	30.00
				Delete		This deletes pattern stored in memory	30.05
				Display		This displays pattern stored in memory	30.08
				Rename		This changes pattern name of a pattern in memory	30.02
SETTING	Setting of pattern	Adjust	Pattern adjustment	Scale X.Y	50~200(%)	This sets magnification in any proportion	34.01
				Angle	-359° ~ +359°	This sets rotation of a pattern at any angle	34.04
				Width	-1.0~ +1.0(mm)	This sets any width adjustment to width of a pattern	34.07
		Repeat	Repeat	Peace X.Y	1~30	This sets production quantity when you perform repeat	34.10
				Space X.Y	-999.9~ +999.9 (mm)	This sets distance between start point of each pattern when you perform repeat	
				Priority	X(Sidewise) Y(lengthwise)	When you set more than 2 pieces for repeat lengthwise and sidewise, This selects direction to embroider 2nd piece.	
		Convert	Coordinate conversion	P U d A 9 Δ b U		This selects angle for coordinate.	34.15
		Auto Origin	Return to Auto Origin		on·off	This switches to make Automatic original point return or not.	34.18
NEEDLE	Needle bar selection			Needle, Color Number		Needle number are set to each color number of memory pattern	35.01
				Color change stop		Color change stop are set to each color number of memory pattern.	35.03
OFFSET		Teach	Input teaching			This moves the frame with frame move key to set offset	36.01
		Alter	Alter		0~999.9 (mm)	This moves distance of offset directly by key input	36.04
FRAME OUT		Teach	Input teaching			This moves the frame with frame move key to set frame out.	38.01
		Alter	Alter		0~999.9 (mm)	This move distance of offset directly by key input	38.05
EDIT	Data edit					This conducts data editing such as addition of stitches, erasure, move, addition of function code, change to selected memory pattern	41.00
BATCH	Batch Sewing	Alter	Alter		30 peaces	This conducts registration of patterns to be batch treated in order	46.01
		Set	Setting			This sets to execute of batch operation	46.05
		Reset	Reset			This cancels to execute of batch operation	46.07
COLOR	Setting of color to be displayed				128 colors	This sets to each color of pattern to be displayed	47.00
CLOTH	Setting of back ground color to be displayed				128 colors	This sets to back ground color for the pattern to be displayed	48.00
FRAME	Protection of frame hit	Select	Selection of frame	round frame, square frame, Tubuler round frame, Tubuler square frame, Cap frame, Registrated frame by user		This selects frame to be used	48.09
		Display	Position of frame is displayed			This displays the position of frame and needle drop point of pattern	48.03

This machine has function of manual needle bar change and automatic needle bar change for changing needle bar.

Manual needle bar change

When you begin to operate the machine without setting mode of "Drive" or "Color change" after reading pattern in memory, the machine makes automatic stop at the start of each *color number, and you can select desired needle bar manually.

※ Once you embroider with mode of manual needle bar change, "color change" is set and needle bar is set to each color number and you can embroider with mode of automatic needle bar change from 2nd time.

**color number : Color number is obtained by dividing pattern data by color change function and is part to comprise pattern data. Needle number (thread color) to be sewn can be set to color number.*

1

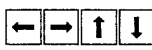
Read pattern from data disc etc. Or select pattern not in use or select pattern with "color change" not set.

Refer to page of "DISK READING", "MEMORY PATTERN".


2

Press  to light  (drive) of status is on.

3

Set the frame with  (frame move) to position where to start embroidery.

4

Select any needle bar with  (Needle bar change key).


5

Push start button.

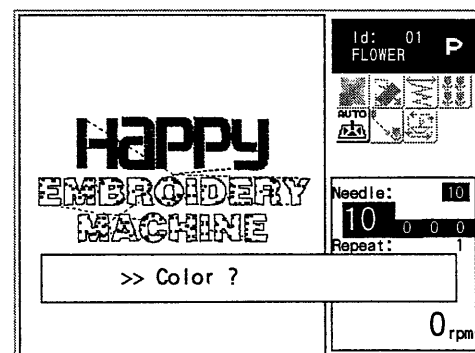
When you start the machine and finish sewing one color number, the machine display right message and stops.


6

When there is color number after 2nd color, repeat 4 and 5 and embroider to the last color number.

When the machine finishes the last color number, it stops and drive information  (top) lights.

Finish



※ When you stop the machine with pattern data being top or in midway of color number and resumed operation by switching to other needle bar with , the switched needle bar is set to that color number.

Automatic needle bar change

For pattern once used by mode of "manual needle bar change" or for pattern to which color change is set, the machine embroiders by automatically changing needles when you start to run it.

1





Select pattern for which needle bar is set to each color number by "Change" etc.

Refer to page of "MEMORY PATTERN", "CHANGE".

2


Press  (escape) to light  (drive) of status is on.

3


Set the frame with     (frame move) to position where to start embroidery.

4

Push start button.

The machine embroiders by automatically changing needle bar according to setting of "Change". When you finish sewing to the last of pattern, the machine stops and status  (top) lights.

Finish

※ When you stop the machine with pattern data being top or in midway of color number and resumed operation by switching to other needle bar with , the switched needle bar is set to that color number.

If there is any necessity of special operation for each function,
The explanation will be indicated so that you can operate without reading a manual.

Function Mode

Main menu	Sub menu	Setting item	Guide indication
Item	Item		
Adjust		※ Another sheet	○
RS232		Input mode	○
		Speed (baud rate)	
Other	Memory pattern		○

Program Mode

Main menu	Sub menu	Setting item	Guide indication
Item	Item		
Pattern		Select	○
		Rename	○
Adjust (Pattern adjustment)	Repeat	Piece X.Y	○
		Space X.Y	
		Priority X.Y	
	Auto Origin		○
Needle select		Needle number	○
		Stop color change	
Frame out		Active needle	○
Edit			○
Batch	Registration		○
Color			○
Material			○
Scale			○

Ex. How to see the guide indication of pattern adjustment



Press the key "Program".




Press the "Up Key" and scroll to the selection "Pattern".



Press the "Set Key"







[PATTERN]		Id:01	Name:FLOWER
Id	Name	Information Stitches: 98765 Changes : 12 Width : 678.1 Height : 569.3	
01	FLOWER		
02	MOON		
03	BIRD		
04	FANTASY		
05	CHILD		
06	DOG		
07	HOUSE		
08	TREE		
09	SUN		
10	CAT		

You can use the function, when this mark appears.



To erase the selected design hold the "Shift Key" and press the "Display change Key".

·Design the pattern form	
·RENAME MODE	
·Erase the pattern data	 + 

This reads pattern data from data disk and writes in memory.

When the HAPPY format pattern data with *various function setting is read in memory, various functions such as needle bar selection, pattern data adjustment and etc. to be set automatically.

※ When you write pattern data in memory, you will consume memory of hundreds of stitches besides number of stitches of the pattern. Before reading, check that free memory has more capacity than the number of stitches to be read and hundreds of stitches put together.

※ There is a case that data disk of Happy or Tajima has pattern in *data format of Barudan or ZSK. In case you can't read pattern properly from these data disks, change data format according to "Data format" in "Data disk" and read again.

End : This stores pattern already read in memory.
Read : This is to read the Pattern and Memorize in to Memory.
Join : This is to connect various pattern in to one and can memorize.

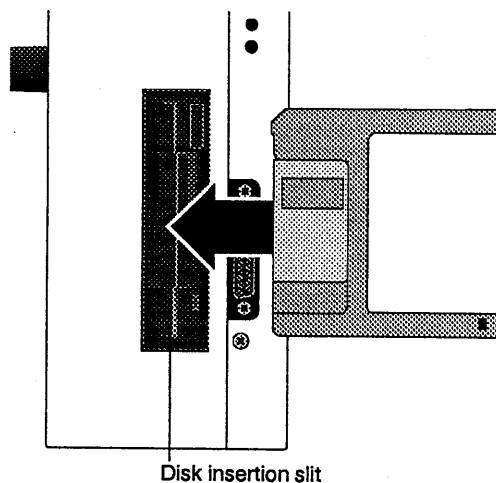
**various function setting : A general term for Needle bar selection, Convert, Pattern adjustment, Repeat, Offset and frame out which are set in the pattern data. Refer to the explanation of "etc. func write" and "etc. func read" on "CREATE" page.*

**data format : This is situation that tape format is converted into pattern data for writing in disk or for data communication.*

DISK FORMAT
Happy : HAPPY
TJM : Tajima
FDR : Barudan (style 30)
MEL : Melco (type 320K)
MEExp : Melco (type exp)
ZSK : ZSK
B32 : Barudan (style 32)

1

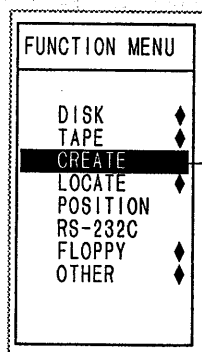
Insert the diskette into the disk drive on the right side of the control panel.



2



Press the "Function Key".





Settings menu is shown.

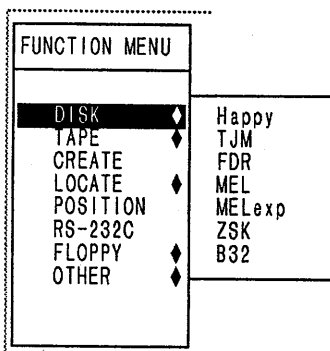
3



Press the "Up Key" and select "Disk".



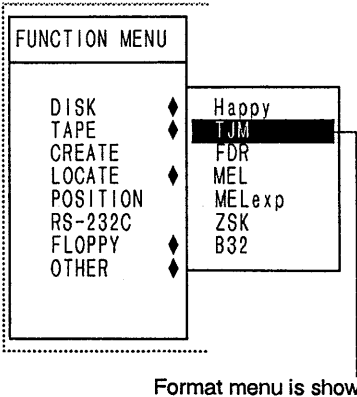
If you hold the "Shift Key"  while pressing the "Up Key"  you can select Disk easily.



4



Press the "Set Key".






Format menu is shown.

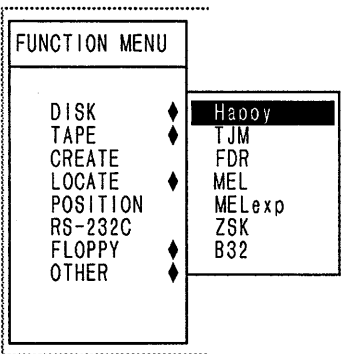
5



Use the "Up and Down Keys" to select the disks format from the sub menu.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.



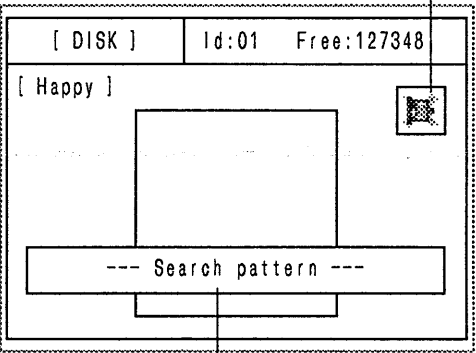
As a example we have selected the Happy format

6



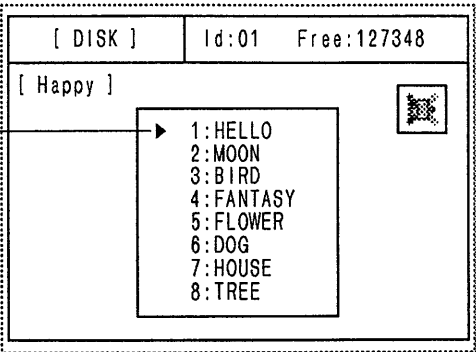
Press the "Set Key".

Prohibit to takeout the floppy disk



A message is shown.

Indicator



A menu show the design stored on the diskette.



7

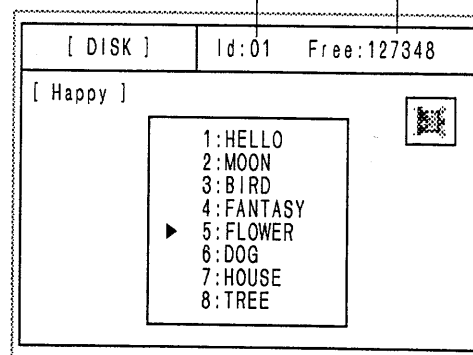


Use the "Up and Down Keys" to select the design you wish to work with.



By holding (shift) and pressing and keys you can move quickly to the selection.

The designs new ID number in the machines memory shows the machines free memory

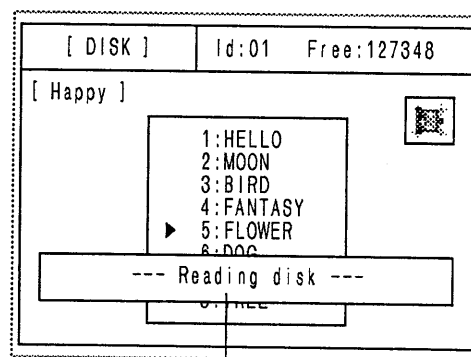


As a example we have selected the flower design

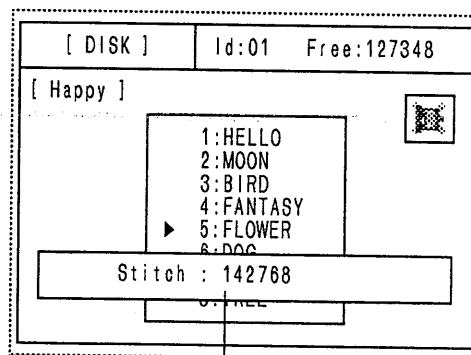
8



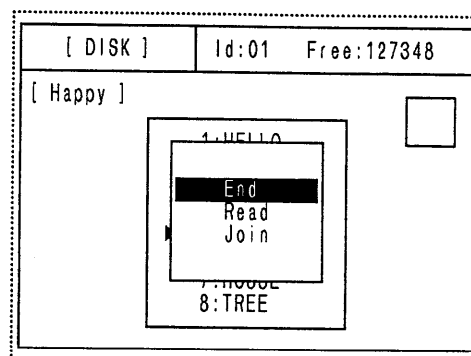
Press the "Set Key".



A message is shown.



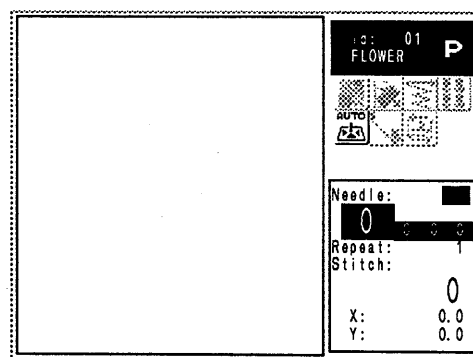
A message is shown.



9



Press the "Set Key".



Return to Drive Mode.



- If you press the "Function Key" at step 7 you will return to the Function Menu.

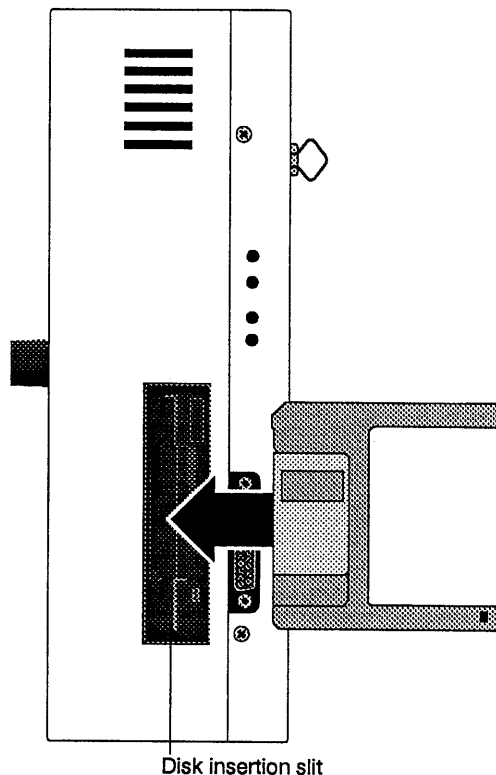


- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

After storing patterns that are read, keep reading other patterns.

1

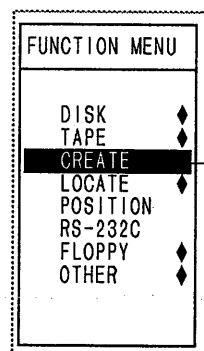
Insert the diskette into the disk drive on the right side of the control panel.



2



Press the "Function Key".





Settings menu is shown.

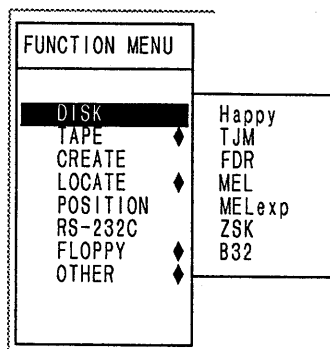
3



Press the "Up Key" and select "Disk".



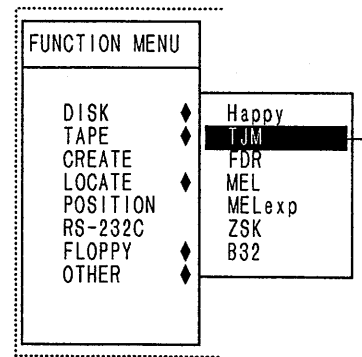
If you hold the "Shift Key"  while pressing the "Up Key"  you can select Disk easily.



4



Press the "Set Key".






Format menu is shown.

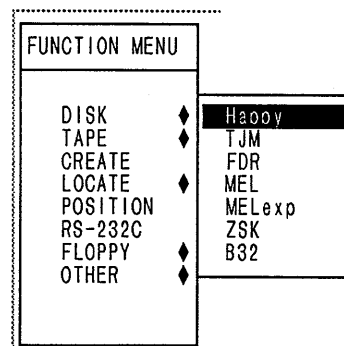
5



Use the "Up and Down Keys" to select the disks format from the sub menu.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.



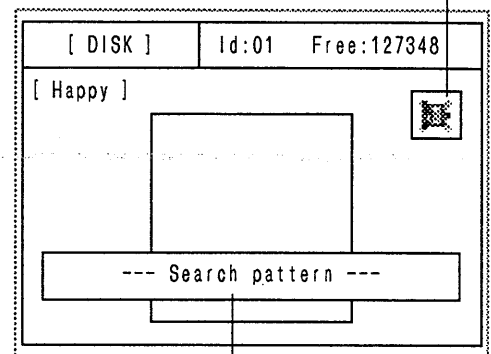
As a example we have selected the Happy format

6



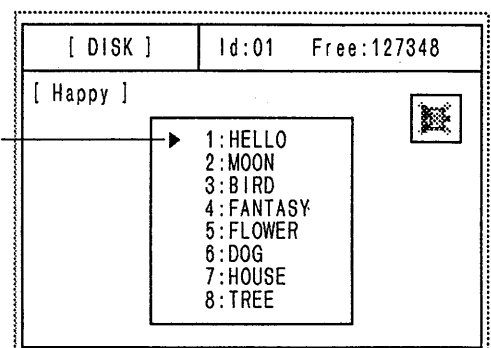
Press the "Set Key".

Prohibit to takeout the floppy disk



A message is shown.

Indicator



A menu show the design stored on the diskette.



7



Use the "Up and Down Keys" to select the design you wish to work with.



By holding (shift) and pressing and keys you can move quickly to the selection.

The designs new ID number in the machines memory

shows the machines free memory

[DISK]	Id:01	Free:127348
[Happy]		
1:HELLO 2:MOON 3:BIRD 4:FANTASY ▶ 5:FLOWER 6:DOG 7:HOUSE 8:TREE		

As a example we have selected the flower design

8



Press the "Set Key".

[DISK]	Id:01	Free:127348
[Happy]		
1:HELLO 2:MOON 3:BIRD 4:FANTASY ▶ 5:FLOWER 6:DOG		
--- Reading disk ---		

A message is shown.

[DISK]	Id:01	Free:127348
[Happy]		
1:HELLO 2:MOON 3:BIRD 4:FANTASY ▶ 5:FLOWER 6:DOG		
Stitch : 142768		

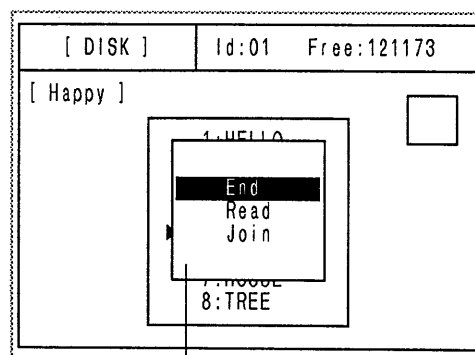
A message is shown.

[DISK]	Id:01	Free:127348
[Happy]		
1:HELLO End Read Join 7:HOUSE 8:TREE		



9

After you finish step 8 you will see the screen as shown

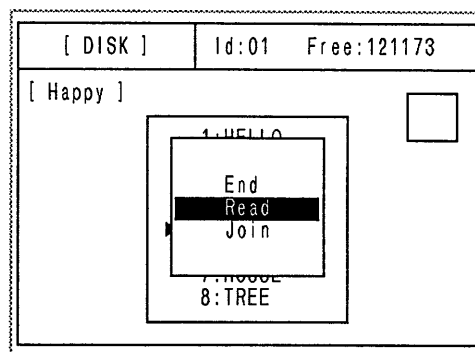


A message is shown

10

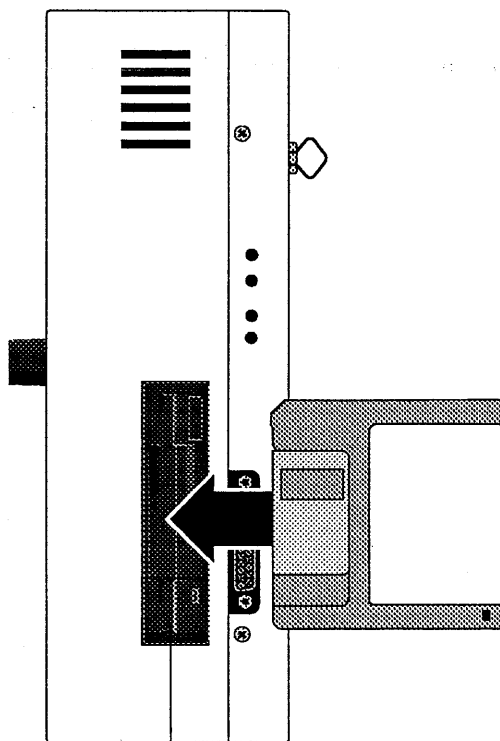


Press the "Down Key" and select "Read"



11

Insert the floppy diskette you wish to read from



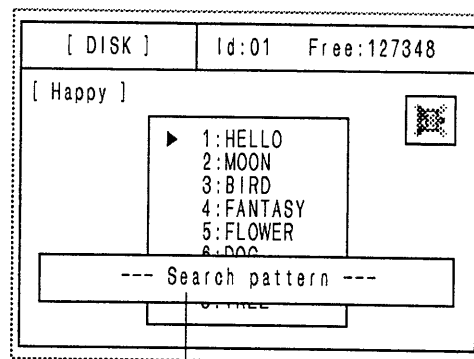
Disk insertion slit



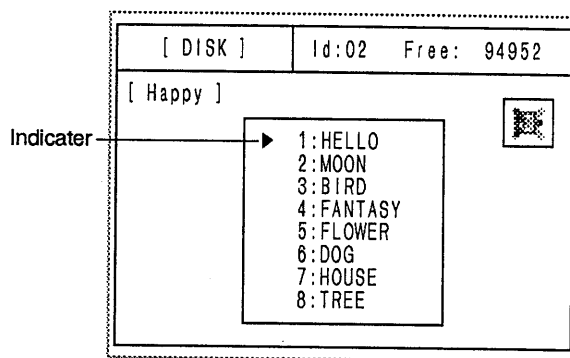
12



Press the "Set Key".



A message is shown.






A menu show the design stored on the diskette.

13



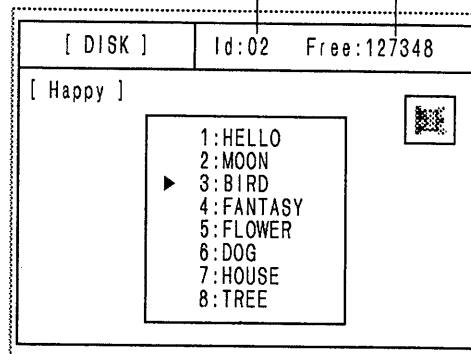
Use the "Up and Down Keys" to select the design you wish to work with.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.

The designs new ID number in the machines memory

Shows the machines free memory



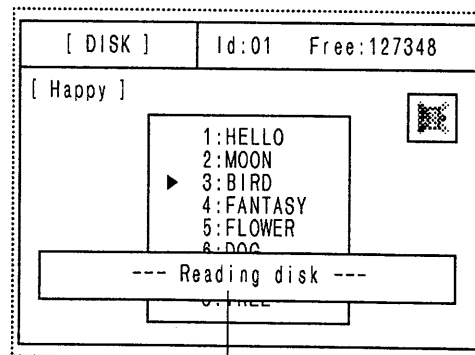
As a example we select the design Bird



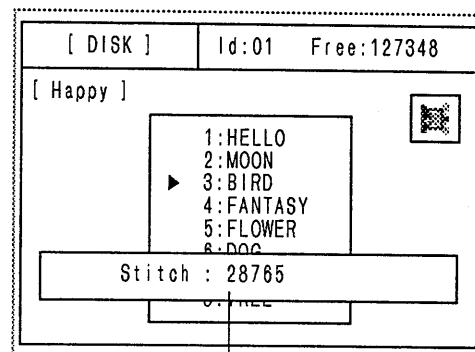
14



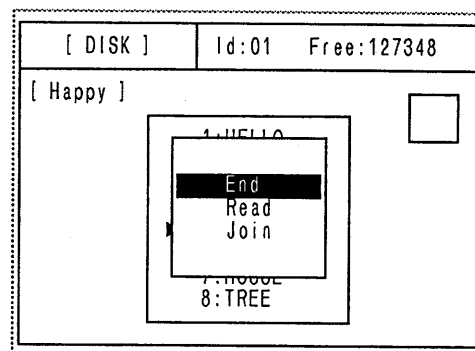
Press the "Set Key".



A message is shown.



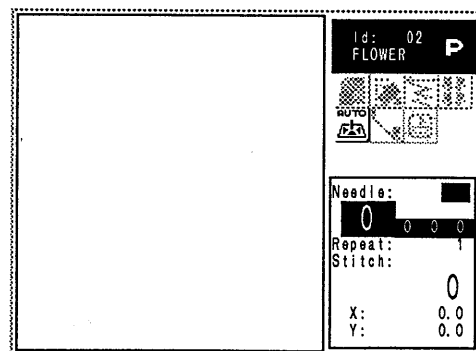
A message is shown.



15



Press the "Set Key".



Return to Drive Mode.



- If you press the "Function Key" at step 7 you will return to the Function Menu.

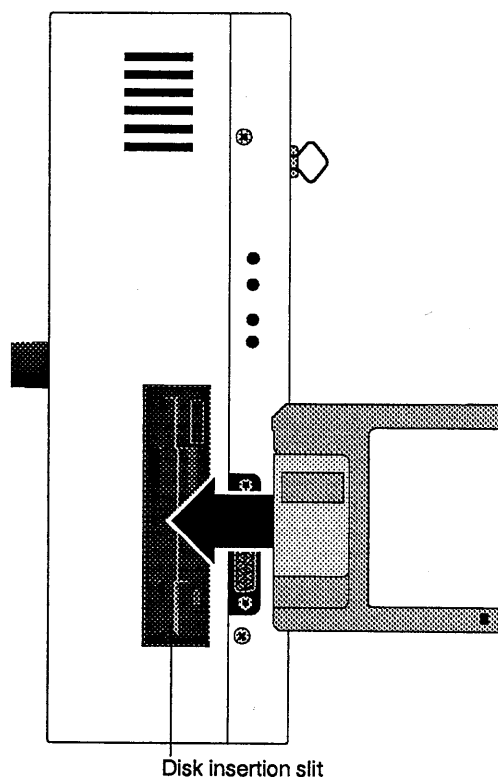


- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

This is used for joining 2 patterns and memorize as one pattern data.

1

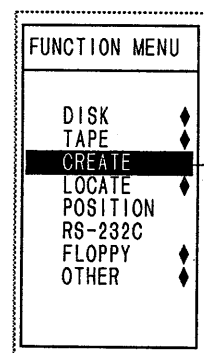
Insert the diskette into the disk drive on the right side of the control panel.



2



Press the "Function Key".





Settings menu is shown.

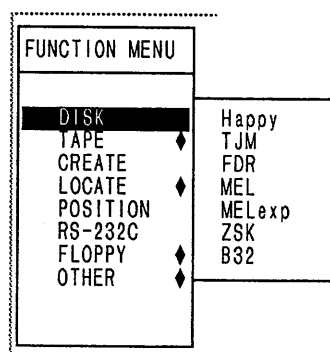
3



Press the "Up Key" and select "Disk".



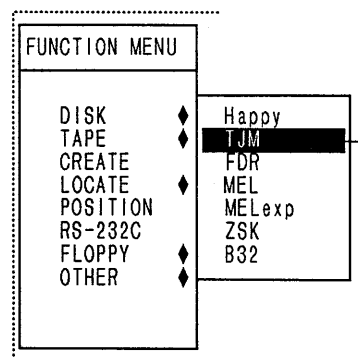
If you hold the "Shift Key"  while pressing the "Up Key"  you can select Disk easily.



4



Press the "Set Key".






Format menu is shown.

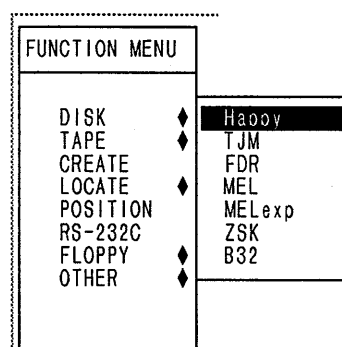
5



Use the "Up and Down Keys" to select the disks format from the sub menu.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.



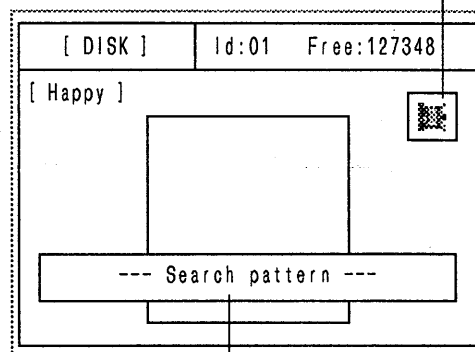
As a example we have selected the Happy format

6



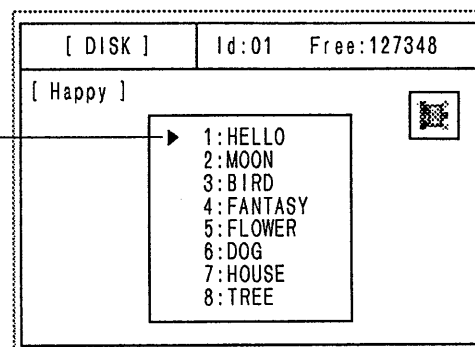
Press the "Set Key".

Prohibit to takeout the floppy disk



A message is shown.

Indicator



A menu show the design stored on the diskette.



7



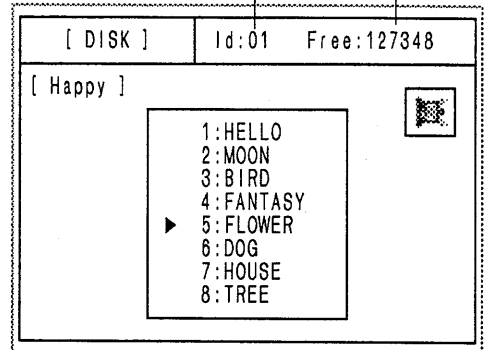
Use the "Up and Down Keys" to select the design you wish to work with.



By holding (shift) and pressing and keys you can move quickly to the selection.

The designs new ID number in the machines memory

shows the machines free memory

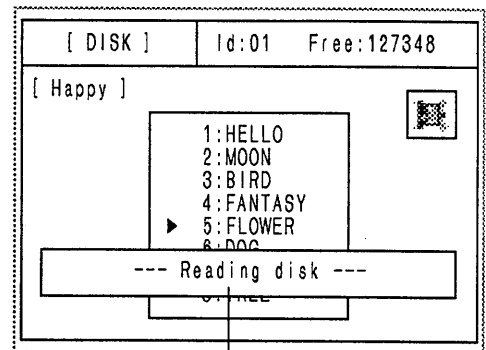


As a example we have selected the flower design

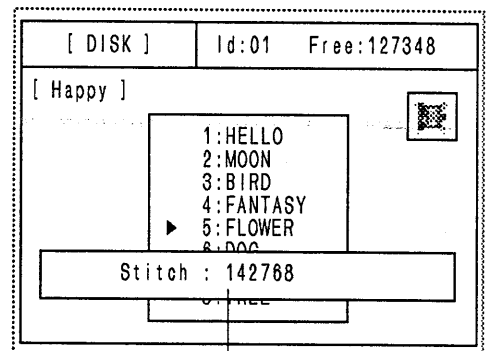
8



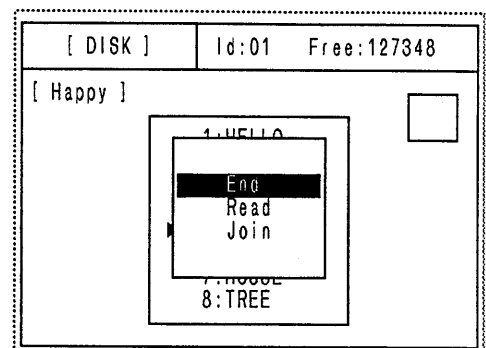
Press the "Set Key".



A message is shown.

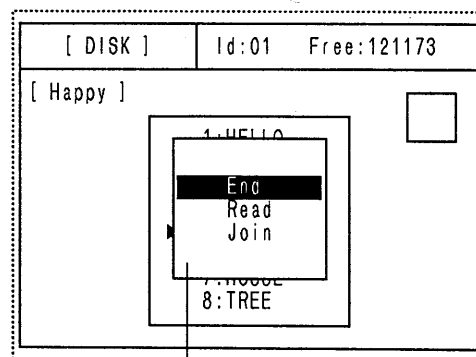


A message is shown.



9

After step 8 in the read design section use the Down key and select Join.

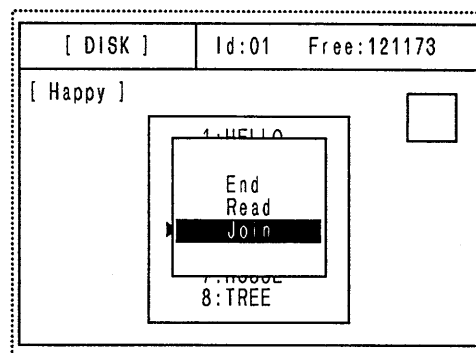


A message is shown.

10

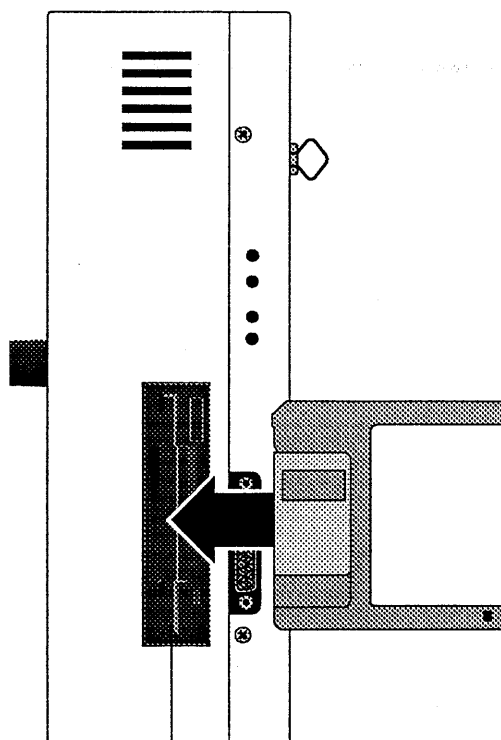


Press the "Down Key" and select "Join".



11

Insert the floppy diskette you wish to read from.



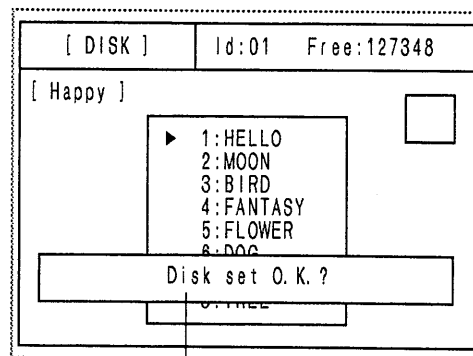
Disk insertion slit



12



Press the "Set Key".

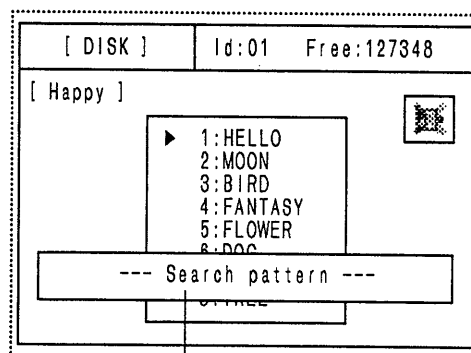


A message is shown.

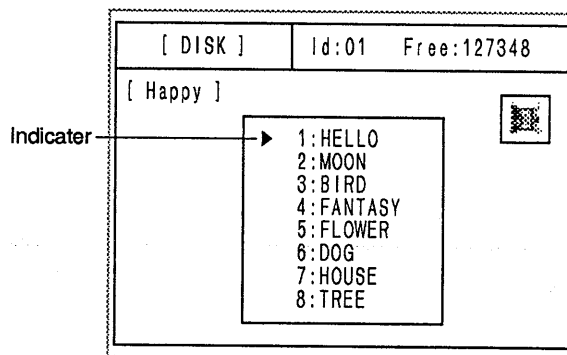
13



Press the "Set Key".



A message is shown.






A menu show the design stored on the diskette.

14



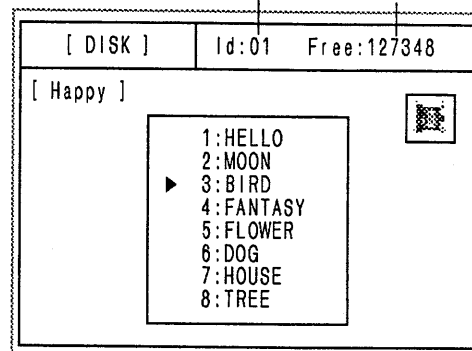
Use the "Up and Down Key" and select the designs name you wish to Join.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.

The designs new ID number in the machines memory

Shows the machines free memory



As a example we selected design Bird to be joined



15



Press the "Set Key".

[DISK]	Id:01	Free:127348
[Happy]		
<div style="border: 1px solid black; padding: 5px;"> 1:HELLO 2:MOON 3:BIRD 4:FANTASY 5:FLOWER 6:DOG </div>		
--- Reading disk ---		

A message is shown.

[DISK]	Id:01	Free:127348
[Happy]		
<div style="border: 1px solid black; padding: 5px;"> 1:HELLO 2:MOON 3:BIRD 4:FANTASY 5:FLOWER 6:DOG </div>		
Stitch : 142768		

A message is shown.

[DISK]	Id:01	Free:127348
[Happy]		
<div style="border: 1px solid black; padding: 5px;"> 1:HELLO <div style="border: 1px solid black; padding: 2px; text-align: center;">End Read Join</div> 7:MOON 8:TREE </div>		

16



Press the "Set Key".

	Id: 01 FLOWER P
	AUTO P
	Needle: 0
	Repeat: 1
	Stitch: 0
	X: 0.0 Y: 0.0

Return to Drive Mode.



- If you press the "Function Key" at step 7 you will return to the Function Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Using this function you can read data from a *PC using a serial cross cable.

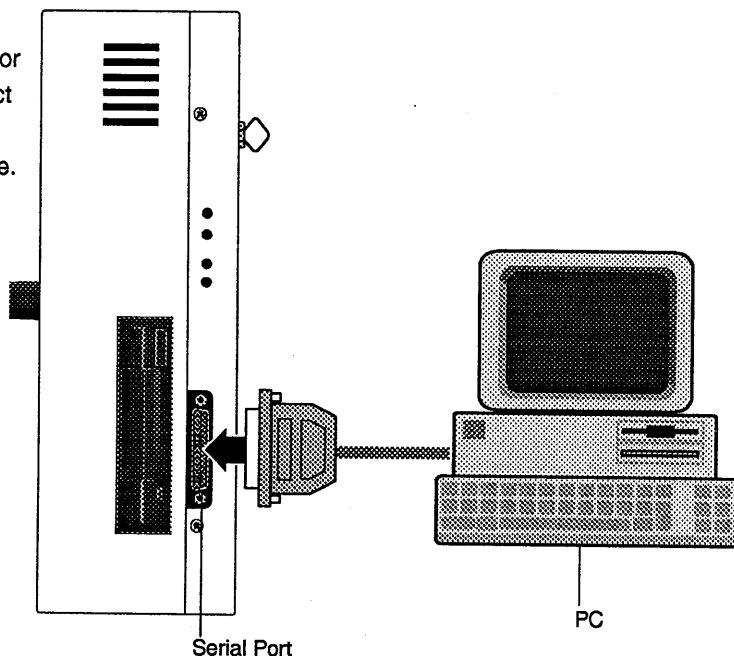
*PC : This is device to take out pattern data from pattern editing machine and tape reader etc.

※ When you write pattern data in memory, you will consume memory of hundreds of stitches besides number of stitches of the pattern. Before reading, check that free memory has more capacity than the number of stitches to be read and hundreds of stitches put together.

Before reading the design

- 1** Connect a RS-232C Serial cross cable from the right side of the control panel to the com port in the PC.

Note: contact your software vendor for details concerning the direct connection. Some software makers do not offer this feature.



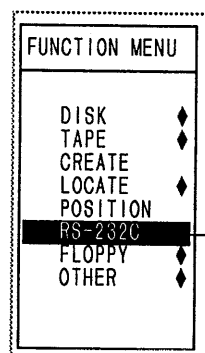
- 2** In the create menu change the RS232C setting to ON.

- 3** Make sure the machine and PC's com port speeds match
Refer to page 26.00 and read the RS232C connection information.

1



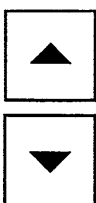
Press the "Function Key".



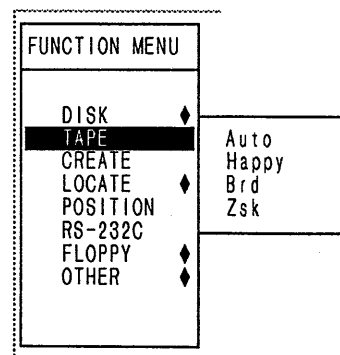
Settings menu is shown.



2



Use the "Up and Down Key" and choose "Tape".

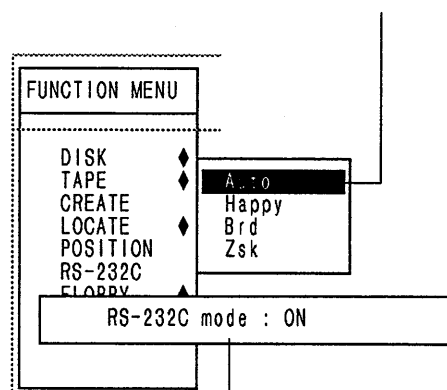


3



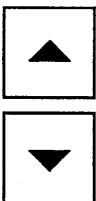
Press the "Set Key".

The selected format is shown.

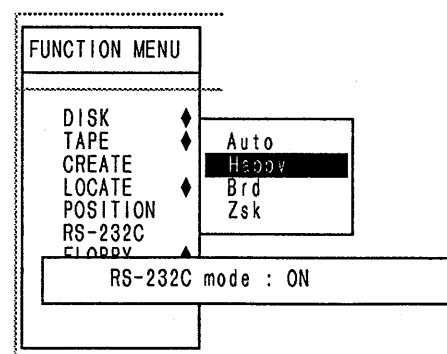


Confirm that RS232C is ON at this point.

4



Use the "Up and Down Key" and select the format.



If you choose Auto for your format the machine will judge the format.
 Note: because of the wide variety of machine format it is possible that the automatic format function will not work in all cases
 In case of reading error select the specific format.

Indication	Format
Auto	Automatic Selection
Happy	Happy , Tajima
Brd	Barudan
Zsk	Zsk



5



Press the "Set Key".

[TAPE]	RS-232C mode : ON								
<table border="1"> <tr> <td>Id</td> <td>: 02</td> </tr> <tr> <td>Free</td> <td>: 121173</td> </tr> <tr> <td>Format</td> <td>: Happy</td> </tr> <tr> <td>Data</td> <td>:</td> </tr> </table>		Id	: 02	Free	: 121173	Format	: Happy	Data	:
Id	: 02								
Free	: 121173								
Format	: Happy								
Data	:								

Format type
Free memory space
Design ID

6



Press the "Set Key".

[TAPE]	RS-232C mode : ON								
<table border="1"> <tr> <td>Id</td> <td>: 02</td> </tr> <tr> <td>Free</td> <td>: 121173</td> </tr> <tr> <td>Format</td> <td>: Happy</td> </tr> <tr> <td>Data</td> <td>:</td> </tr> </table>		Id	: 02	Free	: 121173	Format	: Happy	Data	:
Id	: 02								
Free	: 121173								
Format	: Happy								
Data	:								
<div>----- Reading -----</div>									

Status Message / Ready to Read

7

Follow your PC software instructions for sending data.

Note: contact your software vendor for details concerning the direct connection Some software makers do not offer this feature.

Send the data to the machine.

Status message / reading the design.

[TAPE]	RS-232C mode : ON								
<table border="1"> <tr> <td>Id</td> <td>: 02</td> </tr> <tr> <td>Free</td> <td>: 121173</td> </tr> <tr> <td>Format</td> <td>: Happy</td> </tr> <tr> <td>Data</td> <td>: **</td> </tr> </table>		Id	: 02	Free	: 121173	Format	: Happy	Data	: **
Id	: 02								
Free	: 121173								
Format	: Happy								
Data	: **								
<div>----- Reading -----</div>									

Stitches read are shown.

[TAPE]	RS-232C mode : ON		
<table border="1"> <tr> <td>End</td> </tr> <tr> <td>Join</td> </tr> </table>		End	Join
End			
Join			

After reading confirm by selecting END.



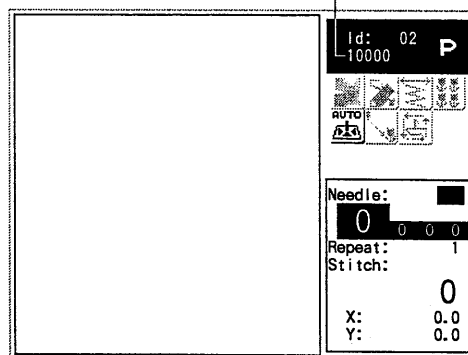
8



Press the "Set Key".

- ※ Number of stitch will be registered as a pattern data at first, If you change pattern name please see the ref. at "Memory pattern".

Number of stitch will be registered as a pattern name.

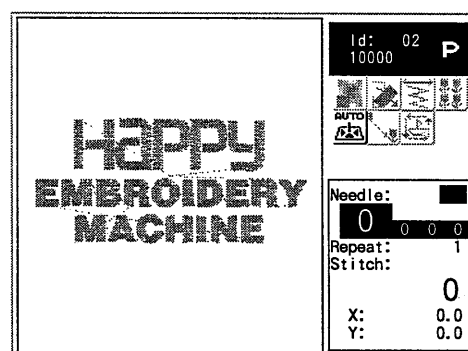


9



Press the "Display Change Key".

Finish



- If you press the Function Key at step 5 you will go back to step 4.
- If you press the Function Key at step 7 you will cancel and return to the Drive Menu.
- If you press the Function Key at any other step you will return to the Function Menu.



- If you wish to cancel the settings at steps 7 press the "Clear Key" you will go back to step 5.

This is used for joining 2 patterns and memorize as one pattern data.

1

Refer to page 22.00 and follow steps 1 to 6.

[TAPE]	RS-232C mode : ON
<div>End Join</div>	

2



Press the "Down Key" and select Join.

[TAPE]	RS-232C mode : ON
<div>End Join</div>	

3



Press the "Set Key".



Press the "Set Key".

[TAPE]	RS-232C mode : ON
<div>Id : 02 Free : 121173 Format : Happy Data : ----- Reading -----</div>	

Status Message / Ready to Read.



4

Send design data from PC.

Status / Reading Design.

After displaying drawing on the right,
displays drawing on the right bottom.

[TAPE]	RS-232C mode : ON
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> Id : 02 Free : 120000 Format : Happy Data : ** </div> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> Reading </div>	

Stitches read are shown.

[TAPE]	RS-232C mode : ON
<div style="border: 1px solid black; padding: 10px; margin: 20px auto; width: 100px;"> End Join </div>	

After reading confirm by selecting END.

5



Press the "Set Key".

※ In case you change pattern name, refer to page
of "MEMORY PATTERN".

Number of stitches of pattern data is registered as
pattern name.

	Id: 02 P
	10000
	Needle: 0
	Repeat: 0 0 0 0
	Stitch: 1
X: 0.0	
Y: 0.0	

6



Press the "Display Change Key".

Finish

<h1>HAPPY EMBROIDERY MACHINE</h1>	Id: 02 P
	10000
	Needle: 0
	Repeat: 0 0 0 0
	Stitch: 1
	X: 0.0
	Y: 0.0

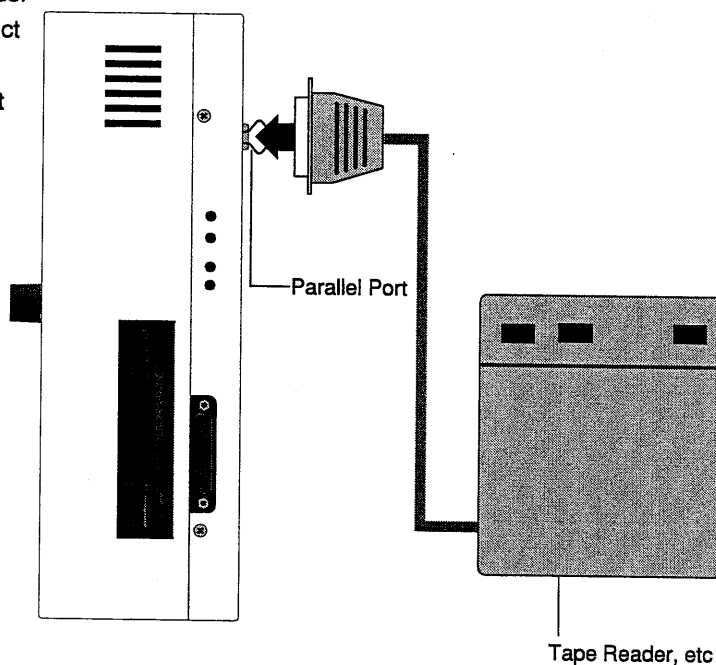
Using this connection you can read in designs from a *pattern data output device.

*pattern data output device : This is device to take out pattern data from pattern editing machine and tape reader etc.

Before reading the design

1 Connect the peripheral to the parallel port.

Note: contact your software vendor for details concerning the direct connection
Some software makers do not offer this feature.



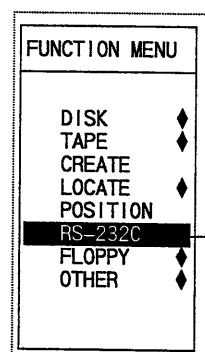
2 In the Function Menu change the RS232 setting to NO.

Refer to page 26.00 and read the RS232C connection information.

1



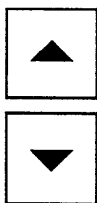
Press the "Function Key".



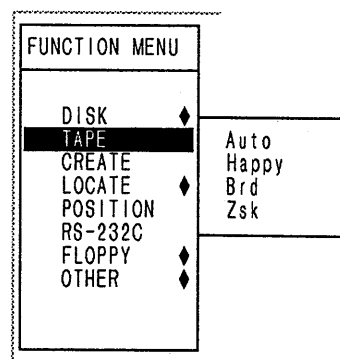
Settings menu is shown.



2



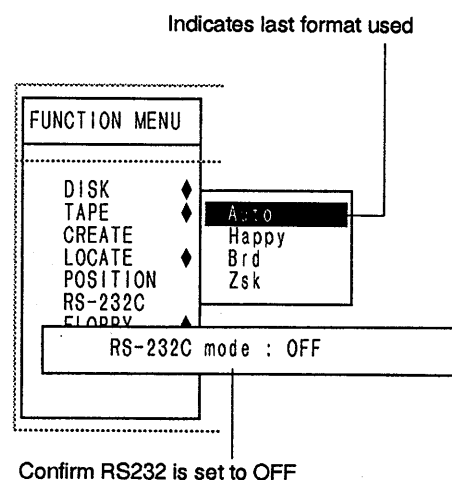
Use the "Up and Down Key" and choose "Tape".



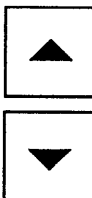
3



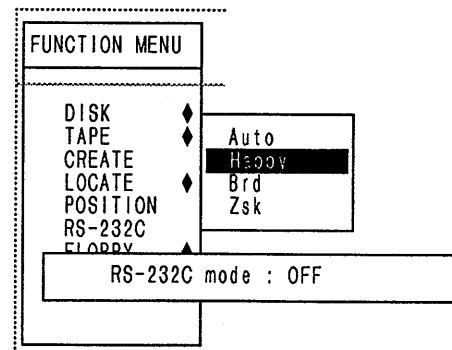
Press the "Set Key".



4



Use the "Up and Down Key" and select the format.



If you choose Auto for your format the machine will judge the format.
 Note: because of the wide variety of machine format it is possible that the automatic format function will not work in all cases.
 In case of reading error select the specific format.

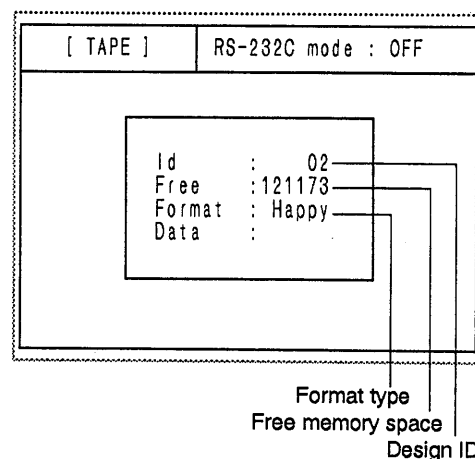
Indication	Format
Auto	Automatic Selection
Happy	Happy , Tajima
Brd	Barudan
Zsk	Zsk



5



Press the "Set Key".



6

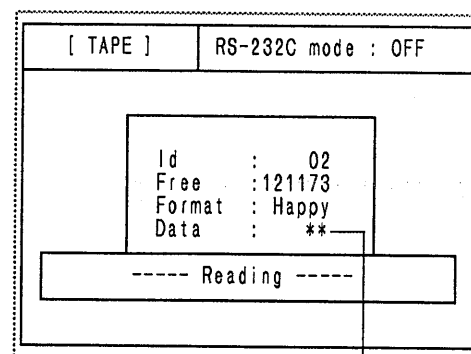
Follow your PC software instructions for sending data.

Note: contact your software vendor for details concerning the direct connection. Some software makers do not offer this feature.

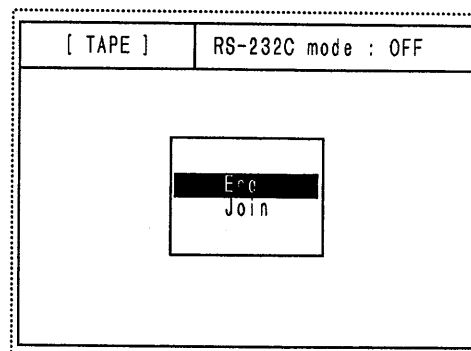
Send the data to the machine.

Status message / reading the design.

After displaying drawing on the right, displays drawing on the right bottom.



Stitches read are shown.



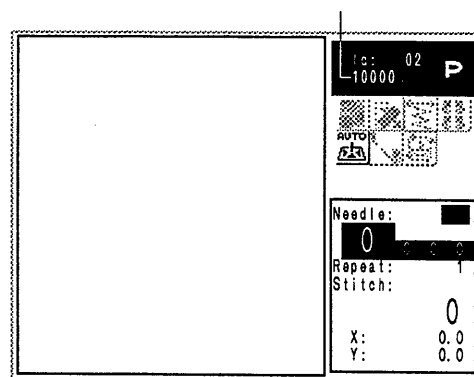
After reading confirm by selecting END.



7



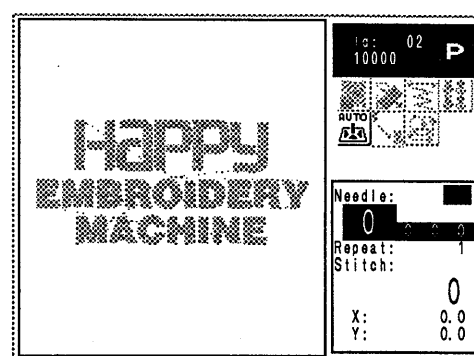
Press the "Set Key".



8



Press the "Display Change Key".



Finish



- If you press the Function Key at step 5 you will go back to step 4.
- If you press the Function Key at step 6 you will cancel and return to the Drive Menu.
- If you press the Function Key at any other step you will return to the Function Menu.



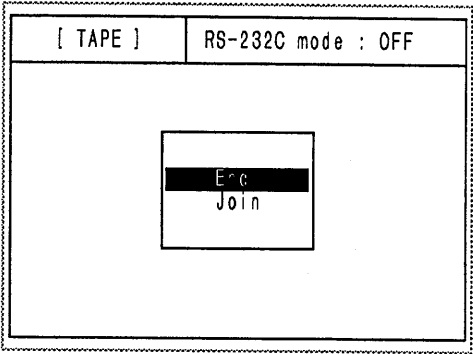
- If you wish to cancel the settings at steps 6 press the "Clear Key" you will go back to step 5.

EXTERNAL READING / Parallel Port / Join 22.10

This is used for joining 2 patterns and memorize as one pattern data.

1

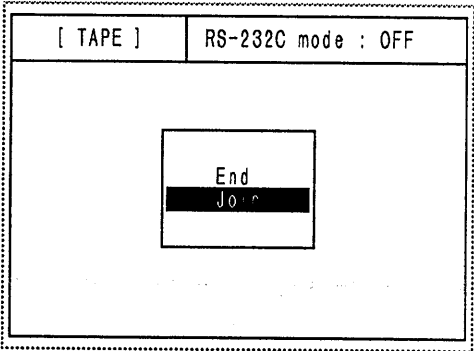
Refer to page 22.06 and follow steps 1 to 6.



2



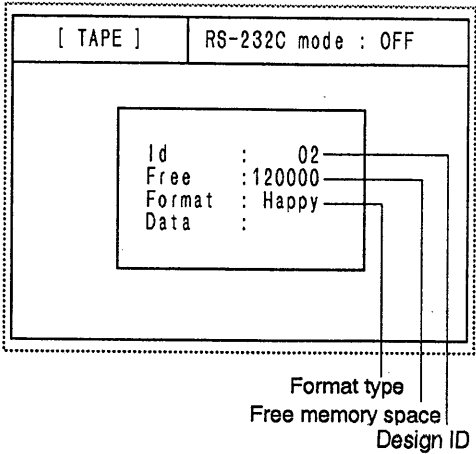
Press the "Down Key".



3



Press the "Set Key".

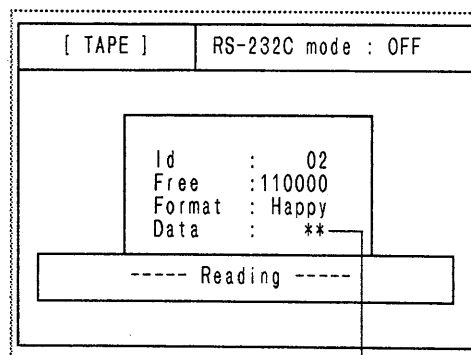


4

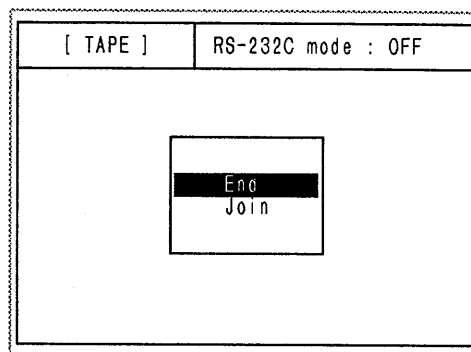
Send design data from Tape Reader, etc.

Status / Reading Design.

After displaying drawing on the right,
displays drawing on the right bottom.



Stitches read are shown



After reading confirm by selecting END

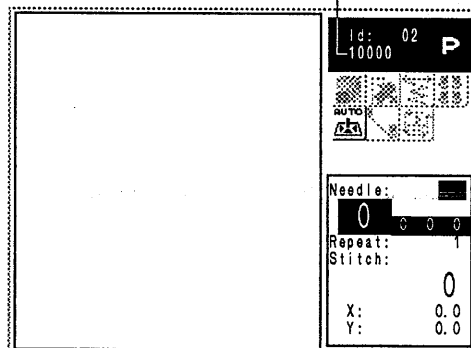
5



Press the "Set Key".

※ In case you change pattern name, refer to page
of "MEMORY PATTERN".

Number of stitches of pattern data is registered as
pattern name.

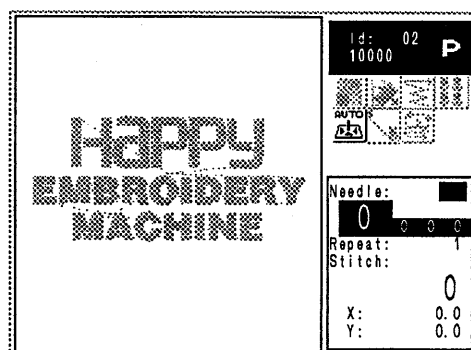


6



Press the "Display Change Key".

Finish



When pattern data are taken out from *pattern data output device which is connected to serial port (RS232), the embroidery machine starts to read automatically and writes in memory.

This function enables the machine to easily read pattern data from pattern managing unit and store them in memory without operating the machine.

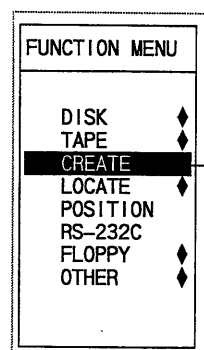
※ When you write pattern data in memory, you will consume memory of hundreds of stitches besides number of stitches of the pattern. Before reading, check that free memory has more capacity than the number of stitches to be read and hundreds of stitches put together.

*pattern data output device : This is device to take out pattern data from pattern editing machine and tape reader etc.

1



Press the "Function Key".

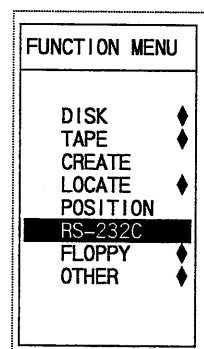


Settings menu is shown.

2



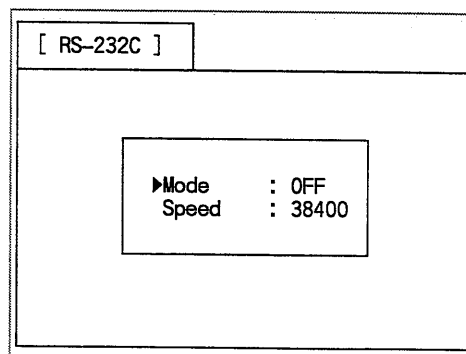
Use the "Up and Down Key" and choose "RS-232C".



3



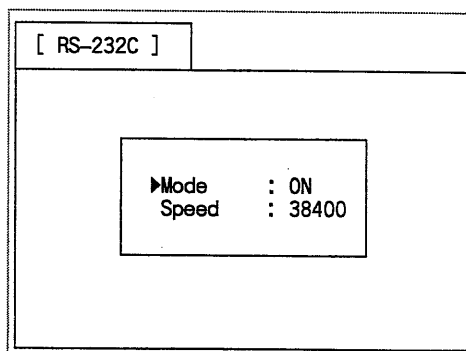
Press the "Set Key".



4



Press the "Plus minus Key" and change the setting to ON.



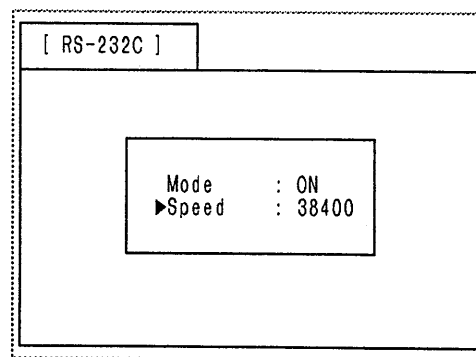
An example that the mode is switched into "ON".



5



Press the Down Key".



6

4

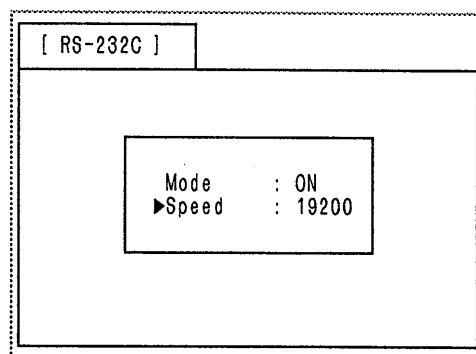
Use the Keypad and select the speed that matches you PC's setting.

1

2

3

0



As a example we set the reading speed to 9600 baud

When you use the RS232 connection if you select a baud rate of less than 9600.

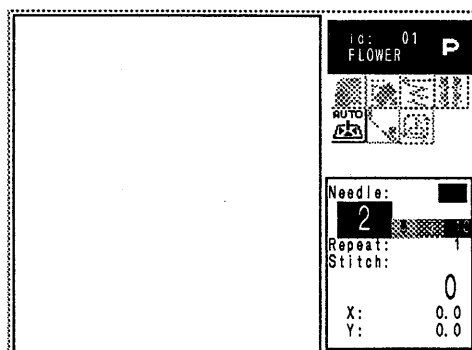
You can begin sewing after 1000 stitches have been read into the machine. Please refer to page of "Auto external reading / Read and Drive".

Key number	Baud Rate
0	38400 bps
1	19200 bps
2	9600 bps
3	4800 bps
4	2400 bps

7



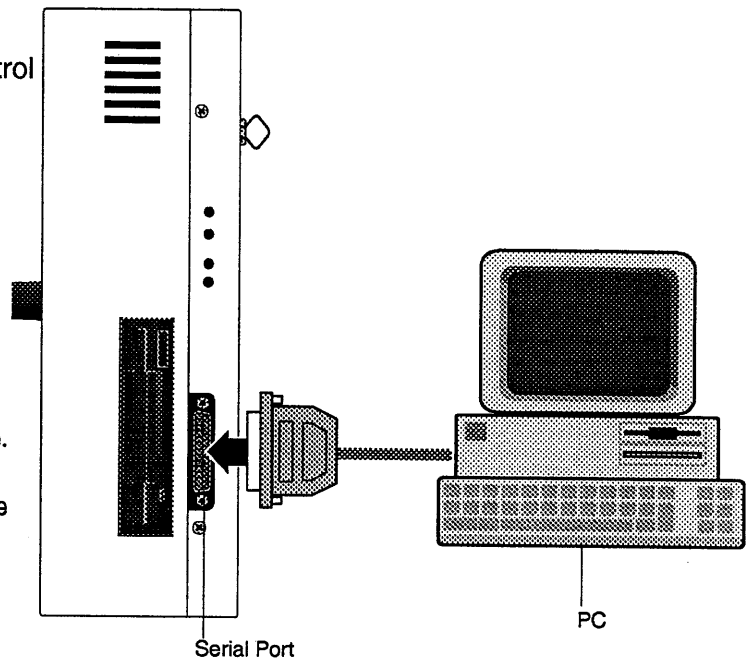
Press the "Escape Key".



8

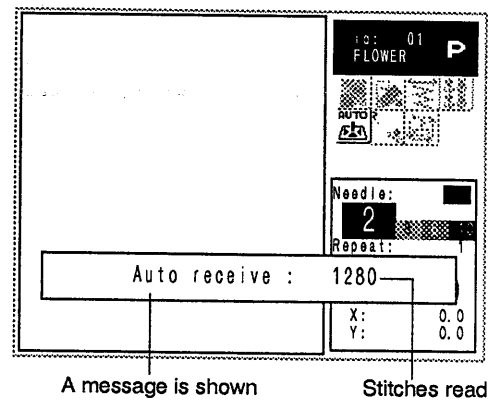
Connect a RS-232C Serial cross cable from the right side of the control panel to the com port in the PC.

- ※ Contact your software vendor for details concerning the direct connection. Some software makers do not offer this feature.
- ※ Please set same baud rate both machine and output device of pattern data.



9

Output the design data from the PC.

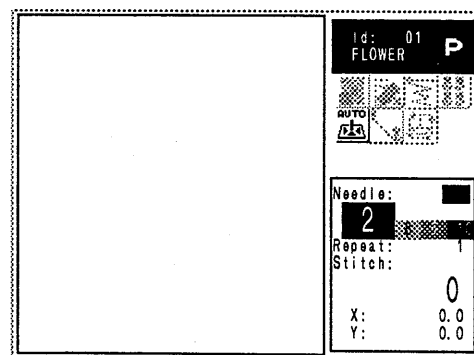


Indicates receiving design data.



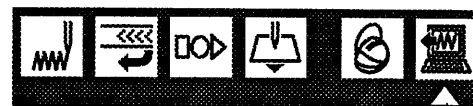
10

If the speed is set less than 9600 bps, the lamp put on after reading 1000 stitches of the pattern data.



※ At first, number of stitches of pattern data is registered as pattern name. In case you change pattern name, refer to page of "MEMORY PATTERN".

※ After reading the data, please do the necessary setting, such as needle bar selection and etc. by the same procedures as reading from the disk.



Indicates finished reading the design.

C

If you push "Clear" key during reading the pattern, you can stop reading.

AUTO EXTERNAL READING / Reading drive 23.04

With "AUTO EXTERNAL READING", if *communication speed of serial port is set at 9600bps or less, you can start to embroider in while reading pattern data. By using of this function, it is not necessary to wait till finish of reading all pattern data, specially large pattern data.

※ There are following restrictions in case of embroidering with using AUTO EXTERNAL READING.

- If communication error happens during transmitting data, embroidery in progress can not be continued.
- Max. speed of machine to be limited to 1000 rpm during transmitting data.
- PROGRAM MENU and CREATE can not be used.

※ You must stop the machine when letting it read pattern data with function of external automatic can do with either on top or in midway. However, if Auto External Reading is executed during embroidering, embroidery in progress can not be restarted. In this case, pattern data read by Auto External reading has priority.

※ At first, number of stitches of pattern data is registered as pattern name. In case you change pattern name, refer to page of "MEMORY PATTERN".

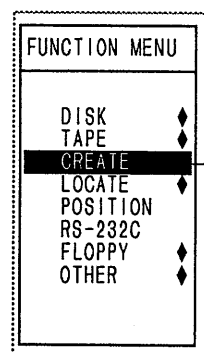
*communication speed : (Baud rate)

Communication speed between machine and pattern data output device, they are connected with serial port. If communication speed value becomes bigger, speed becomes faster, however in this case communication error could be happened easily. If you have communication error often, decrease value of communication speed.

1



Press the "Function Key".

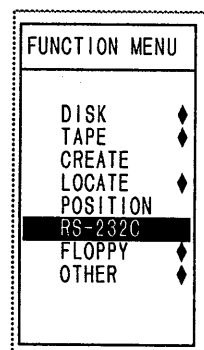


Settings menu is shown.

2



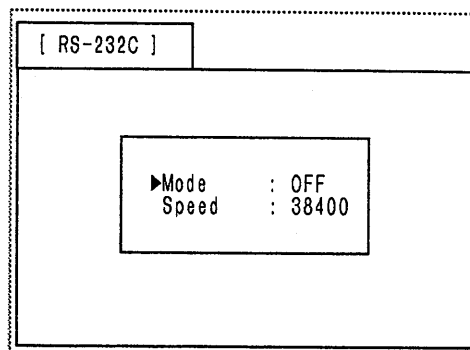
Use the "Up and Down Key" and choose "RS-232C".



3



Press the "Set Key".

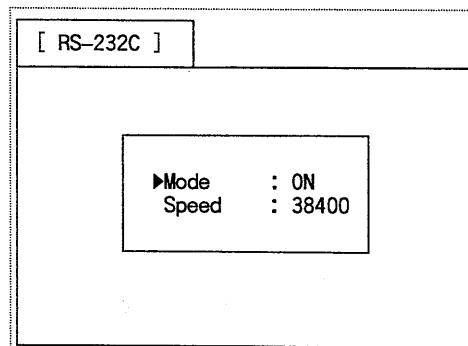


AUTO EXTERNAL READING / Reading drive 23.05

4



Press the "Plus minus Key" and change the setting to ON.

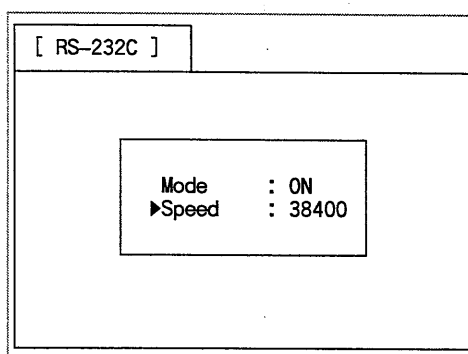


An example that the mode is switched into "ON".

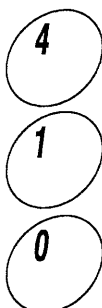
5



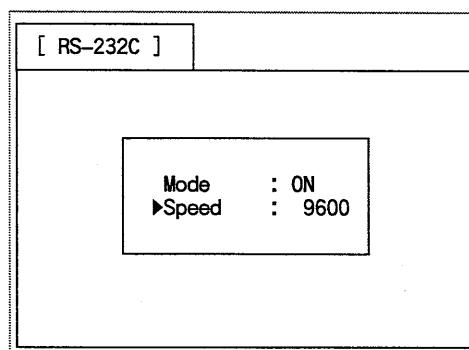
Press the "Down Key".



6



Use the Keypad and select the speed that matches you PC's setting.



As a example we set the reading speed to 9600 baud

When you use the RS232 connection if you select a baud rate of less than 9600.

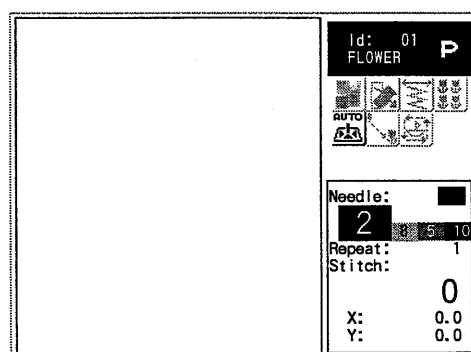
You can begin sewing after 1000 stitches have been read into the machine.

Key number	Baud Rate
0	38400 bps
1	19200 bps
2	9600 bps
3	4800 bps
4	2400 bps

7



Press the "Escape Key".



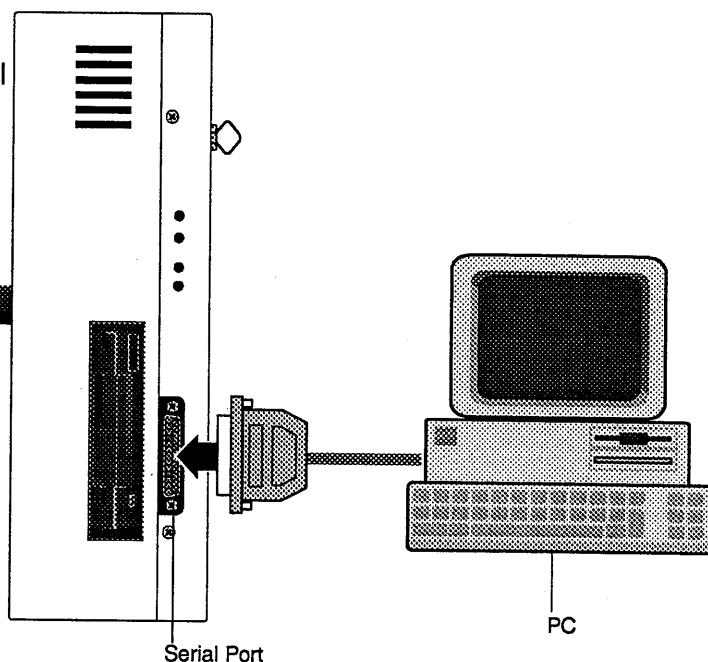
AUTO EXTERNAL READING / Reading drive 23.06

8

Connect a RS-232C Serial cross cable from the right side of the control panel to the com port in the PC.

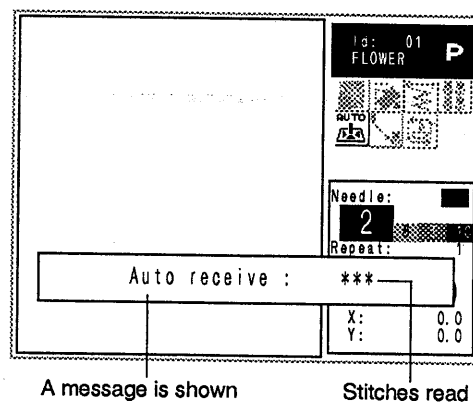
※ Contact your software vendor for details concerning the direct connection. Some software makers do not offer this feature.


※ Please set same baud rate both machine and output device of pattern data.

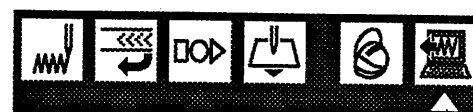


9


Output the design data from the PC.

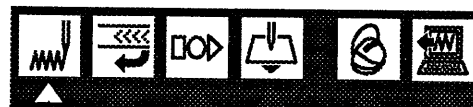


 Indicates status of reading.



Indicates receiving design data.

 Will be indicated after memorizing more than 1000 stitches.



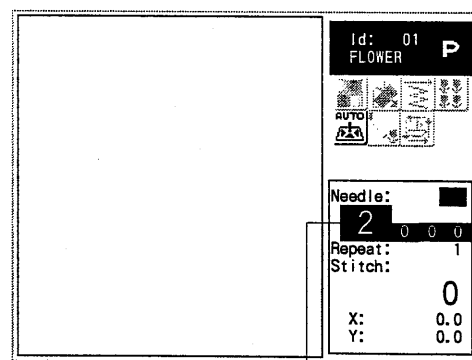
Indicates you can begin sewing. Indicates finished reading the design.



10

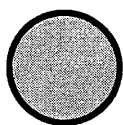


Use the Needle Move Keys and select the first color.



Indicates your selection

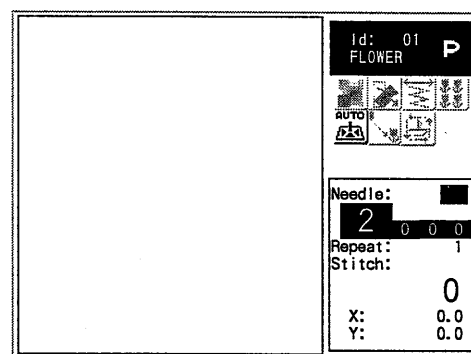
11



START

Press the Start Button to begin sewing.

After the frame movement, You can operate frame forward as it is normal driving.



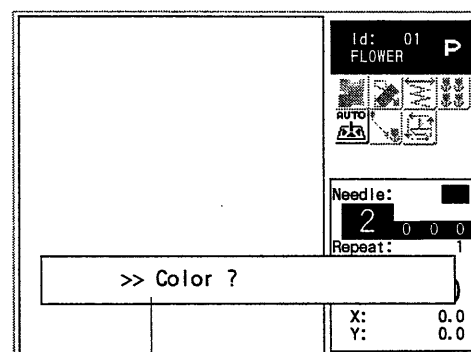
No design is shown.

12

Machine automatically stops after finish sewing the first color.

Requests next color selection.

Needle Selection.



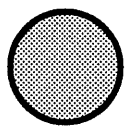
This message indicates the next color has not been set.

※ You can enter the color one by one as each color finishes sewing.



AUTO EXTERNAL READING / Reading drive 23.08

13



START

Press the Start Button to begin sewing.

STOP, TRACE BACK AND MENDING can be operated same as normal procedure.

Finish

※ At first, number of stitches of pattern data is registered as pattern name. In case you change pattern name, refer to page of "MEMORY PATTERN".


In this menu we can set the machines overall settings.

SETTING ITEM	SETTING RANGE	
1 Keep null (CHG.)	No · Yes	: This function lets the machine read zero stitches as they are before color change when reading pattern data.
2 Skip null stitch	No · Yes	: This reads pattern data by ignoring all the null stitches.
3 Combine jump	No · Yes	: In case there are plural continuous jump stitches when reading pattern data, this combines the continuous jump stitches up to maximum of 12.7 mm and reads.
4 TRD. break back	Yes · No	: When threads break, the drive frame goes back a few stitches and the machine stops.
5 All head mending	No	: The machine mends threads for head, only threads of which broke.
	Yes	: The machine mends threads for all heads irrespective of thread break.
6 Width data limit	1~13 (1~12.7mm)	: When stitch width exceeds this length, the machine divides it by jump and embroiders. Width data limit becomes 12.7mm only when setting value is set to 13.
7 Wide cap mode	No · Yes	: Wide cap frame is used for cap frame.
8 Quick start mode	Yes	: The machine sews up to 3 stitches of slow start after thread cut.
	No	: The machine sews up to 5 stitches of slow start after thread cut.
9 Auto thread cut	Yes · No	: This performs automatic thread cut after color change and stop.
10 Cut at jump data	1~8	: When set number of continuous jumps exists in pattern data, the machine cuts threads before jump.
	0	: The machine doesn't cut threads before jump.
11 Cut at null jump	Yes · No	: When there are one stitch of zero jump in pattern data and more than one stitch of jump thereafter, this performs thread cut before zero jump.
12 CHG. always cut	No	: When pattern data is in color change or stop from jump, this gives priority to jump designated by pattern data and doesn't drop needle.
	Yes	: When pattern data is in color change or stop from jump, this gives priority to color change designated by pattern data, drops needle and cut threads.
13 <u>Stitch sweeper</u>	No · Yes	: This function eliminates extremely short stitch for stitch width when reading pattern data.
14 Sweep length	0~8 (0~0.8mm)	: This function sweeps data wheel stitch width is less than this length.
15★ Full length cut	No · Yes	: The machine cuts upper threads in longer length.
16 Thread back long	No	: At time of thread cut→0.8mm, At time of start→1.2mm
	Yes	: At time of thread cut→1.2mm, At time of start→1.6mm
17 All pattern disp	No · Yes	: When you read pattern data from HAPPY's data disk (type TAP) with "DISK READING", pattern data other than HAPPY is also displayed. Usually, select "No".
18 <u>Data format</u>	0→Aut (Automatic) 1→HAPPY, Tajima 2→Barudan 3→Zsk	: Turn data format for reading patterns from data disk of HAPPY or Tajima with "DISK READING". Usually, set it to Automatic switch (0).
19 <u>etc.func write</u>	No · Yes	: This function writes various function setting which are set in pattern data in memory to data disk. (type TAP).
20 <u>etc.func read</u>	No · Yes	: This function reads various function setting which are set in pattern data together with pattern data (type TAP).
21 Slow (mend out)	Yes · No	: When mending finishes and all heads start to embroider again, machine speed to be decelerated for safety purpose.
22 <u>Trace data use</u>	No · Yes	: The frame moves jump data continues from "Top"
23 <u>Trace data make</u>	No · Yes	: Make the trace data (jump data) during inputting pattern.
24 <u>Trace type</u>	Area · Out line	: The type of trace data which is made during inputting pattern.
25 STR. Lock stitch	Yes · No	: When start driving automatically put lock stitch.
26 <u>Width data all</u>	-1.0~1.0mm	: This is to do the width adjustment for all the pattern data in the memory.
27 <u>Preview data make</u>	Yes · No	: Make the preview data (small drawing) during inputting pattern.

※ Under lined setting item will be explained more precisely next section.

※ ★ marked setting item has to turn off the power and turn on it again to make this setting available.

7 Wide cap mode

When "Yes" is set,  (Cap frame) on status lights and the machine runs with low speed suitable for wide cap frame sewing. Further adjustment is needed by patterns or fabrics (caps).

※ If you use wide cap frame with setting not to set to "Yes", you might have malfunction such as off registration or needle break etc.

13 Stitch sweeper

This function removes stitches having extremely narrow width when reading pattern data with "DISK READING", "EXTERNAL READING" and writing in memory of the machine.

Stitches having extremely narrow width in pattern data will cause thread break.

In case thread break occurs often times with a pattern at the same position, there may be stitches with extremely narrow width.

In such a case, please use stitch sweeper function by reading pattern after setting this function to "Yes".

※ By pattern data, there is a chance that thread break still remains at the same place even after using this function. In such a case, more than twice use of this function in the following manner will produce lessened thread break. However, if you use this function many times, there is a chance that portion of narrow stitch width will lose its shape.

1 Write swept pattern data in data disk, which was read in memory of the embroidery machine.

2 Conduct stitch sweeping of swept pattern written in data disk and read it in memory of the embroidery machine again.

End

18 Data format

In case the machine doesn't read patterns from data disk of HAPPY or Tajima properly, change *data format and read again.

**data format : This is situation that tape format is converted into pattern data for writing in disk or for data communication.*

19 etc.func write (Writing various function setting)

In writing the pattern data in memory into data disk, *various function setting exists in pattern data in memory, such as Needle bar selection, Offset and etc. are also transmitted to data disk.

※ Data disk must be HAPPY type disk (type TAP) only.

*various function setting : A general term for Needle bar selection, Convert, Pattern adjustment, Repeat, Offset and frame out which are set in the pattern data.

20 etc.func read (Reading various function setting)

In reading pattern data from data disk, *various function setting are also transmitted together into pattern data, some as "Writing"

By using this function, reads not only the pattern data, but also various function setting at same time.

In case of changing some function setting on pattern data and if you wish to return to original setting, easily read it again from data disk.

※ Data disk must be HAPPY type disk (type TAP) only.

※ When reading various function setting is executed data of various setting must be existing into data disk.

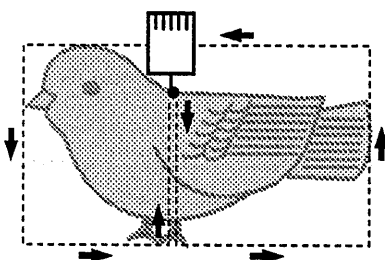
22 Trace mode

This function enables to check pattern fit in the frame by frame move along maximum embroidery area of pattern data or out line data.

24 Trace making mode

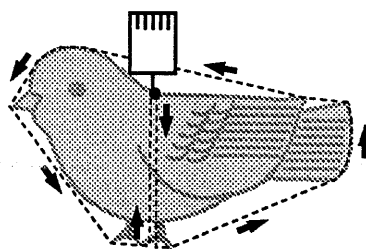
The frame movement will be under below

Area



●Start point

Outline

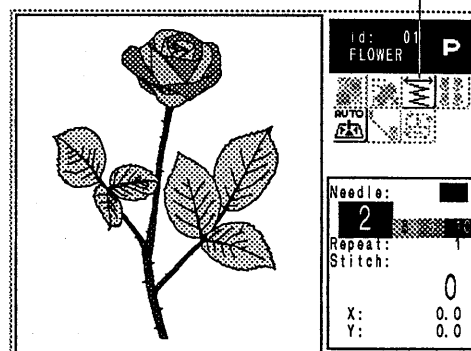


26 Width data all

*Width adjustment to be done for all the pattern data in the memory, however if the width adjustment has already been set through "Pattern adjustment" function on the particular pattern data, in case "Width data all" has not been affected on it.

*Width : Refer to page of the "Pattern adjustment".

The icon of width changes into blue.






27 Preview data make

When you read the pattern data from floppy disk or external reading or etc., the preview data will be made automatically into the memory, when you select "Yes" at create menu.

Preview data is shown as small drawing and can confirm the figure of the pattern data easily just selecting the memory pattern.

※ If you use this function, 780 stitches of memory to be used to make one preview data.

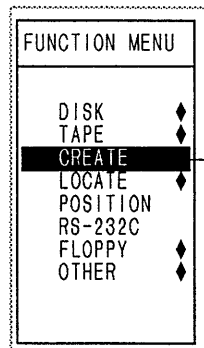
[PATTERN]		Id:01	Name:FLOWER												
Id	Name	<table border="1"><thead><tr><th colspan="2">Information</th></tr></thead><tbody><tr><td>Stitches:</td><td>123456</td></tr><tr><td>Changes :</td><td>250</td></tr><tr><td>Width :</td><td>123.0</td></tr><tr><td>Height :</td><td>219.5</td></tr><tr><td colspan="2"></td></tr></tbody></table>		Information		Stitches:	123456	Changes :	250	Width :	123.0	Height :	219.5		
Information															
Stitches:	123456														
Changes :	250														
Width :	123.0														
Height :	219.5														
															
▶01	FLOWER														
02	MOON														
03	BIRD														
04	FANTASY														
05	CHILD														
06	DOG														
07	HOUSE														
08	TREE														
09	SUN														
10	CAT														

Preview of the memory pattern

1

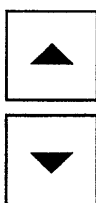


Press the "Function Key".

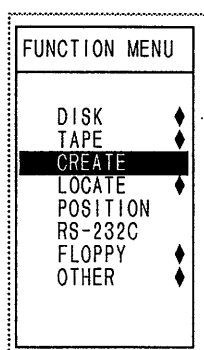


Settings menu is shown.

2



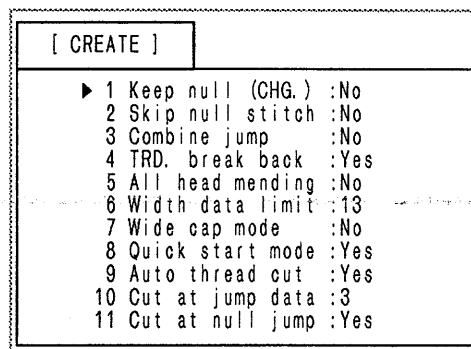
Use the "Up and Down Key" and choose "Create".



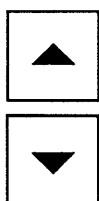
3



Press the "Set Key".



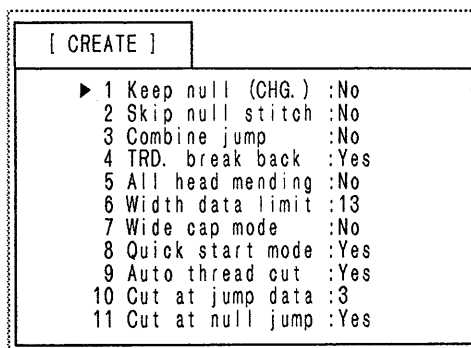
4



Use the "Up and Down Key" to select the function you wish to change.



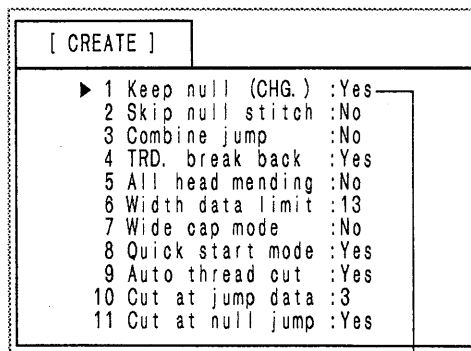
By holding (shift) and pressing and keys you can move quickly to the selection.



5



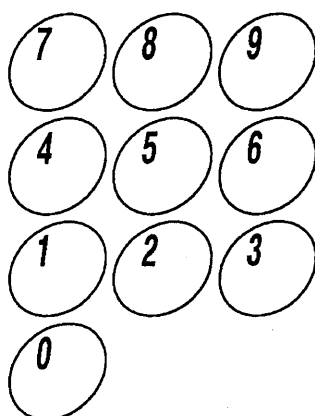
Use the "Plus minus Key" to change settings from Yes / No and etc.



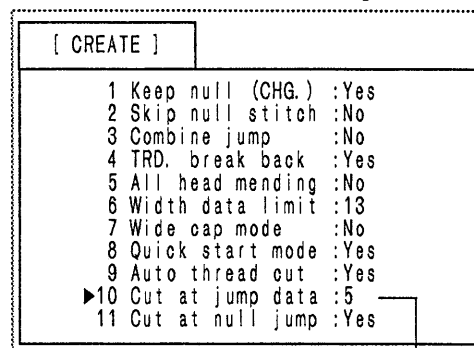
As a example we changed item 1 to Yes

Indication color is changed.

Or



Use Keypad to input Data.



As a example we changed item 10 from 3 to 5

Indication color is changed.

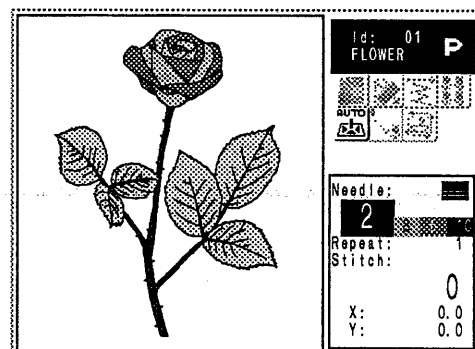
If you change a items setting differently than the factory setting it will become green.

6



Press the "Escape Key".

Finish



• At step 5 use the "Clear Key" to clear the setting, the number 0 is shown then reinput the data.



• If you press the "Function Key" before completing this setting you will return to the Function Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

By function of "LOCATE", you can conduct the following by setting "Entry" in memory pattern.

- Even if you move position of *original point erroneously or change a pattern, you can automatically return the frame to registered original point. (Return)
- Even if you move the frame erroneously when power is turned off while embroidering, you can restore the frame to position before moving it. (Repair)
- Even if power suspends while embroidering, you can restore position of the frame and pattern data to state immediate before power failure. (Repair)

**original point : Frame position where the machine embroiders pattern from the beginning is automatically registered in the machine as original point. Or you can register it by pressing number key of "0" while pressing shift key.*

⚠ Do not operate function of "LOCATE" if the machine is equipped with cap frame or tubular frame.
Machine or Frame might get damaged due to the frame movement goes over its sewing field limit.

⚠ When you carry out "LOCATE", please keep yourself or things from the frame or table. It is dangerous as the frame makes a sudden move to fore side at the left. Never carry it out with needle bar and presser foot lowered. Needle bar and presser foot may hit the frame and break.

- * It is not always necessary to set "Entry", but you can't set "Return" or "Repair". Once "Entry" is set, it is retained even if power is turned off. When you change position of original point, please set again.
- * Even if you set "Entry", the frame may not return exactly to the original position in process of time.
After setting it, please set it again about one month later.

Entry

To register the start point of the selected Memory pattern.

Return (Registered position)

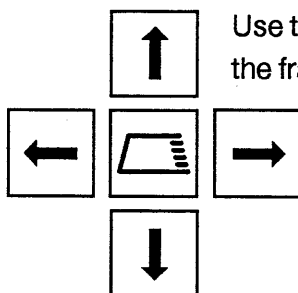
When position of the frame changes by power suspension, this function will restore the frame to the registered point.

Repair

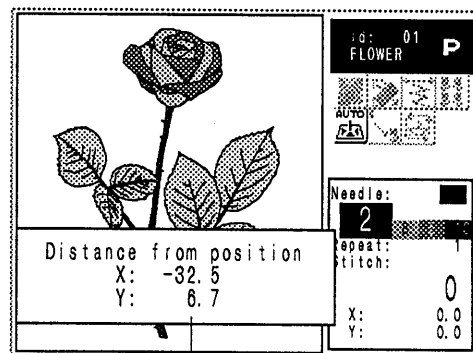
When position of the frame changes by power suspension, this function will restore the frame to the previous position.

This is to register the original point at selected memory pattern.

1



Use the "Frame Move Keys" and move the frame to the new origin point.

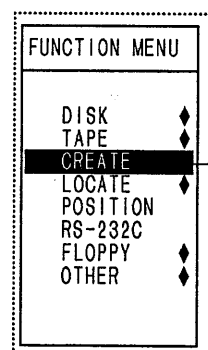


Indicates moving distance.

2

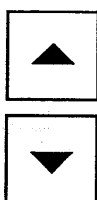


Press the "Function Key".

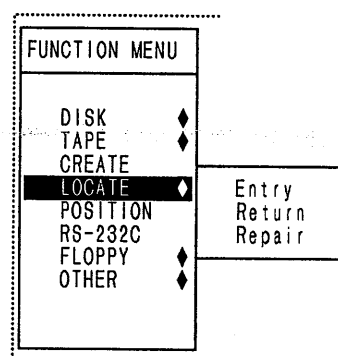


Settings menu is shown.

3



Use the "Up and Down Key" and choose "Locate".

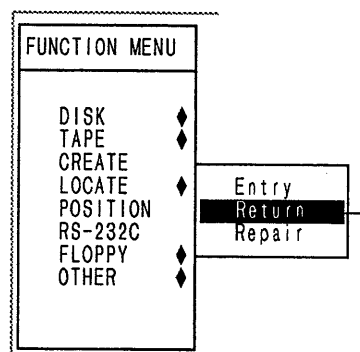


Entry
Return
Repair

4



Press the "Set Key".



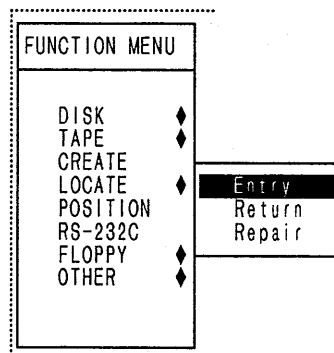
Settings menu is shown.



5



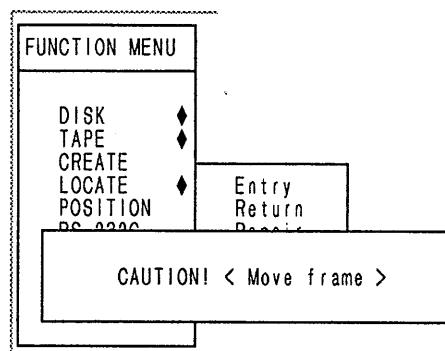
Press the "Up Key" and select "Entry".



6



Press the "Set Key".



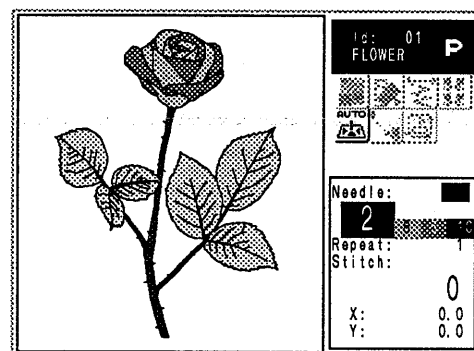
7



Press the Start Button.

⚠ Warning the machine will start immediately so be sure before pressing start that everything is out of the way and cannot be caught in the machine. Also never move the frame if the pressure foot or needle is in the down position.

Finish



Frame is returned to the original position and you return to the Drive Mode Menu.



• If you press the "Function Key" at step 5 you will return to the Function Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode

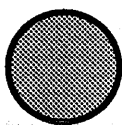
In case of power failure you can return to the original point you registered.

1



Make sure the main is set to the point marked C if not move it to this point by hand.

2



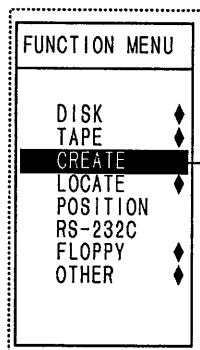
THREAD CUT

Now press the thread trim button and make a trim.

3



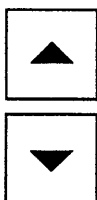
Press the "Function Key".



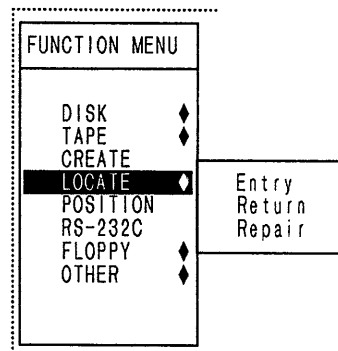
Settings menu is shown.



4



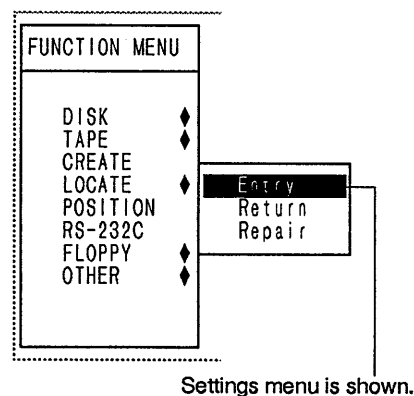
Use the "Up and Down Key" and choose "Locate".



5



Press the "Set Key".

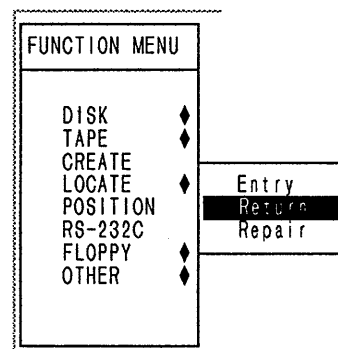


Settings menu is shown.

6



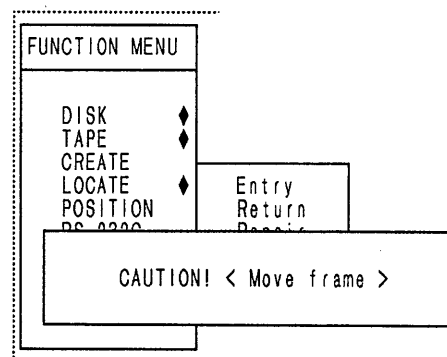
Use the "Up and Down Keys" to select Return in the sub menu.



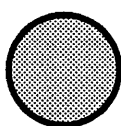
7



Press the "Set Key".



8

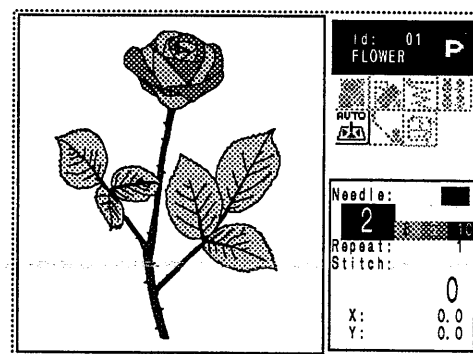


START

Press the Start button.

⚠ Warning the machine will start immediately so be sure before pressing start that everything is out of the way and cannot be caught in the machine.

The frame returns to the Origin point you registered.



The screen return to drive mode after you return to the origin point.

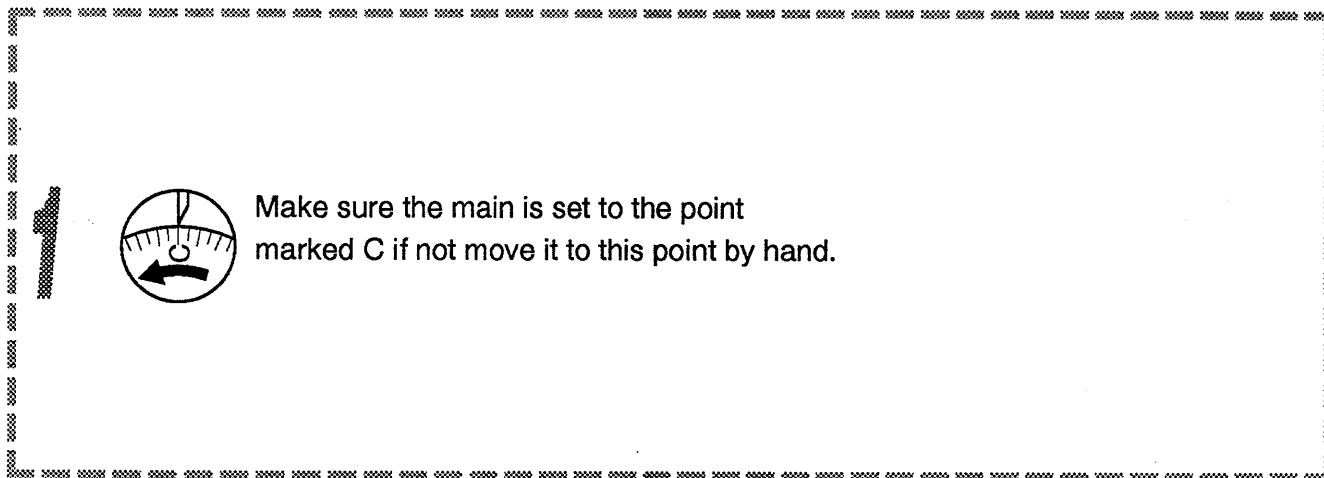


• If you press the "Function Key" at step 6 you will return to the Function Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

In case of power failure you can return to the last stitch sewn if you registered the origin.

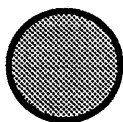


1



Make sure the main is set to the point marked C if not move it to this point by hand.

2



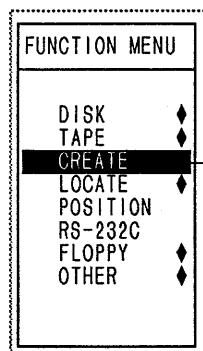
THREAD CUT

Now press the thread trim button and make a trim.

3



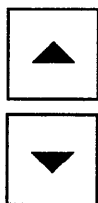
Press the "Function Key".



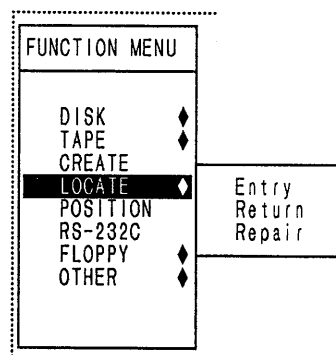
Settings menu is shown.



4



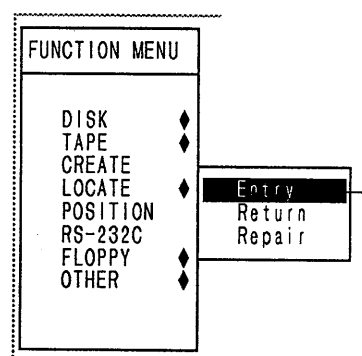
Use the "Up and Down Key" and choose "Locate".



5



Press the "Set Key".

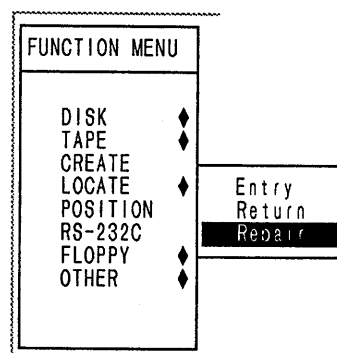


Settings menu is shown.

6



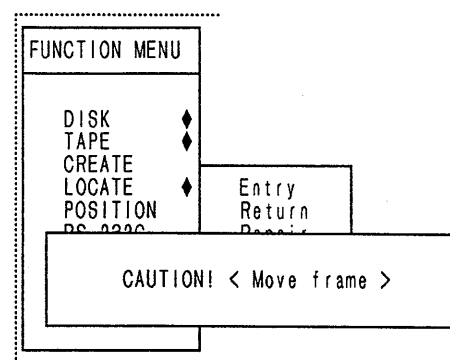
Use the "Up and Down Keys" to select Repair in the sub menu.



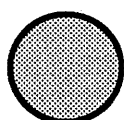
7



Press the "Set Key".



8

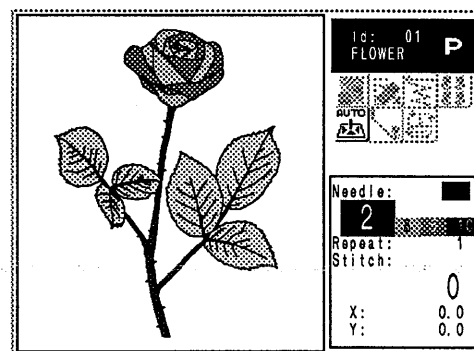


START

Press the Start button.

⚠ Warning the machine will start immediately so be sure before pressing start that everything is out of the way and cannot be caught in the machine.

The Frame returns to the last stitch sewn.



The Screen shows the last stitch sewn.



• If you press the "Function Key" at step 6 you will return to the Function Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

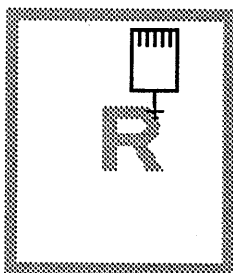
This function makes direct designation of number of stitches and *color number, and set the frame position and data position in to the designated sewing position.

⚠ When you use GO TO function, the frame will have a sudden move.
Execute this function after carefully confirming safety.

**color number : Color number is obtained by dividing pattern data by color change function and is part to comprise pattern data. Needle number (thread color) to be sewn can be set to color number. For example, in case pattern is divided by color change function at 2 places, 3 color numbers exists in the pattern. When needle number is set to respective color number, this pattern is embroidered in 3 colors.*

Stitch (Number of stitches)

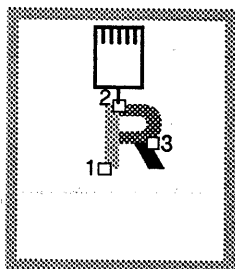
This moves the frame to any stitches at will.



+ : Any stitches

Change (Color position)

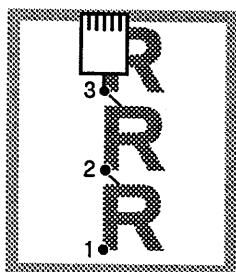
This moves the frame to the beginning of any color number at will beginning of color.



□ : Beginning of any colour number

Piece

In case "Repeat" is set, this moves the frame to the beginning of any piece at will beginning of any piece.



● : Beginning of any pieces



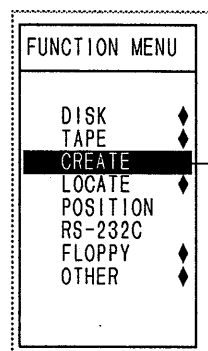
You can designate order of pattern, order of stitch and order of piece by inputting Input "Number of Stitches", "Changing Position" and "Number of Piece".

Use this function to move directly to any stitch in the design.

1

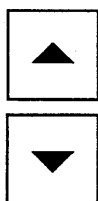


Press the "Function Key".

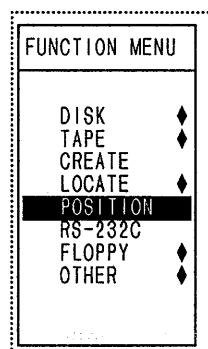


Settings menu is shown.

2



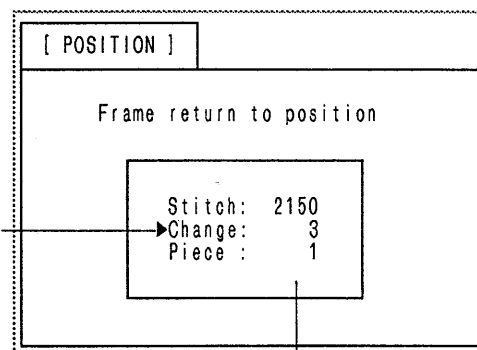
Use the "Up and Down Key" and choose "Position".



3



Press the "Set Key".



Indicator

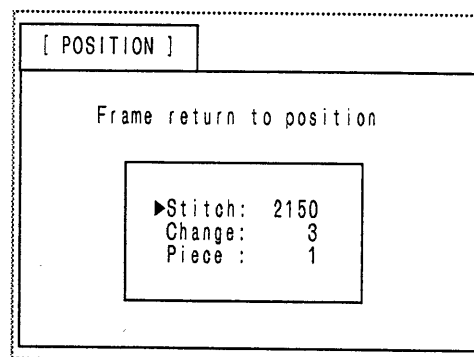
This indicates the current selected position.



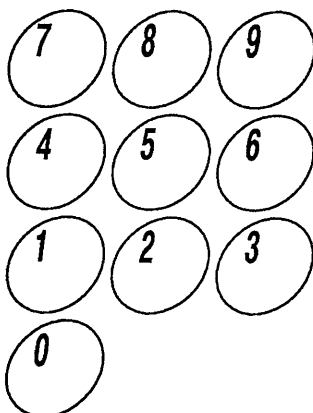
4



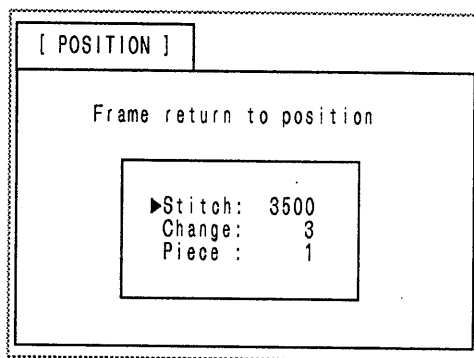
Press the "Up Key" and select Stitch".



5



Use the Keypad and input the desired stitch number.



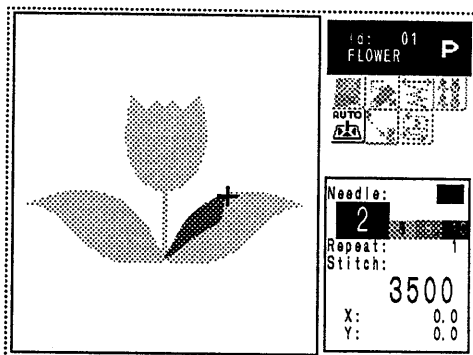
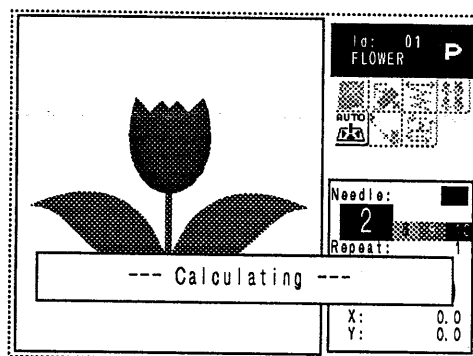
As a example we input stitch 3500

6



Press the "Set Key".

⚠ Warning the machine will start immediately so be sure before pressing enter that everything is out of the way and cannot be caught in the machine.



After moving the Screen returns to Drive Mode.

Finish





- If you press the "Function Key" before completing this setting you will return to the Function Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.



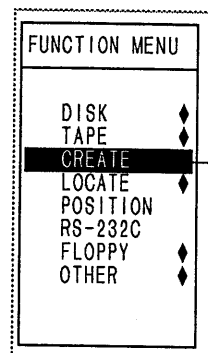
- If you press the Clear Key at step 5 you will cancel the setting.

Use this function to move directly to a color change in the design.

1

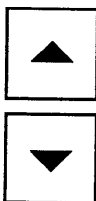


Press the "Function Key".

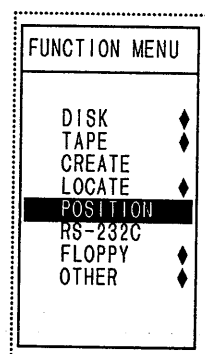


Settings menu is shown

2



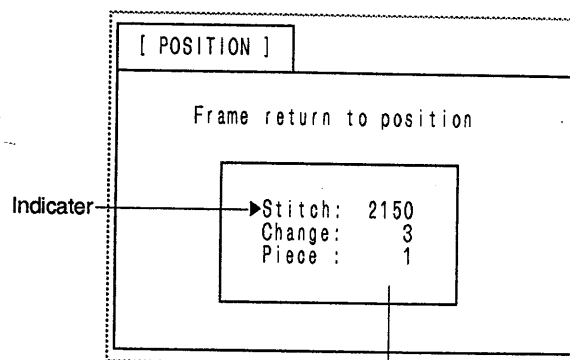
Use the "Up and Down Key" and choose "Position".



3



Press the "Set Key".



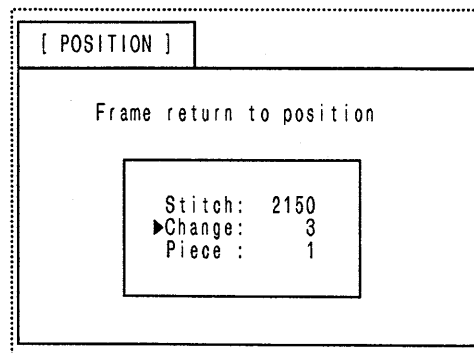
Indicates position information.



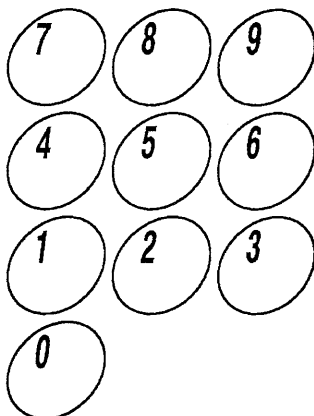
4



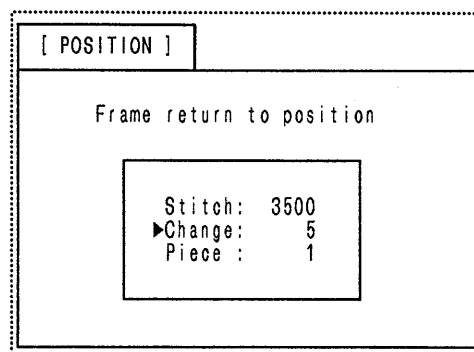
Use the "Up and Down Key" and choose "Change".



5



Use the Keypad input the desired color change number.



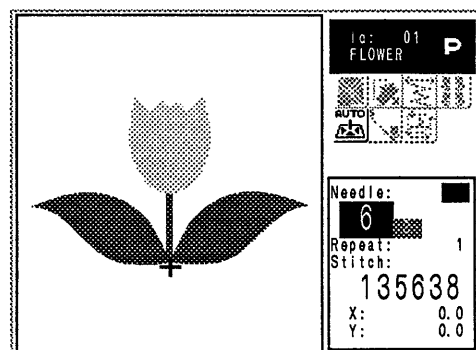
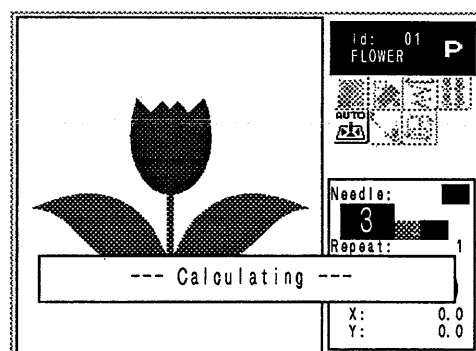
As a example we input the 5th color change

6



Press the "Set Key".

⚠ Warning the machine will start immediately so be sure before pressing enter that everything is out of the way and cannot be caught in the machine.



After moving the Screen returns to Drive Mode.

Finish





- If you press the "Function Key" before completing this setting you will return to the Function Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.



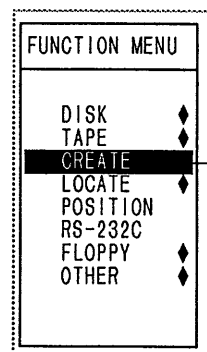
- If you press the Clear Key at step 5 you will cancel the setting.

In the event you are using the repeat or batch function you must specify which piece you wish to move to.

1

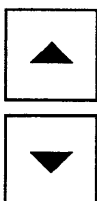


Press the "Function Key".

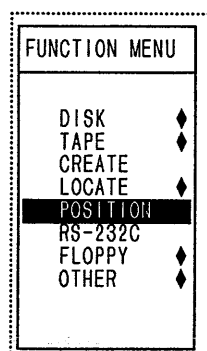


Settings menu is shown.

2



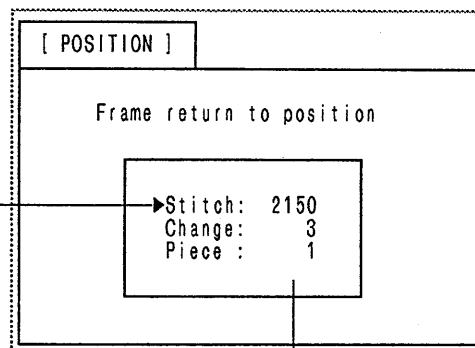
Use the "Up and Down Key" and choose "Position".



3



Press the "Set Key".



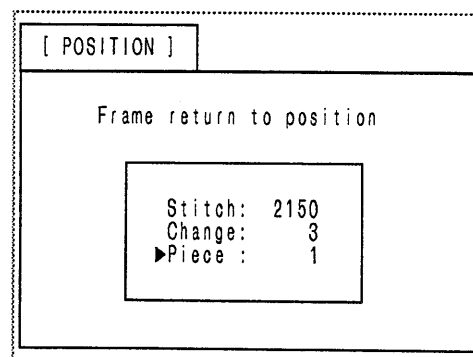
Indicates position information.



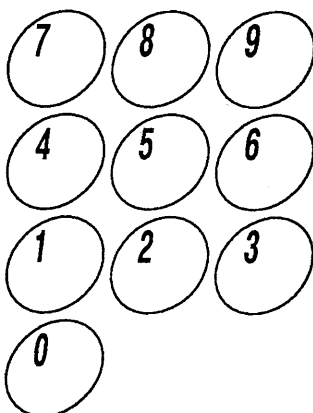
4



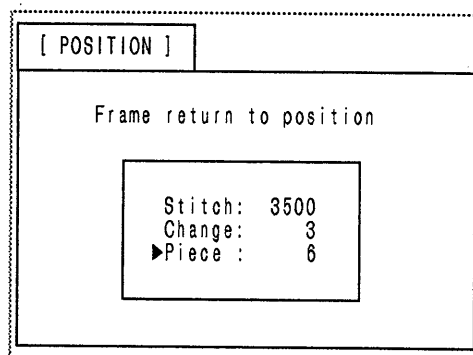
Press the "Down Key" and select "Piece".



5



Use the Keypad and input the piece number you wish to move too.



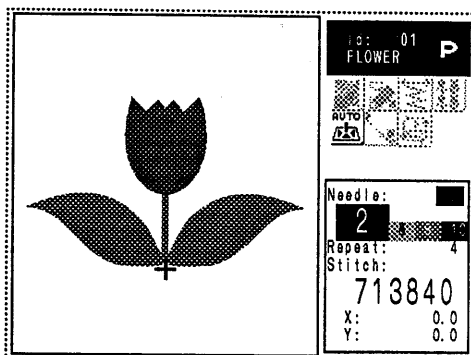
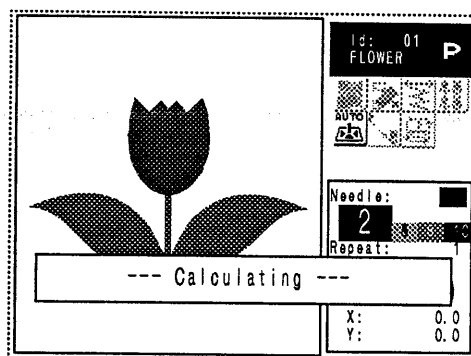
As a example we selected piece number 6 to move too

6



Press the "Set Key".

⚠ Warning the machine will start immediately so be sure before pressing enter that everything is out of the way and cannot be caught in the machine.



After moving the Screen returns to Drive Mode.

Finish





- If you press the "Function Key" before completing this setting you will return to the Function Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.



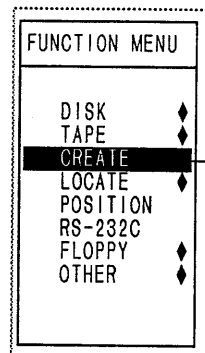
- If you press the Clear Key at step 5 you will cancel the setting.

Use this function to set up the serial port to receive data.
This enables to use serial port at " External reading".
This is to select serial port or parallel port at data input.

1



Press the "Function Key".

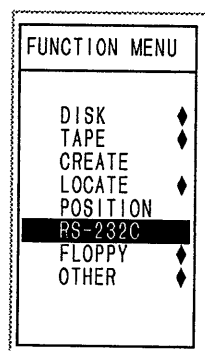


Settings menu is shown.

2



Use the "Up and Down Key" and choose "RS-232C".

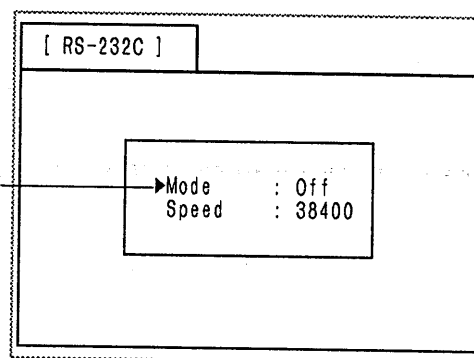


3



Press the "Set Key".

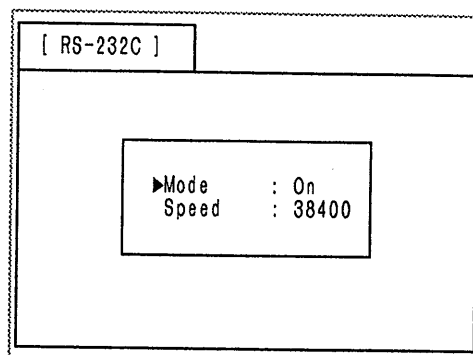
Indicator



4



Press the "Plus minus Key" to change the setting from On and Off.



As a example we changed the mode to ON

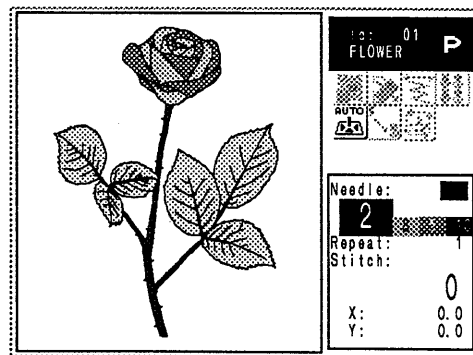


5



Press the "Escape Key".

Finish



• If you press the Clear Key at step 4 you will return to "Off".



• If you press the "Function Key" before completing this setting you will return to the Function Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Setting the *communication speed (baud rate).

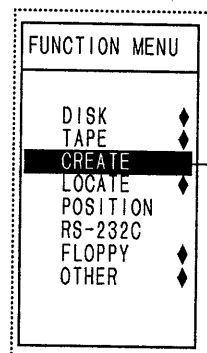
**communication speed : (Baud rate)*

Communication speed between machine and pattern data output device, they are connected with serial port. If communication speed value becomes bigger, speed becomes faster, however in this case communication error could be happened easily.

1



Press the "Function Key".

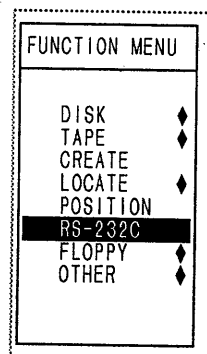


Settings menu is shown.

2



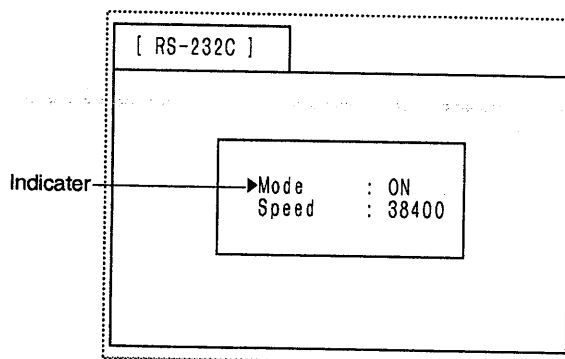
Use the "Up and Down Key" and choose "RS-232C".



3



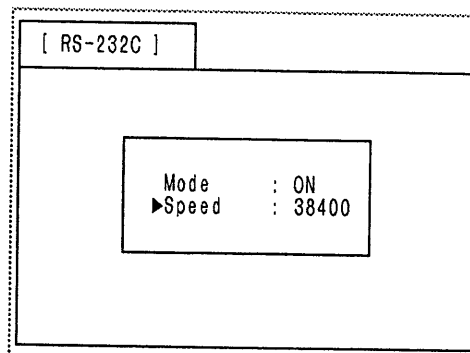
Press the "Set Key".



4



Press the "Down Key".



5

4

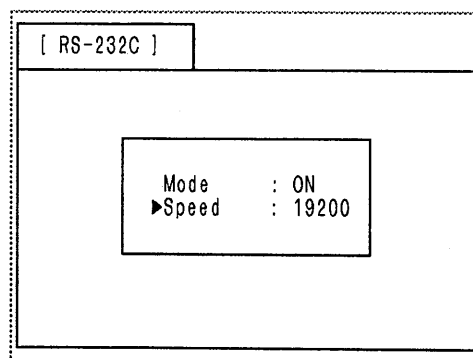
Use the Keypad and select the speed that matches you PC's setting.

1

2

3

0



As a example we selected 19200 Baud Rate

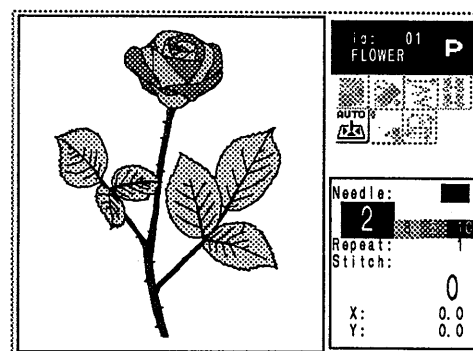
Key number	Baud Rate
0	38400 bps
1	19200 bps
2	9600 bps
3	4800 bps
4	2400 bps

6



Press the "Escape Key".

Finish



C

• If you press the clear the setting will return to the default setting.



• If you press the "Function Key" before completing this setting you will return to the Function Menu.



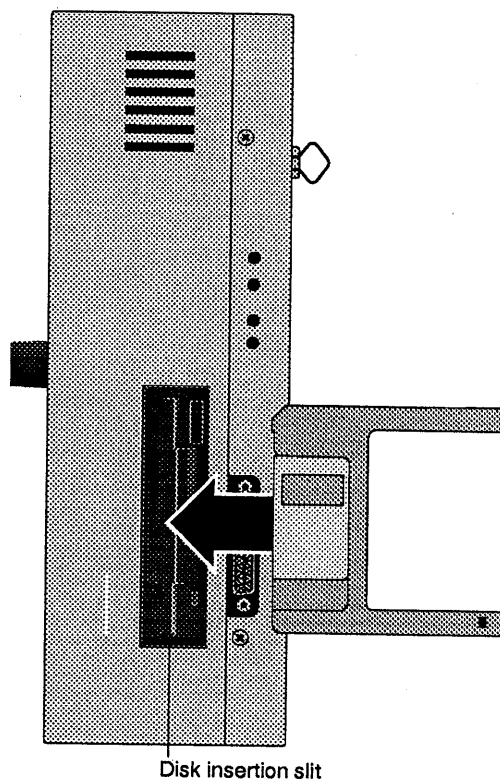
• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

You can write out of machine memory to a floppy disk in Happy format.

1

Insert the diskette into the disk drive on the right side of the control panel.

※ You can choose if you wish to include the designs settings or not when writing to the floppy with a option in the create menu.

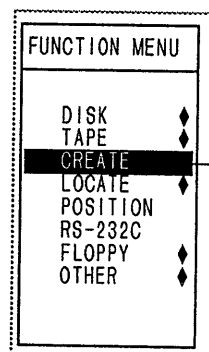


Disk insertion slit

2

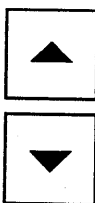


Press the "Function Key".

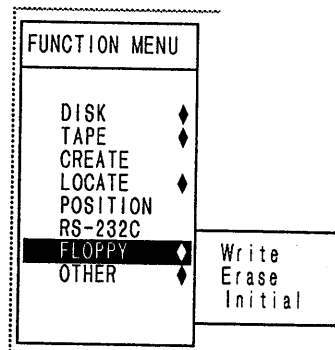


Settings menu is shown.

3



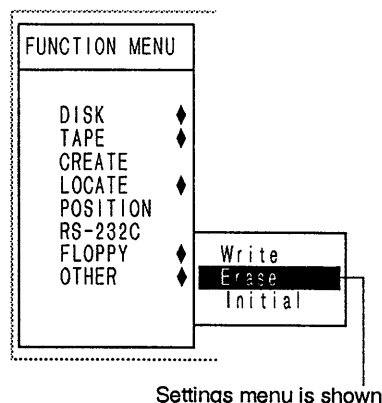
Use the "Up and Down Key" and choose "Floppy".



4



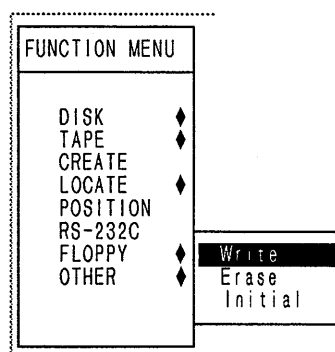
Press the "Set Key".



5



Press the "Up Key" and select "Write".



6

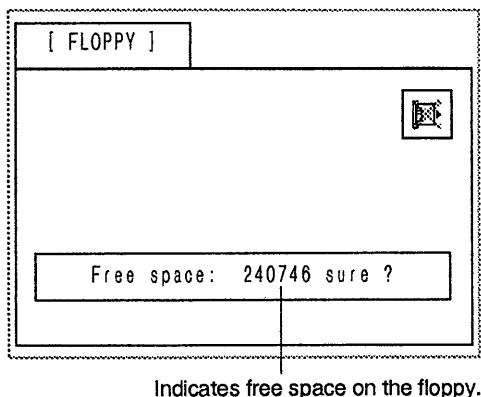
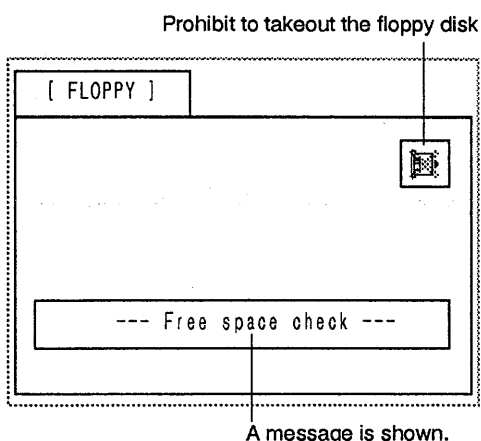


Press the "Set Key".

※ Before writing check that remaining space has more capacity than the number of stitches to be written.

If the stitch number is bigger than remaining space, you need to erase the data in the disk to get sufficient space or write into the new data disk.

※ When you write pattern data disk, you will consume memory of hundreds of stitches besides number of stitches of pattern. Before writing, check that free area has more capacity than the number of stitches to be read and hundreds of stitches put together.



7



Press the "Set Key".

[FLOPPY]

[WRITE]

Id Name
▶01 FLOWER
02 MOON
03 BIRD
04 FANTASY
05 CHILD
06 DOG
07 HOUSE

Indicates the design name.

8



Use the "Up and Down Keys" and select the design to write to floppy.



By holding (shift) and pressing and keys you can move quickly to the selection.

[FLOPPY]

[WRITE]

Id Name
01 FLOWER
02 MOON
03 BIRD
04 FANTASY
▶05 CHILD
06 DOG
07 HOUSE

As a example we selected Child.

9



Press the "Set Key".

[FLOPPY]

[WRITE]

Id Name
01 FLOWER
02 MOON
03 BIRD
04 FANTASY
05 CHILD
06 DOG
07 HOUSE

--- Writing Disk ---

Indicates status

※ Normally the same design will be used except in the event a design with the same name already exists on the floppy, in this event the design will be named P001.

[FLOPPY]

[WRITE]

Id Name
01 FLOWER

Sure? This pattern name
Name: CHILD

() CHILD
 () DOG
 () HOUSE

Cursor



[How the rename the design]

1



Use the "Cursor Key" and move the cursor to the design you desire.

※ You can use up to 8 characters for the designs name.

[FLOPPY]

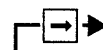
[WRITE]

Id Name
01 FLOWER

Sure? This pattern name
Name: CHILD

02 FANTASY
 03 CHILD
 04 DOG
 05 HOUSE

Cursor



2

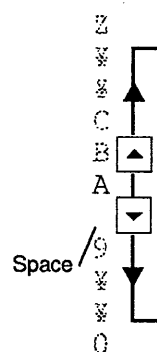


Use the "Up and Down Key" to select the characters.



If you press the Clear Key C you can delete the character.

If you hold shift ⇧ pressing the Up Key ↑ or Down Key ↓ you will move quickly.



10



Press the "Set Key".

[FLOPPY]

[WRITE]

Id Name
01 FLOWER
02 MOON
03 BIRD
04 FANTASY
05 CHILD
06 HOUSE

--- Pattern name set ---

Indicates status

[FLOPPY]

[WRITE]

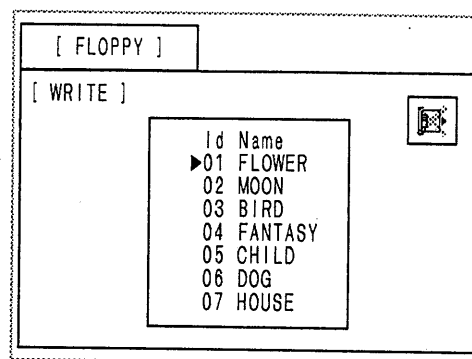
Id Name
01 FLOWER
02 MOON
03 BIRD
04 FANTASY
05 CHILD
06 HOUSE

Complete

Indicates status



If you wish to write another design to disk repeat steps 7 to 10.

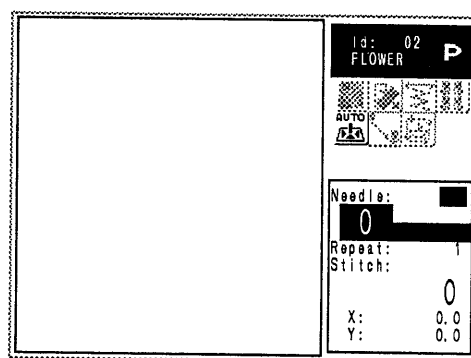


Indicates the design name

11



Press the "Escape Key".



Return to Drive Mode

Finish



- If you press the "Function Key" at step 8 you will return to the Function Menu.

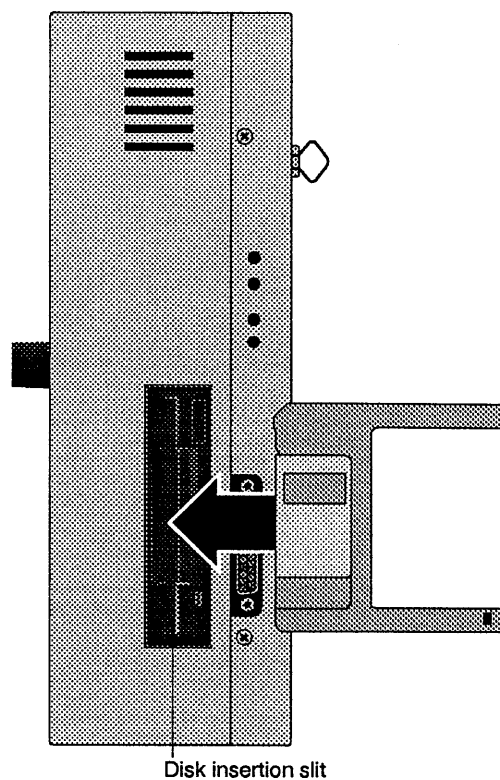


- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

You can erase design from the floppy disk by using the feature.

1

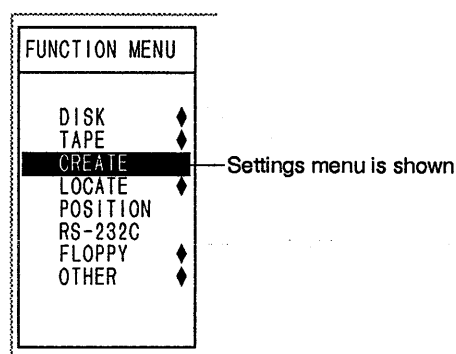
Insert the diskette into the disk drive on the right side of the control panel.



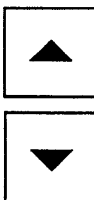
2



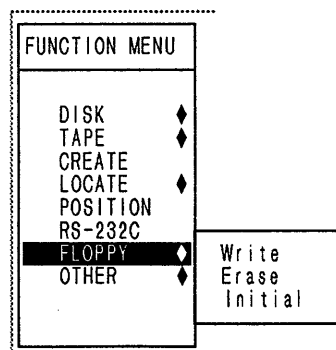
Press the "Function Key".



3



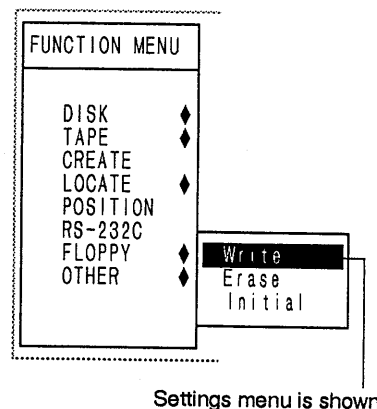
Use the "Up and Down Key" and choose "Floppy".



4



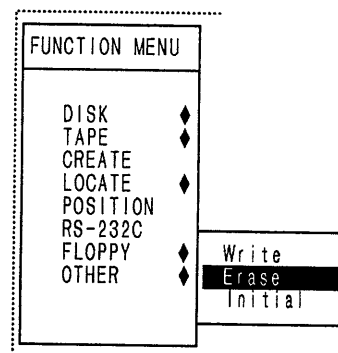
Press the "Set Key".



5



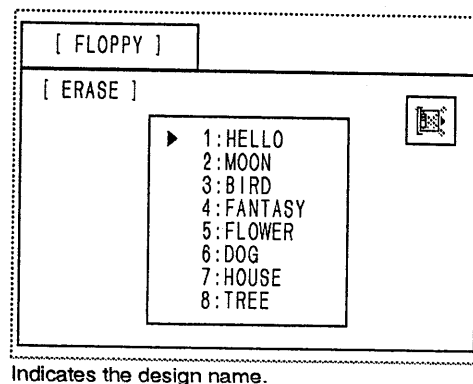
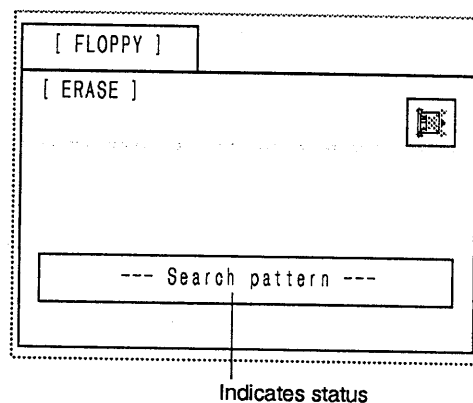
Use the "Up and Down Keys" to select Erase in the sub menu.



6



Press the "Set Key".



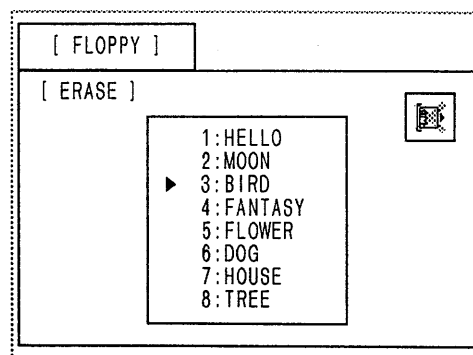
7



Use the "Up and Down Key" and select the design you wish to erase.



By holding (shift) and pressing and keys you can move quickly to the selection.

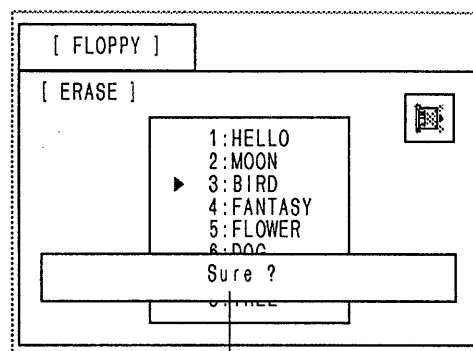


As a example we selected Bird

8



Press the "Set Key".

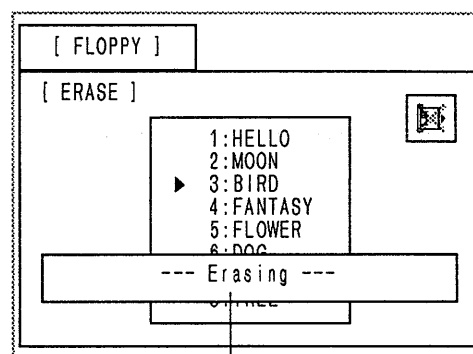


Indicates status

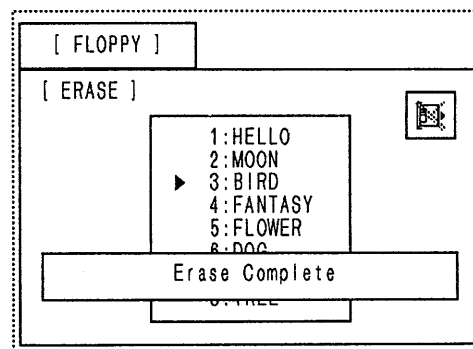
9



Press the "Set Key".



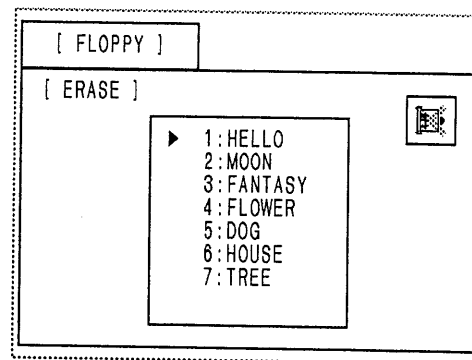
Indicates status



Indicates status



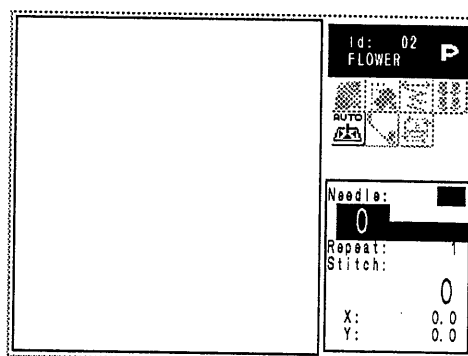
If you wish to erase another design on the floppy repeat steps 7 to 9.



10



Press the "Escape Key".



Return to Drive Mode

Finish



- If you press the "Function Key" at step 8 you will return to the Function Menu.

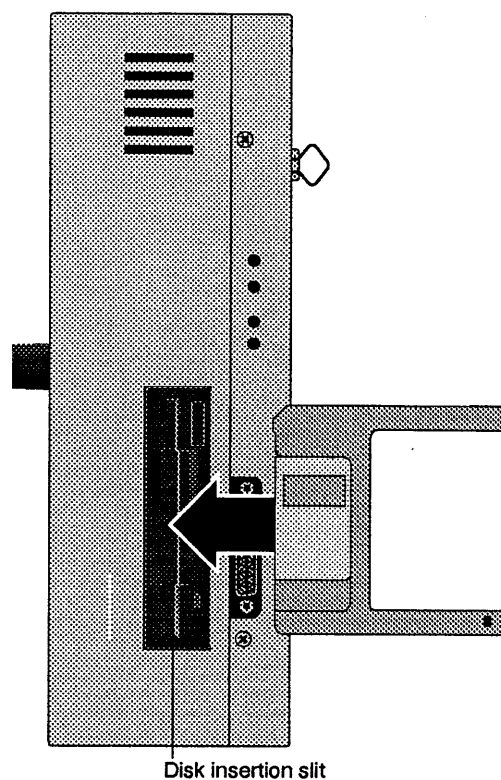


- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Normally new disks are formatted DOS which the machine can use but we recommend. you use this feature and format the disks in Happy format, either double density or high density.

1

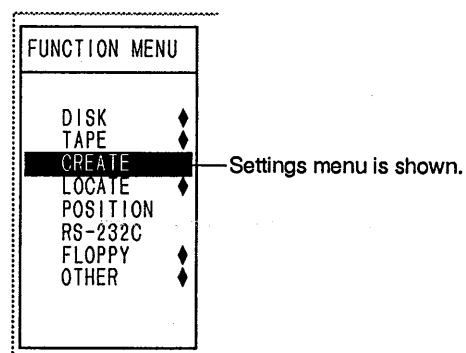
Insert the diskette into the disk drive on the right side of the control panel.



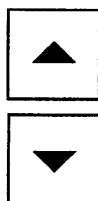
2



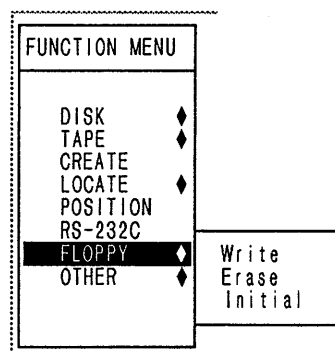
Press the "Function Key".



3



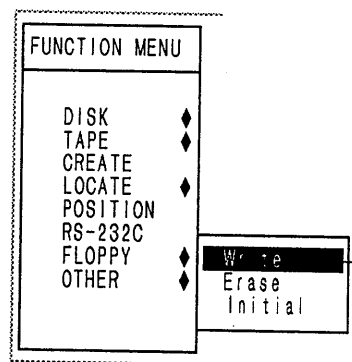
Use the "Up and Down Key" and choose "Floppy".



4



Press the "Set Key".

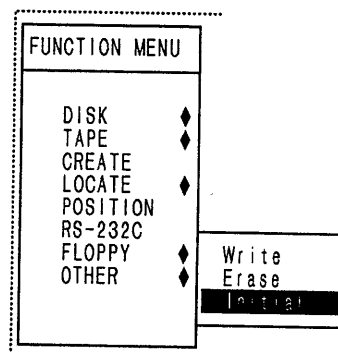


Settings menu is shown

5



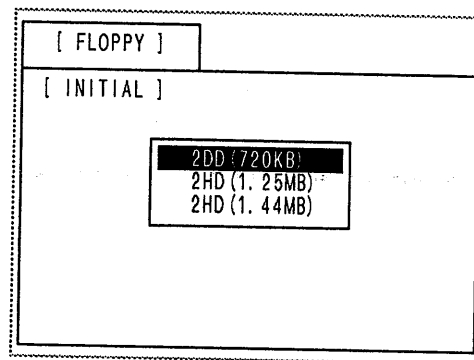
Press the "Down Key" and select "Initial".



6



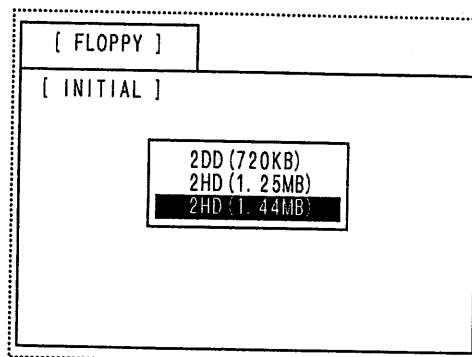
Press the "Set Key".



7



Use the "Up or Down Key" and select your type of disk.



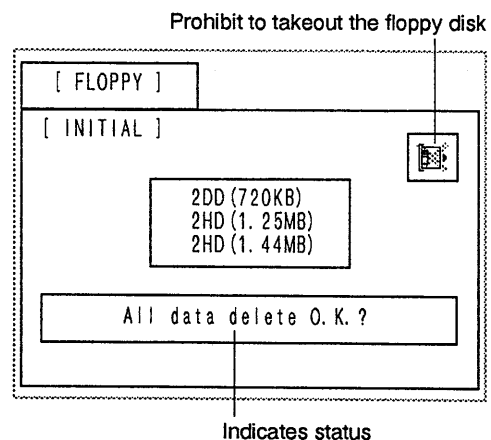
As a example we selected high density



8



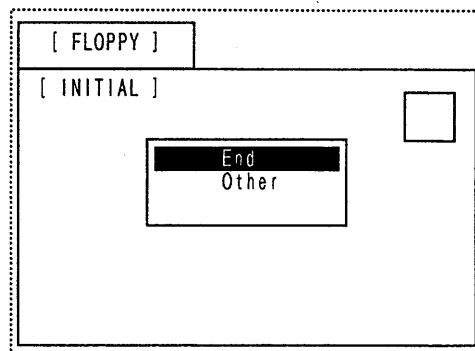
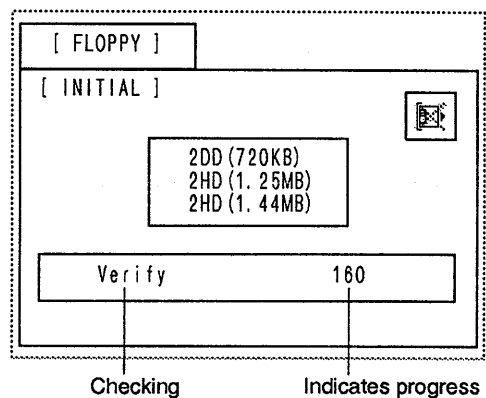
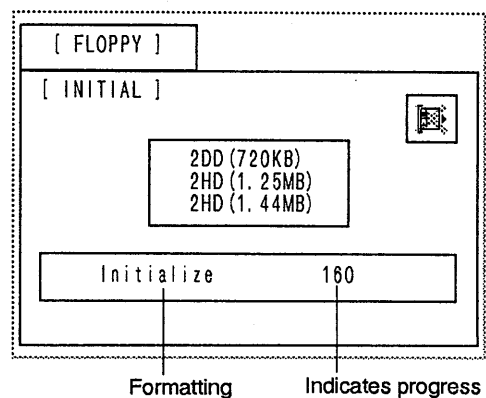
Press the "Set Key".



9



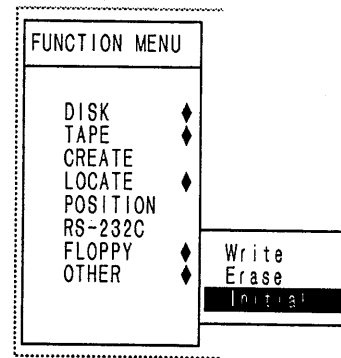
Press the "Set Key".



10



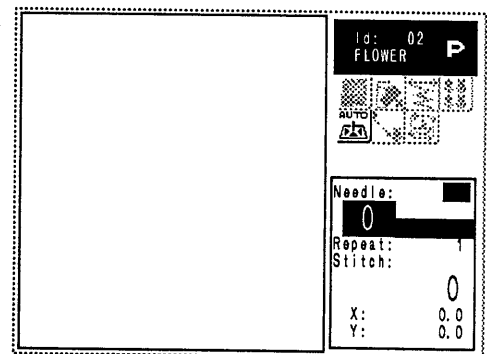
Press the "Set Key".



11



Press the "Escape Key".



Return to Drive Mode

Finish




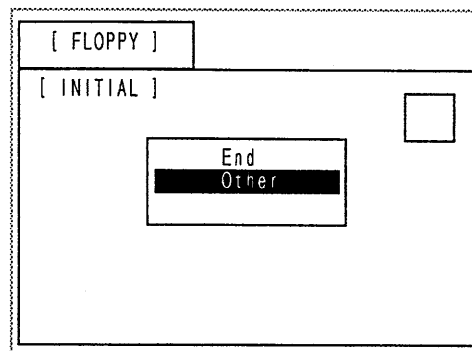
- If you press the "Function Key" at step 8 you will return to the Function Menu.



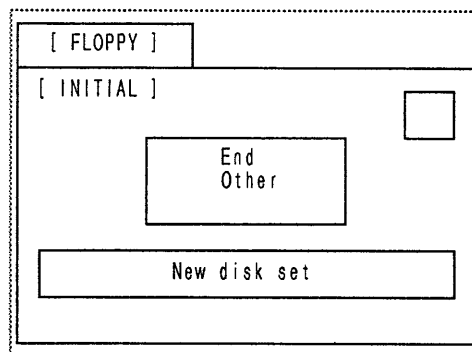
- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

If you want to format another floppy disk press the Down Key after step 9 and select other.

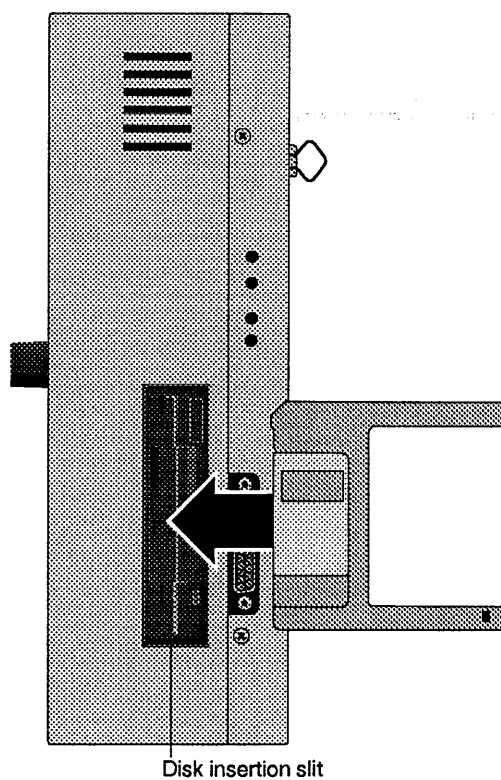
- 1  Press the "Down Key" and select "Other".



- 2  Press the "Set Key".

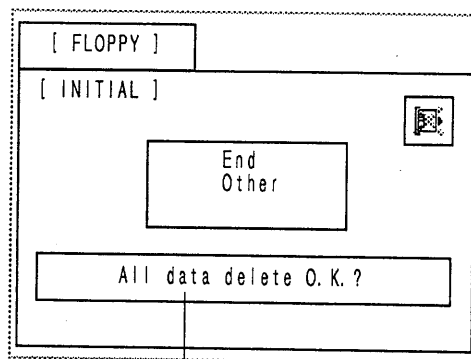


- 3 Exchange the disk.
※ By default the setting is the last used.




4 

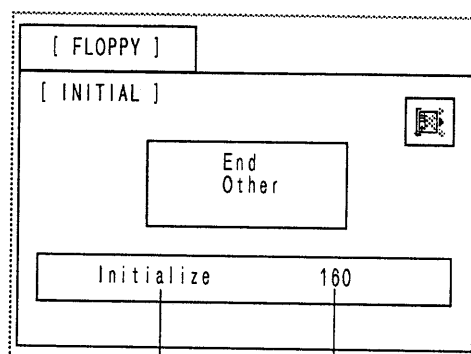
Press the "Set Key".



Indicates status

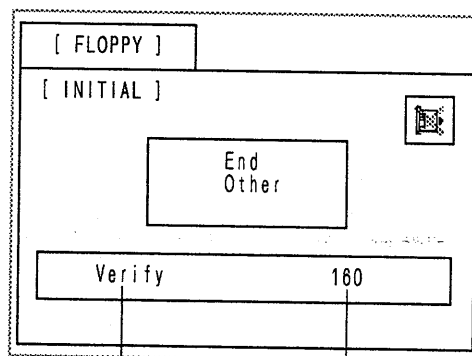
5 

Press the "Set Key".



Formatting

Indicates progress

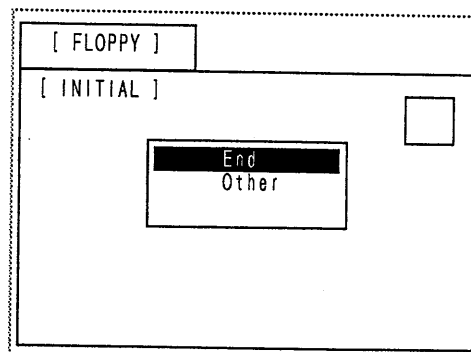


Checking

Indicates progress

6

Return to step 1 O.

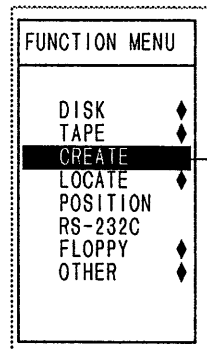



You can erase all the designs in memory at one time using this feature.

1



Press the "Function Key".

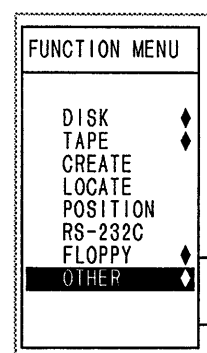


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Other".

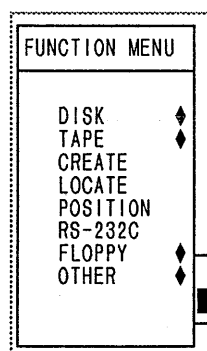


Memory all clear
Report

3



Press the "Set Key".

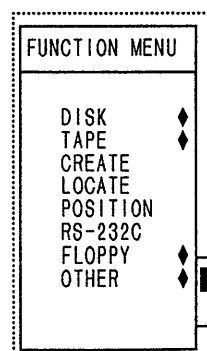


Memory all clear
Report

4



Press the "Up Key".



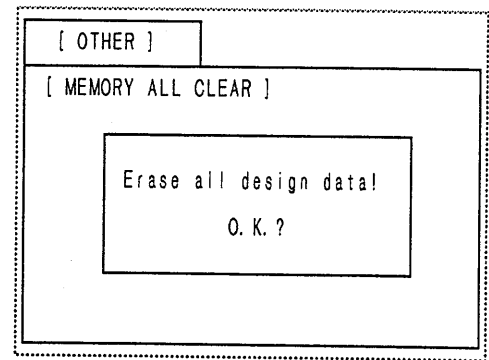
Memory all clear
Report



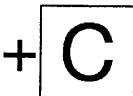
5



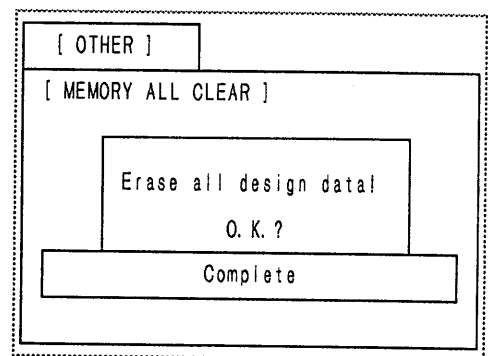
Press the "Set Key".



6

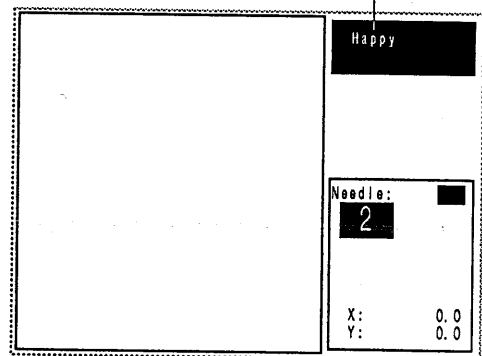


Hold the "Shift Key" while pressing "Clear Key".



Finish

When the memory is clear the word Happy is displayed.



• If you press the Function Key at step 4 you will return to the sub menu in step 3.

At any other step you return to the function menu.



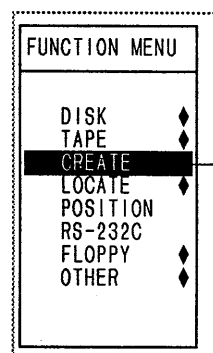
• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

The machine keeps a running total of sewn stitches, use this feature to reset the counter.

1



Press the "Function Key".

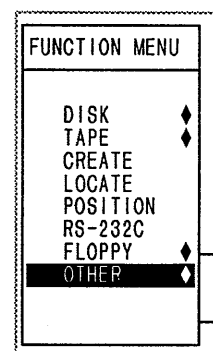


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Other".

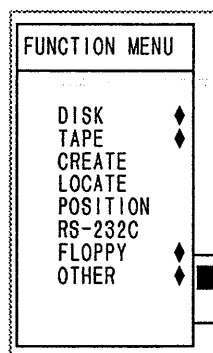


Memory all clear
Report

3



Press the "Set Key".

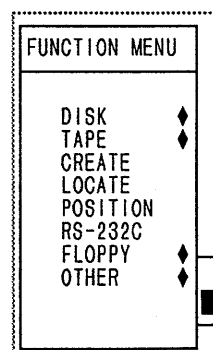


Memory all clear
Report

4



Press the "Down Key".



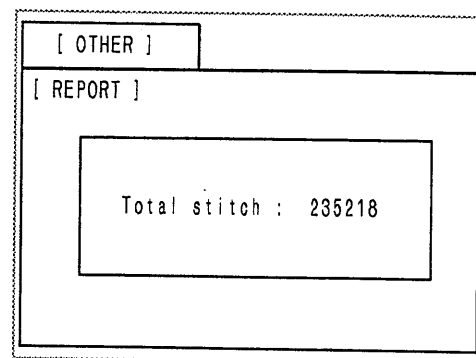
Memory all clear
Report



5



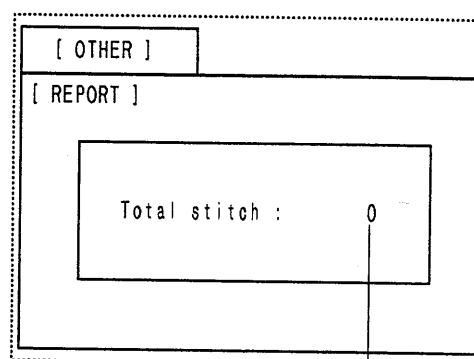
Press the "Set Key".



6



Press the "Clear Key".

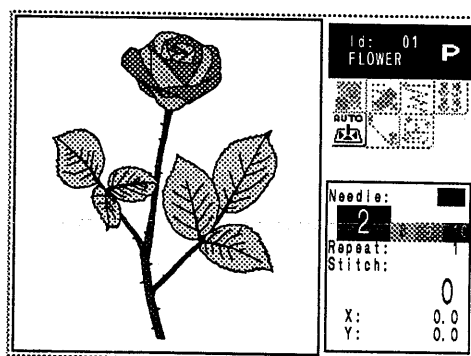


Indicates Status

7



Press the "Escape Key".



Finish



- If you press the Function Key at step 5 and 6 you will return to step 4, at any other step you return to the Function Menu.



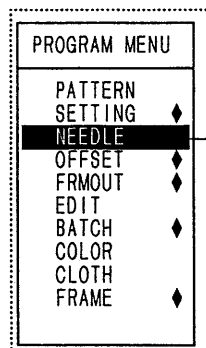
- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Selecting Designs from Memory.

1



Press the key "Program".





Settings menu is shown.

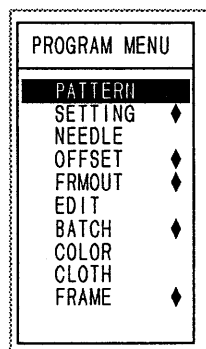
2



Press the "Up Key" and scroll to the selection "Pattern".



By holding  (shift) and pressing the  keys you can move quickly to the selection.



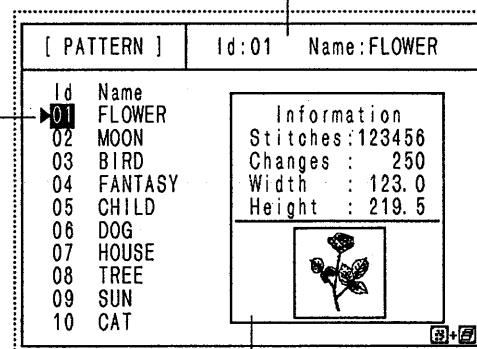
3



Press the "Set Key".

Selecting pattern is shown

Indicator






Selecting pattern information is shown

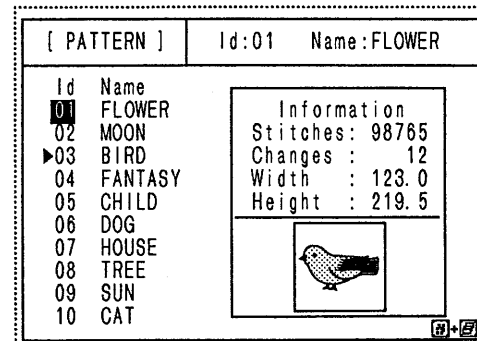
4



By using the up and down keys choose the design you wish to sew by moving the indicator beside the design number you want.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.



By example we selected design number 3 named Bird




5



Press the "Set Key".

The designated pattern to be chosen.

[PATTERN]		Id: 03	Name: BIRD
Id	Name	<div>Information</div> <div>Stitches: 98765</div> <div>Changes : 12</div> <div>Height : 678.1</div> <div>Width : 569.3</div>	
01	FLOWER		
02	MOON		
03	BIRD		
04	FANTASY		
05	CHILD		
06	DOG		
07	HOUSE		
08	TREE		
09	SUN		
10	CAT		

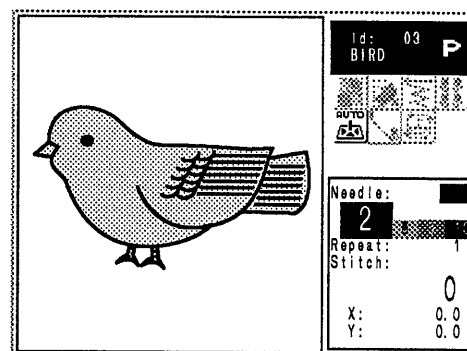
6



Press the "Display Change Key".

Describe the pattern while Embroidering.

Finish



- By pressing the "Program Key" you can return to the program menu.
This is a shortcut additional program menu items.



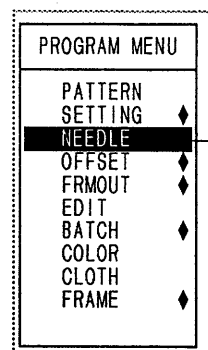
- By pressing the "Escape Key" you can return to Drive Mode.
- If you press "Escape" before refreshing the display the you can return to drive but the display will not show the designs progress.

Rename Design in Memory.

1



Press the key "Program".



The menu choices will be displayed.

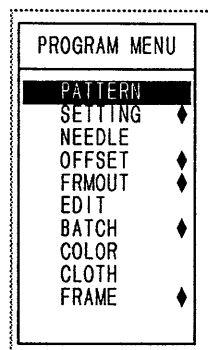
2



Use the "Up Key" to move to the selection "Pattern".



By holding (shift) and pressing the keys you can move quickly to the selection.



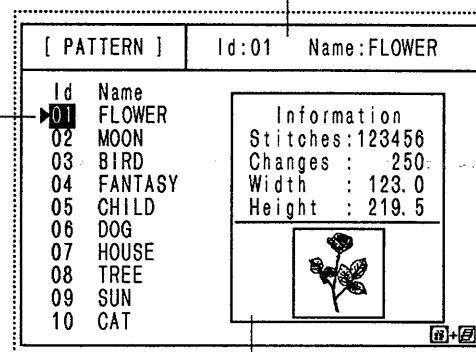
3



Press the "Set Key".

Selecting pattern is shown

Indicator



Selecting pattern information is shown

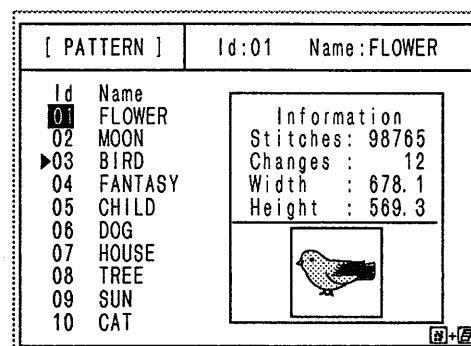
4



Using the "Up and Down Keys" choose the design you wish to rename.



By holding (shift) and pressing and keys you can move quickly to the selection.




by example we selected design number 3 named Bird



5



Press the "Cursor Key".

[PATTERN]		Id:01	Name:FLOWER
Id	Name	<div>Information</div> <div>Stitches: 98765</div> <div>Changes : 12</div> <div>Width : 678.1</div> <div>Height : 569.3</div>	
01	FLOWER		
02	MOON		
03	BIRD		
04	FANTASY		
05	CHILD		
06	DOG		
07	HOUSE		
08	TREE		
09	SUN		
10	CAT		


The design name to be changed will be highlighted red.

6



By pressing the "Right Key" you can move the cursor under the letter or number of the design name we wish to change.

The maximum number of characters in a design name is eight letters or numbers.

[PATTERN]		Id:01	Name:FLOWER
Id	Name	<div>Information</div> <div>Stitches: 98765</div> <div>Changes : 12</div> <div>Width : 678.1</div> <div>Height : 569.3</div>	
01	FLOWER		
02	MOON		
03	BIRD		
04	FANTASY		
05	CHILD		
06	DOG		
07	HOUSE		
08	TREE		
09	SUN		
10	CAT		



7

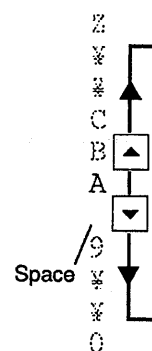


When the cursor is under the character you wish to change use the "Up and Down Keys" to change the character.



If you press **C** you can clear the character.


By holding **Shift** (shift) and pressing the **Up** and **Down** keys you can move quickly to the selection.



8



Press the "Set Key".

[PATTERN]		Id:01	Name:FLOWER
Id	Name	<div>Information</div> <div>Stitches: 98765</div> <div>Changes : 12</div> <div>Width : 678.1</div> <div>Height : 569.3</div>	
01	FLOWER		
02	MOON		
03	CHICKEN		
04	FANTASY		
05	CHILD		
06	DOG		
07	HOUSE		
08	TREE		
09	SUN		
10	CAT		

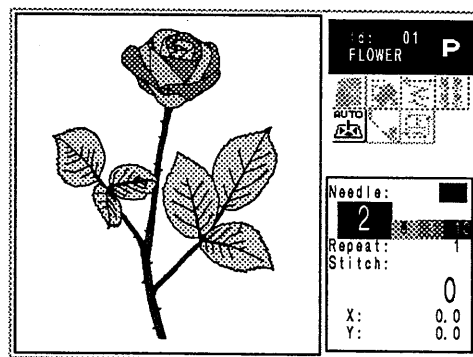
The design name after change will be highlighted black.

9



Press the "Escape Key".

Finish



Return to Drive Mode.



- If you press the "Program Key" before pressing "Enter". This cancels the operation.



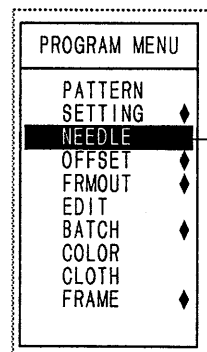
- If you press the "Escape Key" before pressing "Enter" you can cancel your setting and return to the Drive Mode Screen.

Erasing a Design in Memory.

1



Press the "Program Key".





Settings menu is shown

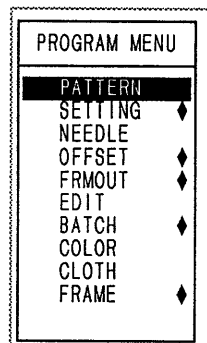
2



Use the "Up Key" to choose the selection "Pattern".



By holding  (shift) and pressing the  keys you can move quickly to the selection.

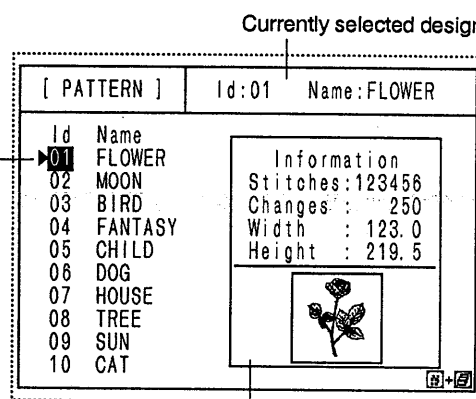


3



Press the "Set Key" and the menu opens.

Indicator



Currently selected design




Current design information

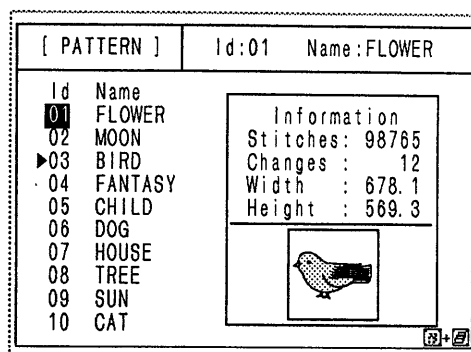
4



By using the up and down keys choose the design you wish to erase by moving the indicator beside the design number.

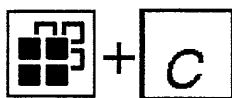


By holding  (shift) and pressing the  and  keys you can move quickly to the selection.

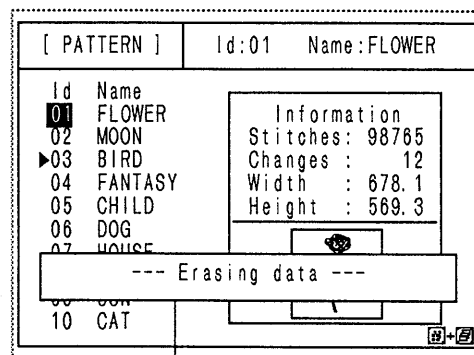


By example we selected design number 3 named Bird

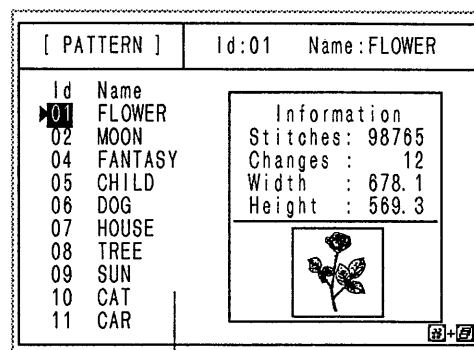
5



To erase the selected design hold the "Shift Key" and press the "Clear Key".



Erasure status.



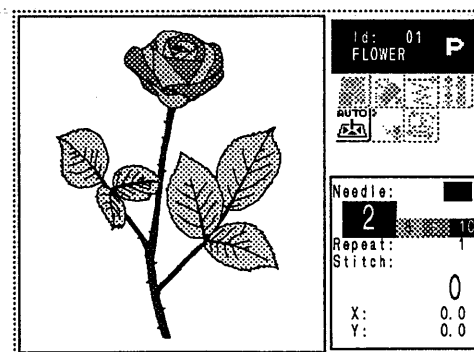
This memory location is now free.

6

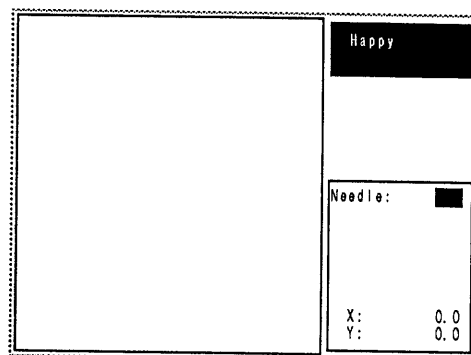
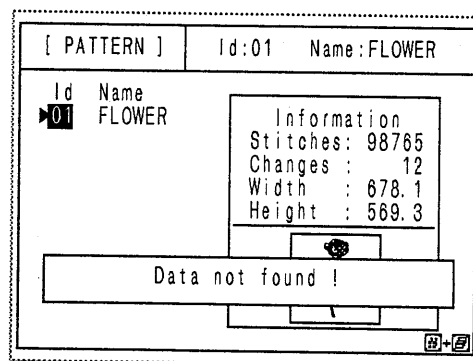


Press the "Display Change Key".

Finish



If you erase all designs in memory you will see the message Data not found And then the screen will be blank.



- IF you press the "Program Key" before clearing the designs you can return to the Program Menu.



- IF you press the "Program Key" before clearing the designs you can return to the Program Menu.
 - If you press the "Escape Key" before pressing "Clear" you can cancel your action and return to the Drive Mode Screen.
- If you have Cleared the designs and used the "Escape Key".
Press the "Change Display Key" to refresh the screen.

This is function will allow you to view the Designs stored in memory.

1



Press the "Program Key".

PROGRAM MENU	
PATTERN	◆
SETTING	◆
NEEDLE	◆
OFFSET	◆
FRMOUT	◆
EDIT	◆
BATCH	◆
COLOR	◆
CLOTH	◆
FRAME	◆



Settings menu is shown.

2



Press the "Up Key" and select "Pattern".



By holding  (shift) and pressing the  keys you can move quickly to the selection.

PROGRAM MENU	
PATTERN	◆
SETTING	◆
NEEDLE	◆
OFFSET	◆
FRMOUT	◆
EDIT	◆
BATCH	◆
COLOR	◆
CLOTH	◆
FRAME	◆


3



Press the "Set Key".

Selecting pattern is shown

Indicator

[PATTERN]		Id:01	Name:FLOWER
Id	Name	<div>Information</div> <div>Stitches:123456</div> <div>Changes : 250</div> <div>Width : 123.0</div> <div>Height : 219.5</div> 	
01	FLOWER		
02	MOON		
03	BIRD		
04	FANTASY		
05	CHILD		
06	DOG		
07	HOUSE		
08	TREE		
09	SUN		
10	CAT		




Selecting pattern information is shown


4



Use the "Up and Down Key" to choose the Design you wish to display.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.

[PATTERN]		Id:03	Name: BIRD
Id	Name	<div>Information</div> <div>Stitches: 98765</div> <div>Changes : 12</div> <div>Width : 678.1</div> <div>Height : 569.3</div> 	
01	FLOWER		
02	MOON		
03	BIRD		
04	FANTASY		
05	CHILD		
06	DOG		
07	HOUSE		
08	TREE		
09	SUN		
10	CAT		

By example we selected design number 3 named Bird

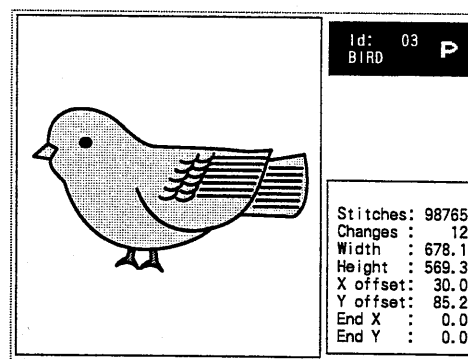


5



Press the "Display Change Key".

After viewing the selected design, the screen returns to drive mode.



You will now see the design you selected on the screen.

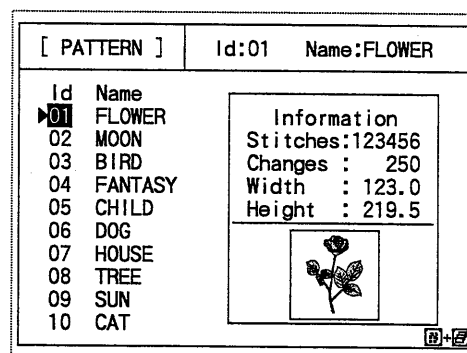
6



Press the "Escape Key".



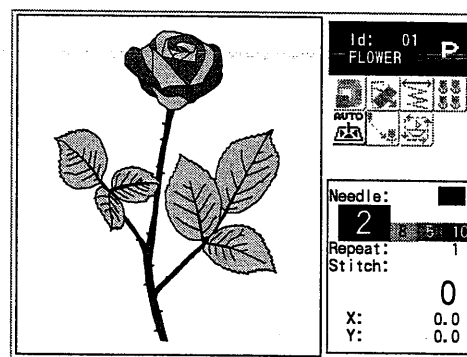
You can repeat this sequence to view additional designs.



7



Press the "Escape Key".



The original design is shown in the screen in drive mode.

Various settings such as scaling and angle are set to the selected pattern.

- ※ Various settings are executed in assortment.
- ※ In case "Width" (Width adjustment) is set and embroidery is made, there is a case that error occurs at end point. In such a case, please return setting figure of stitch width to "0.0".
- ※ When reading pattern with various function setting from HAPPY data disk, "PATTERN ADJUSTMENT" is set automatically accordingly with various function setting. (Refer to the explanation of "etc. func write" and "etc. func read" on "CREATE" page.)

Scale

The machine scales up and down in X and Y directions in every 1% respectively.

Setting example

● : Start point of pattern



Normal

Default : X,Y 100%



X 100 %, Y 150 %

Angle

With start point of pattern as pivot, the machine changes angle in every 1 clockwise.

Setting example

● : Start point of pattern



Normal

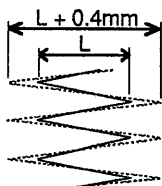
Default : 0°



30°

Width

The machine adjusts stitch width (L) in pattern with in range of -1.0 ~ +1.0mm in every 0.1mm.



0.4 mm

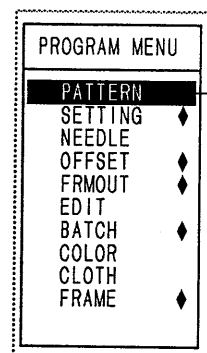
Default : 0 mm

This is to adjust the scale of selected memory pattern (from 50% to 200%).

1

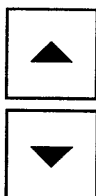


Press the "Program Key".

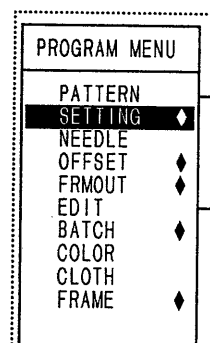


Settings menu is shown..

2



Use the "Up and Down Key" and choose "Setting".



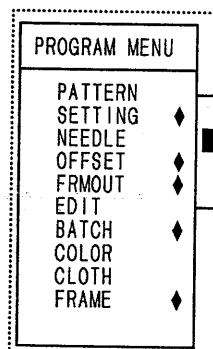
Adjust
Repeat
Convert
Auto org

Indicates a sub-menu..

3



Press the "Set Key".



Adjust
Repeat
Convert
Auto org

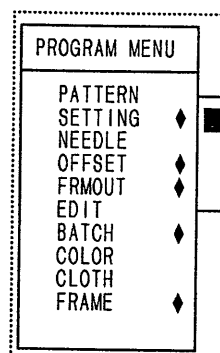
Settings menu is shown..

The cursor moves to the sub-menu..

4



Press the "Up Key" and select "Adjust".



Adjust
Repeat
Convert
Auto org



5



Press the "Set Key".

[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div> <p>►Scale X: 100%</p> <p>Scale Y: 100%</p> <p>(50%~200%)</p> <p>Angle : + 0°</p> <p>(-359° ~359°)</p> <p>Width : 0.0mm</p> <p>(-1.0mm~1.0mm)</p> </div>		

6



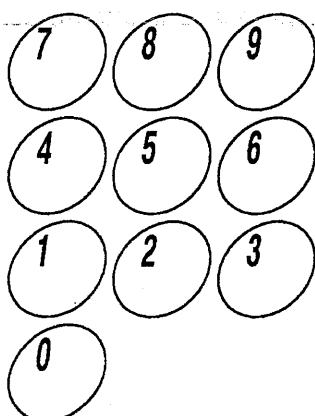
Use the "Up and Down Key" and choose either the "X or Y" direction.



[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div> <p>Scale X: 100%</p> <p>►Scale Y: 100%</p> <p>(50%~200%)</p> <p>Angle : + 0°</p> <p>(-359° ~359°)</p> <p>Width : 0.0mm</p> <p>(-1.0mm~1.0mm)</p> </div>		

As a example we choose the Y direction to be scaled

7



Use the "Key pad" to input the new value or size.

※ Remember the range of adjustment is 50% to 200%.

[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div> <p>Scale X: 100%</p> <p>►Scale Y: 150%</p> <p>(50%~200%)</p> <p>Angle : + 0°</p> <p>(-359° ~359°)</p> <p>Width : 0.0mm</p> <p>(-1.0mm~1.0mm)</p> </div>		

As a example we input 150%

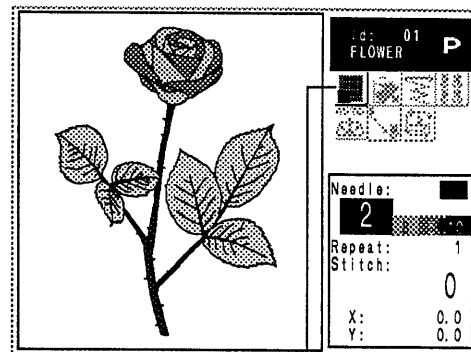


8



Press the "Escape Key".

Finish



In the Drive Mode screen a icon will show that design scaling is in use.



• At step 7 you can clear your entry by pressing the "Clear Key".



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



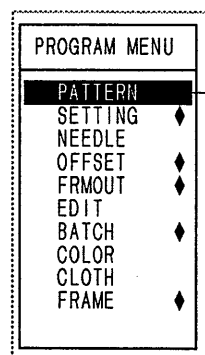
• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

This is to adjust the angle of selected memory pattern.

1



Press the "Program Key".

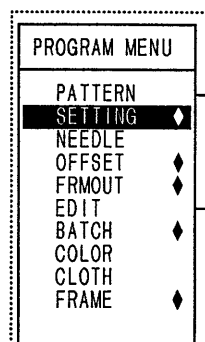


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Setting".

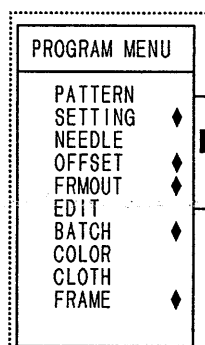


Settings menu is shown.

3



Press the "Set Key".



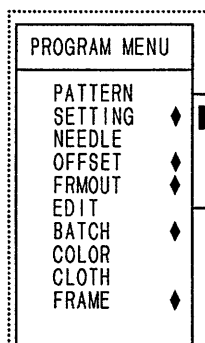
Settings menu is shown.

The cursor moves to the sub-menu.

4



Press the "Up Key" and select "Adjust".



5



Press the "Set Key".

[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div> <p>▶Scale X: 100%</p> <p>Scale Y: 100%</p> <p>(50%~200%)</p> <p>Angle : + 0°</p> <p>(-359° ~359°)</p> <p>Width : 0.0mm</p> <p>(-1.0mm~1.0mm)</p> </div>		

6



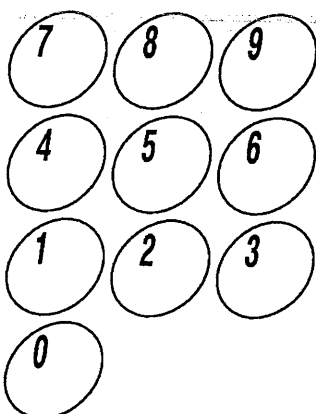
Use the "Up and Down Key" and choose "Angle".



[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div> <p>Scale X: 100%</p> <p>Scale Y: 100%</p> <p>(50%~200%)</p> <p>▶Angle : + 0°</p> <p>(-359° ~359°)</p> <p>Width : 0.0mm</p> <p>(-1.0mm~1.0mm)</p> </div>		

Move the cursor.

7



Use the "Keypad" to input the number of degrees you wish the design rotate.

※ The range of setting is -359 degrees to 359 degrees.

[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div> <p>Scale X: 100%</p> <p>Scale Y: 150%</p> <p>(50%~200%)</p> <p>▶Angle : + 30°</p> <p>(-359° ~359°)</p> <p>Width : 0.0mm</p> <p>(-1.0mm~1.0mm)</p> </div>		

As a example we rotated the design 30 degrees




[Setting a negative value]

8



Press the "Plus minus Key".

※ By pressing  this key you can alternate between positive and negative settings.

[SETTING]	Id: 01	Name: FLOWER														
[ADJUST]																
<table border="1"> <tr> <td>Scale X:</td> <td>100%</td> </tr> <tr> <td>Scale Y:</td> <td>150%</td> </tr> <tr> <td></td> <td>(50%~200%)</td> </tr> <tr> <td>▶Angle :</td> <td>- 30°</td> </tr> <tr> <td></td> <td>(-359° ~359°)</td> </tr> <tr> <td>Width :</td> <td>0.0mm</td> </tr> <tr> <td></td> <td>(-1.0mm~1.0mm)</td> </tr> </table>			Scale X:	100%	Scale Y:	150%		(50%~200%)	▶Angle :	- 30°		(-359° ~359°)	Width :	0.0mm		(-1.0mm~1.0mm)
Scale X:	100%															
Scale Y:	150%															
	(50%~200%)															
▶Angle :	- 30°															
	(-359° ~359°)															
Width :	0.0mm															
	(-1.0mm~1.0mm)															

As a example we set a negative value

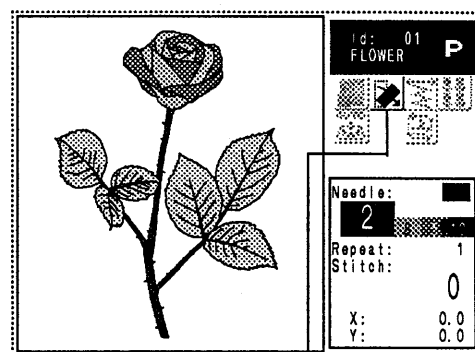
Indicates a negative amount.

9



Press the "Escape Key".

Finish



In the Drive Mode screen a icon will show that design Rotation is in use.



• If you wish to cancel the settings at steps 7 and 8 press the "Clear Key".



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



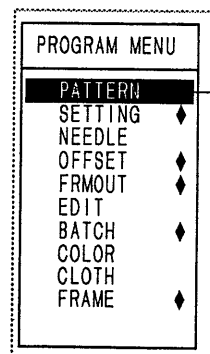
• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

This is to adjust the width of selected memory pattern.

1



Press the "Program Key".

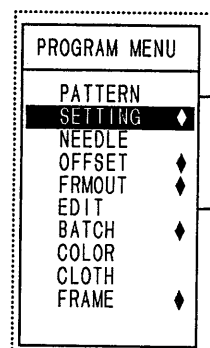


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Setting".

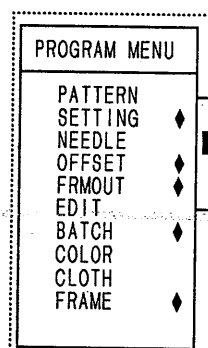


Indicates a sub-menu.

3



Press the "Set Key".



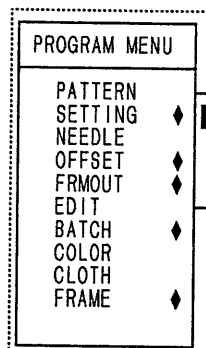
Settings menu is shown.

The cursor moves to the sub-menu.

4



Press the "Up Key" and select "Adjust".



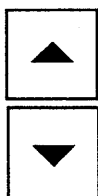
5



Press the "Set Key".

[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div style="border: 1px solid black; padding: 5px;"> <p>▶Scale X: 100%</p> <p>Scale Y: 100%</p> <p style="padding-left: 20px;">(50%~200%)</p> <p>Angle : + 0°</p> <p style="padding-left: 20px;">(-359° ~359°)</p> <p>Width : 0.0mm</p> <p style="padding-left: 20px;">(-1.0mm~1.0mm)</p> </div>		

6

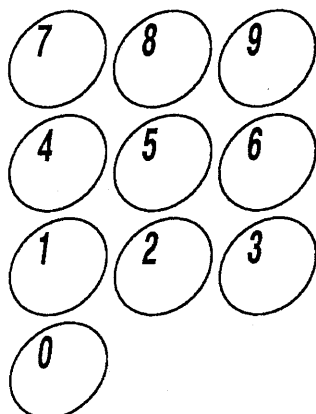


Use the "Up and Down Key" and choose "Width".

[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div style="border: 1px solid black; padding: 5px;"> <p>Scale X: 100%</p> <p>Scale Y: 100%</p> <p style="padding-left: 20px;">(50%~200%)</p> <p>Angle : + 0°</p> <p style="padding-left: 20px;">(-359° ~359°)</p> <p>▶Width : 0.0mm</p> <p style="padding-left: 20px;">(-1.0mm~1.0mm)</p> </div>		

Move the cursor.

7



Use the "Keypad" and input the adjustment amount.

※ The range of setting is -1.0 mm to 1.0mm in 0.1mm increments.

[SETTING]	Id:01	Name:FLOWER
[ADJUST]		
<div style="border: 1px solid black; padding: 5px;"> <p>Scale X: 100%</p> <p>Scale Y: 150%</p> <p style="padding-left: 20px;">(50%~200%)</p> <p>Angle : + 30°</p> <p style="padding-left: 20px;">(-359° ~359°)</p> <p>▶Width : 0.3mm</p> <p style="padding-left: 20px;">(-1.0mm~1.0mm)</p> </div>		

As a example we input 0.3mm




[Setting a negative value]

8



Press the "Plus minus Key".

※ By pressing  this key you can alternate between positive and negative settings.

[SETTING]	Id:01	Name:FLOWER														
[ADJUST]																
<table border="1"> <tr> <td>Scale X:</td> <td>100%</td> </tr> <tr> <td>Scale Y:</td> <td>150%</td> </tr> <tr> <td></td> <td>(50%~200%)</td> </tr> <tr> <td>Angle :</td> <td>+ 0°</td> </tr> <tr> <td></td> <td>(-359° ~359°)</td> </tr> <tr> <td>▶Width :</td> <td>-0.3mm</td> </tr> <tr> <td></td> <td>(-1.0mm~1.0mm)</td> </tr> </table>			Scale X:	100%	Scale Y:	150%		(50%~200%)	Angle :	+ 0°		(-359° ~359°)	▶Width :	-0.3mm		(-1.0mm~1.0mm)
Scale X:	100%															
Scale Y:	150%															
	(50%~200%)															
Angle :	+ 0°															
	(-359° ~359°)															
▶Width :	-0.3mm															
	(-1.0mm~1.0mm)															

As a example we set a negative value

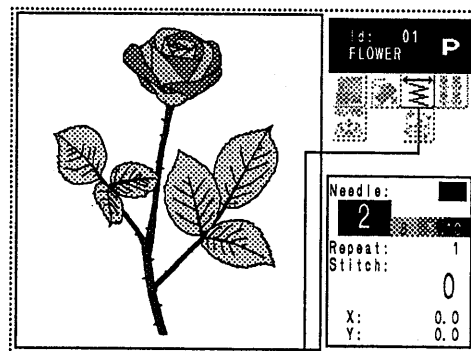
Indicates a negative amount.

9



Press the "Escape Key".

Finish



In the Drive Mode screen a icon will show that width adjustment is in use.



• If you wish to cancel the settings at steps 7 and 8 press the "Clear Key".




• If you press the "Program Key" before completing this setting you will return to the Program Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

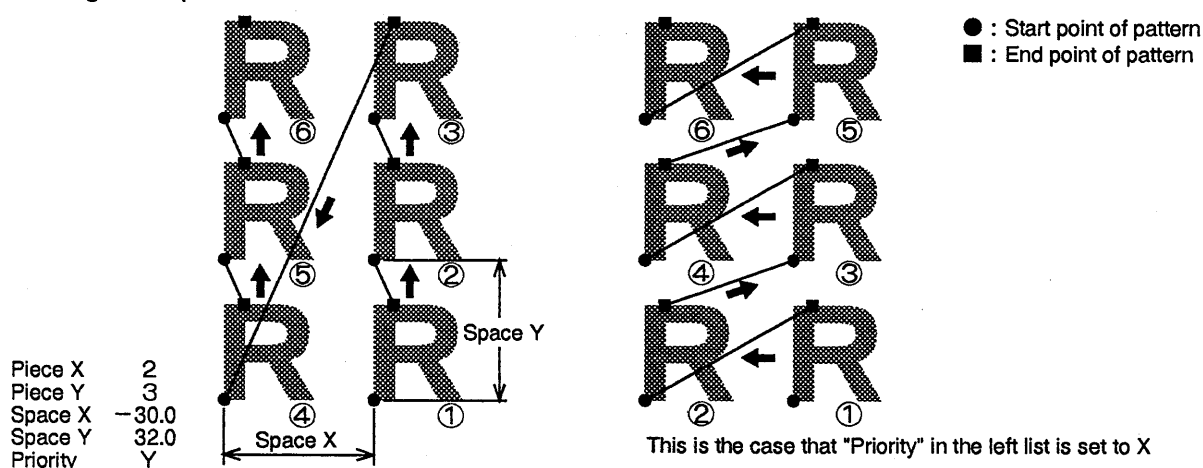
REPEAT

The machine automatically embroiders the selected memory pattern only in specified number of pieces in X and Y directions.

※ If you move frame while you are doing repeat sewing, the machine will not continue repeat sewing. Please push  and start again.

※ When reading pattern with various function setting from HAPPY data disk, "REPEAT" is set automatically accordingly with various function setting. (Refer to the explanation of "etc. func write" and "etc. func read" on "CREATE" page.)

Setting example



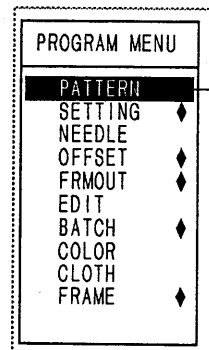
SETTING ITEM	SETTING RANGE	DEFAULT	
Piece X	1~30	1	This sets number of pieces side wise and length wise when you perform repeat.
Piece Y	1~30	1	The number of pieces to be embroidered is product obtained by multiplying numbers in X and Y.
Space X	-999.9~999.9 mm	0	This sets side wise distance between start point of each pattern when you perform repeat. When plus number is input, the machine makes repeat toward right. In case of minus number, toward left.
Space Y	-999.9~999.9 mm	0	This sets length wise distance between start point of each pattern when you perform repeat. When plus number is input, the machine makes repeat upward. In case of minus number, downward.
Priority	X(Side) · Y(Length)	X	When you set more than 2 pieces for repeat length wise and side wise, this selects direction to embroider 2nd piece.

It is possible to repeat sew the design by using this setting.

1

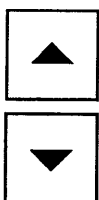


Press the "Program Key".

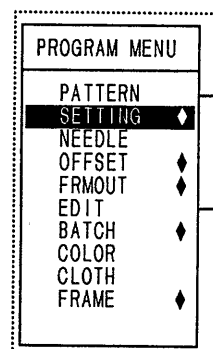


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Setting".

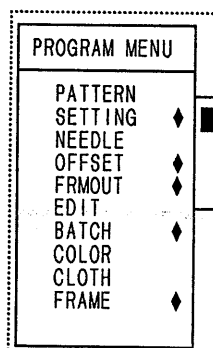


Indicates a sub-menu.

3



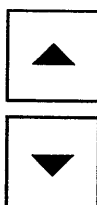
Press the "Set Key".



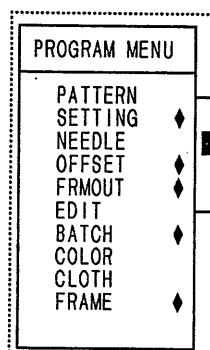
Settings menu is shown.

The cursor moves to the sub-menu.

4



Using the "Up and Down Key" select Repeat from the sub menu.



5



Press the "Set Key".

[SETTING]	Id:01	Name:FLOWER
[REPEAT]		
<div> ▶Pieces X : 1 Pieces Y : 1 Space X : 0.0 Space Y : 0.0 Priority: X </div>		

6



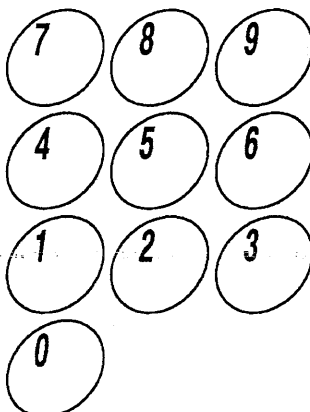
Use the "Up and Down Key" to select the X or Y.



[SETTING]	Id:01	Name:FLOWER
[REPEAT]		
<div> Pieces X : 1 ▶Pieces Y : 1 Space X : 0.0 Space Y : 0.0 Priority: X </div>		

As a example we selected Y

7



Using the "Keypad: input the number of designs you wish to sew in that direction.

※The range of setting is 1 to 30 pieces.

[SETTING]	Id:01	Name:FLOWER
[REPEAT]		
<div> Pieces X : 1 ▶Pieces Y : 5 Space X : 0.0 Space Y : 0.0 Priority: X </div>		

As a example we input 5 pieces to be sewn in the Y direction

8



Use the Up and Down key and select spacing X or Y.

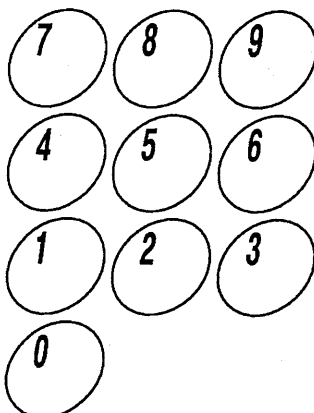


[SETTING]	Id:01	Name:FLOWER
[REPEAT]		
<div> Pieces X : 1 Pieces Y : 5 Space X : 0.0 ▶Space Y : 0.0 Priority: X </div>		

As a example we selected the Y spacing



9



Using the "Keypad" input the amount of spacing between each design sewn.

※ the range of setting is from 0.1mm to 999.9mm in increments of 0.1mm.

[SETTING]	Id:01	Name:FLOWER
[REPEAT]		
<div> <div>Piecs X : 1</div> <div>Piecs Y : 5</div> <div>Space X : 0.0</div> <div>▶Space Y : 50.0</div> <div>Priority: X</div> </div>		


As a example we input a 50.0mm spacing in the Y direction

[Setting a negative value]

10



Press the "Plus minus Key".

※ By pressing  this key you can alternate between positive and negative settings.

[SETTING]	Id:01	Name:FLOWER
[REPEAT]		
<div> <div>Piecs X : 1</div> <div>Piecs Y : 5</div> <div>Space X : 0.0</div> <div>▶Space Y : 50.0</div> <div>Priority: X</div> </div>		

As a example we set a negative value

Indicates a negative amount

[We now must set the direction or Priority of sewing]

11



Use the "Down Key" to select Priority.

[SETTING]	Id:01	Name:FLOWER
[REPEAT]		
<div> <div>Piecs X : 1</div> <div>Piecs Y : 5</div> <div>Space X : 0.0</div> <div>Space Y :- 50.0</div> <div>▶Priority: X</div> </div>		

Move the cursor.




[Use the "Plus minus Key" to select the sewing priority either X or Y]

12



Press the "Plus minus Key".

※ By pressing  this key you can alternate between X and Y settings.

[SETTING]	Id:01	Name:FLOWER
[REPEAT]		
Pieces X : 1 Pieces Y : 5		
Space X : 0.0 Space Y :- 50.0		
▶Priority:		Y

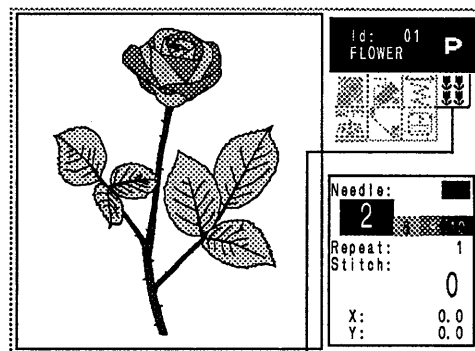
By example we selected the setting Y

13



Press the "Escape Key".

Finish



In the Drive Mode screen a icon will show that repeat sewing is in use.



• You can clear your entry by pressing the "Clear Key".



• If you press the "Program Key" before completing this setting you will return to the Program Menu.

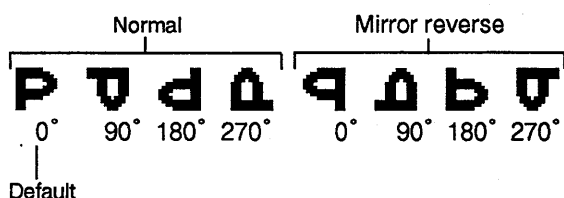


• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Set conversion to the present pattern.

※ When reading pattern with various function setting from HAPPY data disk, "CONVERT" is set automatically accordingly with various function setting.

(Refer to the explanation of "etc. func write" and "etc. func read" on "CREATE" page.)



Setting example

● : Start point of pattern



Normal



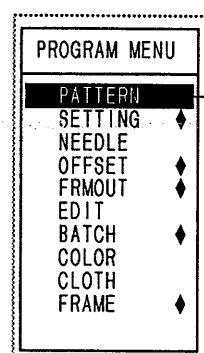
Mirror reverse + 90°

With start point of pattern as pivot, the machine changes angle in every 90 to reverse in mirror image.

1

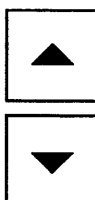


Press the "Program Key".

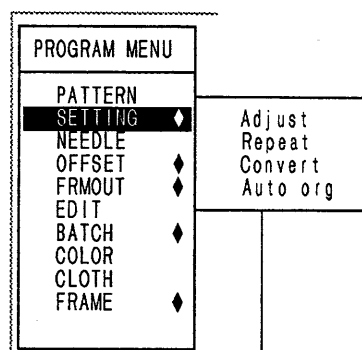


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Setting".



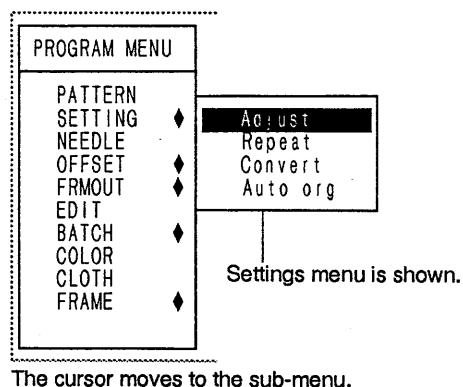
Indicates a sub-menu.



3



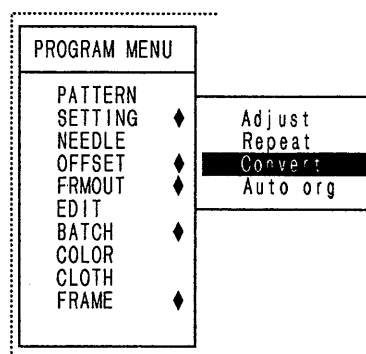
Press the "Set Key".



4



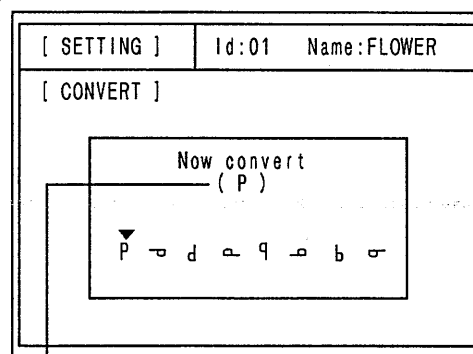
Use the Up and Down Keys and select Convert from the sub menu.



5



Press the "Set Key".





The current condition is as shown

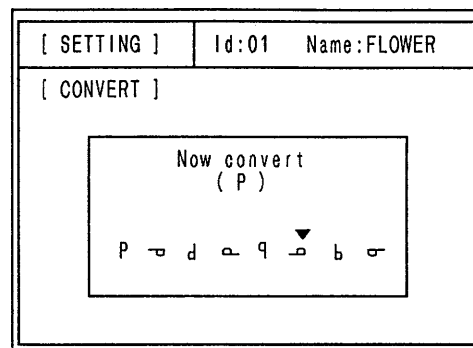
6



Use the right Arrow, Up and Down Keys to select the condition you desire



If you press  key the normal condition is selected  key the mirrored condition is selected.



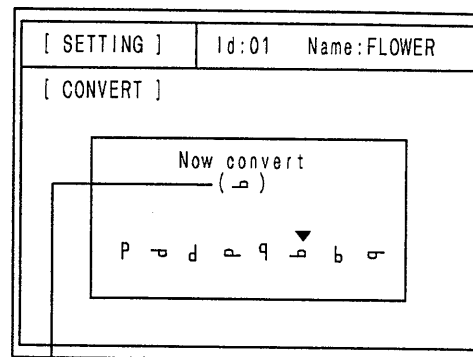
As a example we selected to Mirror the Design and rotate it 90 degrees



7



Press the "Set Key".

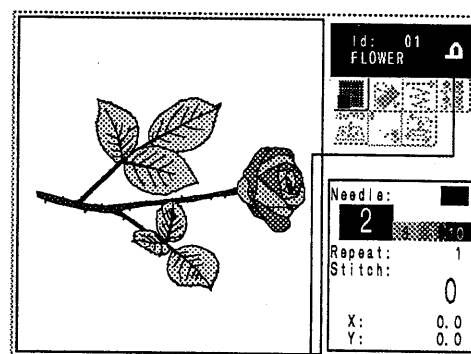


Indicates the current setting.

8



Press the "Escape Key".



In the Drive Mode screen a icon will show that Convert Design is in use.

Finish



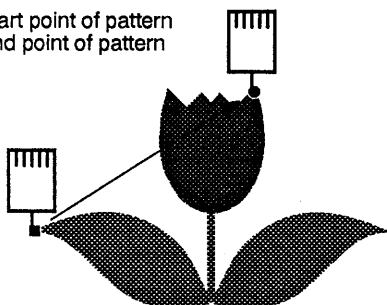
- If you press the "Program Key" before completing this setting you will return to the Program Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

The pattern which has different start and end point, returns the frame automatically to original point up on finishing embroidery.

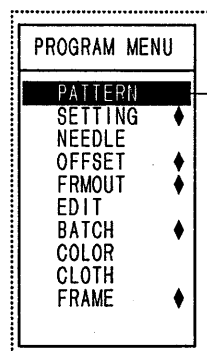
● : Start point of pattern
■ : End point of pattern



1



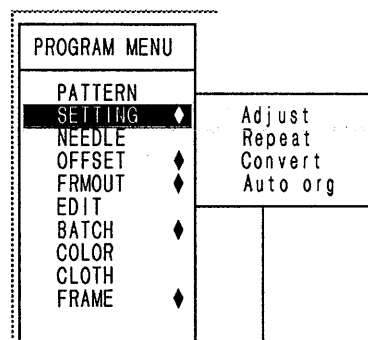
Press the "Program Key"



2



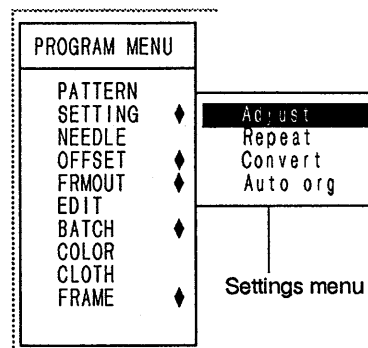
Use the "Up and Down Key" and choose "Setting".



3



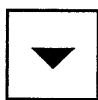
Press the "Set Key".



The cursor moves to the sub-menu.



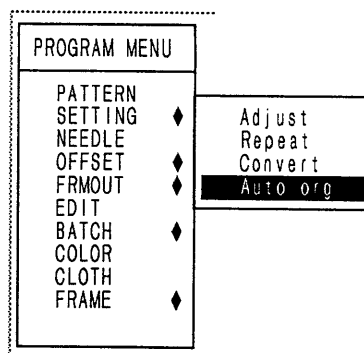
4



Press the "Down Key" and select "Auto org".



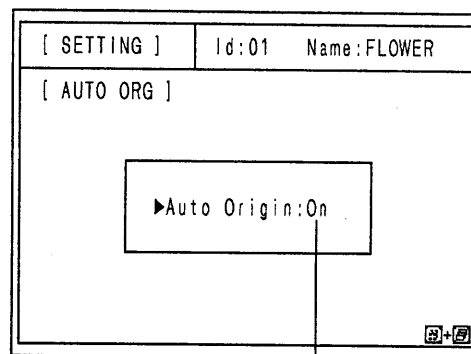
By holding (shift) and pressing the keys you can move quickly to the selection.



5



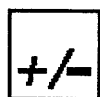
Press the "Set Key".



Shows the current setting.

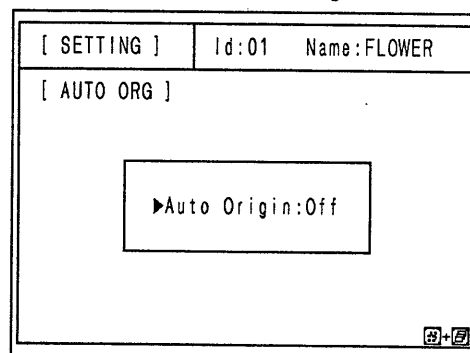
The Default setting is Auto Origin ON.

6



Press the "Plus minus Key".

※ By pressing key you can alternate between settings.



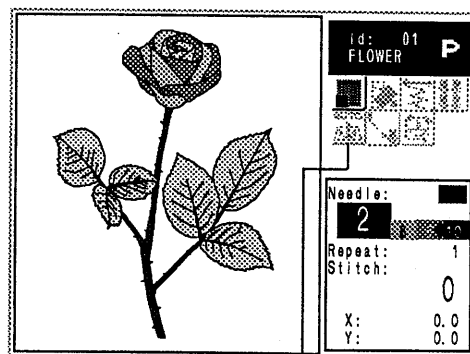
As a example we have selected off

7



Press the "Escape Key".

Finish



In the Drive Mode screen a icon will show that Auto Origin is in use.



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Setting of needle number

Needle number is set to *color number from selected Memory pattern. When needle number is set, the machine embroiders by automatically changing needle bar.

Color change stop function

*Color change stop is set to color number from selected memory pattern. When color change stop is set to color number, the machine embroiders the set color number and stops by displaying following message.

>> Change Stop

*color number : Color number is obtained by dividing pattern data by color change function and is part to comprise pattern data. Needle number (thread color) to be sewn can be set to color number. For example, in case pattern is divided by color change function at 2 places, 3 color numbers exists in the pattern. When needle number is set to respective color number, this pattern is embroidered in 3 colors.

*Colr change stop : When color change stop is set to color number, the machine embroiders the set color number and stops.

Auto setting

Change all the designated needle number into the other needle number at a time.

Color change data registration, Color change data read

Input the color change data from the memorized pattern data then register it. Export the registered data to the selected pattern data then use it.

※ When reading the pattern data together with *various function setting, function of needle bar selection is set automatically. (Refer to the explanation of "etc. func write" and "etc. func read" on "CREATE" page.) When reading the pattern data with color change function, needle bar selection is set according by color change function. (Excluding first color number.)

Function of needle bar selection on various function setting has priority than it on color change function of needle bar selection.

*various function setting : A general term for Needle bar selection, Convert, Pattern adjustment, Repeat, Offset and frame out which are set in the pattern data.

Pattern data with color change on top (4 color)

Color number 1 is only displayed and turns to color number 2 even if needle bar is set and gets started.

Change: Needle	
1:	0
2:	0
3:	0
4:	0
5:	0

← Reads

Pattern data with color change (stop) on top.

chg	dat	...	dat	chg	dat	..
Color number 1	Color number 2				Color number 3	

Pattern data with zero stitch (zero jump) and color change (stop) on top.

0dat	chg	dat	...	dat	chg	dat	..
Color number 1		Color number 2				Color number 3	

chg : Color change function
0dat : Zero stitch
dat : Move stitch

※ When stored pattern data starts with color change (stop) function or zero stitch (zero jump) and color change function following it, the machine stores that pattern data in memory as one color number which has no move data (not conducting embroidery).

For example, when top of pattern with 4 colors reads such pattern data and you select "NEEDLE BAR SELECTION", color numbers add to 5 as under. Also cursor skips color number 1 having no move data and the machine stays with color number 2 being selected. Please set needle bar selection from color number 2 that is actually color number 1. (Color number 1 doesn't function, but please set needle bar same as color number 2 just in case.)

Color change function on top pattern data can be cleared with "DATA EDIT". For details, please refer to "Function code" in "DATA EDIT".

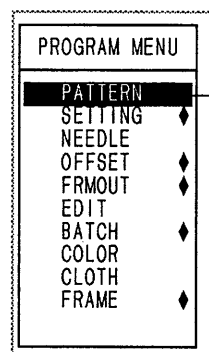
NEEDLE BAR SELECTION / Needle number 35.01

Using this function you can change the colors shown in the design on screen.

1

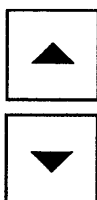


Press the "Program Key".

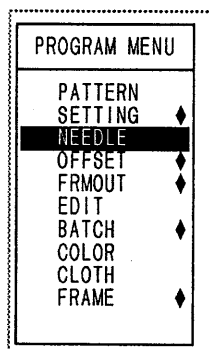


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Needle".

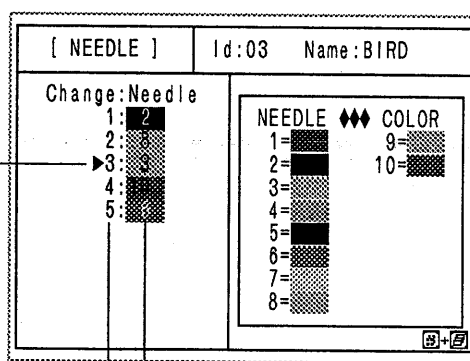


3



Press the "Set Key".

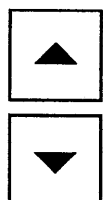
Indicator



Needle number




Color Change number

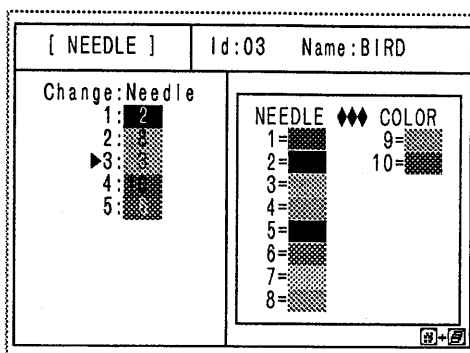
4



Use the "Up and Down Key" and choose needle number you that you wish to change the color of.

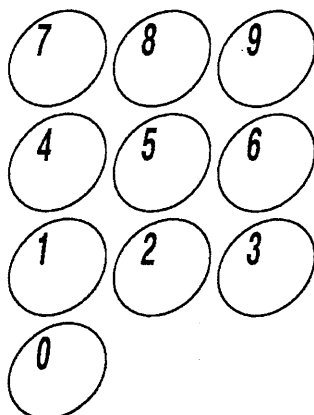


By holding  (shift) and pressing  and  keys you can move quickly to the selection.



We selected the number 3 color change

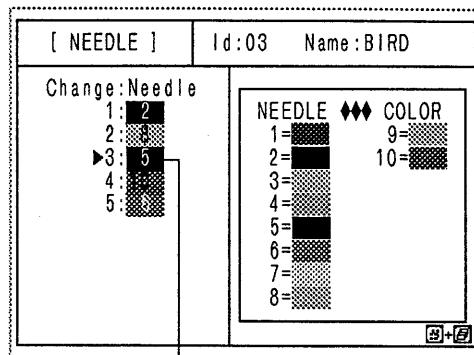
5



You use the keypad to input the number of the needle you want to change.



If you want to select another needle to be changed, go back to step number 4.



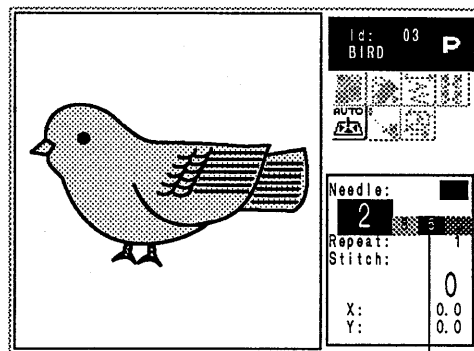
The needle number will be changed to the selected color.

6



Press the "Escape Key".

Finish



The selected needle number and color are shown.



- If you make a mistake inputting the needle number in step 5 press the "Clear Key".



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

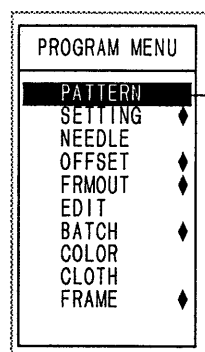
NEEDLE BAR SELECTION / Color change stop 35.03

You can insert a stop command after a color a change.

1

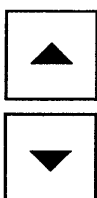


Press the "Program Key".

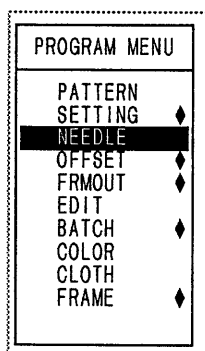


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Needle".

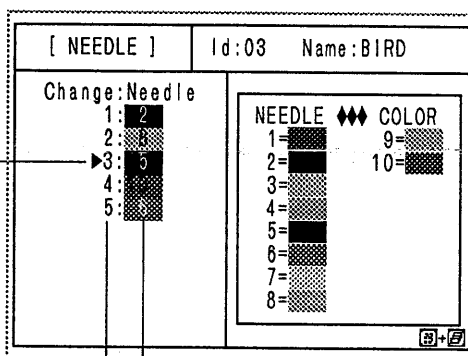


3



Press the "Set Key".

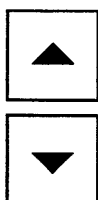
Indicator



Needle number




Color Change number

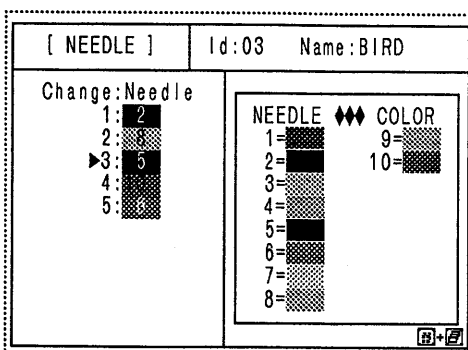
4



Use the "Up and Down Key" to choose the color you wish to insert the stop after.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.



We selected the number 3 color change


NEEDLE BAR SELECTION / Color change stop 35.04

5

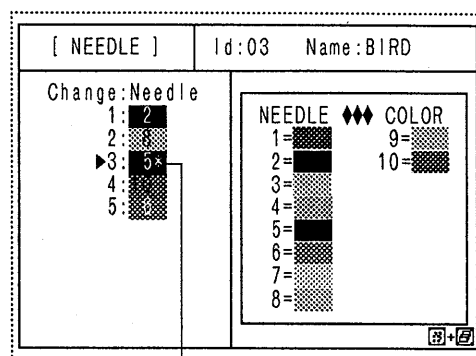


Press the "Plus minus Key".



If you press the "Plus minus Key"  again you can cancel this setting.

If you want to insert another stop command for another needle go back to step 4.

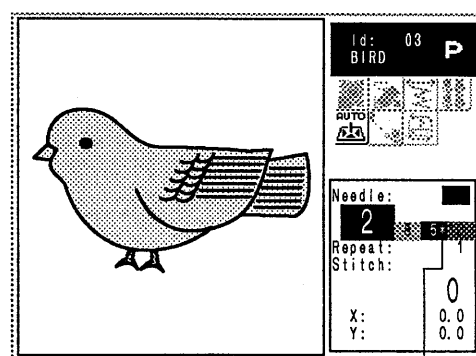


A symbol "*" will appear beside the needle number that the stop command is after.

6



Press the "Escape Key".



A symbol "*" is shown beside the needle number which has a stop command.

Finish



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

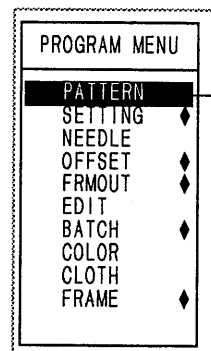
This is to change all the designated needle number in the pattern data which needle bar selection has been set, into the other needle number at a time.

For example, if you want to change all the needle number of "10" into "6", just select one of the color number in which needle number "10" is set, then execute all the color number to be changed into "6".

1

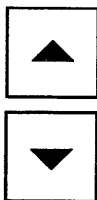


Press the "Program Key".

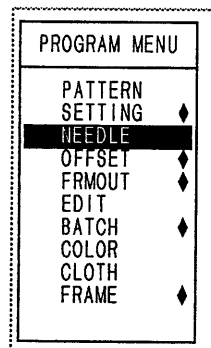


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Needle".

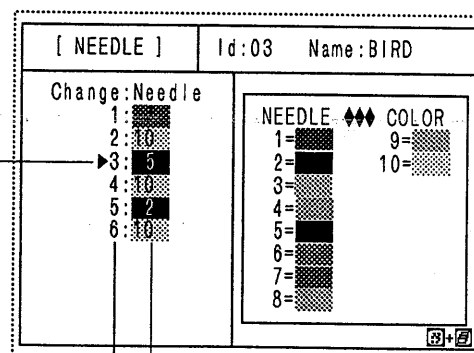


3



Press the "Set Key".

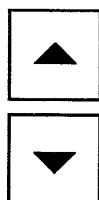
Indicator



Needle number

Color Change number




4

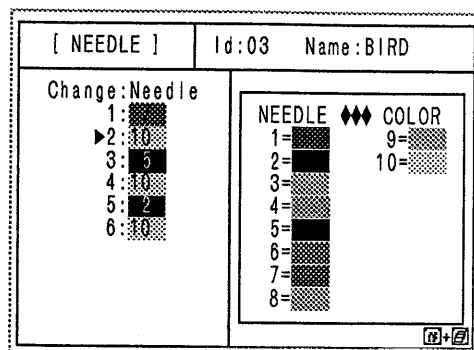


Use the "Up and Down Key" and choose needle number you that you wish to change the color of.

In this case you can choose color number 2, 4 or 6.

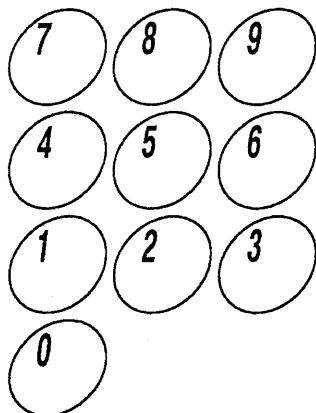



By holding  (shift) and pressing  and  keys you can move quickly to the selection.



We selected the number 2 color change

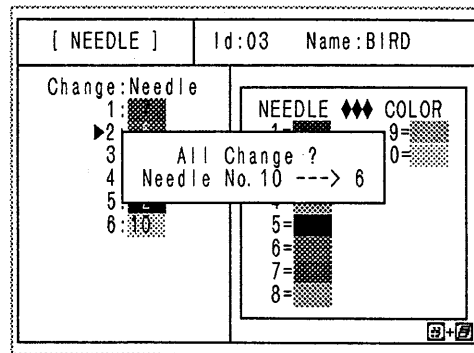
5



You use the keypad to input the number of the needle you want to change then press .



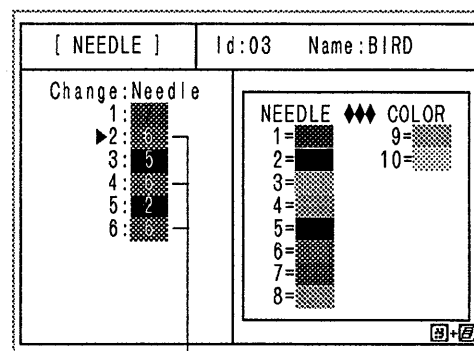
If you want to select another needle to be changed, go back to step number 4.



6



Press the "Set Key".

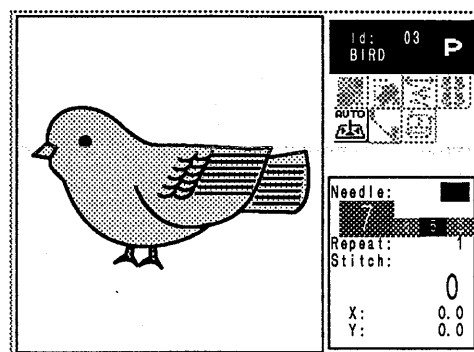


Needle number to be changed after

7



Press the "Escape Key".



Finish



- If you make a mistake inputting the needle number in step 5 press the "Clear Key".



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

NEEDLE BAR SELECTION/Color change data registration 35.07

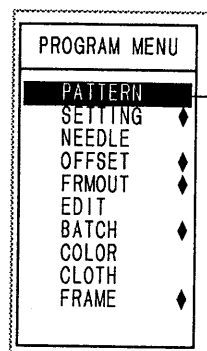
You can import and register the color change data from the memorized pattern data. (Including color change stop.)
By using this function you can set the same color change data to the other pattern data easily.

※ The color change data to be registered is limited to one data and the color number to be registered up to 250.

1



Press the "Program Key".

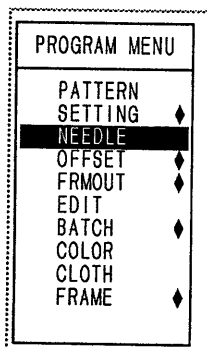


Settings menu is shown.

2



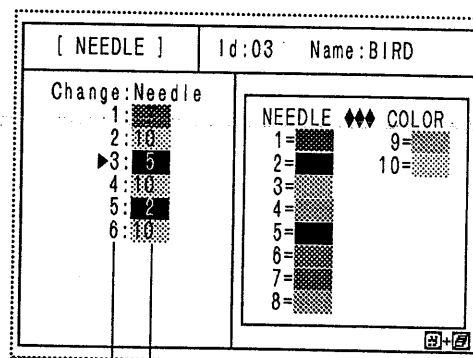
Use the "Up and Down Key" and choose "Needle".



3



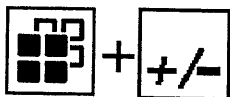
Press the "Set Key".



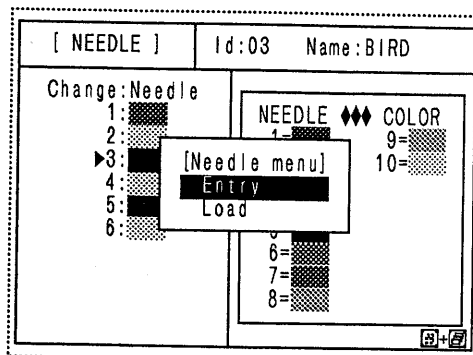
Needle number

Color Change number

4

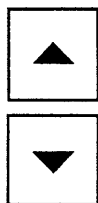


Hold the "Shift Key" and Press the "Plus minus Key".

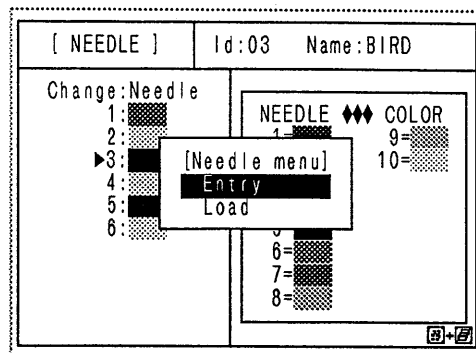


NEEDLE BAR SELECTION/Color change data registration 35.08

5



Use the "Up and Down Key" and choose "Entry".

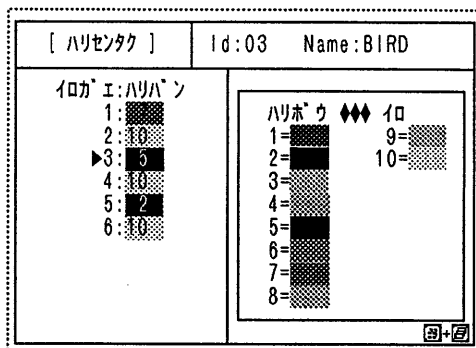
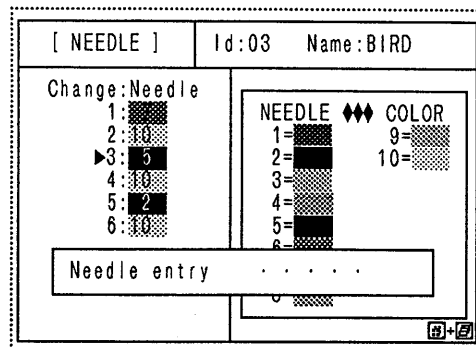


6



Press the "Set Key".

Color change data will be registered into the memory.

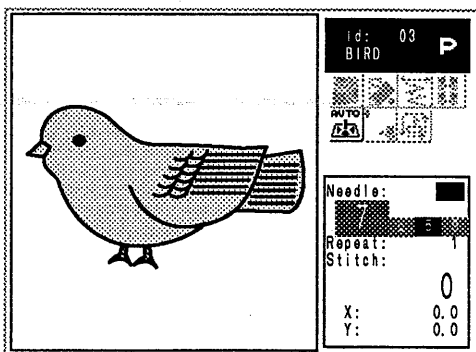


7



Press the "Escape Key".

Finish



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

NEEDLE BAR SELECTION/Color change data read 35.09

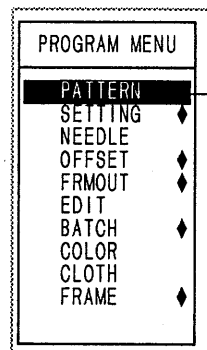
You can export the registered color change data to the selected pattern data.

※ If the color number of the selected pattern data is more than the registered data's, "0" (No needle number) to be set to the later color number of the pattern data.

1

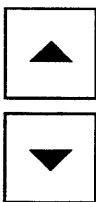


Press the "Program Key".

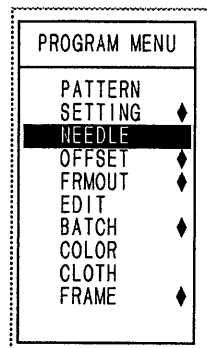


Settings menu is shown.

2



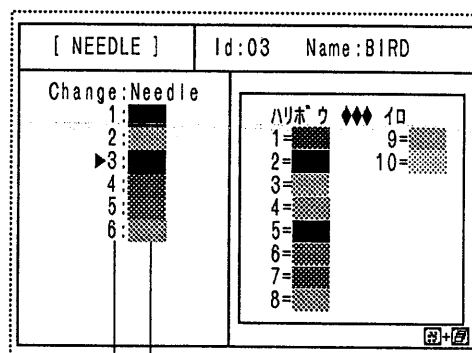
Use the "Up and Down Key" and choose "Needle".



3

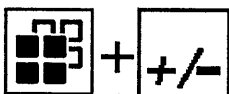


Press the "Set Key".

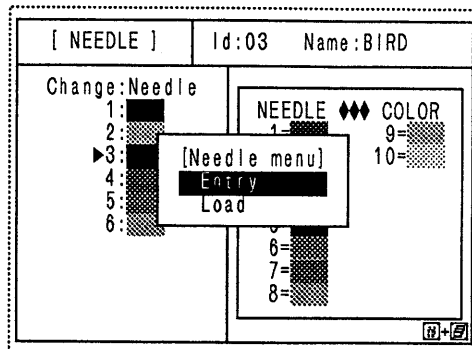


Needle number
Color Change number

4

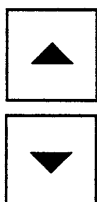


Hold the "Shift Key" and Press the "Plus minus Key".

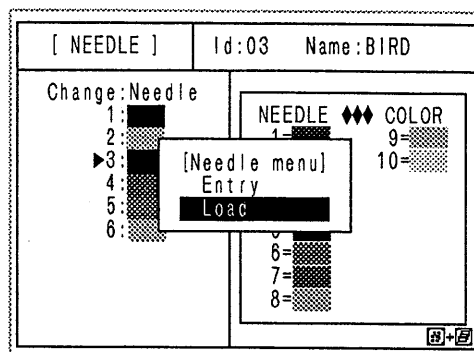


NEEDLE BAR SELECTION/Color change data read 35.10

5



Use the "Up and Down Key" and choose "Load".

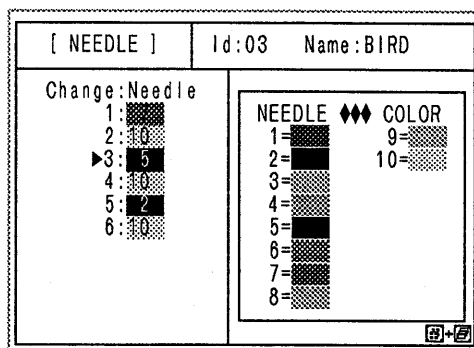
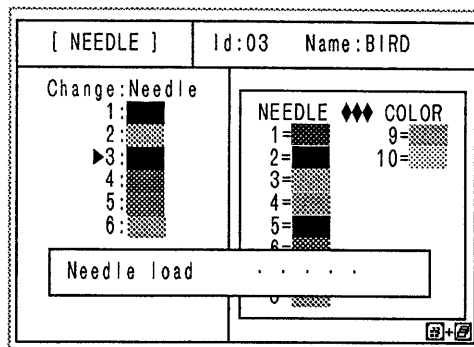


6



Press the "Set Key".

Needle number to be set subject to the color change data exported.

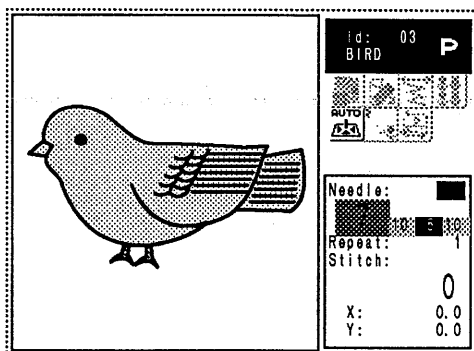


7



Press the "Escape Key".

Finish



• If you press the "Program Key" before completing this setting you will return to the Program Menu.

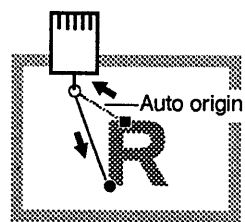


• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Set start point of the frame to the selected memory pattern. When the machine embroiders on offset, the frame moves from offset point to start point of pattern and the machine begins to embroider. When *auto origin (automatic original point return) is set together, the frame returns to offset point automatically upon finishing of embroidery. (Fig.1)

By setting offset, you can start the frame from place easy to handle it. This is convenient for replacing hoops.

**auto origin : This returns the frame automatically to original point upon finishing embroidery. Refer to latter page for how to set.*



○ : Offset point
● : Start point of pattern
■ : End point of pattern

Fig.1

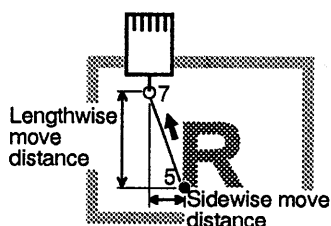
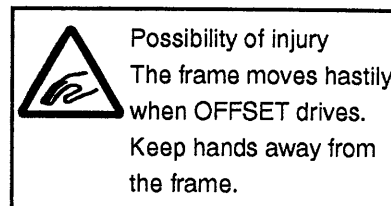



Fig.2



※ When you press  (Original point return) on control box or execute *auto origin with pattern set with offset, the frame returns to offset point.

※ Please make sure to put Auto origin "ON", when you use the offset function repeatedly on same pattern

※ When reading pattern with various function setting from HAPPY data disk, "OFFSET" is set automatically accordingly with various function setting. (Refer to the explanation of "etc. func write" and "etc. func read" on "CREATE" page.)

Teaching input

Set frame to the offset position with "Frame move key".

The move distance to start point of pattern with offset point as pivot is input.

Alter

Set distance of side wise move and length wise move by inputting the numerical key. Also change position of offset set by "Teaching input"

Input the move distance to original point with offset as pivot.

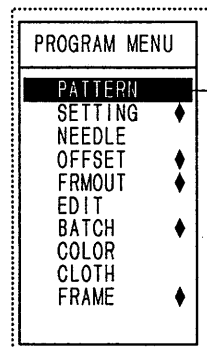


You can set the offset starting position by showing the machine where to start.
Move the frame with frame move key and set the distance as a offset distance.

1

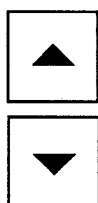


Press the "Program Key".

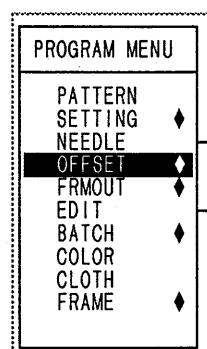


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Offset".

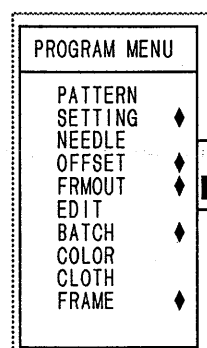


Indicates a sub-menu.

3



Press the "Set Key".



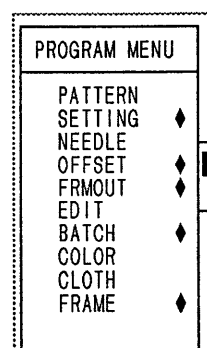
Settings menu is shown.

The cursor moves to the sub-menu.

4



Press the "Up Key" to select "Teach".



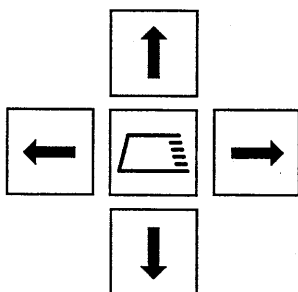
5



Press the "Set Key".

[OFFSET]	Id:01	Name:FLOWER
[TEACH]		
<div>Move to Pattern start point</div> <div> X: 0.0 Y: 0.0 </div>		

6



Use the "Frame Move Keys" to move the Pantograph to the desired Offset Starting
The Origin is the design starting position.

[OFFSET]	Id:01	Name:FLOWER
[TEACH]		
<div>Move to Pattern start point</div> <div> X: 0.0 Y: 30.0 </div>		

Indicates the distance moved.

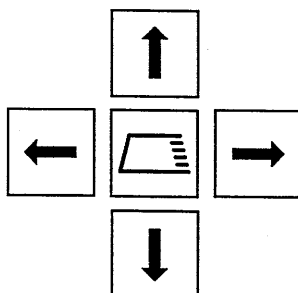
7



Press the "Set Key".

[OFFSET]	Id:01	Name:FLOWER
[TEACH]		
<div>Move to Offset position</div> <div> X: 0.0 Y: 0.0 </div>		

8



Use the "Frame Move Keys" to move the Pantograph to the desired Offset Starting .

[OFFSET]	Id:01	Name:FLOWER
[TEACH]		
<div>Move to Offset position</div> <div> X: 0.0 Y: 85.3 </div>		

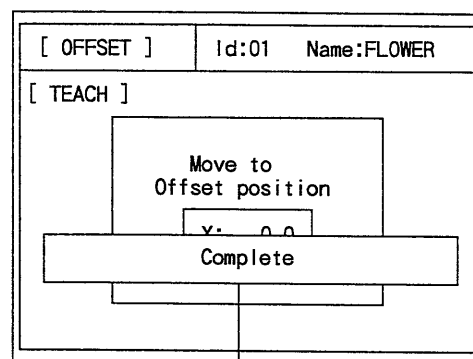
Indicates the distance moved.



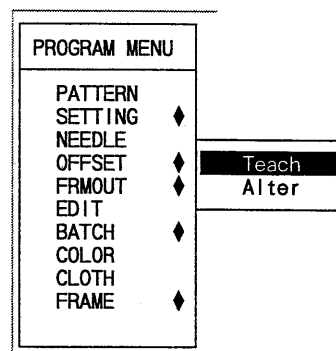
9



Press the "Set Key".



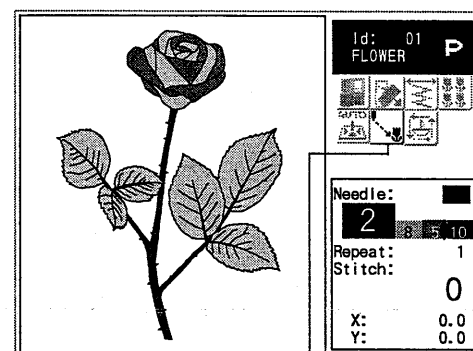
A message of Complete on the screen confirms the setting.



10



Press the "Escape Key".



A icon on the screen shows the Offset starting function is being used.

Finish



- By pressing the "Program Key" you can return to the program menu.



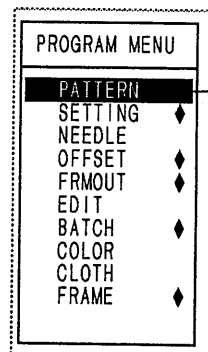
- By pressing the "Escape Key" you can return to Drive Mode.

By key inputting, You can set moving distance of offset (X · Y) directly and can change offset position is set with "teaching input".

1

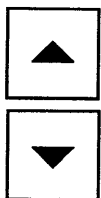


Press the "Program Key".

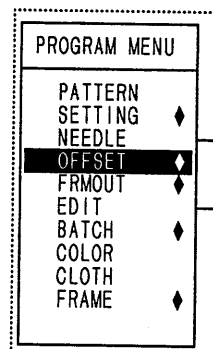


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Offset".

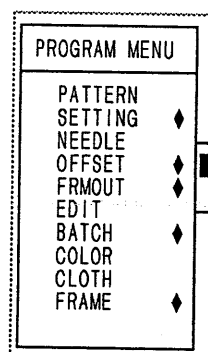


Indicates a sub-menu.

3



Press the "Set Key".



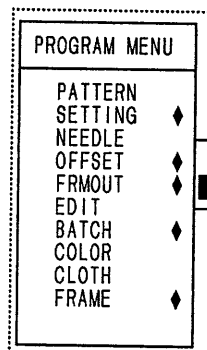
Settings menu is shown.

The cursor moves to the sub-menu.

4



Press the "Down Key" and select "Alter".



5

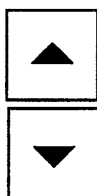


Press the "Set Key".

[OFFSET]	Id:01	Name:FLOWER
[ALTER]		
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 150px;"> Set-point ▶X: 30.0 Y: 52.5 </div>		

This shows the current setting for Offset starting position.

6

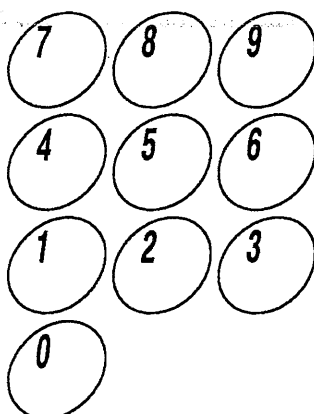


By using the "Up and Down Keys" choose the direction you wish to alter.

[OFFSET]	Id:01	Name:FLOWER
[ALTER]		
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 150px;"> Set-point X: 30.0 ▶Y: 52.5 </div>		

As a example we selected the Y direction

7



Use the "Key pad" to input the new offset distance in millimeters.

※ The maximum offset distance is 999.9 millimeters.

[OFFSET]	Id:01	Name:FLOWER
[ALTER]		
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 150px;"> Set-point X: 30.0 ▶Y: 200.0 </div>		

As a example we input 200.0 millimeters in the positive Y direction



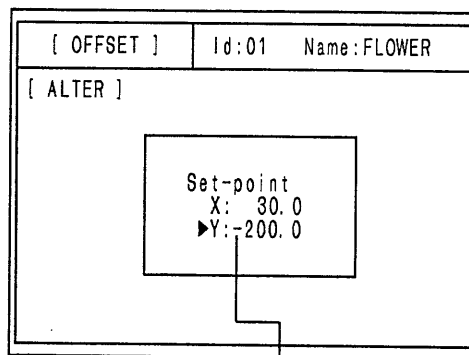
[How set a negative amount of Offset]

8



Press the "Plus minus Key".

※ By pressing key you can alternate between positive and negative settings.



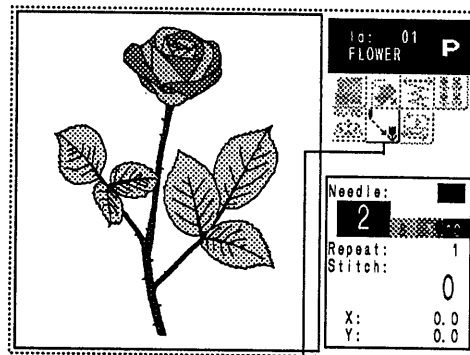
As a example we set a negative value

Indicates a negative amount.

9



Press "the Escape Key".



Finish

A icon on the screen shows the Offset starting function is being used.



• If you wish to cancel the settings at steps 7 and 8 press the "Clear Key".



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Set frame out to selected memory pattern. By setting frameout to *color number in memory pattern, you can move the frame to desired position automatically and stop it after finishing sewing of that color number. When you resume operation, the frame has an automatic return to previous position and you can continue sewing. (Fig.1)

This function will be convenient for trimming threads while embroidering or for sewing applique etc.

※ When reading pattern with various function setting from HAPPY data disk, "FRAME OUT" is set automatically accordingly with various function setting. (Refer to the explanation of "etc. func write" and "etc. func read" on "CREATE" page.)

**color number : Color number is obtained by dividing pattern data by color change function and is part to comprise pattern data. Needle number (thread color) to be sewn can be set to color number. For example, in case pattern is divided by color change function at 2 places, 3 color numbers exists in the pattern. When needle number is set to respective color number, this pattern is embroidered in 3 colors.*



Possibility of injury
The frame moves hastily when FRAME OUT drives.
Keep hands away from the frame.

Execution of color number

Set color number to execute frameout.

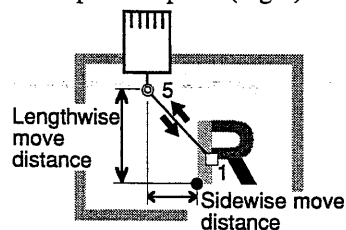
※ When you select "Off" (with no display of option) of frame out for color number to which *color change stop is set, color change stop is released.
※ When you turn frameout "On" without setting the move distance of frameout, the machine has same action as color change stop .

**Color change stop : When color change stop is set to color number, the machine embroiders the set color number and stops.*

Teaching input

Set position of frame out with "Frame move key" and the distance of movement will be the frame out distance.

Usually move distance to frame out point is input, with original point as pivot.(Fig.1) In case offset is set, the move distance is input with offset point as pivot.(Fig.2)



- ◎ : Frame out point
- : Original point (Start point of pattern)
- : Last position of color number
- : Offset point

Fig.1

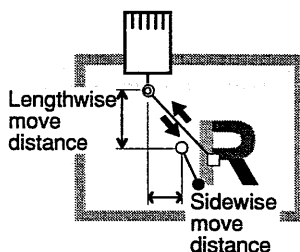


Fig.2

※ You can set number of stitches or color number to make frame out in plural, but frame out point is limited to one place. The point set finally becomes good for making frame out. The point set finally becomes good for making frame out.

Alter

Set position of frame out directly by inputting by number key. Also change position of frame out set by "Teaching input".

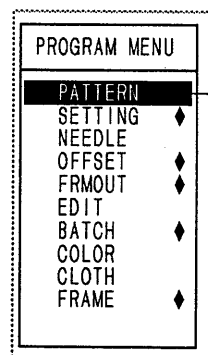
Usually input the move distance to frameout point with original point as pivot. (Fig. 1) In case offset is set, input the move distance to frameout position with offset point as pivot. (Fig.2)

Move the frame with frame move key of selected memory pattern and distance of movement will be set as a frame out distance.

1

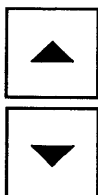


Press the "Program Key".

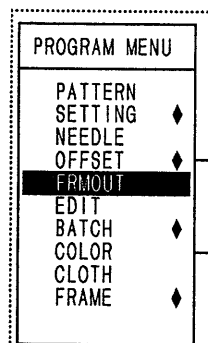


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Frame out".



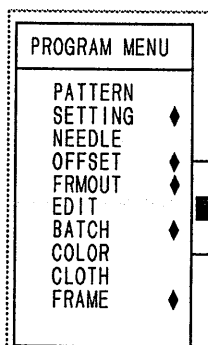
Set
Teach
Alter

Indicates a sub-menu.

3



Press the "Set Key".



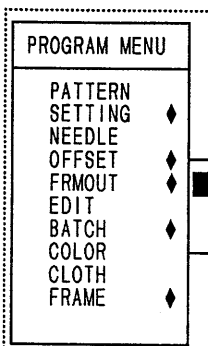
Set
Teach
Alter

Settings menu is shown.

4



Press the "Up Key" and select "Set".



Set
Teach
Alter

5

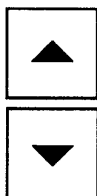


Press the "Set Key".

[FRAMOUT]	Id:01 Name: FLOWER												
[SET]													
<table border="1"> <tr> <th colspan="2">Chg:Set (Ndl)</th> </tr> <tr> <td>▶1:off</td> <td>2</td> </tr> <tr> <td>2:off</td> <td>8</td> </tr> <tr> <td>3:off</td> <td>5</td> </tr> <tr> <td>4:off</td> <td>10</td> </tr> <tr> <td>5:off</td> <td>6</td> </tr> </table>		Chg:Set (Ndl)		▶1:off	2	2:off	8	3:off	5	4:off	10	5:off	6
Chg:Set (Ndl)													
▶1:off	2												
2:off	8												
3:off	5												
4:off	10												
5:off	6												
⏏ + ⏏													

Shows the current setting.

6



Use the "Up and Down Key" and select the color change you want the frame out after.


[FRAMOUT]	Id:01 Name: FLOWER												
[SET]													
<table border="1"> <tr> <th colspan="2">Chg:Set (Ndl)</th> </tr> <tr> <td>1:off</td> <td>2</td> </tr> <tr> <td>2:off</td> <td>8</td> </tr> <tr> <td>▶3:off</td> <td>5</td> </tr> <tr> <td>4:off</td> <td>10</td> </tr> <tr> <td>5:off</td> <td>6</td> </tr> </table>		Chg:Set (Ndl)		1:off	2	2:off	8	▶3:off	5	4:off	10	5:off	6
Chg:Set (Ndl)													
1:off	2												
2:off	8												
▶3:off	5												
4:off	10												
5:off	6												
⏏ + ⏏													

As a example we selected color change number 3

7



Press the "Plus minus Key".

※ If you press  Key you can alternate between on and off.



If you wish set another frame out at another color change go back to step 6.

[FRAMOUT]	Id:01 Name: FLOWER												
[SET]													
<table border="1"> <tr> <th colspan="2">Chg:Set (Ndl)</th> </tr> <tr> <td>1:off</td> <td>2</td> </tr> <tr> <td>2:off</td> <td>8</td> </tr> <tr> <td>▶3:on</td> <td>5</td> </tr> <tr> <td>4:off</td> <td>10</td> </tr> <tr> <td>5:off</td> <td>6</td> </tr> </table>		Chg:Set (Ndl)		1:off	2	2:off	8	▶3:on	5	4:off	10	5:off	6
Chg:Set (Ndl)													
1:off	2												
2:off	8												
▶3:on	5												
4:off	10												
5:off	6												
⏏ + ⏏													

Indicates frame out is on.

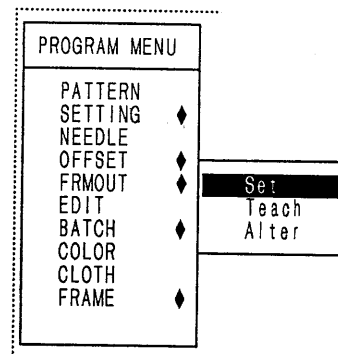
Indicates frame out.



8



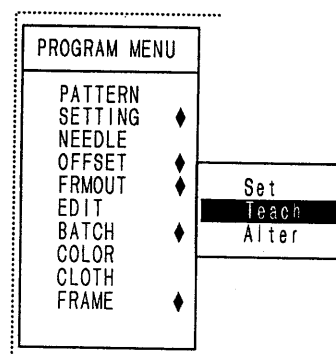
Press the "Program Key".



9



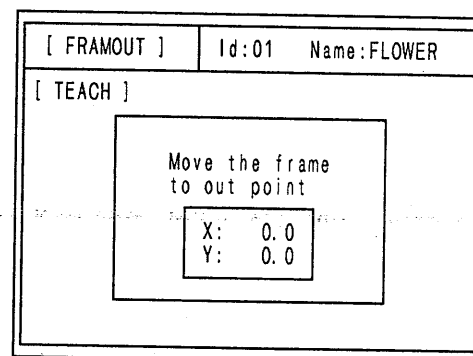
Use the "Up and Down Keys" to select Teach in the sub menu.



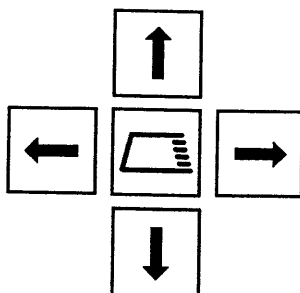
10



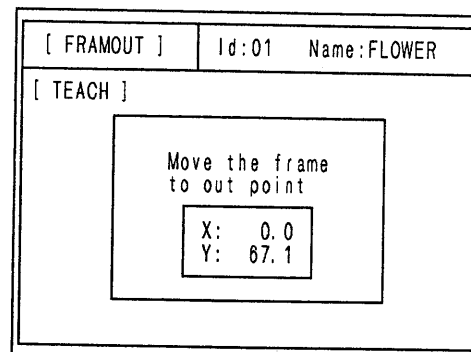
Press the "Set Key".



11



Use the "Frame Move Keys" to move the frame to the frame out position.



As a example we moved the frame 67.1mm in the positive Y direction



12



Press the "Set Key" after confirming safety.

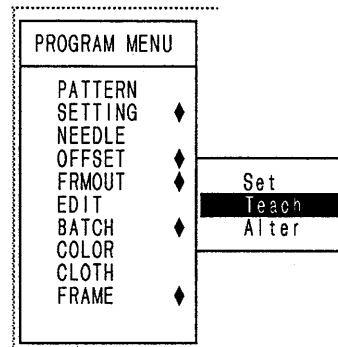
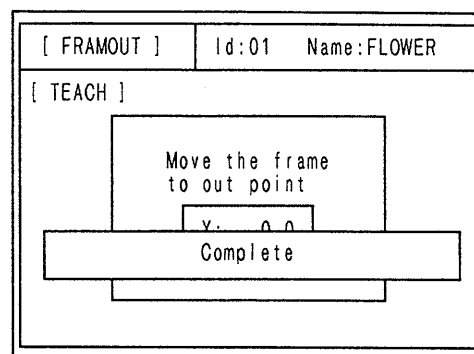
Frame out point is stored and the frame returns to where was.



Possibility of injury

The frame has a sudden move when executing "Teaching input".

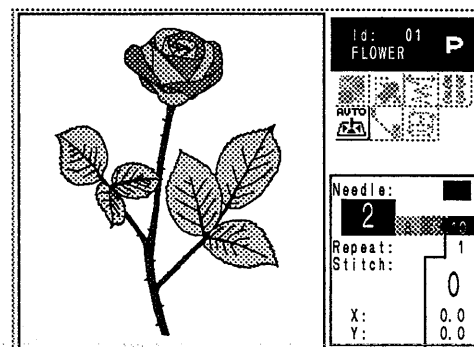
Keep hands away from the frame.



13



Press the "Escape Key".



In the Drive Mode screen a icon will show that Frame Out is in use .



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

You can alter the position of your frame out by using this function. By key inputting, You can set moving distance of frame out position directory and can change frame out position which is set with "Teaching input".

[If you did not teach the frame out position in earlier steps use this function to set it.]

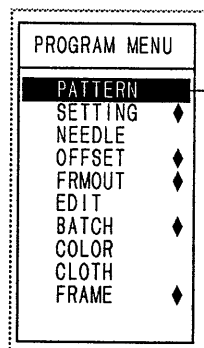
1

We will set the frame out distance for the color you desire.
(go back to steps Teaching a Frame out steps 1 to 7.)

2



Press the "Program Key".

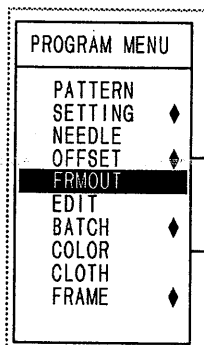


Settings menu is shown.

3



Using the "Up and Down Keys" select "Frmout" from the menu.



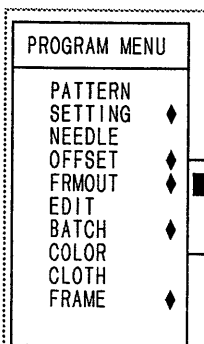
Set
Teach
Alter

Indicates a sub-menu.

4



Press the "Set Key".



Set
Teach
Alter

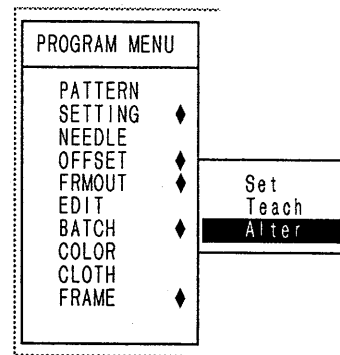
Settings menu is shown.



5



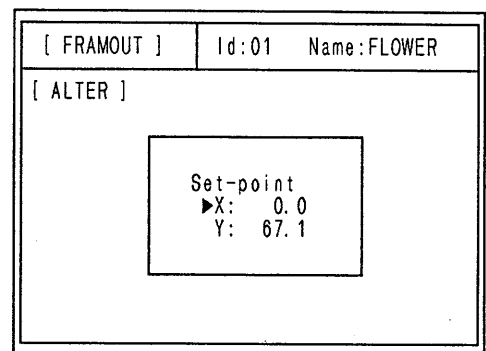
Use the "Down Key" and select Alter in the sub menu.



6



Press the "Set Key".

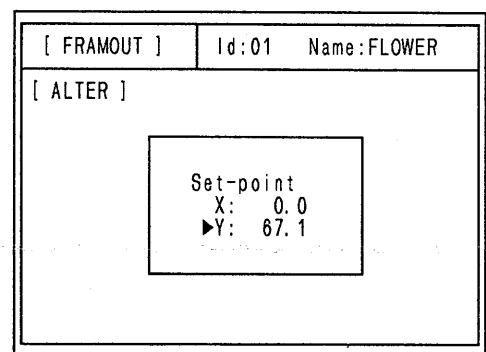


Shows the current setting.

7

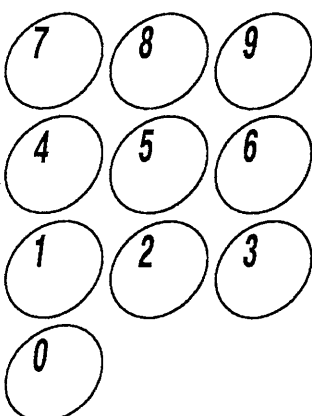


Use the "Up and Down Keys" and select X or Y in the menu.



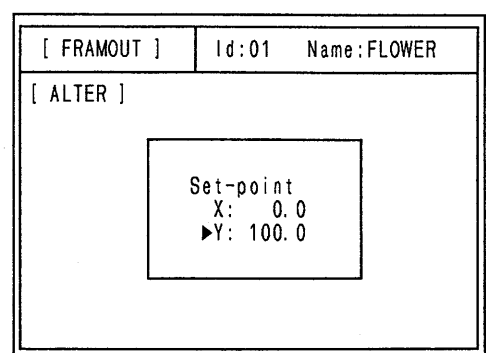
As a example we selected the Y direction

8



You can change or input frame out distances by using the "Keypad".

※ The range of setting is from 0.1mm to 999.9mm in increments of 0.1mm.



As a example we have set a 100mm frame out in the Y direction



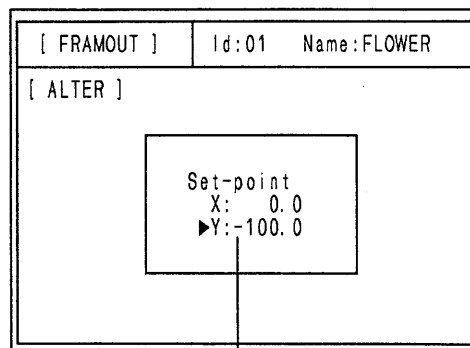
[Setting a negative value]

9



Press the "Plus minus Key".

※ By pressing key you can alternate between positive and negative settings.



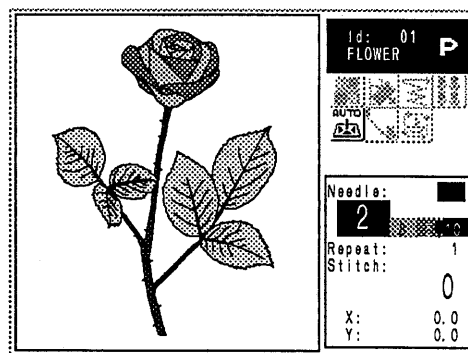
As a example we set a negative value

10



Press the "Escape Key".

Finish



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Select *stitch (number of stitches) to do data editing.

There are three ways for stitch selection.

Direct selection : Input the stitch number you want to edit directly then go to the particular stitch number.

Manual selection : Search the stitch number you want to edit by moving forward or backward by one stitch.

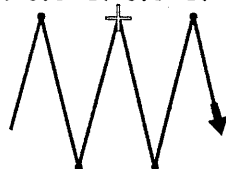
Function selection : Search the only stitch including the function code such as jump, color change and etc.

*stitches : This is minimum unit of pattern data. We have different stitches. "Stitches" to command sequence to embroider, "Function" to command functions such as jump, thread cut etc., "Sidewise move distance", and "lengthwise move distance" to command the move distance of the frame.

S:1232 F: X: 0.8 Y: 6.4
S:1234 F: X: 0.8 Y: 6.4
S:1236 F: X: 0.8 Y: 6.4

S : Number of stitches
F : Function code
X : Sidewise move distance
Y : Lengthwise move distance

+ shows selected stitch.



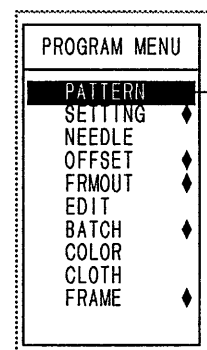
S:1233 F: X: 0.8 Y: -6.4
S:1235 F: X: 0.8 Y: -6.4

Direct selection

1



Press the "Program Key".

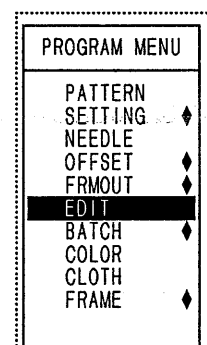


Settings menu is shown.

2



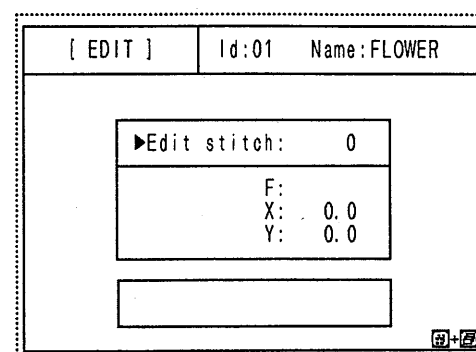
Use the "Up and Down Key" and choose "Edit".



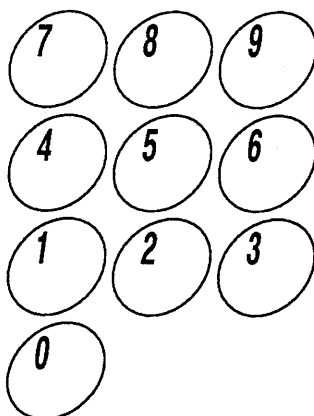
3



Press the "Set Key".



4



Using the Keypad and enter the stitch number you wish edit.

[EDIT]	Id:01	Name: FLOWER
<div>►Edit stitch: 1230</div> <div> F: X: 1.2 Y: -1.3 </div> <div></div>		

Indicates status.

As a example we selected stitch 1230

The stitch has been selected.

You can edit "Function code", "Insert stitch" and etc. with this status.

Please refer to clause for each editing procedure.

<At step number 4>



By holding the Shift Key and pressing the Down Key you advance to the next stitch.



By holding the Shift Key and pressing the Up Key you retreat to the previous stitch.



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



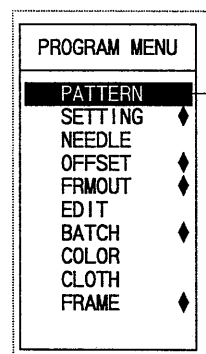
- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Manual selection

1

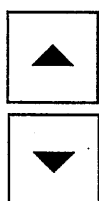


Press the "Program Key".

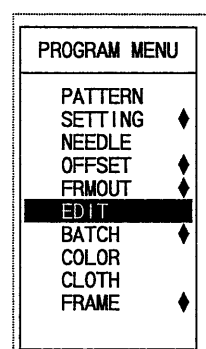


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Edit".



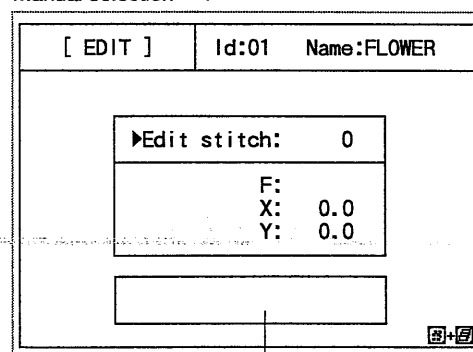
3



Press the "Set Key".

If the display shows "Manual selection" screen, go to procedure 5.

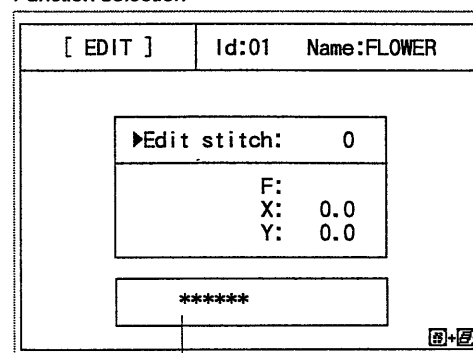
Manual selection



Nothing to be displayed.


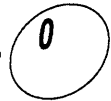

If the display does not shows "Manual selection" screen, go to procedure 4.

Function selection









Function to be searched



4  +  Push  (shift) + 0 (number).
The screen comes to "Manual selection".

Manual selection

[EDIT]	Id:01	Name:FLOWER
<div>▶Edit stitch: 0</div> <div> F: X: 0.0 Y: 0.0 </div> <div></div>		

5  +  With  +  you can move the stitch to forward or backward to select the desired stitch.
 + 

[EDIT]	Id:01	Name:FLOWER
<div>▶Edit stitch: 1</div> <div> F: X: 0.1 Y: 2.2 </div> <div></div>		

The stitch has been selected.

You can edit "Function code", "Insert stitch" and etc. with this status.

Please refer to clause for each editing procedure.



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



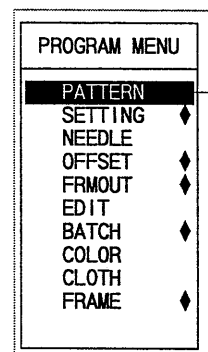
- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Function selection

1



Press the "Program Key".

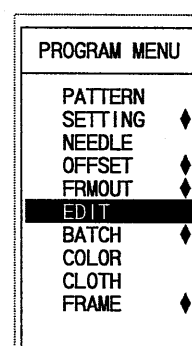


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Edit".



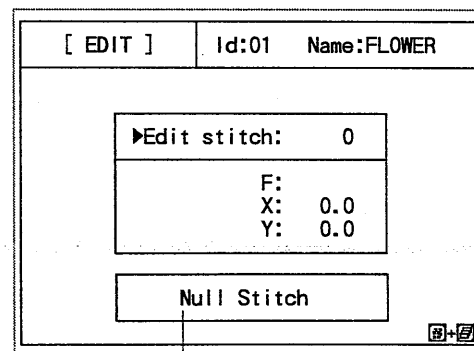
3



Press the "Set Key".

The function you want to search is shown on the display, go to procedure 5.

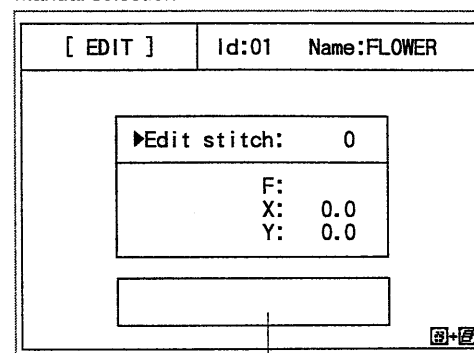
Function selection



Function to be searched

If the display shows "Manual selection" screen, or the function you want to search is not shown on the display, go to procedure 4.

Manual selection



Nothing to be displayed.



4



+

1

Push (shift) + 1 (number) till the designated function comes.

Function selection

[EDIT]
Id:01 Name:FLOWER

▶Edit stitch: 0

F: X: 0.0 Y: 0.0

Null Jump

FUNCTION TO BE SEARCHED	DISPLAY	ACTION OF THE MACHINE
N.Stitch	(Zero stitch)	F: X:0.0 Y:0.0 Needle drops at same position (stitch).
N.Jump	(Zero jump)	F: ^ X:0.0 Y:0.0 Needle jumps at same position (stitch).
Jump		F: ^ The machine jumps with needle not coming down
Change	(Color change)	F:chg Change needle bar to thread color you want to use
Speed	(Speed limit)	F:sph, sp1, sp2, spm To cancel or execute the various speed limit. (Refer to page of "DATA EDIT / Function code")
Cut	(Thread cut)	F:cut Cut threads
Stop		F:stp Cut threads and stop
End		F:end Come to an end.



If you push + 3 (number) during the procedure 4 ~ 5. You can see the total number of the desired function in the pattern data. Push (clear) to cancel.

Null Jump : 12

5



+



With + you can search the stitch includes the desired function.



+



If the stitch includes desired function is not found, "Not found function" to be displayed.

[EDIT]
Id:01 Name:FLOWER

▶Edit stitch: 2345

F: ^ X: 0.0 Y: 0.0

Null Jump

The stitch has been selected.

You can edit "Function code", "Insert stitch" and etc. with this status.

Please refer to clause for each editing procedure.



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

This is function code to conduct addition, change and erasure on desired stitch.

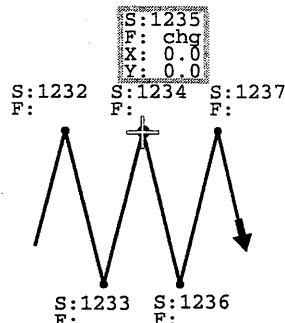
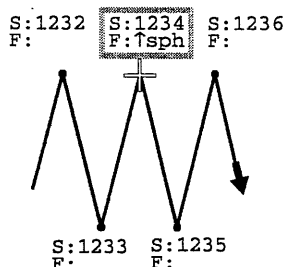
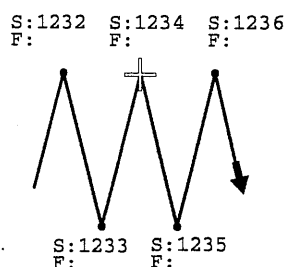
Before editing

Ex. 1 after editing

When add the jump and speed limit.

Ex. 2 after editing

when add the color change.



S : Number of stitches
F : Function code
X : Move data of sidewise
Y : Move data of lengthwise

⊕ shows selected stitch.

FUNCTION CODE	MATCHING KEY	ACTION OF THE MACHINE
-	Normal	0 Normal stitch
sph	Speed limit H	1 Release *speed limit
sp1	Speed limit 1	2 Set *speed limit to high speed
sp2	Speed limit 2	3 Set *speed limit to middle speed
spm	Speed limit M	4 Set *speed limit to low speed
cut	Thread cut	5 Cut threads
stp	Stop	6 Cut threads and stop
chg	Color change	8 Change needle bar to thread color you want to use
^	Jump	+/- The machine jumps with needle not coming down

**speed limit : This is function code to limit the highest speed. In case you force to reduce speed in the middle of embroidery, you can limit speed not to exceed the specified speed by setting function code to desired stitch.*

Speed limit	rpm		
Model	Low	Middle (Cap)	High (Cap)
HCA	300	590 (490)	650 (520)
HCG	↑	680 (490)	750 (520)
HCM	↑	650 (490)	720 (520)
HMF	↑	650	720
HMG	↑	↑	↑

※ Figures in bracket means cap frame use.

**trace back : This is to move only the frame and memory pattern toward reverse direction of sewing.*

**thread brake back : When threads break, the frame goes back a few stitches and the machine stops.*

- ※ When you add color change function (chg), zero stitch with color change function (chg) is added after selected stitch. Refer to the above figure. (Ex. 2 after editing)
- ※ Except for color change function (chg), you can join Jump function (^) with all other function codes. When you input Jump function (^) in color change set stitch, display appears, but you can't execute this setting.
- ※ You can't edit color change (chg) and End (end) at the last of pattern data.※ In midway of embroidery, when you get back the frame with *trace back or *thread brake back etc. for portion where speed limit is applicable by function code of speed limit, and resume embroidery, speed limit is not applicable for that portion. In case you need to execute speed limit for this portion definitely, set new speed limit behind stitch you resumed embroidery or reduce speed with speed adjustment knob.
- ※ When "Stop (stp)" is set, the machine displays following message and stops.

>> Stop Function

- ※ In case thread cut is added in the middle of pattern as below, there is lack of seams because needle comes down from next stitch of stitch on which thread cut is conducted as illustrated (Ex. 3 after editing). If you need seams definitely, add one *zero stitch behind thread cut as illustrated (Ex. 4 after editing). By this operation, needle comes down on thread cut added stitches with zero stitches and there is no seams. Regarding addition of zero stitches, refer to page of "Insert stitch, Erase stitch" in "DATA EDIT".

**zero stitch : This is stitch that the move distance of both sidewise and lengthwise is "0" and needle lands in the same position.*

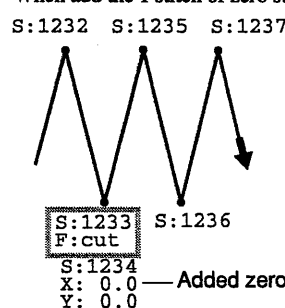
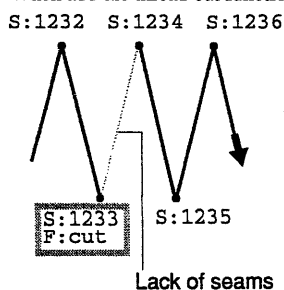
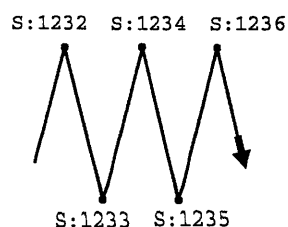
Before editing

Ex. 3 after editing

When add the thread cut function.

Ex. 4 after editing

When add the 1 stitch of zero stitch after the thread cut.



S : Number of stitches
F : Function code
X : Move data of sidewise
Y : Move data of lengthwise

1

By "Stitch selection" in the preceding page, the machine displays either of intended stitch function code.

[EDIT]	Id:01	Name:FLOWER
<div>▶Edit stitch: 1230</div> <div> F: X: 1.2 Y: -1.3 </div>		
<div></div>		

2

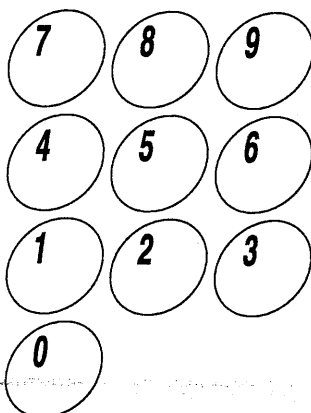


Press the "Down Key".

[EDIT]	Id:01	Name:FLOWER
<div>Edit stitch: 1230</div> <div> ▶F: X: 1.2 Y: -1.3 </div>		
<div></div>		

Functions code

3



Using the Keypad select the function cod.

[EDIT]	Id:01	Name:FLOWER
<div>Edit stitch: 1230</div> <div> ▶F: cut X: 1.2 Y: -1.3 </div>		
<div></div>		

As a example we selected cut

Keypad Number	Function code	description
0	No	function Normal normal stitch
1	sph	Speed control normal Release *speed limit
2	sp1	speed control 1 Set *speed limit to high speed
3	sp2	speed control 2 Set *speed limit to middle speed
4	sp3	speed control 3 Set *speed limit to low speed
5	cut	thread trim Cut the thread
6	stp	stop command stops the machine after a thread cut
8	chg	color change changes the needle in use
+/-		jump the needle stays up

- ※ Each speed limit is different by model.
- ※ If you add a color change the machine inserts a empty stitch after the command.
- ※ You can combine a Jump command with any other command except a color change.
If you combine a color change and a jump command it will show in the menu but.
- ※ You can not edit or insert a command on the last stitch of a design.



4



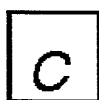
Press the "Set Key".

Returns to edit stitch menu.

[EDIT]	Id:01	Name:FLOWER								
<table border="1"> <tr> <td>Edit stitch:</td> <td>1230</td> </tr> <tr> <td>▶F:</td> <td>cut</td> </tr> <tr> <td>X:</td> <td>1.2</td> </tr> <tr> <td>Y:</td> <td>-1.3</td> </tr> </table>			Edit stitch:	1230	▶F:	cut	X:	1.2	Y:	-1.3
Edit stitch:	1230									
▶F:	cut									
X:	1.2									
Y:	-1.3									
<table border="1"> <tr> <td>Set O.K.</td> </tr> </table>			Set O.K.							
Set O.K.										

[EDIT]	Id:01	Name:FLOWER								
<table border="1"> <tr> <td>▶Edit stitch:</td> <td>1230</td> </tr> <tr> <td>F:</td> <td>cut</td> </tr> <tr> <td>X:</td> <td>1.2</td> </tr> <tr> <td>Y:</td> <td>-1.3</td> </tr> </table>			▶Edit stitch:	1230	F:	cut	X:	1.2	Y:	-1.3
▶Edit stitch:	1230									
F:	cut									
X:	1.2									
Y:	-1.3									
<table border="1"> <tr> <td> </td> </tr> </table>										

Finish



If you wish to cancel press the Clear Key.

< At step number 1 >



By holding the Shift Key and pressing the Down Key you advance to the next stitch.



By holding the Shift Key and pressing the Up Key you retreat to the previous stitch.



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Add *zero stitch to selected *stitch or erase the selected stitch.

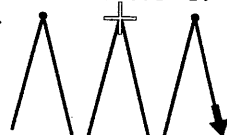
※ In case you erase stitch having move data, all hind stitches move by the erased move data as illustrated. Don't erase stitch having move data except for special case.

**zero stitch : This is stitch that the move distance of both sidewise and lengthwise is "0" and needle lands in the same position.*

**stitch : This is minimum unit of pattern data. We have different stitches. "Stitches" to command sequence to embroider, "Function" to command functions such as jump, thread cut etc., "Sidewise move distance", and "lengthwise move distance" to command the move distance of the frame.*

Before editing

S:1232 S:1234 S:1236
X: 0.8 X: 0.8 X: 0.8
Y: 6.4 Y: 6.4 Y: 6.4



S:1233 S:1235
X: 0.8 X: 0.8
Y:-6.4 Y:-6.4

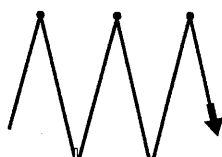
S : Number of stitches
X : Move data of sidewise
Y : Move data of lengthwise

✚ shows selected stitch.

Insert

Insert zero stitch at stitch No.1233.

S:1232 S:1235 S:1237
X: 0.8 X: 0.8 X: 0.8
Y: 6.4 Y: 6.4 Y: 6.4



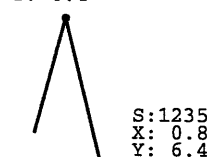
S:1233 S:1236
X: 0.8 X: 0.8
Y:-6.4 Y:-6.4

S:1234
X: 0.0
Y: 0.0

Erase

Erase stitch No. 1234.

S:1232
X: 0.8
Y: 6.4



S:1233
X: 0.8
Y:-6.4

S:1234
X: 0.8
Y:-6.4

You can insert a empty stitch before the selected stitch.

1

By "Stitch selection" in the preceding page, the machine displays either of intended stitch function code.

[EDIT]	Id:01	Name:FLOWER
<div>▶Edit stitch: 1230</div> <div> F: X: 1.2 Y: -1.3 </div> <div></div>		

2



+



Hold the "Shift Key" and Press the "Plus minus Key".

The Screen changes to and is ready input new data.

[EDIT]	Id:01	Name:FLOWER
<div>Edit stitch: 1230</div> <div> ▶F: X: 1.2 Y: -1.3 </div> <div>Insert</div>		

[EDIT]	Id:01	Name:FLOWER
<div>▶Edit stitch: 1230</div> <div> F: X: 0.0 Y: 0.0 </div> <div></div>		

3

- By necessity, Do the step 6~10 of "DATA EDIT / Change of moving data" to input the Data.
- By necessity, Do the step 2~4 of "DATA EDIT / Function code" to input the Function.

Finish

You can erase the selected stitch.

1

By "Stitch selection" in the preceding page, the machine displays either of intended stitch function code.

[EDIT]	Id:01	Name:FLOWER
<div>▶Edit stitch: 1230</div> <div> F: X: 1.2 Y: -1.3 </div>		
<div></div>		

2



Press the "Shift and Clear Key" to erase the selected stitch after the stitch is erase the screen changes to show the corrected design data.

Warning

If you delete a stitch with moving data the balance of the design will shift.
It is not advised to erase stitches, a unexpected result may occur.

[EDIT]	Id:01	Name:FLOWER
<div>Edit stitch: 1230</div> <div> ▶F: X: 1.2 Y: -1.3 </div> <div>Erase</div>		

[EDIT]	Id:01	Name:FLOWER
<div>▶Edit stitch: 1230</div> <div> F: X: 0.0 Y: 0.0 </div>		
<div></div>		

Finish



If you wish to cancel press the Clear Key.

< At step number 1 >



By holding the Shift Key and pressing the Down Key you advance to the next stitch.



By holding the Shift Key and pressing the Up Key you retreat to the previous stitch.



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



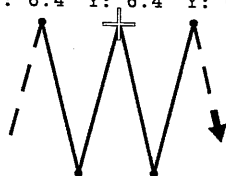
- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

This is to change move data of desired stitch.

- ※ When you move stitch, all stitches after the moved stitch move as illustrated. Don't move stitch except for special occasion.
- ※ Even if you change move data of stitch to which function code of color change(chg) or stop(stp) is set to other than "0.0", this change is ignored when the machine runs, and has no relation to the frame move.

Before editing

S:1232 S:1234 S:1236
X: 0.8 X: 0.8 X: 0.8
Y: 6.4 Y: 6.4 Y: 6.4

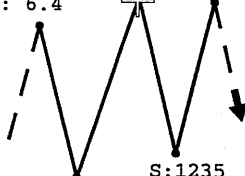


S:1233 S:1235
X: 0.8 X: 0.8
Y:-6.4 Y:-6.4

After editing

When changing the movement data.

S:1232 S:1234 S:1236
X: 0.8 X: 1.3 X: 0.8
Y: 6.4 Y: 7.2 Y: 6.4



S:1233 S:1235
X: 0.8 X: 0.8
Y:-6.4 Y:-6.4

S : Number of stitches
X : Move data of sidewise
Y : Move data of lengthwise

✚ shows selected stitch.

You can change the location of a selected stitch.

1

By "Stitch selection" in the preceding page, the machine displays either of intended stitch function code.

[EDIT]	Id:01	Name:FLOWER
<div> <div>▶Edit stitch: 1230</div> <div> F: X: 1.2 Y: -1.3 </div> </div>		
<input type="text"/>		

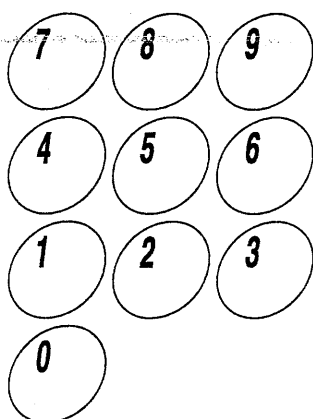
2



Press the "Down Key".

[EDIT]	Id:01	Name:FLOWER
<div> <div>Edit stitch: 1230</div> <div> F: ▶X: 1.2 Y: -1.3 </div> </div>		
<input type="text"/>		

3



Use the Keypad to input the new location of the stitch.

[EDIT]	Id:01	Name:FLOWER
<div> <div>Edit stitch: 1230</div> <div> F: ▶X: 2.0 Y: -1.3 </div> </div>		
<input type="text"/>		

As a example we changed the stitches location to from positive 1.2 to positive 2.0



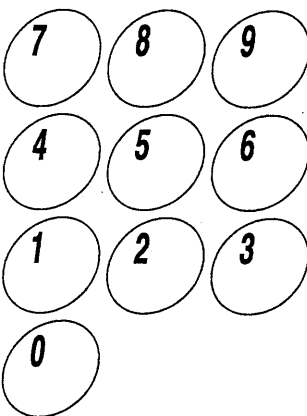
4



Press the "Down Key".

[EDIT]	Id:01	Name:FLOWER
<div> Edit stitch: 1230 </div> <div> F: X: 2.0 Y: -1.3 </div>		
<div></div>		

5



Use the Keypad to input the new location of the stitch.

Warning
 If you delete a stitch with moving data the balance of the design will shift.
 It is not advised to erase stitches, a unexpected result may occur.

[EDIT]	Id:01	Name:FLOWER
<div> Edit stitch: 1230 </div> <div> F: X: 2.0 Y: -3.0 </div>		
<div></div>		

As a example we changed the stitches location from negative 1.3 to negative 3.0

6



Press the "Set Key".

A confirmation will be given on the screen.

[EDIT]	Id:01	Name:FLOWER
<div> Edit stitch: 1230 </div> <div> F: X: 2.0 Y: -3.0 </div> <div> Set O.K. </div>		
<div></div>		

[EDIT]	Id:01	Name:FLOWER
<div> Edit stitch: 1230 </div> <div> F: X: 2.0 Y: -3.0 </div>		
<div></div>		

Finish





If you wish to cancel press the Clear Key.

<At step number 1>



By holding the Shift Key and pressing the Down Key you advance to the next stitch.



By holding the Shift Key and pressing the Up Key you retreat to the previous stitch.



- If you press the "Program Key" before completing this setting you will return to the Program Menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

DATA EDIT / Zoom in for the display

41.17

This enables to confirm the designated part of pattern by zooming.

1

By "Stitch selection" in the preceding page, the machine displays either of intended stitch function code.

[EDIT]	Id:01	Name:FLOWER
<div>▶Edit stitch: 1230</div> <div> F: X: 1.2 Y: -1.3 </div> <div></div>		

2



Press the "Display change Key".

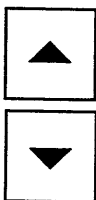
	Id: 01 FLOWER
	Stitches:123456 Changes : 12 Width : 569.3 Height : 678.1 X offset: 30.0 Y offset: 85.2 End X : 0.0 End Y : 0.0
	— Check pattern form —

	Id: 01 FLOWER
	Stitch : 1230
	F: X: 1.2 Y: -1.3
	Null Jump
	Stitches:123456 Changes : 12 Width : 569.3 Height : 678.1 X offset: 30.0 Y offset: 85.2 End X : 0.0 End Y : 0.0

● : Start point of pattern
■ : End point of pattern

The blinking pointer shows the selected stitch point.

3



Use the "Up and Down Key" and, select any zooming rate.

800%



400%



200%



100%

	Id: 01 FLOWER
	Stitch : 1230
	F: X: 1.2 Y: -1.3
	Null Jump
	Stitches:123456 Changes : 12 Width : 569.3 Height : 678.1 X offset: 30.0 Y offset: 85.2 End X : 0.0 End Y : 0.0

By changing the zooming rate, the displayed area to be changed.



4

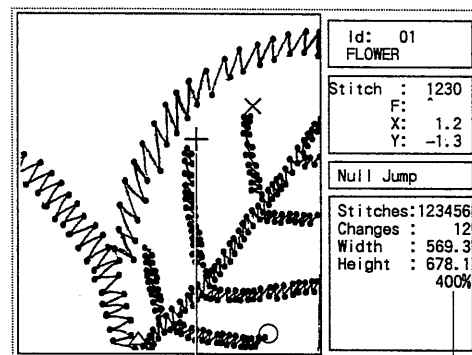


Press the "Display change Key".

When you use the zooming, the functions used in the pattern to be displayed as the function mark.

You can change the zooming rate by using the (up, down) key from this screen too.

- Function mark
- : Stitch (Normal)
 - : Jump
 - △ : Color change
 - * : Speed limit
 - × : Thread cut
 - # : Stop
 - : Start point
 - : End point



Amount of zooming in

The pointer shows the position of the stitch number you have selected.
500 stitches around the pointer to be displayed.



If you wish to cancel press the Clear Key.

< At step number 2 >



If you press the Display change Key you will return to step 4.



By holding the Shift Key and pressing the Down Key you advance to the next stitch.



By holding the Shift Key and pressing the Up Key you retreat to the previous stitch.

< At step number 4 >



If you press the Display change Key you will return to step 2.



By holding the Shift Key and pressing the Down Key you advance to the next stitch.



By holding the Shift Key and pressing the Up Key you retreat to the previous stitch.



• If you press the "Program Key" before completing this setting you will return to the Program Menu.

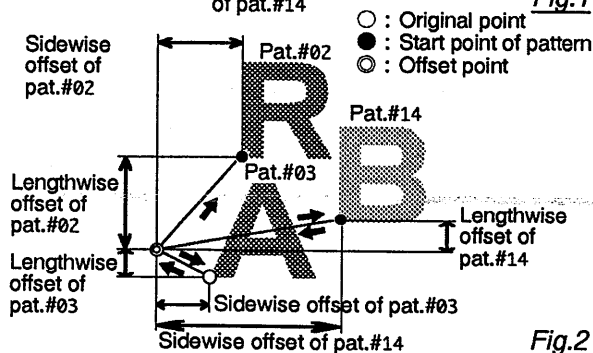
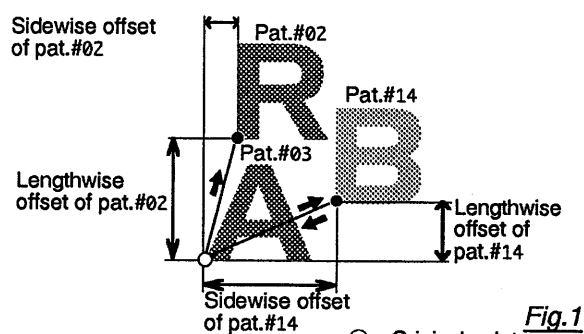


• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

This enables to embroider any memory pattern in any sequence up to 30 pieces in succession. At this moment, the machine embroiders by executing various settings set to each pattern.

※ In case you embroider pattern to batch register laid out like Fig.1, you need to set offset with original point (Start point of the first pattern) as pivot to each pattern in advance. In case offset is set to the first pattern like Fig. 2, you need to set setoff point of the first pattern with offset of other pattern as pivot. Refer to page of "OFFSET".

※ In case automatic original point return is set to the last portion that was batch registered, the machine returns to original point and finishes. In case automatic original point return is not set, embroidery finishes at end point of the last pattern.



Alter

This conducts registration of patterns to be batch treated in order.

Set

This sets to execute of batch sewing.

Cancel

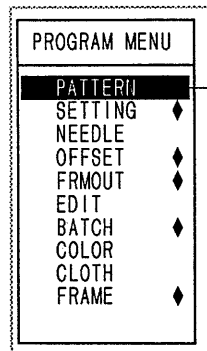
This cancels to execute of batch sewing.

This function will allow you to sew any combination of designs in sequence.

1



Press the "Program Key".

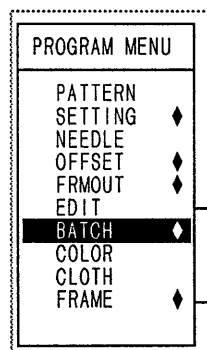


Settings menu is shown.

2



Use the "Up and Down Key" and select Batch from the menu.

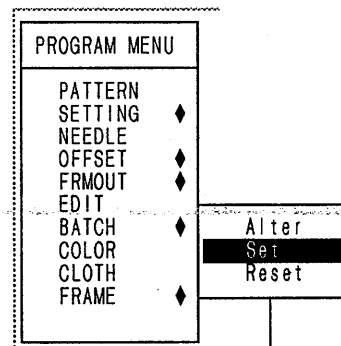


Indicates a sub-menu.

3



Press the "Set Key".

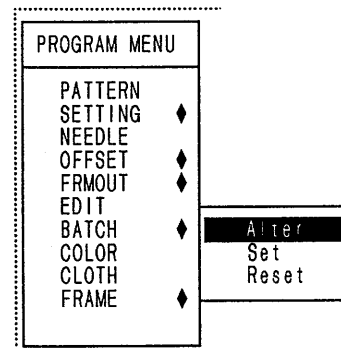


Settings menu is shown.

4



Press the "Up Key" and select "Alter".



5



Press the "Set Key".




[BATCH]	
[ALTER]	
▶1:	
2:	
3:	
4:	
5:	
6:	
7:	
8:	
9:	
10:	

6



Use the Up and Down Keys to select ID #1.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.

[BATCH]	set order number
[ALTER]	
▶1:	
2:	
3:	
4:	
5:	
6:	
7:	
8:	
9:	
10:	


As a example we selected ID #1

7



Press the "Cursor Key".



By pressing  key you will go back to the previous menu

[BATCH]	
[ALTER]	[1]
▶1:	▶01 FLOWER
2:	02 MOON
3:	03 BIRD
4:	04 FANTASY
5:	05 CHILD
6:	06 DOG
7:	07 HOUSE
8:	08 TREE
9:	09 SUN
10:	10 CAT

The designs name is shown in right hand side of the screen.



8



Use the Up and Down Key to select the design you wish.



By pressing key you will go back to the previous menu.



By holding (shift) and pressing and keys you can move quickly to the selection.

Blue cursor

[BATCH]	
[ALTER]	{1}
1:	01 FLOWER
2:	02 MOON
3:	03 BIRD
4:	04 FANTASY
5:	05 CHILD
6:	06 DOG
7:	07 HOUSE
8:	▶08 TREE
9:	09 SUN
10:	10 CAT

As a example we have selected design number 8 which is Tree

9



Press the "Set Key".

[BATCH]	
[ALTER]	
▶1: 08 TREE	
2:	
3:	
4:	
5:	
6:	
7:	
8:	
9:	
10:	

This selected design is shown beside it order number.

10

To add additional design into the batch order go back to steps 6 to 9.

11

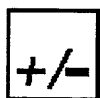


Pressing the "Down Key" will select the next available number of the sewing order.

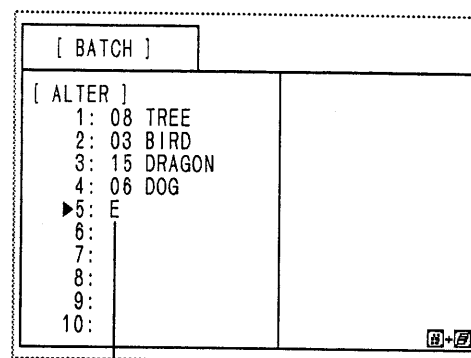
[BATCH]	
[ALTER]	
1: 08 TREE	
2: 03 BIRD	
3: 15 DRAGON	
4: 06 DOG	
▶5:	
6:	
7:	
8:	
9:	
10:	



12



Press the "Plus minus Key".

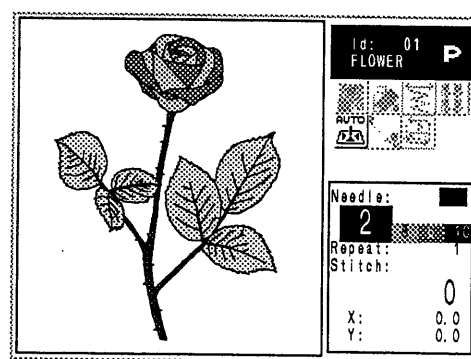


The letter "E" indicates the end.

13



Press the "Escape Key".



Return to Drive Mode.

Finish



- If you wish to cancel a item in this menu press the "Clear Key" but, step 8 will be invalidity.



- If you press the "Program Key" at steps you will return the Program menu. however if you are at steps 7 or 8 you will return to the last menu.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

Use this function to turn on the batch sewing you have already programmed.

1



Press the "Program Key".

PROGRAM MENU	
PATTERN	◆
SETTING	◆
NEEDLE	◆
OFFSET	◆
FRMOUT	◆
EDIT	◆
BATCH	◆
COLOR	◆
CLOTH	◆
FRAME	◆

Settings menu is shown.

2



Use the "Up and Down Key" and choose "Batch".

PROGRAM MENU	
PATTERN	◆
SETTING	◆
NEEDLE	◆
OFFSET	◆
FRMOUT	◆
EDIT	◆
BATCH	◆
COLOR	◆
CLOTH	◆
FRAME	◆

Alter
Set
Reset

Indicates a sub-menu.

3



Press the "Set Key".

PROGRAM MENU	
PATTERN	◆
SETTING	◆
NEEDLE	◆
OFFSET	◆
FRMOUT	◆
EDIT	◆
BATCH	◆
COLOR	◆
CLOTH	◆
FRAME	◆

Alter
Set
Reset

Settings menu is shown.

4



Use the "Up and Down Key" and select Set in the sub menu.

PROGRAM MENU	
PATTERN	◆
SETTING	◆
NEEDLE	◆
OFFSET	◆
FRMOUT	◆
EDIT	◆
BATCH	◆
COLOR	◆
CLOTH	◆
FRAME	◆

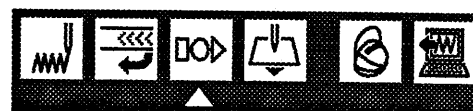
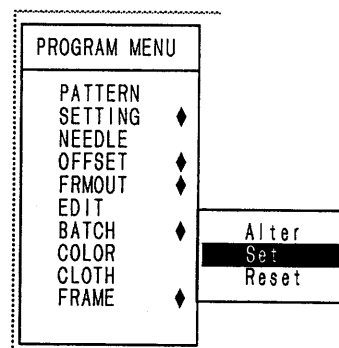
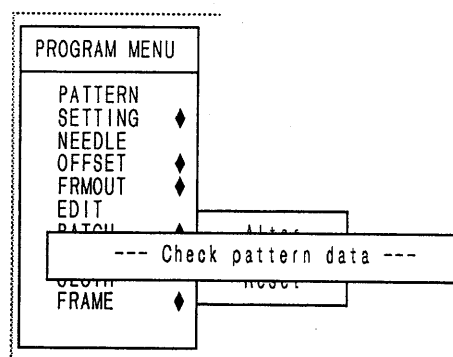
Alter
Set
Reset



5



Press the "Set Key".

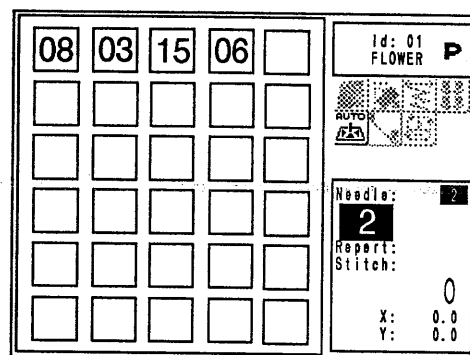


In the Drive Mode screen a icon will show that Batch Operation is in use.

6



Press the "Escape Key".



Indicates the batch order.



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



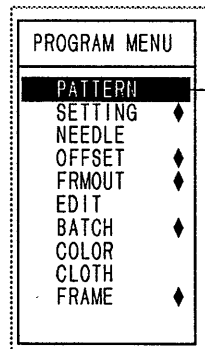
• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

By using the reset command we will turn off the batch operation.

1



Press the "Program Key".

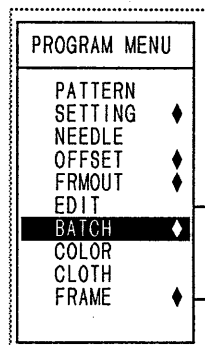


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Batch".



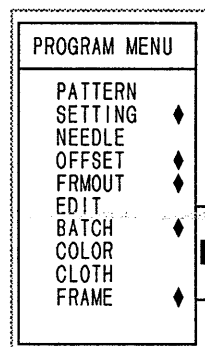
Alter
Set
Reset

Indicates a sub-menu.

3



Press the "Set Key".



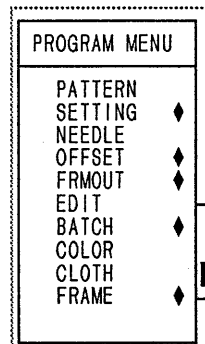
Alter
Set
Reset

Settings menu is shown.

4



Press the "Down Key" and select Reset in the sub menu.



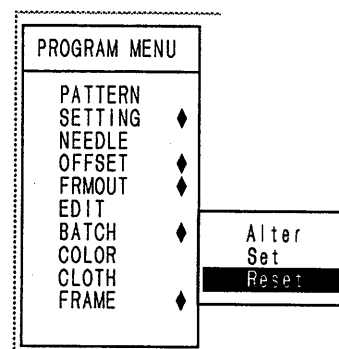
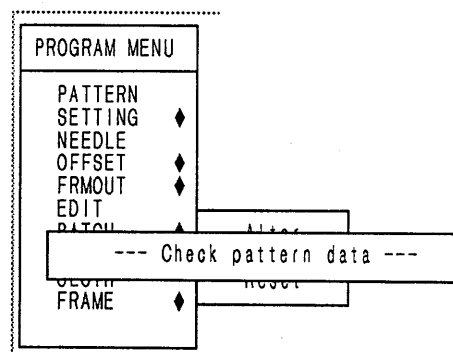
Alter
Set
Reset



5



Press the "Set Key".

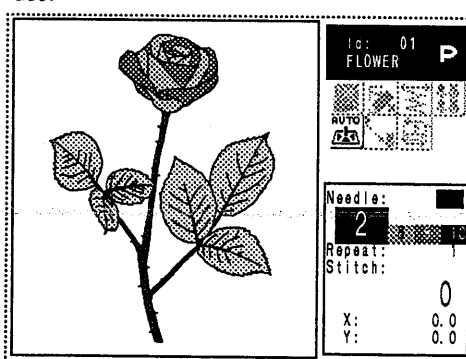


In the Drive Mode screen the icon will not be shown to indicate that Batch Operation is not in use.

6



Press the "Escape Key".



Return to Drive Mode.



• If you press the "Program Key" before completing this setting you will return to the Program Menu.



• If you press the "Escape Key" before completing this setting you will return to Drive Mode.

This sets the color of pattern by needle number to be displayed.

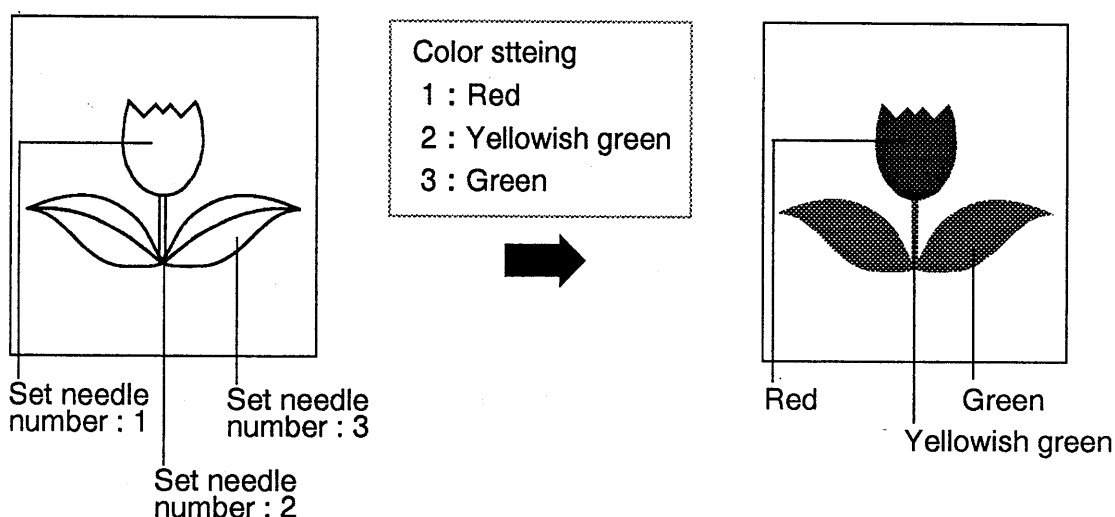
This enables to set the color of pattern to be displayed by setting the color of needle number.

By adjusting between actual thread color displayed color of pattern, you can confirm Embroidered pattern image. (128 colors)

※ The pattern will be displayed by the color which are set each needle bar.

※ The color will be changed by selection of colors and light and darkness.

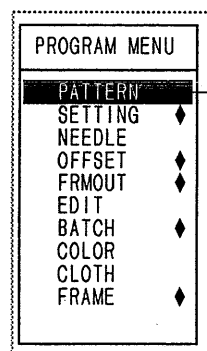
※ You will find difficulty to see the pattern if you set same color on both pattern and background.



1

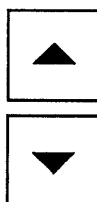


Press the "Program Key".

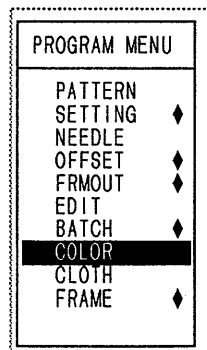


Settings menu is shown.

2



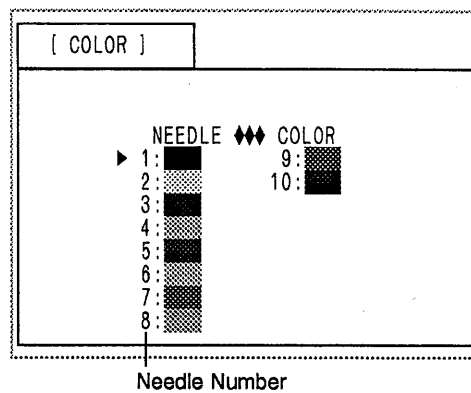
Use the "Up and Down Key" and choose "Color".



3



Press the "Set Key".






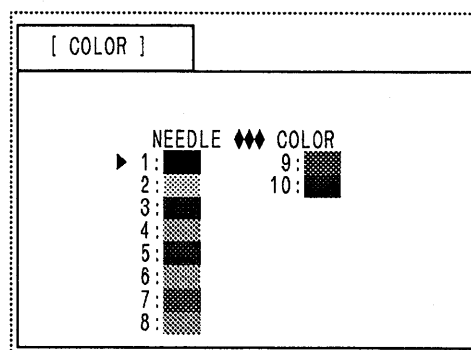
4



Use the "Up and Down Keys" to select the needle you wish to assign a color to.



By holding  (shift) and pressing  and  keys you can move quickly to the selection.

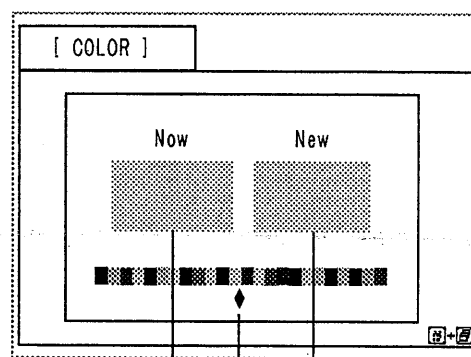


As a example we selected the number 3 needle color

5



Press the "Set Key".





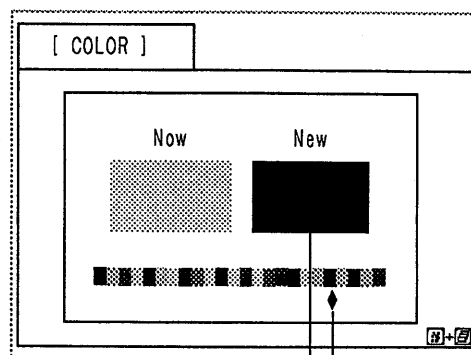
6



Use "Cursor Key" move the sursor across the color palette.



If you hold "Shift"  and press the "Cursor Key"  you can move to the left in the color palette.



[Adjusting for lighter or darker shades]

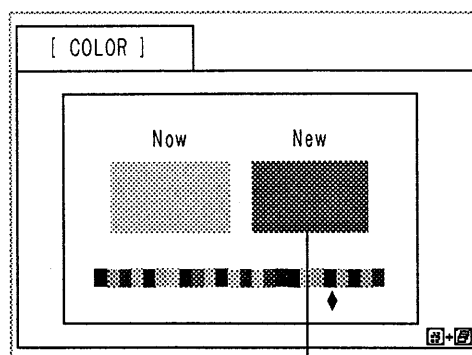
7



Use the "Up Key" to lighten the color shade.



Use the "Down Key" to darken the color shade.

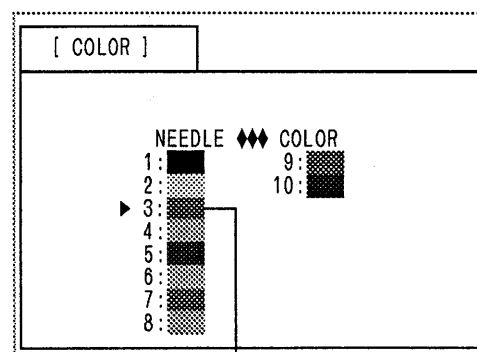


As you change the colors shade it will be shown in this window.

8



Press the "Set Key".

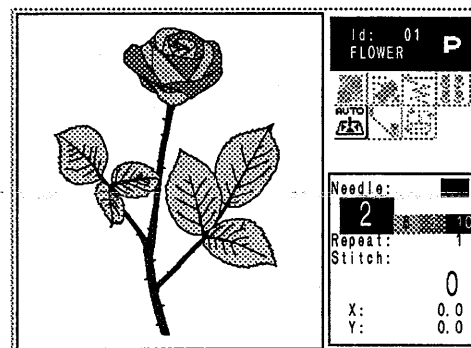


Indicates the selected color.

9



Press the "Escape Key".



Finish

Design is shown with the users selected color palette.



• If you wish to cancel the settings at steps 6 and 7 press the "Clear Key".



• If you press the "Program Key" at steps 6 and 7 it cancels your setting and returns you to step 4.



• If you press the "Escape Key" at steps 6 and 7 it cancels your setting and returns you to Drive Mode.

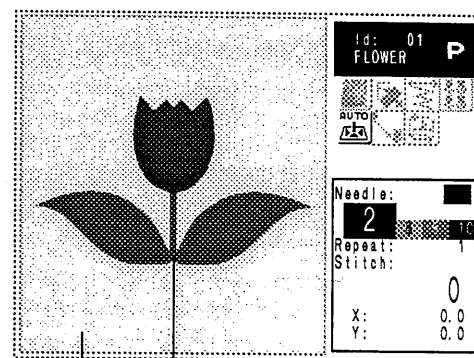
CLOTH COLOR

48.00

With this function it is possible to set the background to a color similar to the fabric color. (128 colors)

※ The pattern will be displayed by the color which are set each needle bar.

※ Note be sure to set the colors differently to show contrast.

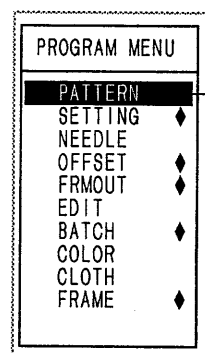


Pattern
Cloth (background color)

1



Press the "Program Key".

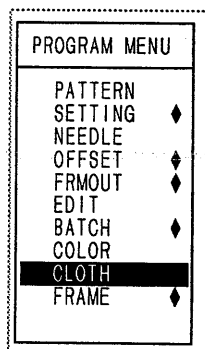


Settings menu is shown.

2



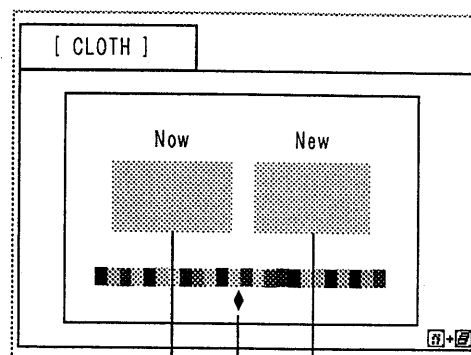
Use the "Up and Down Key" and choose "Cloth".



3



Press the "Set Key".



This menu shows the
current newly selected
color




4



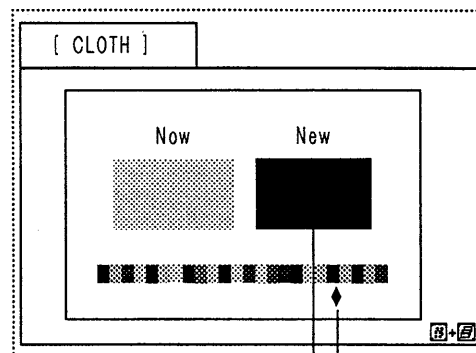
Use "Cursor Key" move the sursor across the color palette.



If you hold "Shift"  and press the "Cursor Key"



you can move to the left in the color palette.



The color selected from the palette is shown.

[Adjusting for lighter or darker shades]

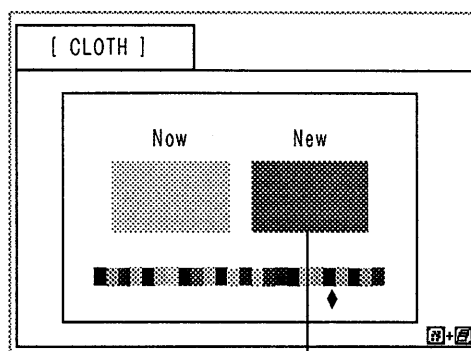
5



Use the "Up Key" to lighten the color shade.



Use the "Down Key" to darken the color shade.

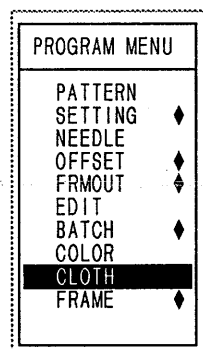


As you change the colors shade it will be shown in this window.

6



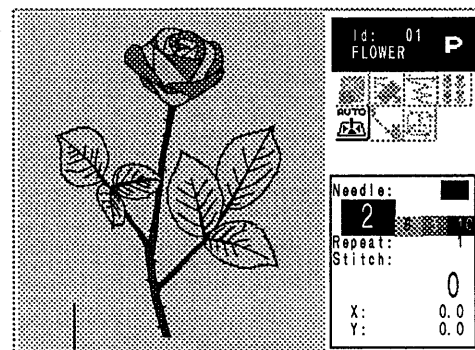
Press the "Set Key".



7



Press the "Escape Key".



The background color is shown.



Finish



- If you wish to cancel the settings at steps 4 and 5 press the "Clear Key".



- If you press the "Program Key" at steps 4 and 5 it cancels your setting and returns you to step 2.



- If you press the "Escape Key" at steps 4 and 5 it cancels your setting and returns you to Drive Mode.

POSITION CONFIRMATION / Monitor display 48.03

After selecting the frame you are going to use by "Registration number selection", register the *standard point of the frame sets on the machine. By setting the standard point, the start point of the pattern to be adjusted automatically by the machine and the selected pattern comes to the center of the frame.

This will enable you to check whether the selected memory pattern fits the embroidery area or not at the same time.

The pattern will be centered of the each selected frame (round, square, cap) This function enables to confirm positioning between embroidery are and pattern.

And if you change frame position by frame move key, display will be changed and you can confirm the positioning.

⚠ The "Monitor display" is the function to check whether the pattern fits the embroidery area of the frame you are going to use or not before starting the operation.

This is not the safety device to prevent the crash due to the pattern's excess of the embroidery area after starting the operation.

After having done the "Monitor display" do not move the frame, if you do so the machine may be damaged due to the crash of the needle or pressure foot to the frame.

⚠ Make sure to do "Registration number selection" again when you change the frames. If you do not do this the machine may be damaged due to the crash of the needle or pressure foot to the frame.

※ This function can be used with the function of scale, convert, mirror, width, offset, frame out and repeat setting.

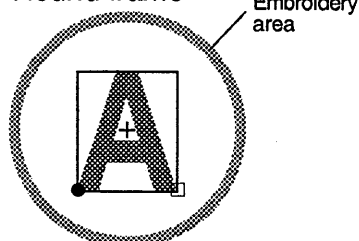
※ This function can not be used with the function of batch drive setting.

※ This function is not limit function or out line trace function.

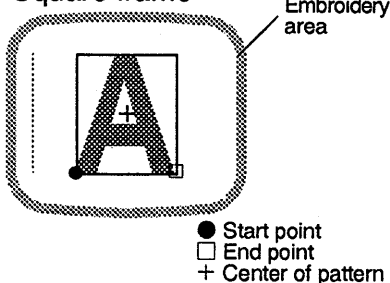
Frame hit can be happened if you move the frame and start driving after position confirmation.

*standard point of the frame : It is the point to recognize the frame position sets on the machine. The checking of the embroidery area to be done based on this point and the pattern data in memory.

Round frame



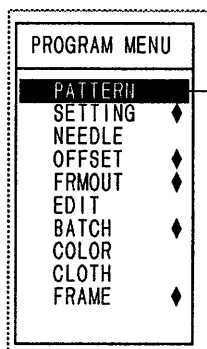
Square frame



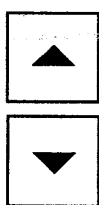
1



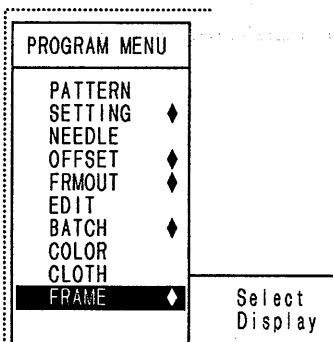
Press the "Program Key".



2



Use the "Up and Down Key" and choose "Frame".

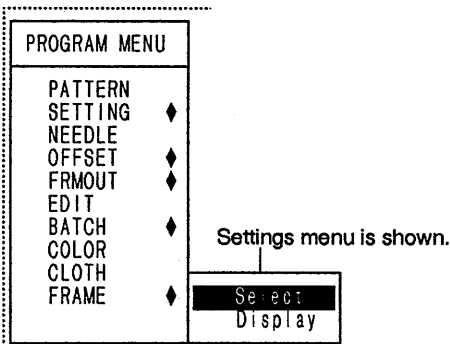


Indicates a sub-menu.

3



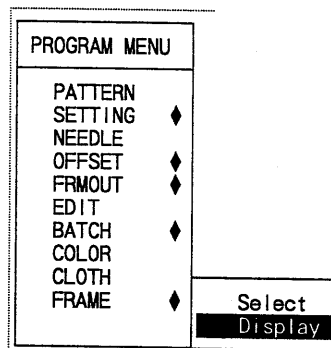
Press the "Set Key".



4



Press the "Down Key" and select "Display".

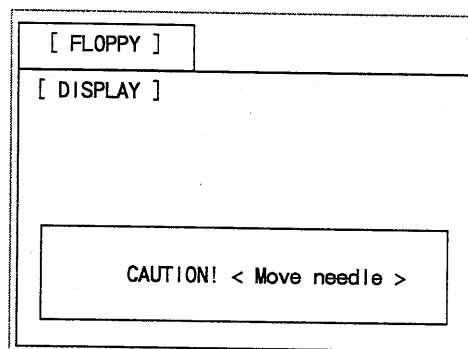
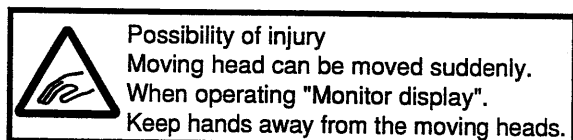


5



Press the "Set Key".

When you do the procedure 4 without selecting the 1st needle, the left caution message to be displayed, then press the 1st needle selected automatically and return to the message display of procedure 6.



To set the standard point easily, the 1st needle to be selected automatically.

6



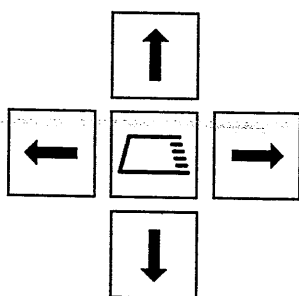
Press the "Set Key".

Message of drawing on the right hand will be Displayed.

Move frame to standard point

This is to register standard point of frame.

7



Adjust standard point correctly by using "Frame move key".

Standard point of each frame except cap frame

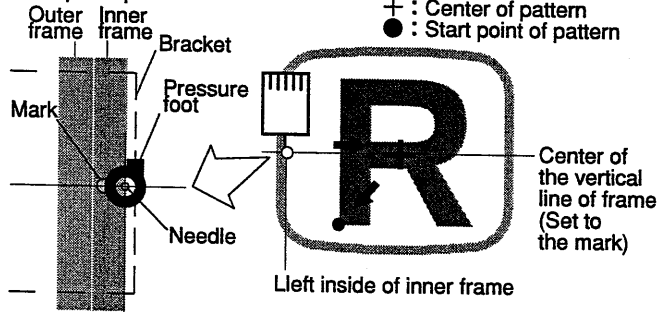


Fig. 1

※ When the frame is set to the standard point, the widthwise sets to the left inside of the inner frame and the lengthwise sets to the mark of the left inside of the inner frame. If there is no mark on the frame, the lengthwise sets to the center of frame in the vertical line. In case of the frame which has a bracket, such as tubular frames, set to the inside of the inner frame not to the inside of the bracket.

Standard point of cap frame

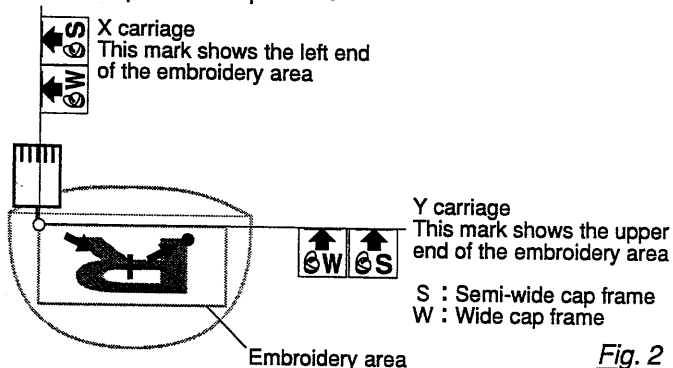


Fig. 2

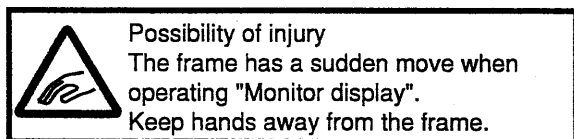
※ When the frame sets to the mark on the Y carriage, the mark occasionally cannot see from the right above by the interference of the cover. In this occasions, set the frame accurately by seeing the mark from the right side of the machine.

8

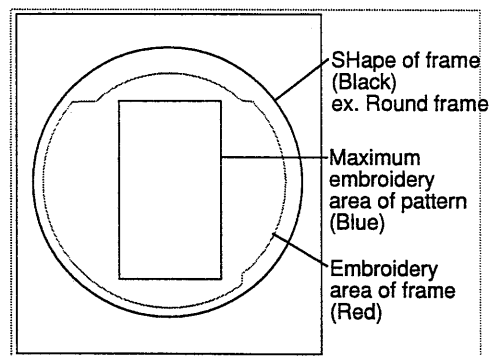


Press the "Set Key".

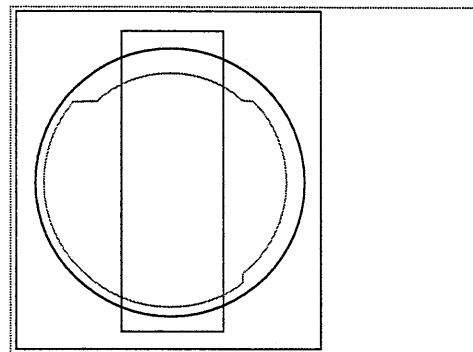
Frame moves and do the centering of pattern .



⚠ If the frame is not set accurately to the standard point, the machine may be damaged due to the crash of the needle or pressure foot to the frame.



When fit the pattern in the Embroidery area



When pattern is bigger than Embroidery area

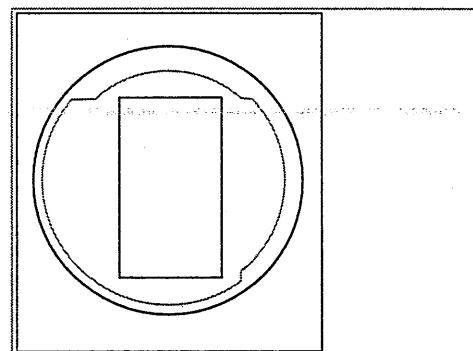
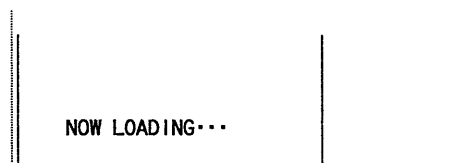
When not changing frame select



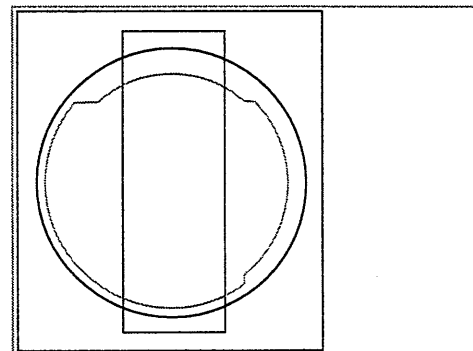
Press the "Set Key".

After displaying drawing on the right, displays drawing on the right bottom.

Frame moves and do the centering of pattern.



When fit the pattern in the Embroidery area



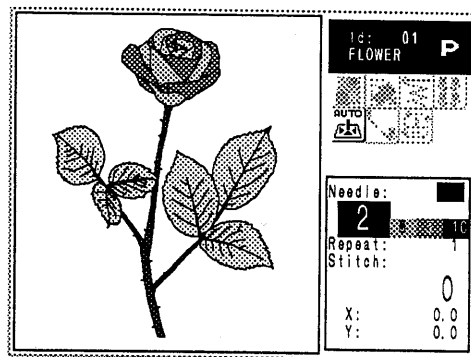
When pattern is bigger than Embroidery area



9



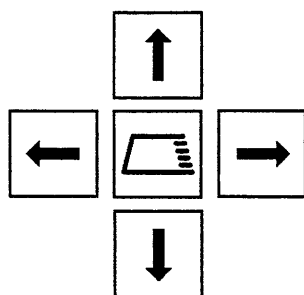
Press the "Escape Key".



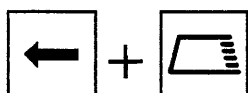
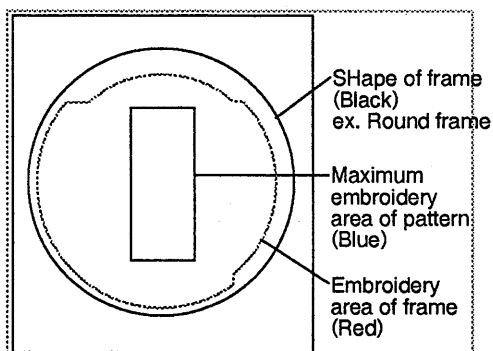
Return to Drive Mode.



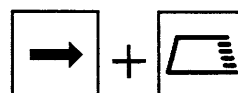
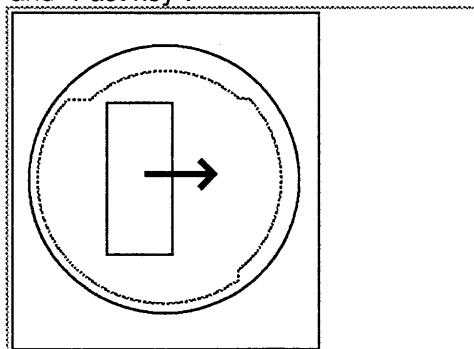
At step 8



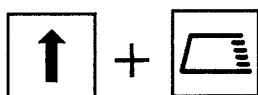
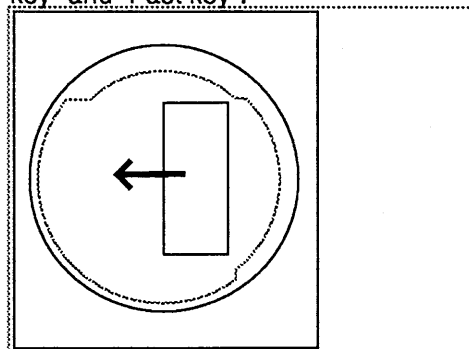
By pushing the "Frame move key", you can make movement of the Maximum Embroidery area of pattern.



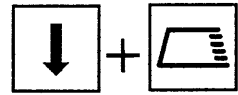
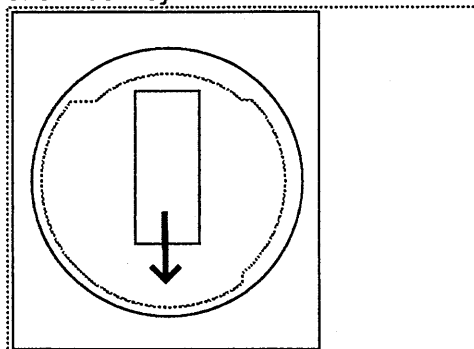
By pushing the "Left Frame move key" and "Fast key".



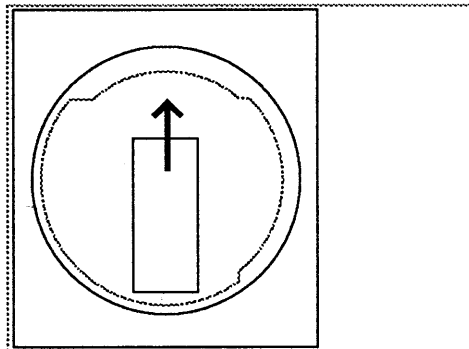
By pushing the "Right Frame move key" and "Fast key".



By pushing the "Up Frame move key" and "Fast key".



By pushing the "Down Frame move key" and "Fast key".



Slant movement also can be done.



POSITION CONFIRMATION / *Selection of the frame* **48.09**

This function will enable you to protect the frames such as round frame, square frame and cap frame from the crash when the pattern is embroidered.

Select the frame you are going to use according to "Selection of the frame".

This function will adjust the frame position automatically to fit the pattern into the center of the embroidery area by "Monitor display".

※ FRAME CHECK is not available for the patterns combined by *BATCH SEWING.

**BATCH SEWING : This enables to embroider any memory pattern in any sequence in succession.*

***R*Selection of the frame**

To make the machine recognize the embroidery area of the frame you are going to use, select the same size frame you are going to use from the display frame menu memorized into the machine.

Unrecognized frame can be memorized into the machine as a user's frame.

This function will enable you to check automatically whether the pattern fits the embroidery area of the frame or not.

POSITION CONFIRMATION / Selection of the frame 48.10

*Regular round frame, Regular square frame,

*Tubular round frame, Tubular square frame

Selection of the frame (Normal Round frame, Square frame, Tubular Round frame, Tubular Square frame).

The embroidery area of each registered frame is set inside from the frame edge for the clearance of the pressure foot. (Fig. 1)

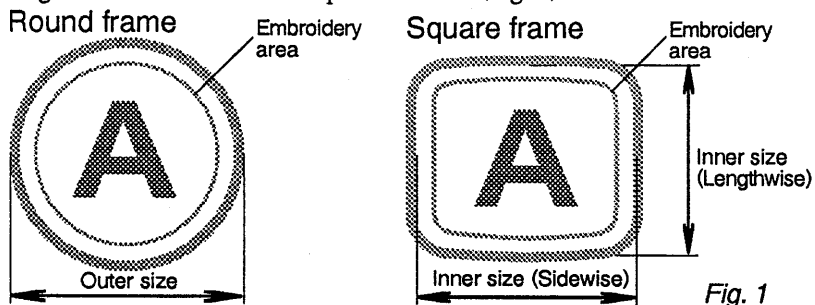


Fig. 1

1



Press the "Program Key".

2



Use the "Up and Down Key" and choose "Frame".

3



Press the "Set Key".

4

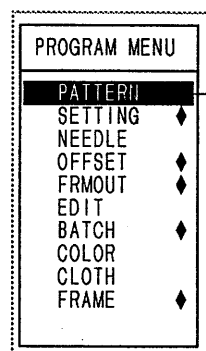


Press the "Up Key" and select "Select".

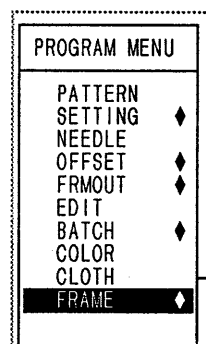


*Regular round frame, Regular square frame : The frames made by HAPPY and for flat sewing. They are used with the holder frames or with the brackets and the fittings connecting to the drive frame.

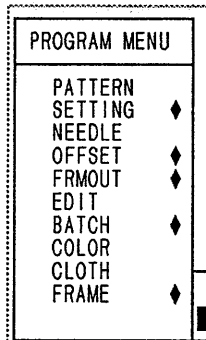
*Tubular round frame, Tubular square frame : The frames made by HAPPY and used for cylinder sewing, such as T-shirts, bags and etc. The frame has bracket at both sides.



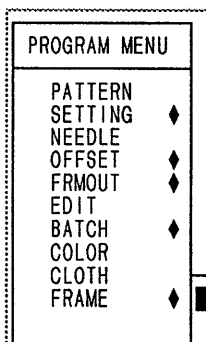
Settings menu is shown.



Indicates a sub-menu.



Settings menu is shown.

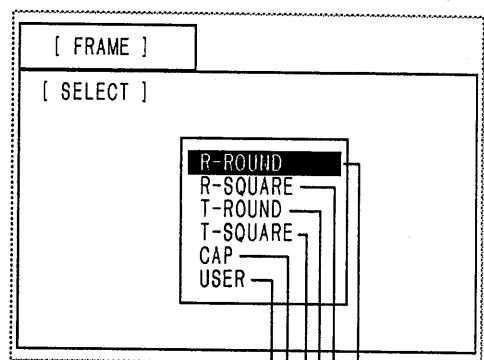


POSITION CONFIRMATION / Selection of the frame 48.11

5



Press the "Set Key".



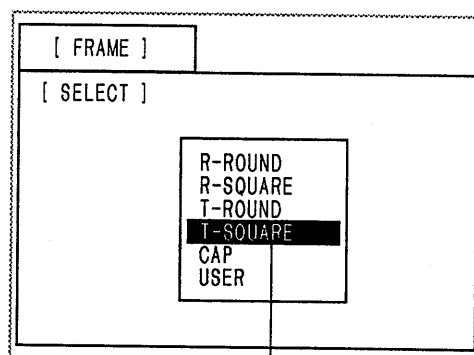
Shows the current setting.

Round frame
Square frame
Tubular Round frame
Tubular Square frame
Cap frame
User frame

6



Use the "Up and Down Key" and choose "T-Square".

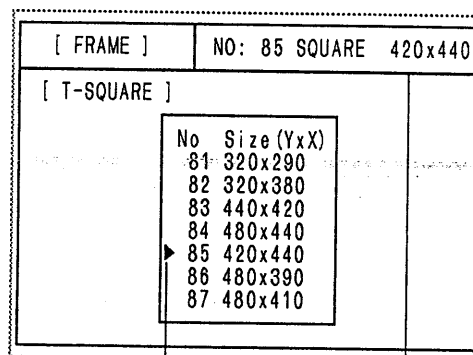


The cursor moves to the "T-Square"

7



Press the "Set Key".



Settings menu is shown




Indicates the select frame.

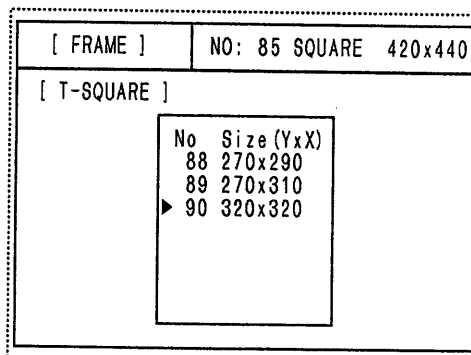
8



Use the "Up and Down Key" and choose "No 90 320x320".



By holding  (shift) and pressing  and  keys you can move quickly to the selection.



As a example we set a No.90 320x320



9



Press the "Set Key".


[FRAME]	NO: 85 SQUARE 320x320
[T-SQUARE]	
No	Size(YxX)
88	270x290
89	270x310
▶ 90	320x320

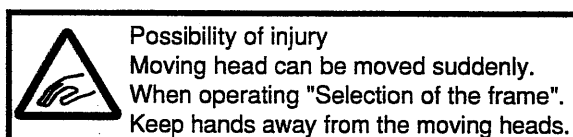
Indicates the select frame.

10



Press the "Set Key".

When you do the procedure 4 without selecting the 1st needle, the left caution message to be displayed, then press  the 1st needle selected automatically and return to the message display of procedure 6.



[FLOPPY]
[DISPLAY]
CAUTION! < Move needle >

To set the standard point easily, the 1st needle to be selected automatically.

11



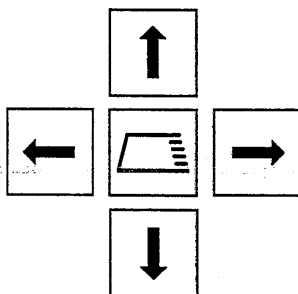
Press the "Set Key".

Message of drawing on the right hand will be Displayed.

Move frame to standard point

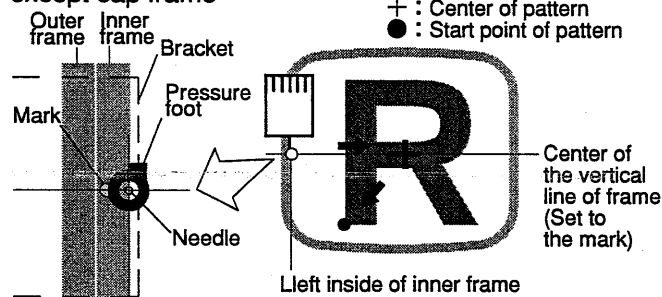
12

This is to register standard point of frame.



Adjust standard point correctly by using "Frame move key".

Standard point of each frame except cap frame



※ When the frame is set to the standard point, the widthwise sets to the left inside of the inner frame and the lengthwise sets to the mark of the left inside of the inner frame. If there is no mark on the frame, the lengthwise sets to the center of frame in the vertical line. In case of the frame which has a bracket, such as tubular frames, set to the inside of the inner frame not to the inside of the bracket.

13



Press the "Set Key".

The frame moves to the center automatically.



- Goes back to previous section by pushing "Program Key" once.
- When you go to display of frame position from the display 9. If you push "Program Key" twice, go back to display 4.

※ About display of frame position, please refer the way of operation on page 48.03.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

POSITION CONFIRMATION / Selection of the frame 48.13

Cap frame

Selection of the cap frame.

The embroidery area of HAPPY made semi-wide and wide cap frame are memorized into the machine.

The lengthwise of the embroidery area can be adjusted to the variety of caps.
(Fig. 1)

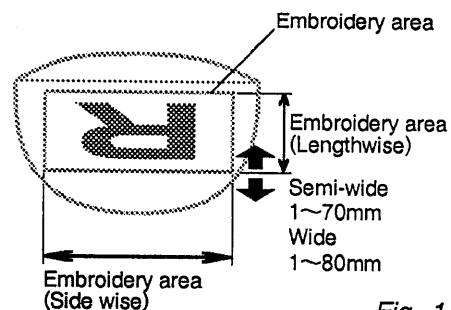
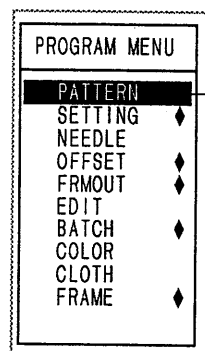


Fig. 1

1



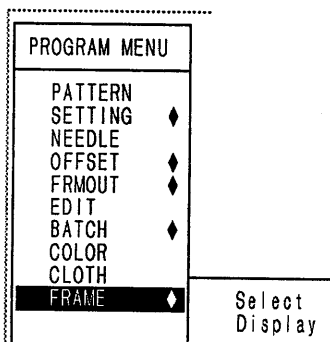
Press the "Program Key".



2



Use the "Up and Down Key" and choose "Frame".

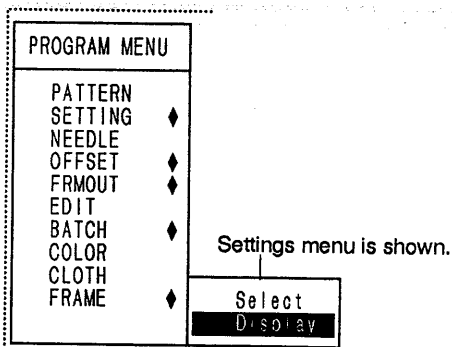


Indicates a sub-menu.

3



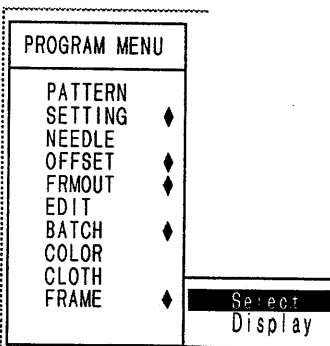
Press the "Set Key".



4



Press the "Up Key" and select "Select".



5



Press the "Set Key".

[FRAME]
[SELECT]
<div> R-ROUND R-SQUARE T-ROUND T-SQUARE CAP USER </div>

Settings menu is shown.

6



Use the "Up and Down Key" and choose "Cap".



[FRAME]
[SELECT]
<div> R-ROUND R-SQUARE T-ROUND T-SQUARE CAP USER </div>

7



Press the "Set Key".

[FRAME]	NO:111 S-Cap	70x180									
[CAP]											
<table border="1"> <thead> <tr> <th>No</th> <th>Name</th> <th>Size (YxX)</th> </tr> </thead> <tbody> <tr> <td>▶111</td> <td>S-Cap</td> <td>70x180</td> </tr> <tr> <td>112</td> <td>W-Cap</td> <td>46x360</td> </tr> </tbody> </table>			No	Name	Size (YxX)	▶111	S-Cap	70x180	112	W-Cap	46x360
No	Name	Size (YxX)									
▶111	S-Cap	70x180									
112	W-Cap	46x360									

Settings menu is shown.

Indicates the select frame.

8



Use the "Up and Down Key" and choose "W-Cap".



[FRAME]	NO:111 S-Cap	70x180									
[CAP]											
<table border="1"> <thead> <tr> <th>No</th> <th>Name</th> <th>Size (YxX)</th> </tr> </thead> <tbody> <tr> <td>111</td> <td>S-Cap</td> <td>70x180</td> </tr> <tr> <td>▶112</td> <td>W-Cap</td> <td>46x360</td> </tr> </tbody> </table>			No	Name	Size (YxX)	111	S-Cap	70x180	▶112	W-Cap	46x360
No	Name	Size (YxX)									
111	S-Cap	70x180									
▶112	W-Cap	46x360									

As a example we set a No.112 46x360



POSITION CONFIRMATION / Selection of the frame 48.15

9

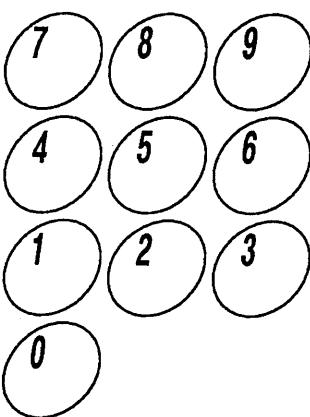


Press the "Set Key".

[FRAME]	NO:112 W-Cap	48x360
[ENTRY]		
<div> <div>►Size Y: 48</div> <div></div> </div>		

Displays present select of Embroidery area on Y direction.

10



Input the Embroidery area on Y direction with "Number Key".

Semi-width 1~70mm
Width 1~80mm

[FRAME]	NO:112 W-Cap	48x360
[ENTRY]		
<div> <div>►Size Y: 60</div> <div></div> </div>		

Ex. Input, 60mm pn Y direction

11



Press the "Set Key".

[FRAME]	NO:112 W-Cap	60x360									
[CAP]											
<table border="1"> <thead> <tr> <th>No</th> <th>Name</th> <th>Size (YxX)</th> </tr> </thead> <tbody> <tr> <td>111</td> <td>S-Cap</td> <td>70x180</td> </tr> <tr> <td>►112</td> <td>W-Cap</td> <td>60x360</td> </tr> </tbody> </table>			No	Name	Size (YxX)	111	S-Cap	70x180	►112	W-Cap	60x360
No	Name	Size (YxX)									
111	S-Cap	70x180									
►112	W-Cap	60x360									


Indicates status.



12

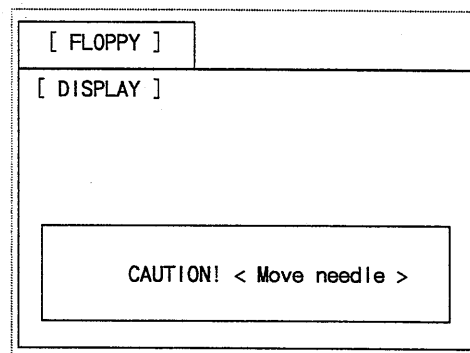


Press the "Set Key".

When you do the procedure 4 without selecting the 1st needle, the left caution message to be displayed, then press  the 1st needle selected automatically and return to the message display of procedure 6.



Possibility of injury
Moving head can be moved suddenly.
When operating "Selection of the frame".
Keep hands away from the moving heads.



To set the standard point easily, the 1st needle to be selected automatically.

13



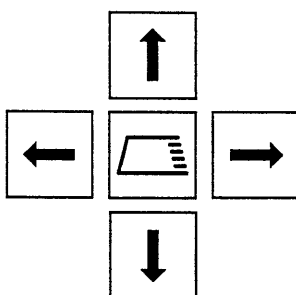
Press the "Set Key".

Message of drawing on the right hand will be Displayed.

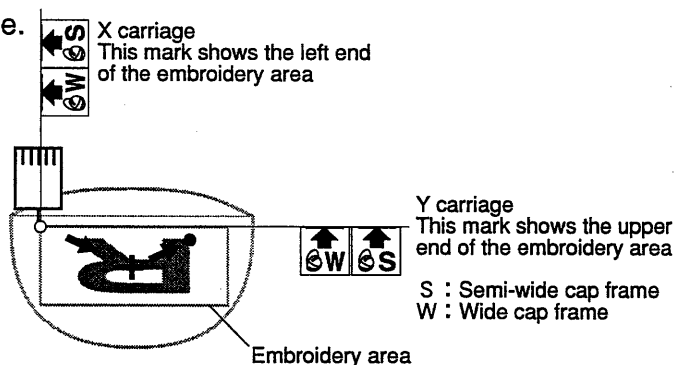
Move frame to standard point

14

This is to register standard point of frame.



Adjust standard point correctly by using "Frame move key".



※ When the frame sets to the mark on the Y carriage, the mark occasionally cannot see from the right above by the interference of the cover.
In this occasions, set the frame accurately by seeing the mark from the right side of the machine.

15



Press the "Set Key".

The frame moves to the center automatically.



- Goes back to previous section by pushing "Program Key" once.
- When you go to display of frame position from the display 11. If you push "Program Key" twice, go back to display 4.

※ About display of frame position, please refer the way of operation on page 48.03.



- If you press the "Escape Key" before completing this setting you will return to Drive Mode.

POSITION CONFIRMATION / Selection of the frame 48.17

User's frame registration

The frame which is not registered, you can register as user frame up to 5 frame.

Then you can select the frame which you want to use.

The both inner size, lengthwise and sidewise of square frame, and the diameter of round frame can be registered.

The embroidery area of each registered frame is set inside from the frame edge for the clearance of the pressure foot. (Fig. 1, 2)

⚠ The shape of the embroidery area set the inside of square frame will be a right angle. When you use the square frame like showing in fig.3, there may be a possibility of the crash at the corner if the embroidery area overlaps the frame.

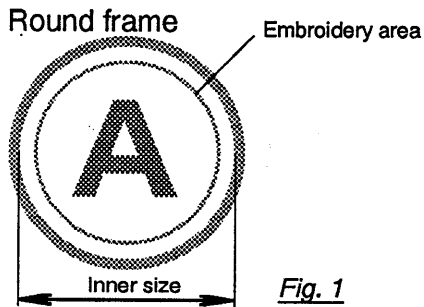


Fig. 1

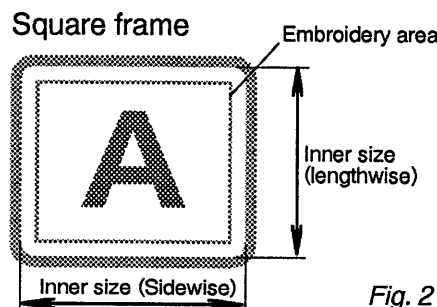


Fig. 2

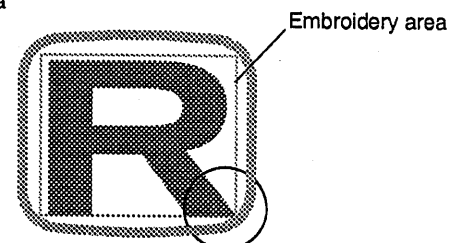
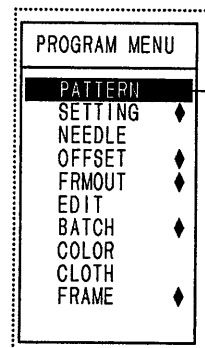


Fig. 3

1



Press the "Program Key".

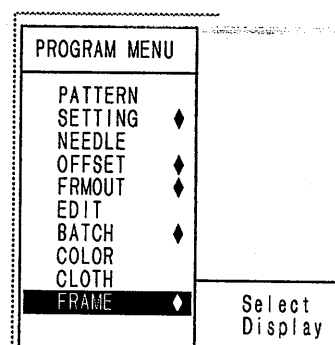


Settings menu is shown.

2



Use the "Up and Down Key" and choose "Frame".



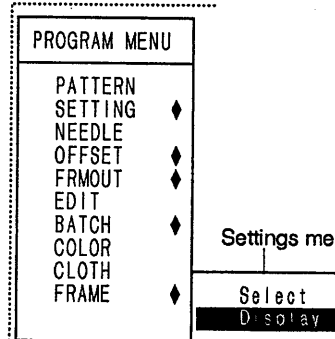
Select Display

Indicates a sub-menu.

3



Press the "Set Key".



Settings menu is shown.



POSITION CONFIRMATION / Selection of the frame 48.18

4



Press the "Up Key" and select "Select".

PROGRAM MENU	
PATTERN	
SETTING	◆
NEEDLE	
OFFSET	◆
FRMOUT	◆
EDIT	
BATCH	◆
COLOR	
CLOTH	
FRAME	◆

Select
Display

5



Press the "Set Key".

[FRAME]						
[SELECT]						
<table border="1"> <tr><td>R-ROUND</td></tr> <tr><td>R-SQUARE</td></tr> <tr><td>T-ROUND</td></tr> <tr><td>T-SQUARE</td></tr> <tr><td>CAP</td></tr> <tr><td>USER</td></tr> </table>	R-ROUND	R-SQUARE	T-ROUND	T-SQUARE	CAP	USER
R-ROUND						
R-SQUARE						
T-ROUND						
T-SQUARE						
CAP						
USER						

Settings menu is shown.

6



Use the "Up and Down Key" and choose "User".



[FRAME]						
[SELECT]						
<table border="1"> <tr><td>R-ROUND</td></tr> <tr><td>R-SQUARE</td></tr> <tr><td>T-ROUND</td></tr> <tr><td>T-SQUARE</td></tr> <tr><td>CAP</td></tr> <tr><td>USER</td></tr> </table>	R-ROUND	R-SQUARE	T-ROUND	T-SQUARE	CAP	USER
R-ROUND						
R-SQUARE						
T-ROUND						
T-SQUARE						
CAP						
USER						

As a example we select the "User frame"

7



Press the "Set Key".

[FRAME]	NO:111 S-Cap	70x180																		
[USER]																				
<table border="1"> <thead> <tr> <th>No</th> <th>Name</th> <th>Size</th> </tr> </thead> <tbody> <tr><td>▶131</td><td>Custom1</td><td>300x400</td></tr> <tr><td>132</td><td>Custom2</td><td>200</td></tr> <tr><td>133</td><td>Custom3</td><td></td></tr> <tr><td>134</td><td>Custom4</td><td></td></tr> <tr><td>135</td><td>Custom5</td><td></td></tr> </tbody> </table>			No	Name	Size	▶131	Custom1	300x400	132	Custom2	200	133	Custom3		134	Custom4		135	Custom5	
No	Name	Size																		
▶131	Custom1	300x400																		
132	Custom2	200																		
133	Custom3																			
134	Custom4																			
135	Custom5																			

Round frame Square frame
Indicates the select frame.

8



Use the "Up and Down Key" and choose "No 133 Custom3".



[FRAME]	NO:111 S-Cap	70x180																		
[USER]																				
<table border="1"> <thead> <tr> <th>No</th> <th>Name</th> <th>Size</th> </tr> </thead> <tbody> <tr><td>131</td><td>Custom1</td><td>300x400</td></tr> <tr><td>132</td><td>Custom2</td><td>200</td></tr> <tr><td>▶133</td><td>Custom3</td><td></td></tr> <tr><td>134</td><td>Custom4</td><td></td></tr> <tr><td>135</td><td>Custom5</td><td></td></tr> </tbody> </table>			No	Name	Size	131	Custom1	300x400	132	Custom2	200	▶133	Custom3		134	Custom4		135	Custom5	
No	Name	Size																		
131	Custom1	300x400																		
132	Custom2	200																		
▶133	Custom3																			
134	Custom4																			
135	Custom5																			

As a example we set a No.133 Custom3



POSITION CONFIRMATION / Selection of the frame 48.19

9

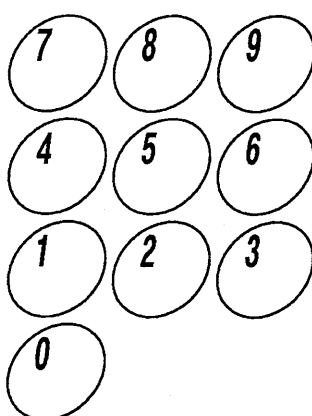


Press the "Set Key".

[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> ▶Class : 1 Size L: 0 </div>		

Displays present select of Embroidery area on Y direction.

10



Push "2" from "Number Keys".

Class1 : Round frame
Class2 : Square frame

[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> ▶Class : 2 Size Y: 0 Size X: 0 </div>		

Ex. Select the Class2 : Square frame

11

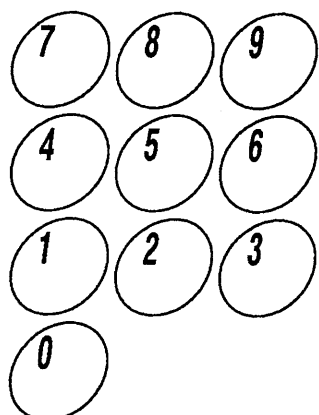


Press the "Set Key".

[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> Class : 2 ▶Size Y: 0 Size X: 0 </div>		

Move the cursor to Size Y

12



Input Embroidery area on Y direction with "Number Keys".

(Size of Embroidery area frame)

[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> Class : 2 ▶Size Y: 300 Size X: 0 </div>		

Ex. Input 300 from "Number Keys"



13

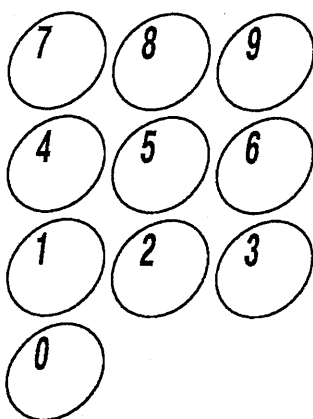


Press the "Down Key" and select the "Size X".

[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> Class : 2 Size Y: 300 ▶Size X: 0 </div>		

Ex. Select the "Size X"

14



Input Embroidery area on X direction with "Number Keys".

(Size of Embroidery area frame)

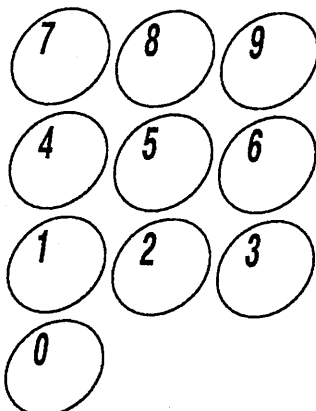
[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> ▶Class : 2 Size Y: 300 Size X: 200 </div>		

Ex. Input 200 from "Number Keys"



When select the Round frame at step 10

15



Push 2 from "Number Keys".

Class1 : Round frame
Class2 : Square frame

[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> ▶Class : 1 Size L: 0 </div>		

Ex. Select the Class1 : Round frame

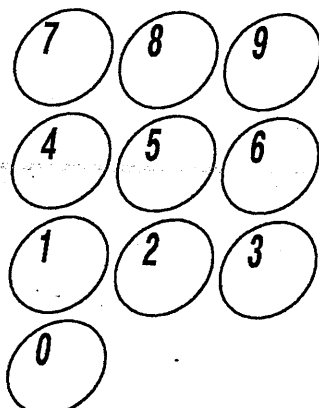
16



Press the "Down Key" and select "Size L".

[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> Class : 1 ▶Size L: 0 </div>		

17



Press the "Number Keys".
(Size of Embroidery area frame)

[FRAME]	NO:133 Custom3	0
[ENTRY]		
<div> Class : 1 ▶Size L: 200 </div>		

Ex. Input 200 from "Number Keys"



18



Press the "Set Key".


[FRAME]	NO:133 Custom3 200	
[USER]		
No	Name	Size
▶131	Custom1	300x400
132	Custom2	200
133	Custom3	200
134	Custom4	
135	Custom5	

Input frame size

19



Press the "Set Key".

When you do the procedure 4 without selecting the 1st needle, the left caution message to be displayed, then press  the 1st needle selected automatically and return to the message display of procedure 6.



Possibility of injury
Moving head can be moved suddenly.
When operating "Selection of the frame".
Keep hands away from the moving heads.

[FLOPPY]
[DISPLAY]
CAUTION! < Move needle >

To set the standard point easily, the 1st needle to be selected automatically.

20



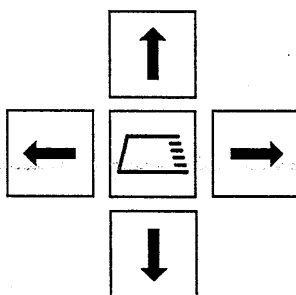
Press the "Set Key".

Move frame to standard point

Message of drawing on the right hand will be Displayed.

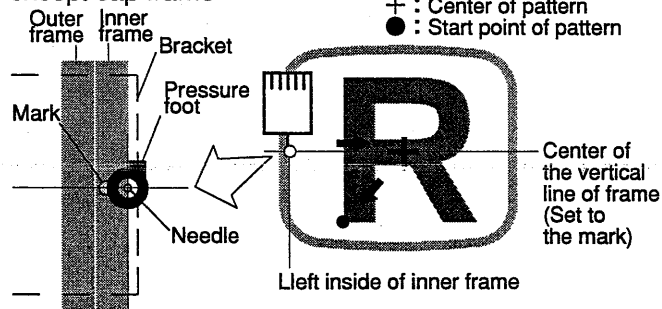
21

This is to register standard point of frame.



Adjust standard point correctly by using "Frame move key".

Standard point of each frame except cap frame



※ When the frame is set to the standard point, the widthwise sets to the left inside of the inner frame and the lengthwise sets to the mark of the left inside of the inner frame. If there is no mark on the frame, the lengthwise sets to the center of frame in the vertical line. In case of the frame which has a bracket, such as tubular frames, set to the inside of the inner frame not to the inside of the bracket.

22



Press the "Set Key".

The frame moves to the center automatically.



- Goes back to previous section by pushing "Program Key" once
- When you go to display of frame position from the display 18. If you push "Program Key" twice, go back to display 4.

※ About display of frame position, please refer the way of operation on page 48.03



- If you press the "Escape Key" before completing this setting you will return to Drive Mode

Using this feature you can confirm the size and position of the design by moving the pantograph and tracing the outside area of the design. This feature will save time and damaged goods by confirming the setup is right before sewing.

Direction of frame movement

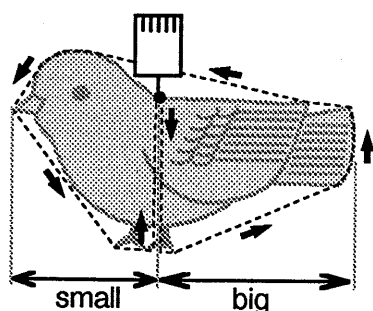
Direction of frame movement will be moved to down ward at fist.

Secondly moves to side direction (clockwise · counter clockwise) and finally return to start point of trace.

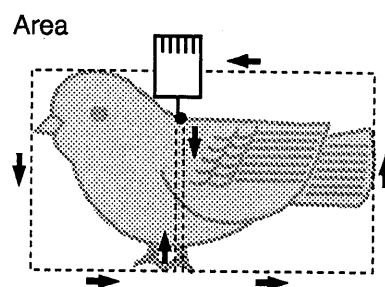
Judgement between clockwise and counter clockwise are made by pattern data.

Clockwise

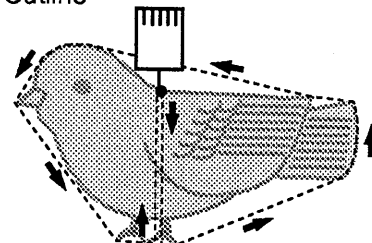
If the right side of the Embroidery area is bigger, concerning of centering around the start point of pattern.



● : Start point



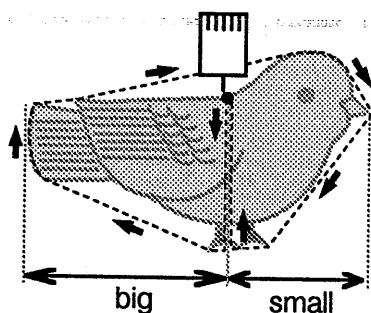
Outline



● : Start point

Counter clockwise

If the left side of the Embroidery area is bigger, concerning of centering around the start point of pattern.



※ This function can be used with scale, convert, mirror, offset, Frame out function but can not be used with repeat, Batch, automatic external reading · For example, If you drive with repeat or batch function with setting of No.22 is "Yes", the movement will be the frame jump movement.

※ If you are sewing direct from PC output the trace feature is disabled.
(Direct sewing mode)

Before select to embroider, this enables to confirm where the pattern will be embroidered by the movement of frame which displays the Maximum embroidery area of pattern.

1



Use the "Up and Down Key" and choose "22 Trace data use".



[CREATE]	
12	CHG. always cut :No
13	Stitch sweeper :No
14	Sweep length :4
15	Full length cut :No
16	Long lock stitch :No
17	All pattern disp :No
18	Data format :Aut
19	etc. func write :No
20	etc. func read :No
21	Slow (mend out) :Yes
▶22	Trace data use :No

2



Press the "Plus minus Key" and select "Yes".

[CREATE]	
12	CHG. always cut :No
13	Stitch sweeper :No
14	Sweep length :4
15	Full length cut :No
16	Long lock stitch :No
17	All pattern disp :No
18	Data format :Aut
19	etc. func write :No
20	etc. func read :No
21	Slow (mend out) :Yes
▶22	Trace data use :Yes

3



Press the "Down Key" and select "23 Trace data make".

[CREATE]	
▶23	Trace data make :No
24	Trace type :Area
25	STR. Lock stitch :Yes
26	Width data all : 0.0
27	Preview data make:Yes

4



Press the "Plus minus Key" and select "Yes".

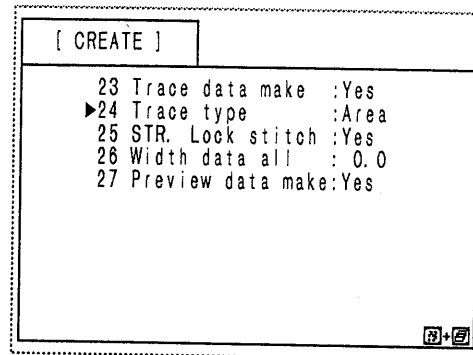
[CREATE]	
▶23	Trace data make :Yes
24	Trace type :Area
25	STR. Lock stitch :Yes
26	Width data all : 0.0
27	Preview data make:Yes



5



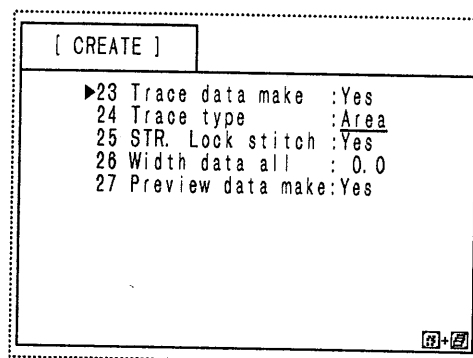
Press the "Down Key" and select "24 Trace type".



6



Press the "Plus minus Key" and select "Area".

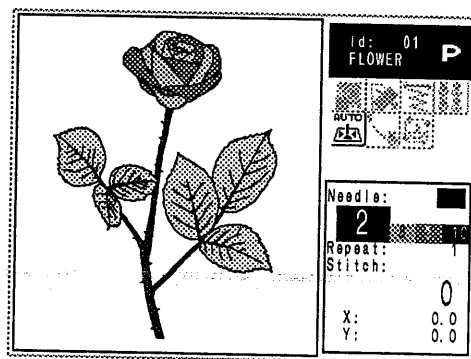


7



Press the "Escape Key".

Finish



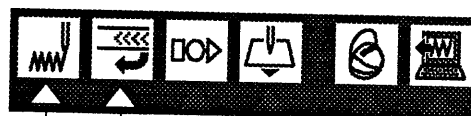
8

Reading pattern.

Refer the way of operation on page 21.00.

The status will be pattern "Top".

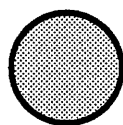
Refer the way of operation on page 9.00.



Indicates status



9



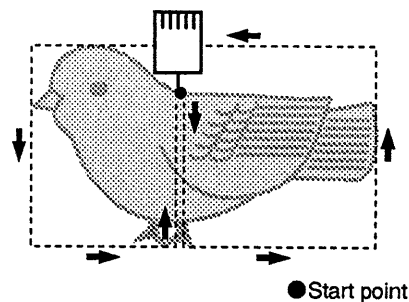
START

Press the "Start button".

Needle bar moves to the first stitch of pattern. The frame continuously moves direction of 1 ~ 7 from the start point.

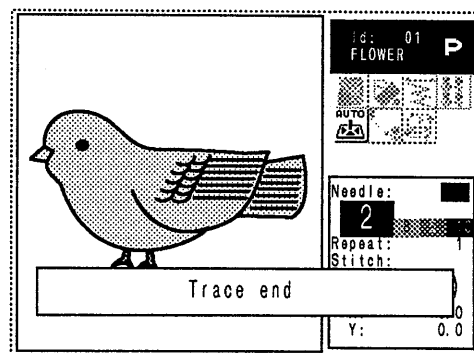
※ Even setting is needle bar selection, needle bar moves to the first stitch.

Frame moves of Outline trace

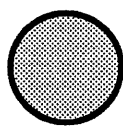


10

Displaying drawing on the right.

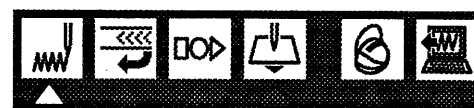


11



START

Press the "Start button".



Indicates status "Top" is not in use.



Before select to embroider, this enables to confirm where the pattern will be embroidered by the movement of frame which displays the Outline trace embroidery area of pattern.

1



Use the "Up and Down Key" and choose "22 Trace data use".



[CREATE]	
12	CHG. always cut :No
13	Stitch sweeper :No
14	Sweep length :4
15	Full length cut :No
16	Long lock stitch :No
17	All pattern disp :No
18	Data format :Aut
19	etc. func write :No
20	etc. func read :No
21	Slow (mend out) :Yes
▶22	Trace data use :No

2



Press the "Plus minus Key" and select "Yes".

[CREATE]	
12	CHG. always cut :No
13	Stitch sweeper :No
14	Sweep length :4
15	Full length cut :No
16	Long lock stitch :No
17	All pattern disp :No
18	Data format :Aut
19	etc. func write :No
20	etc. func read :No
21	Slow (mend out) :Yes
▶22	Trace data use :Yes

3



Press the "Down Key" and select "23 Trace data make".

[CREATE]	
▶23	Trace data make :No
24	Trace type :Area
25	STR. Lock stitch :Yes
26	Width data all : 0.0
27	Preview data make:Yes

4



Press the "Plus minus Key" and select "Yes".

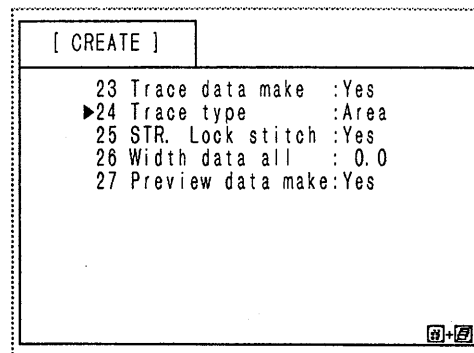
[CREATE]	
▶23	Trace data make :Yes
24	Trace type :Area
25	STR. Lock stitch :Yes
26	Width data all : 0.0
27	Preview data make:Yes



5



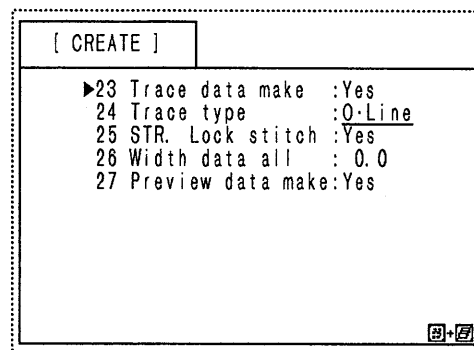
Use the "Up and Down Key" and choose "24 Trace type".



6



Press the "Plus minus Key" and select "O-Line".

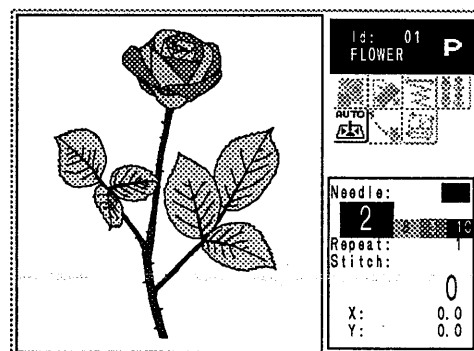


7



Press the "Escape Key".

Finish



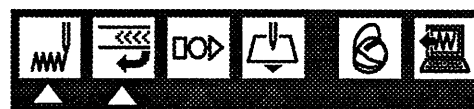
8

Reading pattern.

Refer the way of operation on page 21.00.

The status will be pattern "Top".

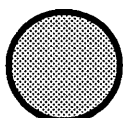
Refer the way of operation on page 9.00.



Indicates status



9

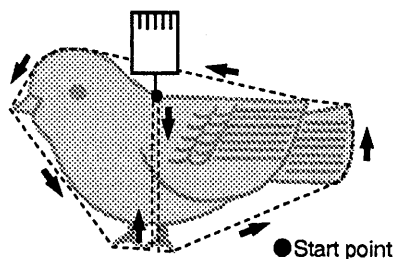

START

Press the "Start button".

Needle bar moves to the first stitch of pattern. The frame continuously moves direction of 1 ~ 10 from the start point.

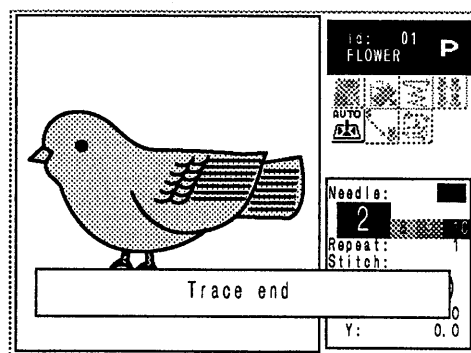
※ Even setting is needle bar selection, needle bar moves to the first stitch.

Frame moves of Outline trace

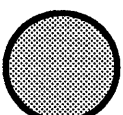


10

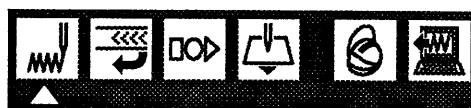
Displaying drawing on the right.



11


START

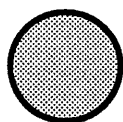
Press the "Start button".



Indicates status "Top" is not in use.

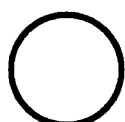
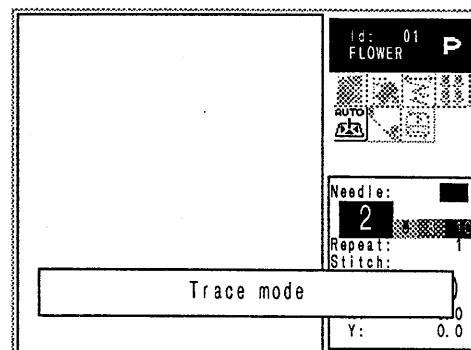


At step 10 (During tracing)



STOP

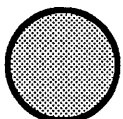
When pushing "Stop button", The message drawing on the right will be shown and you can stop trace function.



FORWARD

When pushing "Forward button", The trace forward will be made stitch by stitch.

or

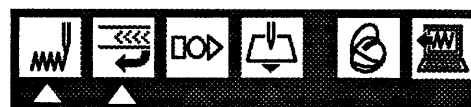


STOP

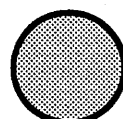
When pushing "Stop button", The trace back will be made stitch by stitch.



When pushing "Auto origin key", The frame will be return to start position of trace movement.



Indicates status.



START

If you do not want to do the trace or want to stop the trace in the midst, keep pushing the start button till the buzzer sound comes.

This explains basically order for operation of read pattern and Embroider.

1 Read the pattern data.

Disk reading

 21.00

External reading

 22.00

2 Select the pattern.

Memory pattern - selecting

 30.00

3 Set needle bar to be used.

Needle bar selection

 35.00

4 Adjust the frame to start point.

Frame move key - operate

5 Start embroidering.

Push start button

6 It will finish when complete sewing.

1. Setting of convert and repeat

1

Read the pattern data.

Disk reading

P21.00

External reading

P22.00

2

Select the pattern.

Memory pattern - selecting

P30.00

3

Set needle bar to be used.

Needle bar selection

P35.00

4

Set convert.

Setting - convert

P34.14

5

Set repeat.

Setting - repeat

P34.10

6

Adjust the frame to start point.

Frame move key - operate

7

Start embroidering.

Push start button

8

It will finish when complete sewing.

2. Setting of Scale and Offset

1 Select the pattern.

Memory pattern - selecting

 30.00

2 Set needle bar to be used.

Needle bar selection

 35.00

3 Set offset.

Offset - teaching input

 36.00

4 Set scale.

Setting - scale design

 34.00

5 Start embroidering.

Push start button

6 It will finish when complete sewing.

3. Example of practical use

1

Set basic function of the machine.

Function setting P24.00

2

Read the pattern data.

Disk reading P21.00*External reading* P22.00

3

Select the pattern.

Memory pattern - selecting P30.00

4

Set needle bar to be used.

Needle bar selection P35.00

5

Set auto origin.

Setting - auto origin P34.16

6

Register frame position.

Locate - entry P25.00

7

Start embroidering.

Push start button

8

It will finish when complete sewing.

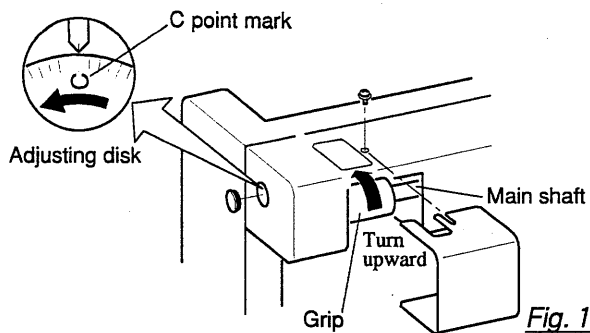


Fig. 1

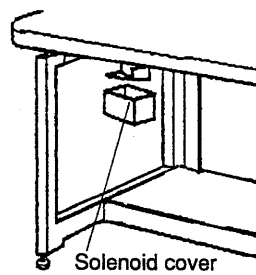


Fig. 2

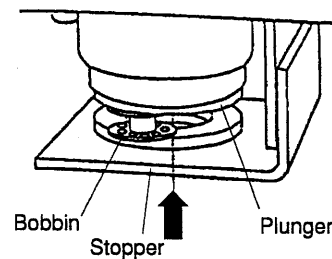


Fig. 3

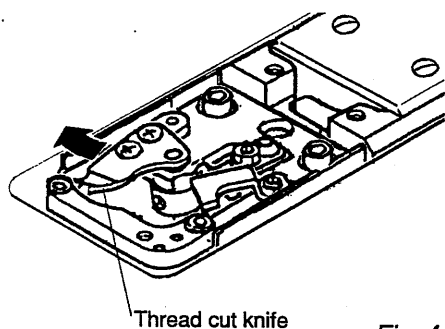


Fig. 4

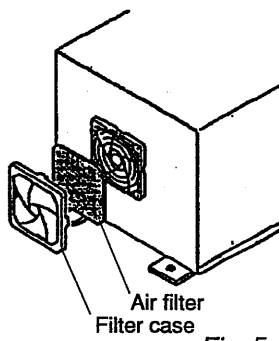
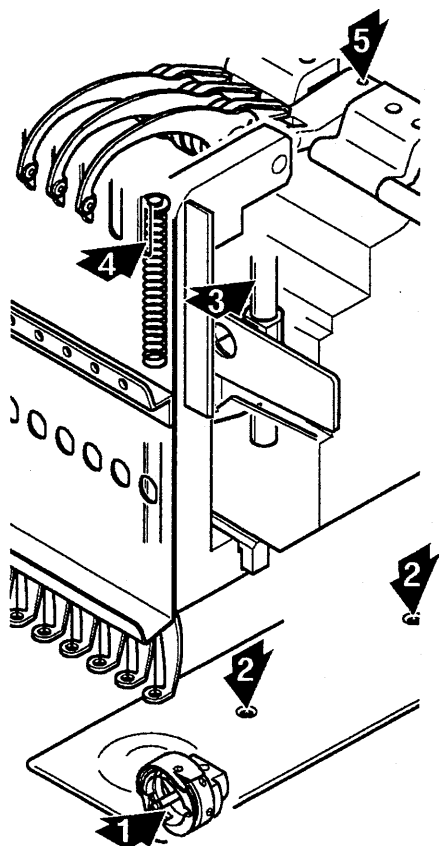


Fig. 5

Parts to maintain	Requirements	Method
Thread cutter	Once every three days	<ol style="list-style-type: none"> 1. Please turn main shaft toward an arrow mark as shown in Fig. 1 and set to 10° further from "C" on the adjusting disc. Fig. 1 2. Please remove the solenoid cover on the left side under the machine table. (2 screws) Fig. 2 3. Please raise the plunger with hand from hole in the center of solenoid stopper and insert bobbin between the plunger and the stopper. Fig. 3 4. Remove the needle plate. 5. Please turn the main shaft toward an arrow mark and open cutting knife as shown in Fig. 4. Fig. 1, Fig. 4 6. Please clean lints from thread cut knife with brush etc. 7. Please turn main shaft toward an arrow mark as shown in Fig. 1 and set to 10° further from "C" on the adjusting disc. Fig. 1 8. Please remove the bobbin from the solenoid. 9. Please place the solenoid cover and the needle plate where they were. 10. Please turn main shaft toward an arrow mark and set to "C" on the adjusting disc.
Air filter for main unit	Once a week (Every, it's very dusty)	<p>Please clean dust on air filter.</p> <p>(When you remove air filter, please remove filter case.) Fig. 5</p>
Rotary hook	Everyday before use	Stop the machine and clean thread wastes and dusts stuck to rotary hook with a small brush.



Please lubricate specified oil periodically according to instruction stated below.

If the machine keeps running without oiling, it will cause increased noise and wear, and will produce burning. Waste of fabrics and lints will gather in and around rotary hooks. Rotary hooks will have scratches that cause threads break. Please clean lints with brush and run the machine idly for 2~3 minutes.

No	Place to oil	Time to oil	Specified oil
1	Rotary hook (Lubricate oil slightly with a small brush between outer and inner rotary hooks.)	Once a days	Sewing machine oil
2	Rotary hook shaft bushing	Once a week	Sewing machine oil
3◆	Slide shaft		
4	Needle bar		
5◆	Cam lever		

◆In case of oiling slide shaft and cam lever, please move moving head to the left and set needle No. to 1.

※ Too much oil may stain fabrics and threads.

In case something wrong happened in the machine when running it, please refer to the following table for measures. Press **[C]**(clear) on the control box to release an error and fix according to the list below. When errors occur frequently, contact dealer.

Code	Error	Measures
001 002 004	Circuit board : Abnormality was detected in control circuit board. Power source : Power failure or lowered voltage System memory : System memory is out of order	Turn off power source once and turn on again.
015	Inverter trip : Over-load on main shaft motor, short circuit, trouble of main shaft drive unit, main shaft motor related abnormality	Cut power and turn main shaft with hand. If no abnormality is found, turn on again.
016	Alarm X unit : X axis motor related trouble Over-load on X carriage motor, short circuit, trouble of motor drive unit	Turn power off, move drive frame and drive motor with a hand. If no abnormality is found, turn power on again.
017	Alarm Y unit : Y axis motor related trouble Over-load on Y carriage motor, short circuit, trouble of motor drive unit	
018	Main shaft : Main shaft doesn't turn	Make sure if main shaft or drives are normal.
020	Needle detect : Needle position is not detected. Needle bar selection unit is off its stop position. Trouble of position detecting circuit board	Turn needle bar selection unit by spanner so that the unit comes within moving range (Be careful to needle position). At this time, set unit to where indication lamp of needle position center lights. Fig. 1
021 022	Needle move : Motor for needle bar selection unit stopped halfway. No movement owing to malfunction of thread take-up lever or trouble of position detecting circuit board.	After fixing malfunction of needle and thread take-up lever, turn needle bar selection unit by spanner so that the unit comes within moving range. At this time, set unit to where indication lamp of needle position center lights. Fig. 1
024 025 026	Needle center : Needle bar stop position is off center Needle bar stop position is out of place. Needle over : Needle number not existing in the machine was specified. Needle differ : Needle number at time of finish and start of operation differs. It was changed to correct one.	Turn needle bar selection unit by spanner and set to where indication lamp of needle position center lights.
030	Slow mismatch : Improper speed adjustment at low speed. Speed doesn't decrease below 100rpm at low speed.	Necessary to adjust or exchange speed control VR on CPU circuit board. Contact dealer.
050	C point : Stop position of main shaft is out of its place	Turn grip on main shaft upward one time and set to C point mark. Fig. 2
051	L sensor : Trouble of timing detecting board, stain of photo sensor [PH1](L.P.) Malfunction of "Lowest needle position" sensor on detecting circuit board. Improper adjustment of slit plate.	Check if photo sensor is stained or the slit plate contacts sensor.
052	C sensor : Trouble of timing detecting board, stain of photo sensor [PH2](C.P.) Malfunction of "Color change position" sensor on timing detecting circuit board.	
060	X limit : Frame moved beyond sewing area side-wise	Return frame within sewing area by frame move key. Check pattern size and contents of setting.
061	Y limit : Frame moved beyond sewing area length-wise	

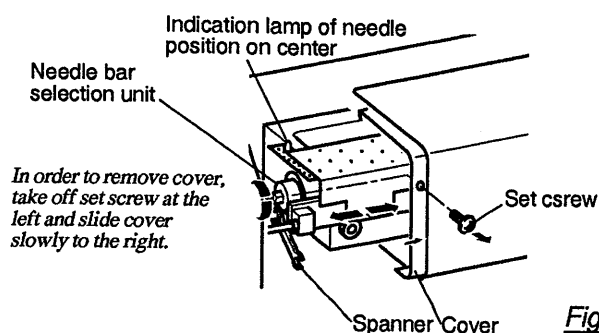


Fig. 1

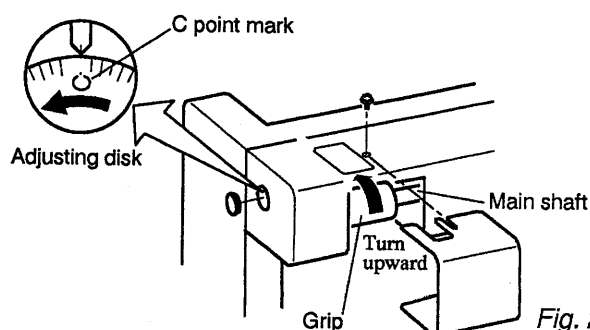
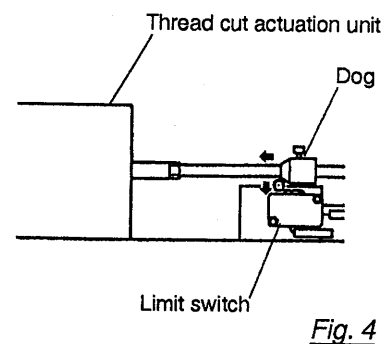
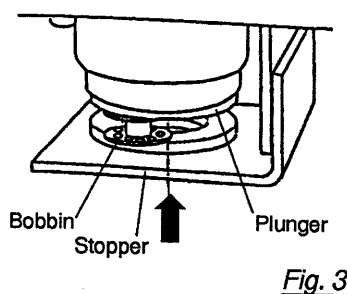
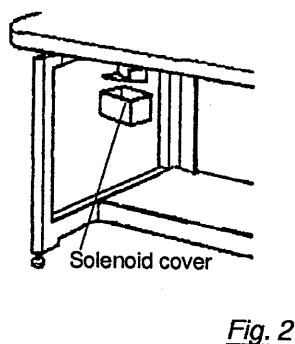
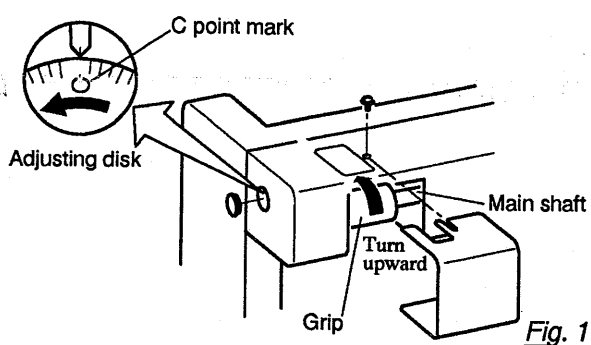


Fig. 2

Code	Error	Measures
070	Safety sensor : Safety sensor activated by concerning danger.	Be confirmed of nothing is put around the safety sensor. Confirm the safety of embroidery area.
090	Miss reception : Error occurred during communication of data.	Read pattern data again from the first.
091	No send : Data don't get in for over 10 seconds.	
102	Tape set : While in reading, tape holder get out of place.	Read tape again from the first.
103	Tape format : The machine can't judge format of pattern data.	Check tape format of tape or data format of pattern data. In relation to setting of pattern data reading, set tape format or data format properly.
104	Miss function : Timing to read tape doesn't conform.	Read tape again from the first.
105	Dual function : One stitch data on tape has more than 2 functions.	Check if tape is OK or not. Read tape again from the first.
106	No function : Distance between start point of reading and start point of pattern is too long when reading.	Leave length of less than 1 m between reading unit of tape reader and first part of tape data.
108	Improper read : While reading pattern data, there accrued error in internal processing.	Read pattern data again from the first.
110	Memory full : While reading tape, memory exceeded its capacity.	Delete unnecessary patterns and read from the outset.
111	change over : While reading pattern data, the frequency of color change (color No.) exceeded 250 times.	Divide pattern data and reduce frequency of color change of one pattern to less than 250 times.
112	Data error : Pattern data of pattern to be embroidered is damaged.	Read pattern data again from the first.
114	Id over : The number of Pattern in memory has reached maximum of 99.	Delete unnecessary patterns and read.
116	Not found Id : Specified pattern doesn't exist.	Check setting.
118	Trace data over : The stitch number counts over 1024 stitches during preparing Trace data.	Set Embroidery area of pattern data within 2m(length wise)×2m (side wise)
120	Memory error : It became impossible to retain contents of memory.	If this condition occurs frequently, CPU circuit board is out of order.
130	Disk error : Incapable of disposing of data disk continuously.	Turn off power source once and turn it on again. If not reinstated, it will be trouble of disk drive unit.
131	Disk no ready : Disk is not set.	Check if data disk is properly set.
132	Write protect : Disk write protect.	Make write protect tab in data disk "Writing possible".
133	Bad disk : Data disk is not proper or broken.	Data disk that disk drive unit can't read or broken data disk or data disk not initialized is set.
134	Disk unit : Trouble in disk drive unit.	Turn off power source once and turn it on again. If not recovered, it will be trouble in disk drive unit.
140	Entry over : Capacity is full for registering patterns.(refer to page of "SPECIFICATIONS")	Clear unnecessary patterns. Or use other data disk.
141	Not found name : Designated pattern is not found.	Data disk is not correct.
142	Disk full : Capacity is full for storing. (refer to page of "SPECIFICATIONS")	Clear unnecessary patterns. Or use other data disk.
143	Multi name : if there is multi name of data when writing.	Change name, write in another disk. (Over write)

Code	Error	Measures
190	Cut blade : Thread cut knife is not at stop position	<p>Please check if the stop position limit switch on the thread cut actuation unit on the left side under the machine table contacts the dog. Fig. 4</p> <p>When the stop position limit switch doesn't contact the dog, please return stop position to where it was, in the following manner.</p> <ol style="list-style-type: none"> 1. Please remove the solenoid cover on the left side under the machine table. (2 screws) Fig. 2 2. While raising the plunger from a hole in the center of the solenoid stopper, turn the main shaft toward an arrow mark. <p>Please turn the main shaft to where there appears a gap for bobbin to get in between plunger and stopper. Fig. 1, Fig. 3</p> <ol style="list-style-type: none"> 3. Please insert the bobbin between the plunger and the stopper. Fig. 3 4. Please turn the main shaft toward an arrow mark and set to 10° further from "C" on the adjusting disc. At this moment, when you turn the main shaft and feel abnormally heavy, please remove the needle plate and check the thread cut knife. Fig. 1 5. Please remove the bobbin from the solenoid. 6. Please place the solenoid cover and the needle plate where they were. 7. Please turn the main shaft toward an arrow mark and set to "C" on the adjusting disc.
193	Catcher : Thread catch hook is off its position Limit switch to detect position is not "OFF"	<ol style="list-style-type: none"> 1. Check if there is a head that does not cut thread. If thread is not cut, cut it and return thread catch hook. 2. If threads are all cut, check if thread catch hook on each head has returned to its position completely.
200	Font data : Found the something wrong of the data during reading user language from disk	Examine the disk use the normal data disk.
201	Transmit font : It failed to send the user language data to LCD unit	If it happens often, please contact agent
202	Install font : It failed to send the user language data to Flash ROM on LCD unit	If it happens often, please contact agent



If you embroider patterns dense in stitches like wappen to the brim of border frame, front part of border frame is pulled inside by shrinkage of fabric and there is a chance that front part of border frame bends as shown in Fig.1.

If front part of border frame bends, it causes off registration.

If you embroider under such condition, please fix center support in the center of border frame. (Except model HCGB-1*02, 1*04)

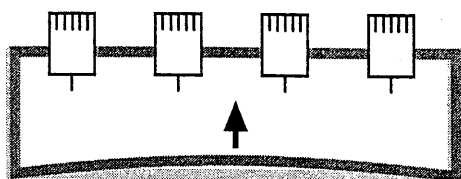


Fig. 1

⚠ If you fix center support in border frame, neighboring area is reduced by 35mm as shown.

If you misplace pattern, needle and presser foot hit border frame and cause breakage. Please pay care in this respect.

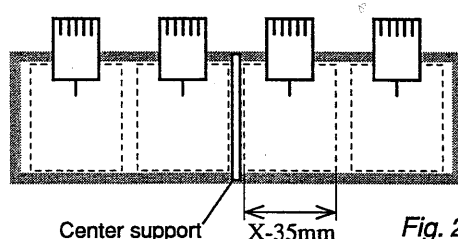
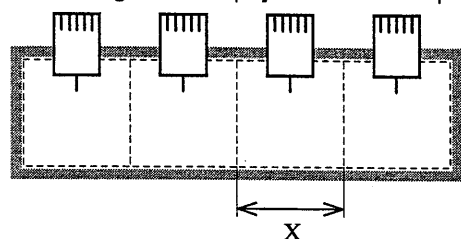


Fig. 2

How to fix

1 Spread fabric in border frame and hold it with clips.

2 As shown in Fig. 3, fix center support in the center of border frame with set screws. At this moment, long fixing hole should face toward you.

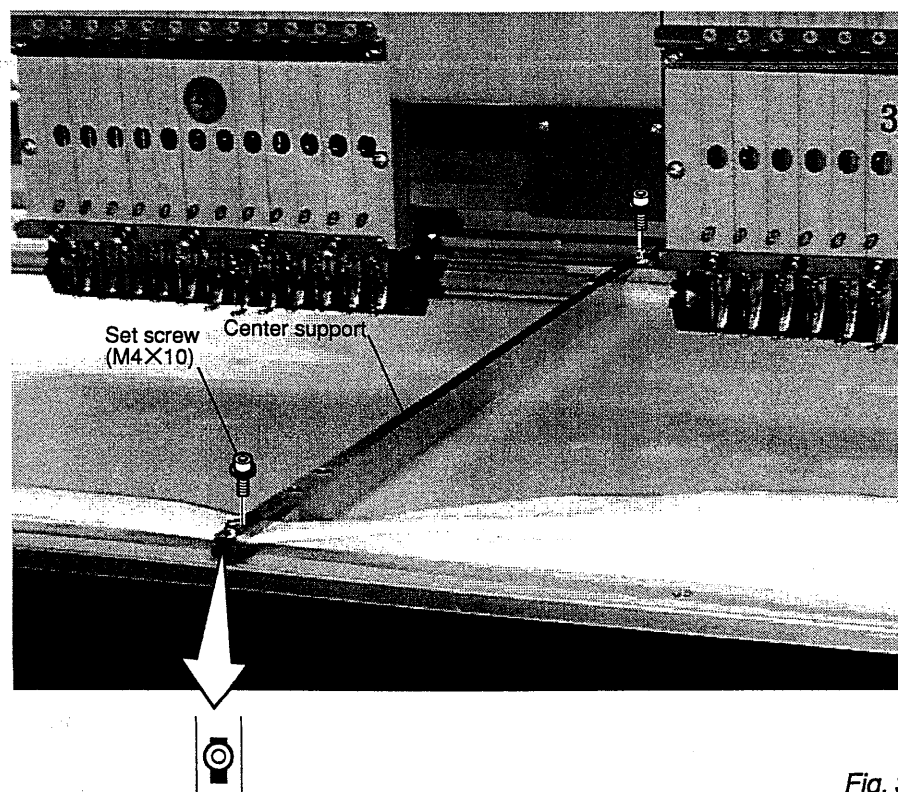


Fig. 3

End

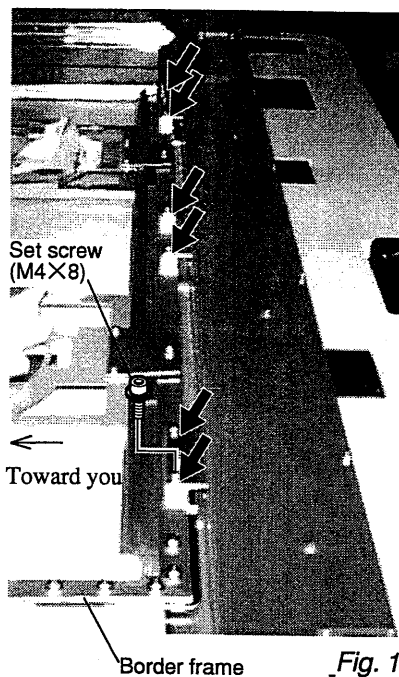


Fig. 1

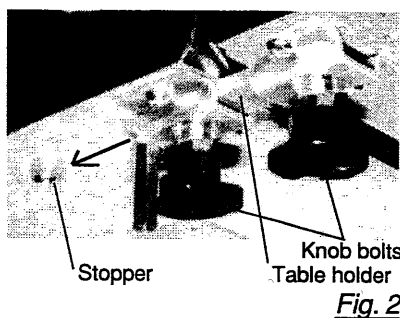


Fig. 2

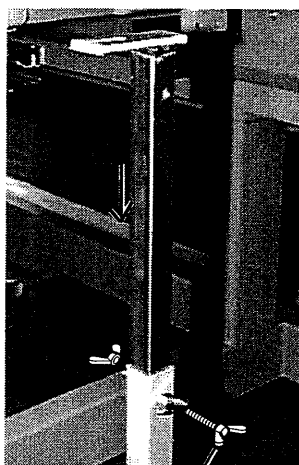


Fig. 4

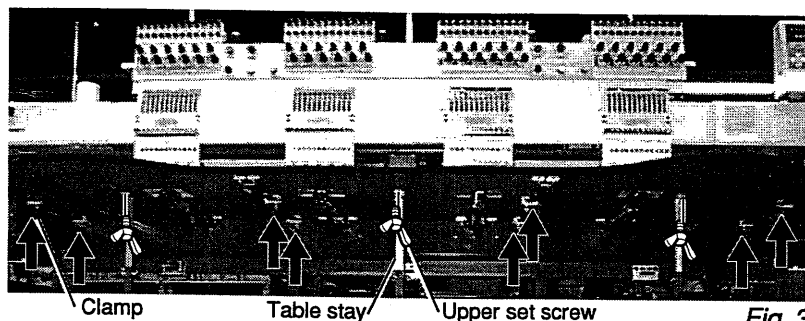


Fig. 3

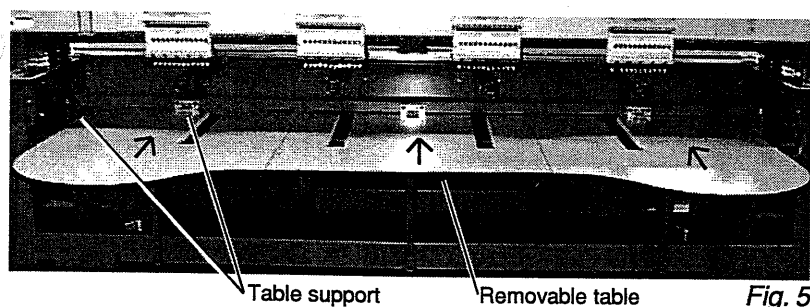


Fig. 5

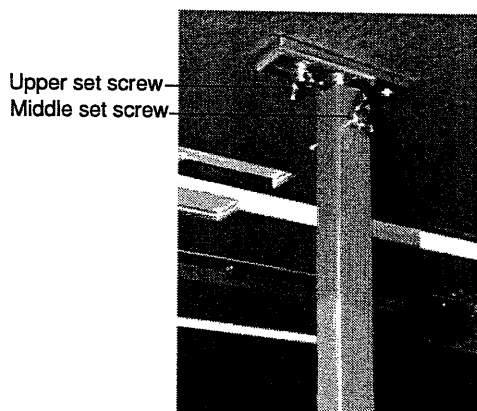


Fig. 6

Removing

When fixing the tubular frame and the cap frame, please take off the removable table in the following manner.

- 1 Make sure that power source of the machine is off.
- 2 Make sure that all rotary hook covers are shut.
 - ※ If rotary hook cover is not shut, the table will hit rotary hook and damage it.
- 3 Remove set screw indicated in arrow mark on back of the border frame and take out border frame slowly toward you as shown in Fig. 1.
- 4 Loosen all of the knob bolts on the reverse side of the table slightly, pull the table holder till it hits stopper as shown in Fig. 2.
- 5 Open all clumps indicated by an arrow mark as shown in Fig. 3.
- 6 Unscrew set screws on table stay in order of center, left and right, then pull out removable table slowly toward you.
 - ⚠ To prevent the table from falling down, be sure to take off set screws immediately before pulling out the table.
- 7 Remove middle set screw on table stay, shrink table stay as illustrated in Fig. 4 and insert middle set screw.
- 8 As shown in Fig. 5, insert removable table under table support in order of left, right and center and slide it deep inside. Fix set screws on each table.
 - ⚠ To prevent removable table from falling down, fix screws immediately.
- 9 As shown in Fig. 6, tighten middle set screw, shut all clamps, insert table stay and tighten knob bolts.

End

Fixing

Please fix in reverse order of removing.

- ※ Insert set screw lightly as shown in Fig. 1 for mounting border frame and tighten set screw pulling border frame toward an arrow mark (to your side).

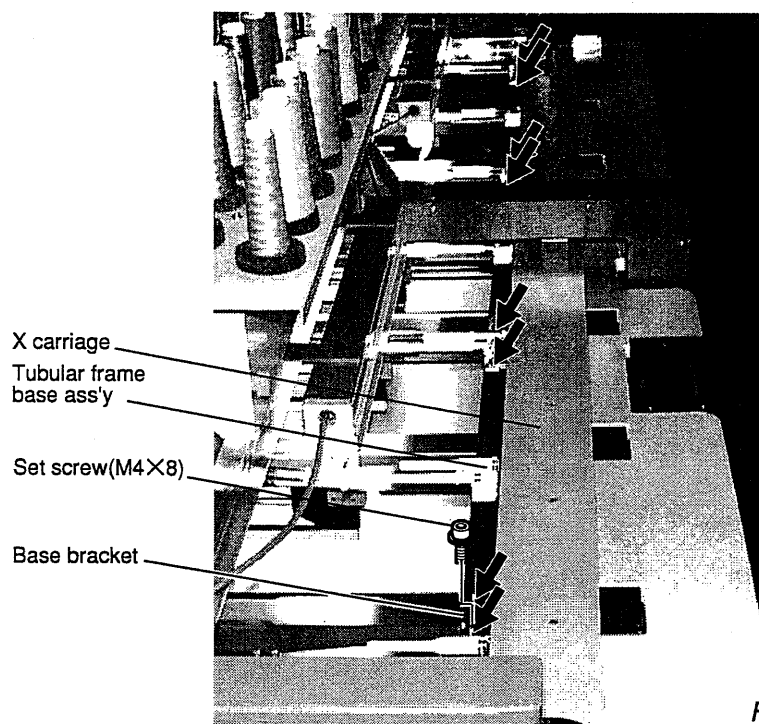


Fig. 1

- 1 According to page of "REMOVING OF REMOVABLE TABLE", take off the removable table.
- 2 Move X carriage to a position similar to Fig. 1.
- 3 Fix tubular frame base ass'y under base bracket of X carriage with set screw as shown in Fig. 1.

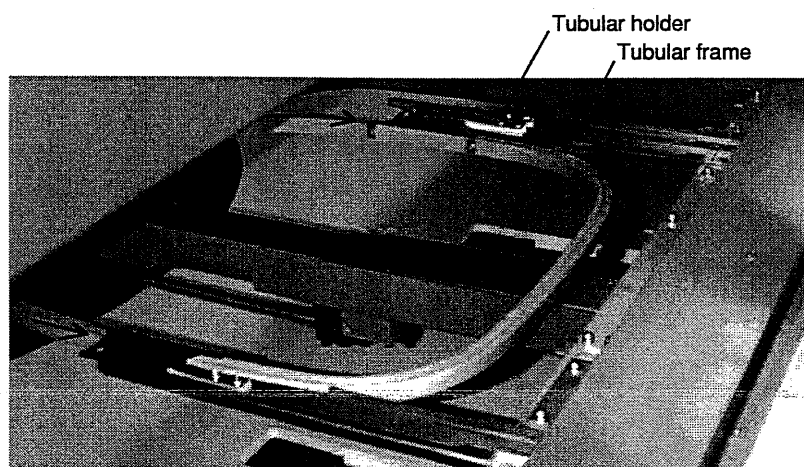


Fig. 2

- 4 Place each of tubular frame in tubular frame holder as shown in Fig. 2 and confirm that there is no malfunction.

End

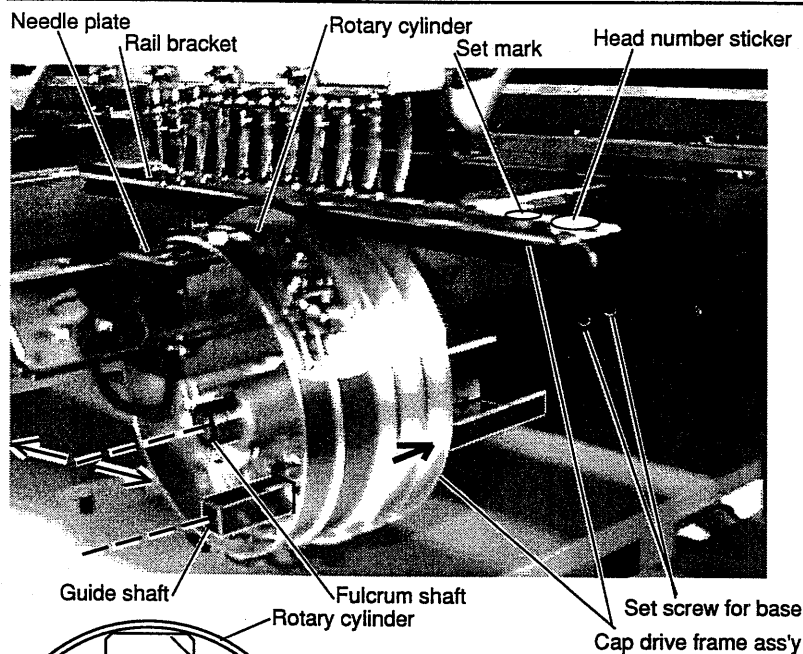


Fig. 1

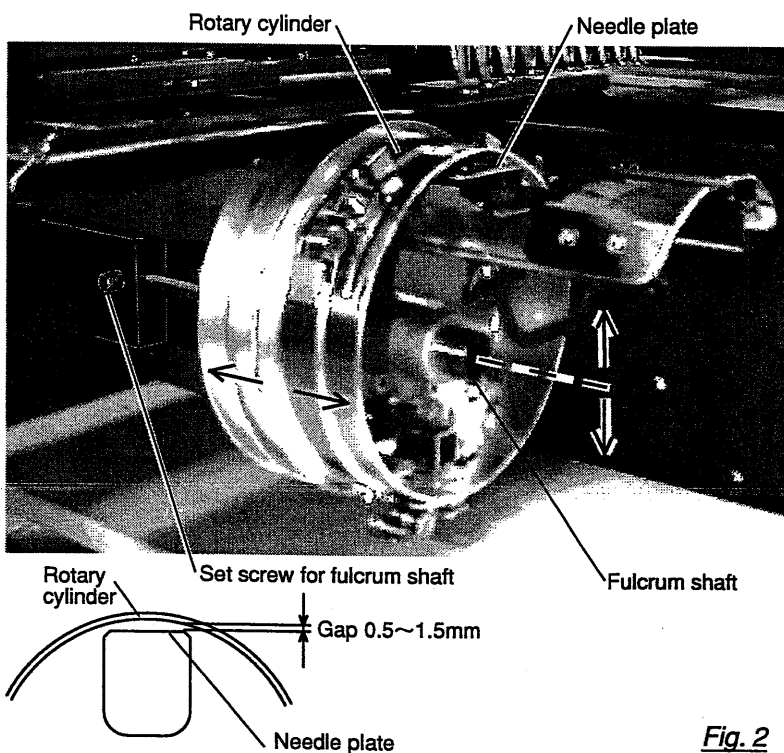
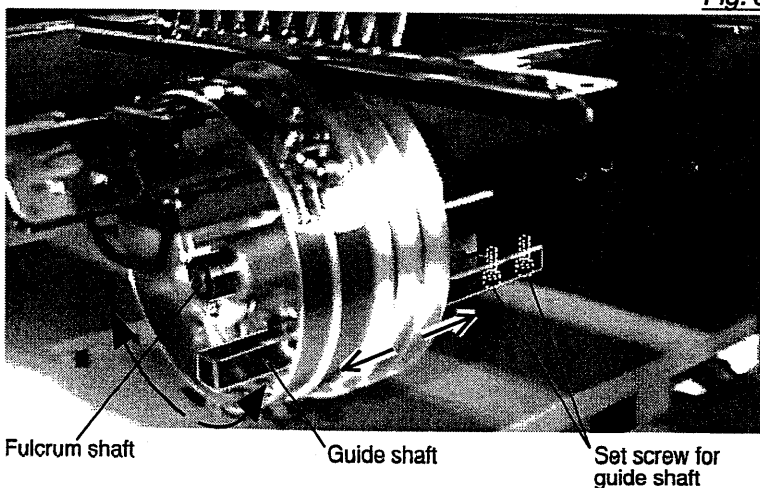


Fig. 2

Fig. 3



Fulcrum shaft is adjusted together with cap drive frame as a set when the machine leaves the factory.

When you mount cap drive frame, skip this page and proceed to "Mounting of cap drive frame" on the next pages.

However if you moved fulcrum shaft for some reason or if you exchanged fulcrum shaft or cap drive frame, adjust fulcrum shaft in the following manner.

※ When you hold cap drive frame assembly, be sure to hold part of rotary cylinder.

If you hold rail bracket, fingers will be put between rail bracket and notary cylinder or rail bracket will get out of place.

1. As shown in Fig. 1, insert cap drive frame assembly with head number sticker labeled for respective head in fulcrum shaft and guile shaft.
2. As shown in Fig. 1, place cap drive frame assembly with set screw for base so that upper inside of rotary cylinder hits needle plate without producing gap.
3. As shown in Fig. 2, move fulcrum shaft up and down with hand and adjust so that gap between upper inside of rotary cylinder and needle plate comes to gap shown in Fig. and fix with set screw for fulcrum shaft.
- ※ Move rotary cylinder back and forth to confirm that gap in front and back of needle plate is same.
4. As shown in Fig. 3, move rotary cylinder back and forth with hand within limit of length of fulcrum shaft to confirm smooth movement. If it doesn't have smooth move, loosen set screw for guide shaft on guide shaft slightly to adjust, then fix after adjustment.
5. When you finished adjustment of fulcrum shaft by each head, remove cap drive frame assembly from fulcrum shaft. After you finished adjustment of fulcrum shaft an all heads, proceed to "Mounting of cap drive frame" on the next page.

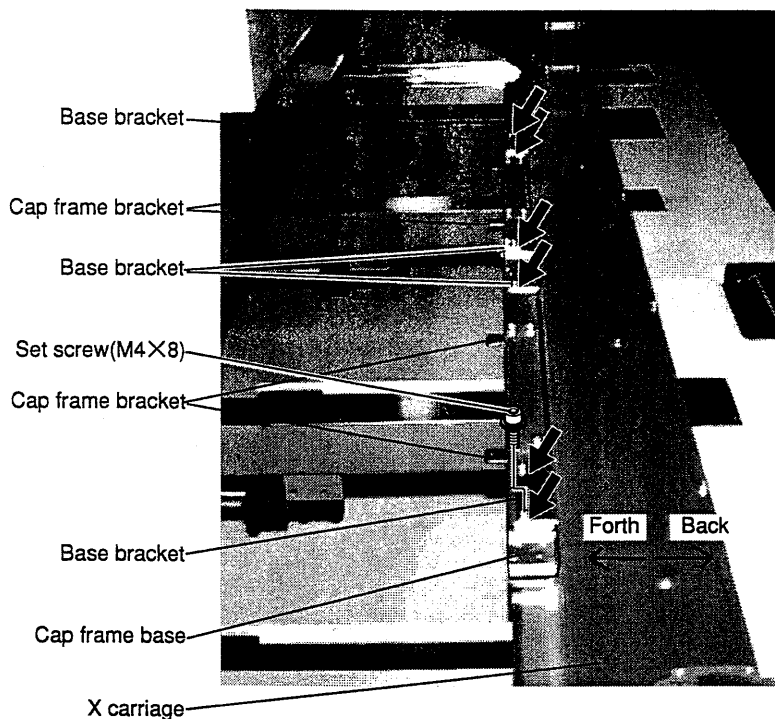


Fig. 1

After you finished adjustment of fulcrum shaft, mount cap drive frame assembly in the following manner.

1. According to page of "REMOVING OF REMOVABLE TABLE", take off the removable table.
2. Move X carriage to a position similar to Fig. 1.
3. Fix cap frame base under base bracket of X carriage with set screw as shown in Fig. 1.
4. Move X carriage back and forth with hand and remember weight before mounting cap drive frame assembly.

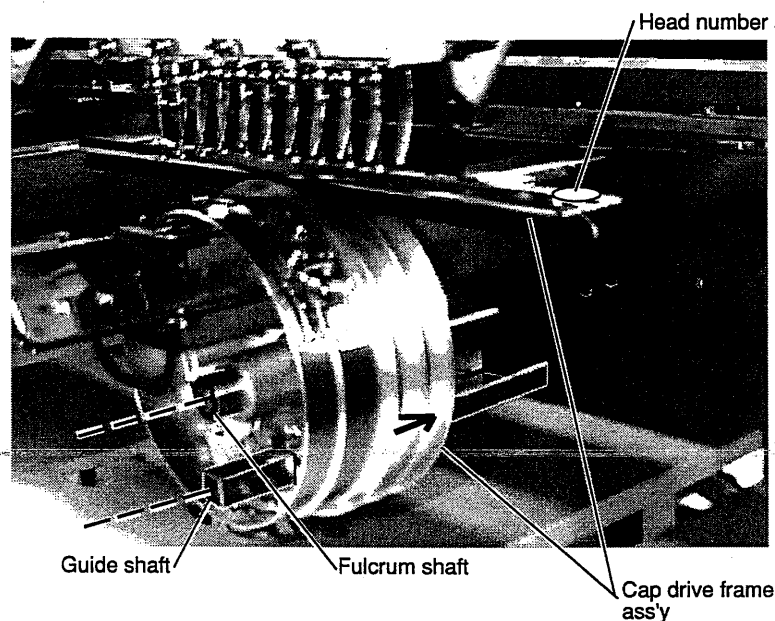


Fig. 2

5. Move X carriage to a position shown in Fig. 3.
6. As shown in Fig. 2, insert cap drive frame assembly with head number sticker labeled for respective head in fulcrum shaft and guile shaft. This work requires firstly to insert drive frame assembly for even numbered heads and secondly insert cap drive frame assembly for odd numbered heads.

※ When you hold cap drive frame assembly, be sure to hold part of rotary cylinder.

If you hold rail bracket, fingers will be pout between rail bracket and notary cylinder or rail bracket will get out of place.

※ For machines with needle distance of 360mm, if you insert cap drive frame assembly for odd numbered heads firstly, you can't insert cap drive frame assembly for even numbered heads.

7. Move drive frame assembly toward X carriage to place it on cap frame bracket, then tighten with set screw lightly and fix. This work also requires firstly to insert even numbered leads, then go to odd numbered heads.

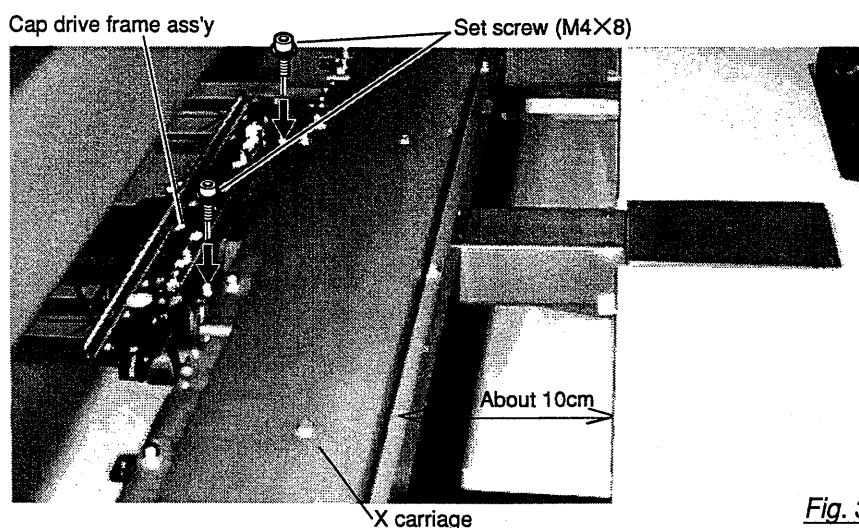


Fig. 3

MOUNTING OF CAP DRIVE FRAME

64.0

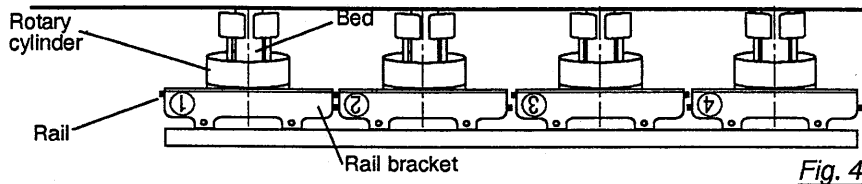
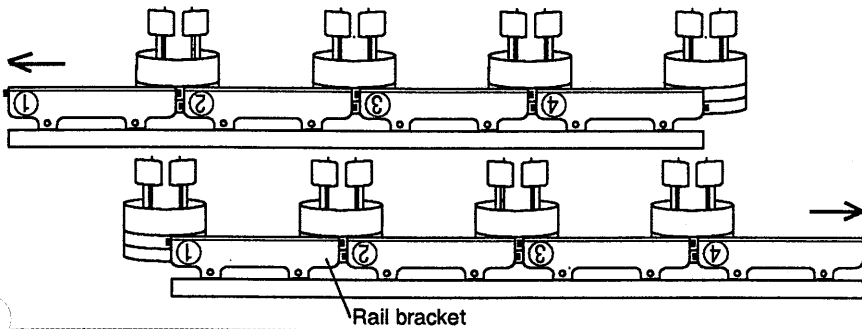


Fig. 4

8. As shown in Fig. 4, move rail bracket left and right with hand to get center of rail bracket came to about center of bed. Confirm that rails of rail bracket are in grooves in front and back of rotary cylinder.



9. As shown in Fig. 5, move rail bracket fully to the right side or left side to confirm that all rails are in grooves in front and back of rotary cylinder.

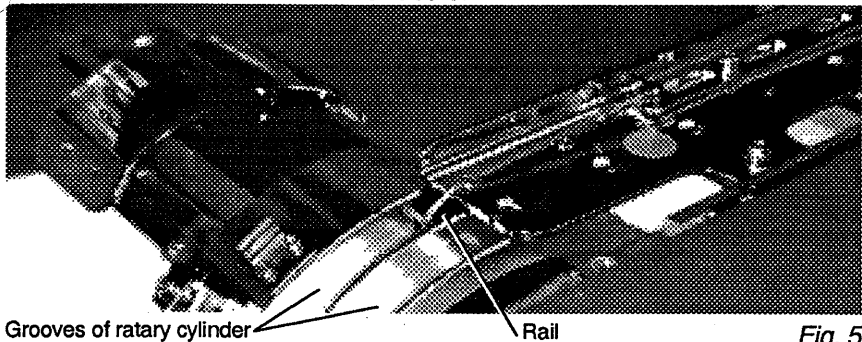


Fig. 5

10. Tighten set screw on cap drive frame assembly firmly, which was once lightly tightened in 7. above. At this moment, move rail bracket toward X carriage as shown in Fig. 6, then tighten fixing screw proving rail bracket further toward right.

11. As shown it Fig. 6, move X carriage back and forth and confirm If you feel X carriage extremely heavy or if it doesn't get caught, comparing it before you placed cap drive frame assembly. If you have some problem, repeat this work from the outset.

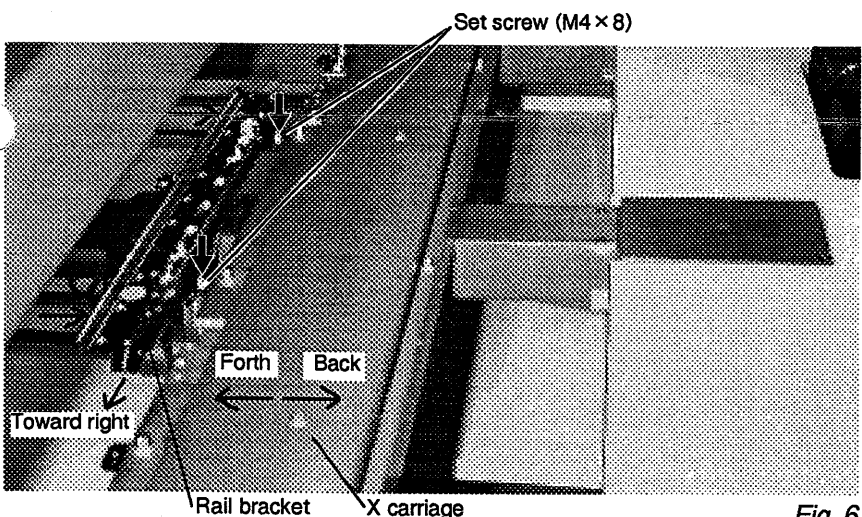


Fig. 6

<END>

Adjustment

When you fix cap to cap hold frame, please adjust in the following manner:

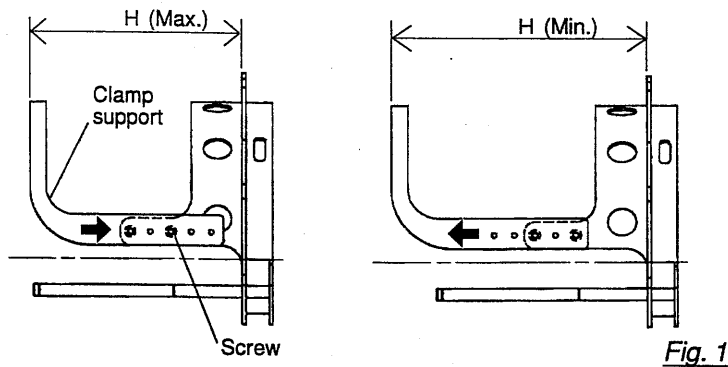


Fig. 1

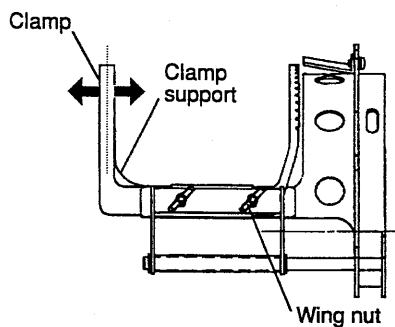


Fig. 2

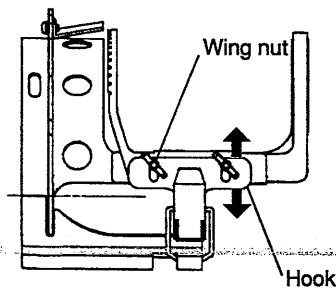


Fig. 3

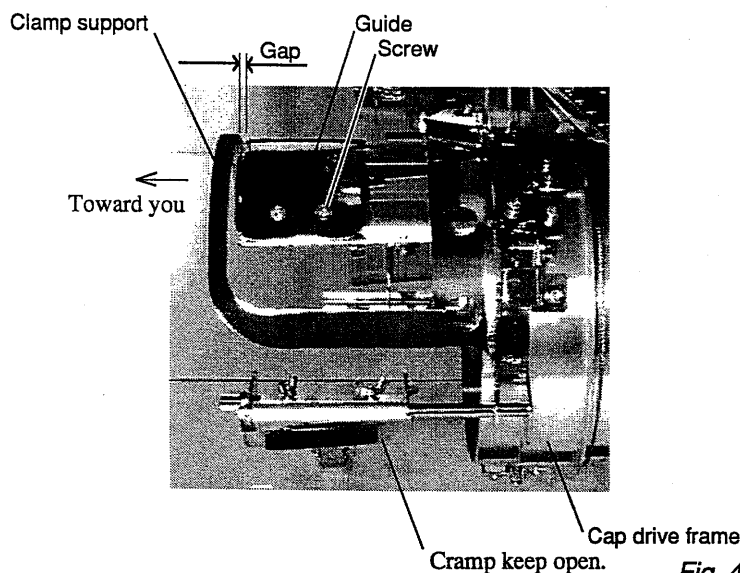


Fig. 4

- 1 Adjust position of clamp support by height of cap. (Fig. 1)
Adjust position by removing inner screws at left and right.

⚠ If you adjust position of clamp support and shorten distance H, embroidery area will be reduced in Y direction (depth).

- 2 Set position of clamp to clamp support to adjust. (Fig. 2)
Loosen wing nuts at left and right to adjust.

- 3 Adjust up and down position of hook according to thickness of cap to adjust clamp tension. At this moment, hook should open and close without feeling heavy.
(For adjustment, proceed to operation 5 according to "Setting of caps" on later page).
Use wing nuts for adjustment. (Fig. 3)

⚠ If you feel hook extremely heavy in opening and closing, there is a case that cap hold frame will lose its shape or damage.

- 4 Fix cap hold frame without cap to cap drive frame on the machine.
(Please refer to operation 8 "Setting of caps" on later page for setting).
At this moment, adjust so that guide on cap drive frame doesn't strike clamp support and gap is reduced as small as possible.
Remove screws at left and right to adjust. (Fig. 4)

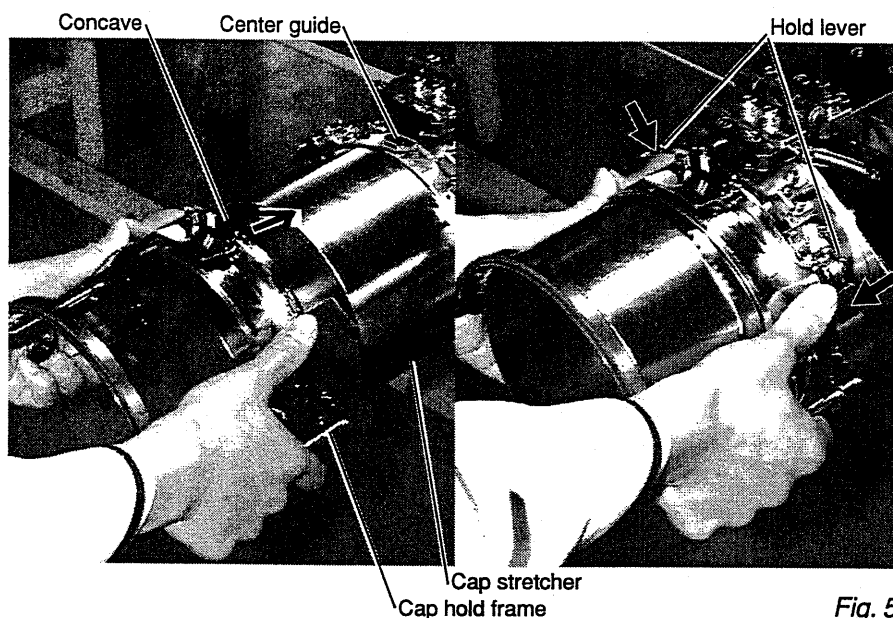


Fig. 5

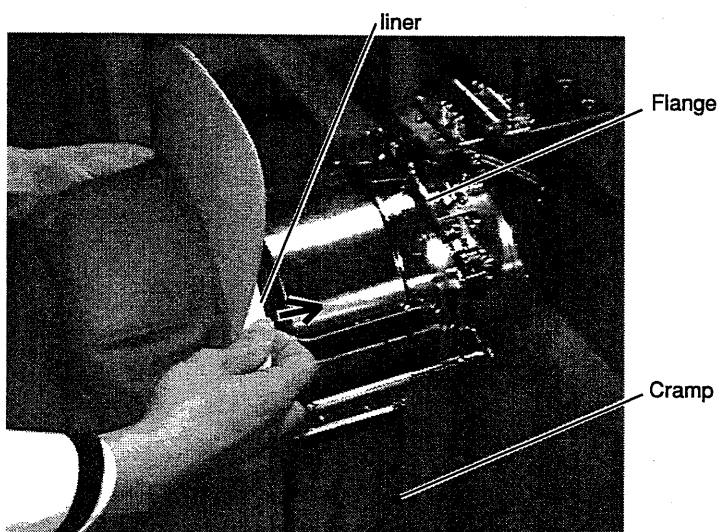


Fig. 6

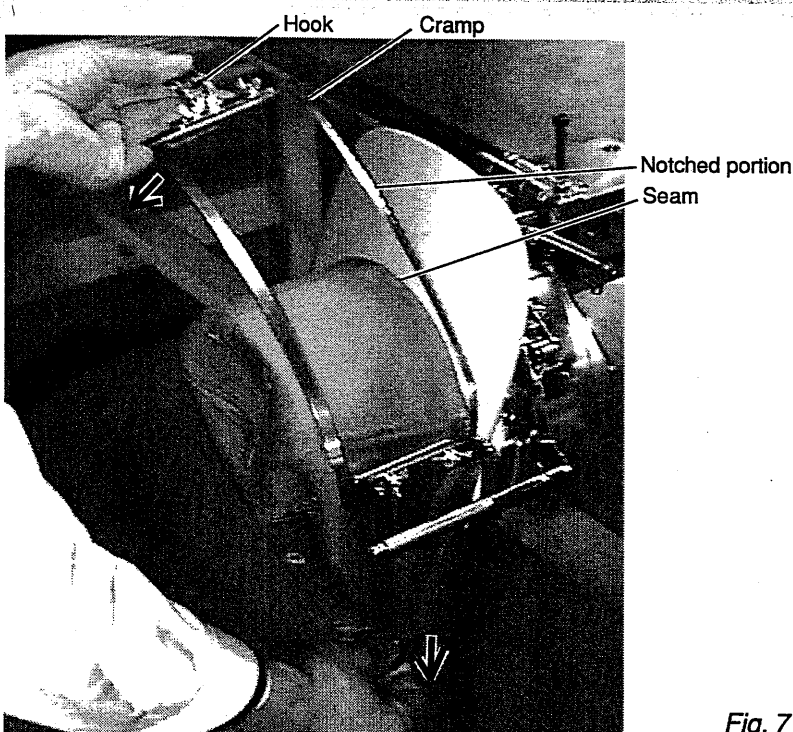


Fig. 7

Setting of caps

- 1 Place cap stretcher securely on sturdy work bench.
 ※ You can use cap stretcher for wide cap hold frame, but use of semi-wide cap hold frame that is more workability is recommendable.
- 2 As shown in Fig. 5, hold cap hold frame with both hands and place on cap stretcher. By pushing hold lever at 2 places in arrow marks with fingers, place cap hold frame so that center guide of cap stretcher gets in concave of upper cap hold frame.
 ※ Confirm that cap holder frame is securely placed on cap stretcher without gap.
- 3 As shown in Fig. 6, remove cramp and keep open to the right.
- 4 Extend fore half of liner inside cap to place on cap stretcher. At this moment, place it so that tip of liner contacts flange of cap hold frame.
 ※ Please place 2 sheets of nonwoven fabric (backing) of standard thickness under fabric for better sewing finish.
- 5 As shown in Fig. 7, pull hind part of cap and get it caught on hook by smoothing out creases on cap. At this moment, set center of cap to center mark on cap hold frame so that notched portion of clamp gets into seam of visor.
- 6 Close hook so as for cap not to get creased.
 ※ If you can't get rid of creases on cap, adjust cap hold frame again according to "Adjustment" on previous page.

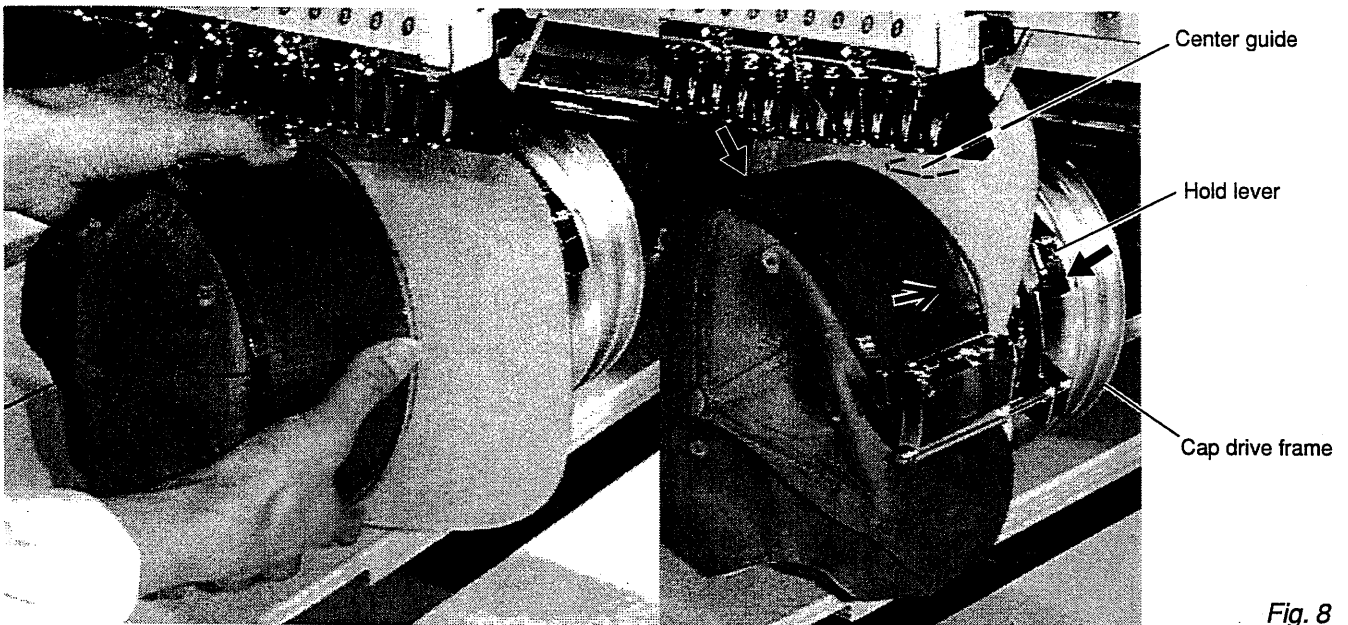


Fig. 8

7 Remove cap hold frame with cap on from cap stretcher.

8 As shown in Fig. 8, place cap frame holder with cap on cap drive frame assembly of embroidery machine. By pushing holder lever at 2 places in arrow marks with fingers, place cap hold frame with cap on so that center guide of drive frame assembly gets in concave of upper cap hold frame.

※ Confirm that cap holder frame is firmly plated on cap drive frame assembly without gap.

In case there is gap between cap hold frame and cap drive frame of hold lever doesn't go into hole on cap hold frame, loosen set screw on hold lever to adjust.

End

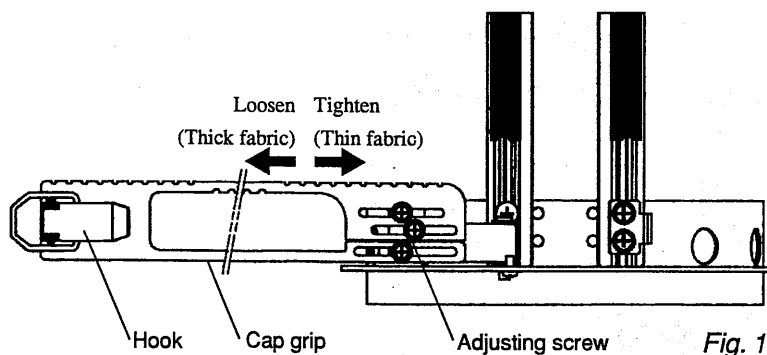


Fig. 1

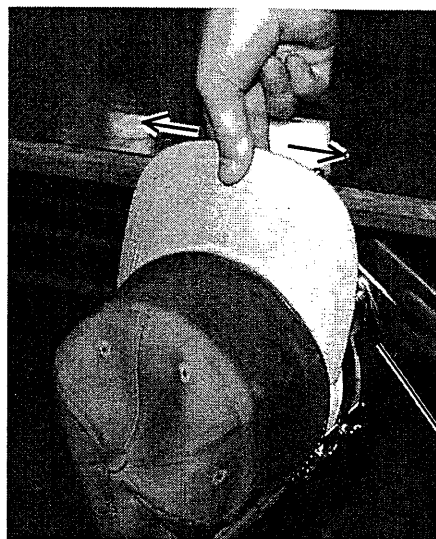


Fig. 2

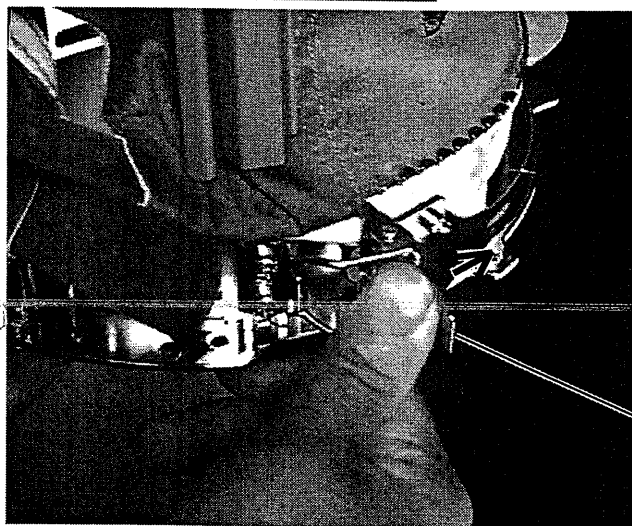


Fig. 3

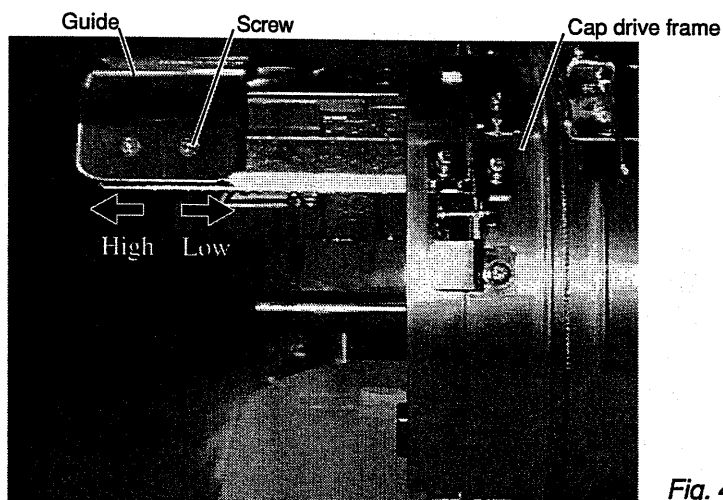


Fig. 4

Adjustment

When you fix cap to cap hold frame, please adjust in the following manner:

⚠ Make sure to do the adjustment of the cap hold frame. If it is not adjusted properly, it may cause the deformity, damage of the cap, damage of the cap hold frame and break of the cap grip.

After adjusting the cap hold frame, make sure the cap to be set properly.

1 Adjust the length of the cap grip to suit the thickness of the fabric. At this moment, hook should open and close without feeling heavy.
(For the adjustment follow the next page "WIDE CAP HOLD FRAME" item 1 to 5.)
The adjustment to be done by three adjusting screws. (Fig. 1)

● If the cap grip is loose, even after hooked the cap is not fixed tightly and the cap is moving. (Fig. 2)

● If the cap grip is too tight, you feel heavy when it is hooked and the grip bites into the cap too much. (Fig. 3)

⚠ If you feel hook extremely heavy in opening and closing, there is a case that cap hold frame will lose its shape or damage.

2 Adjust the guide position to suit the height of the cap.
Remove screws at left and right to adjust. (Fig. 4)

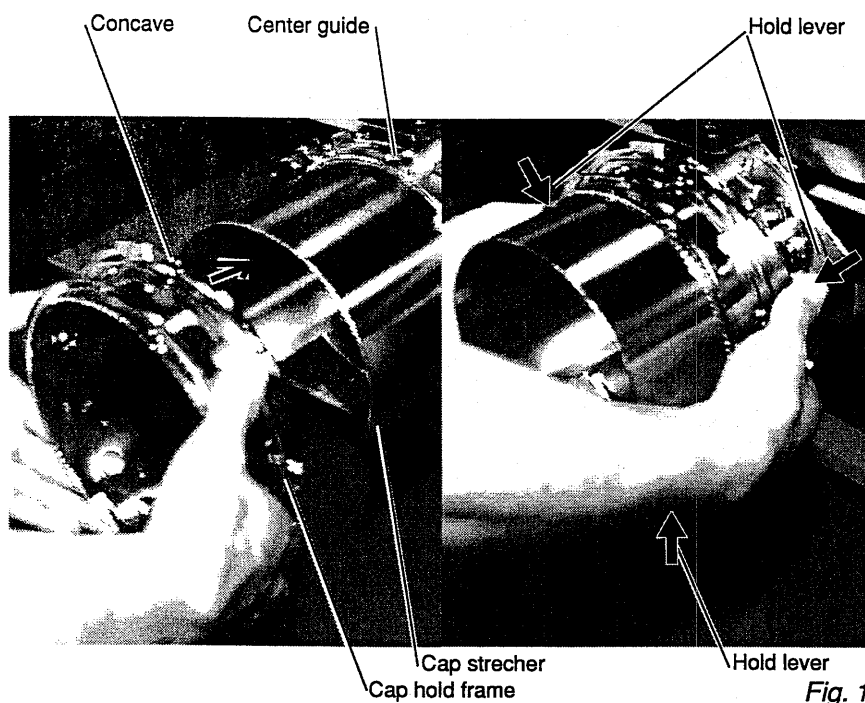


Fig. 1

Setting of caps

- 1 Place cap stretcher securely on sturdy work bench.
- 2 As shown in Fig. 1, hold cap hold frame with both hands and place on cap stretcher. By pushing hold lever at 3 places in arrow marks with fingers, place cap hold frame so that center guide of cap stretcher gets in concave of upper cap hold frame.

※ Confirm that cap holder frame is securely placed on cap stretcher without gap.

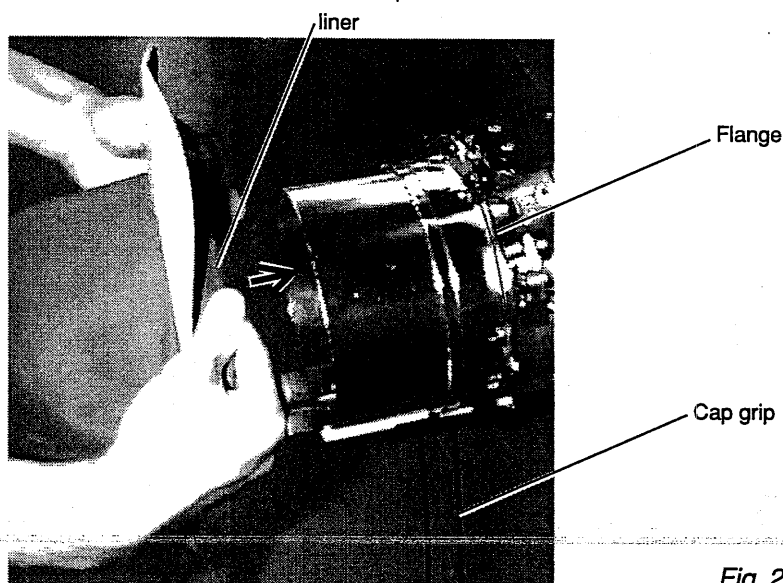


Fig. 2

- 3 As shown in Fig. 2, remove cap grip and keep open to the left.
- 4 Extend fore half of liner inside cap to place on cap stretcher. At this moment, place it so that tip of liner contacts flange of cap hold frame.

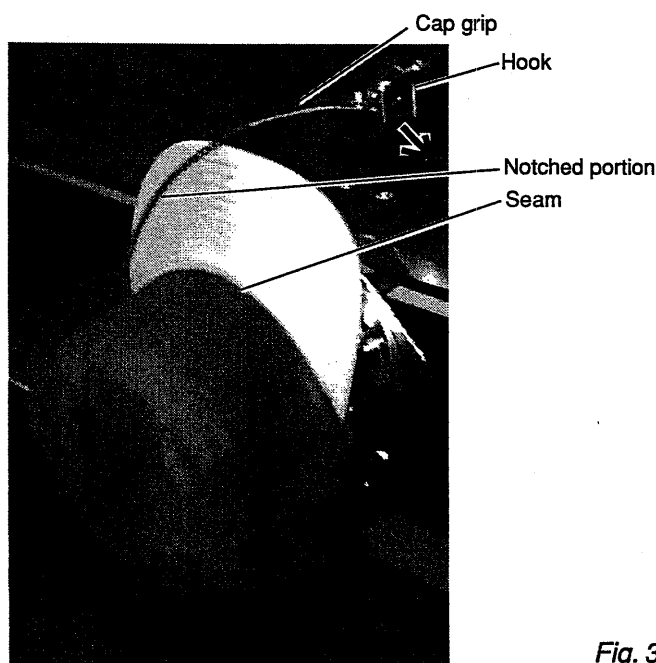
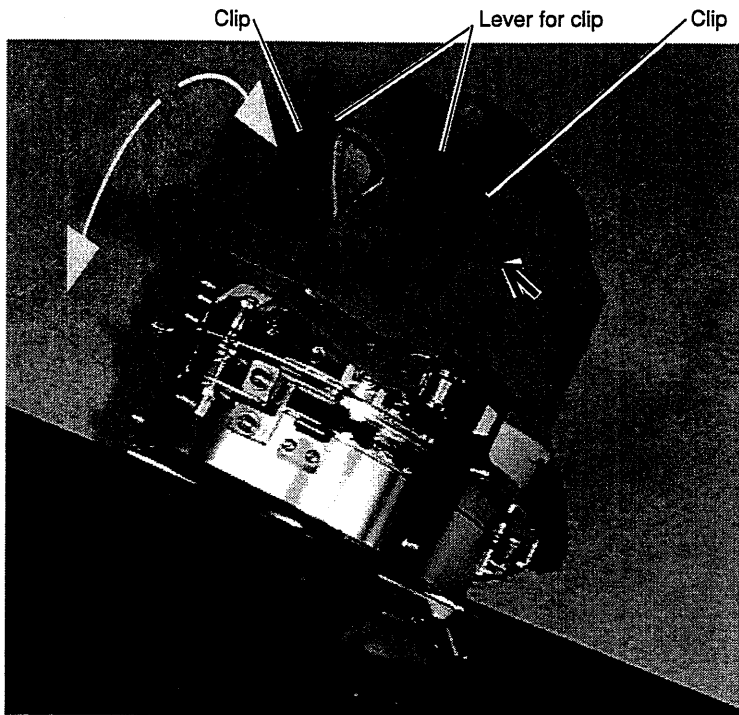


Fig. 3

- 5 As shown in Fig. 3, place hook so as to have visor of cap get in gap between cap grips. At this moment, set center of cap to center mark on cap hold frame so that notched portion of clamp gets into seam of visor. Close hook.



6 As shown in Fig. 4, lift cap stretcher to tip forward.

Hold cap with clips at two places in back by stretching crease toward arrow marked direction from front of the cap.

※ Get lever for clip facing toward inside.

Fig. 4

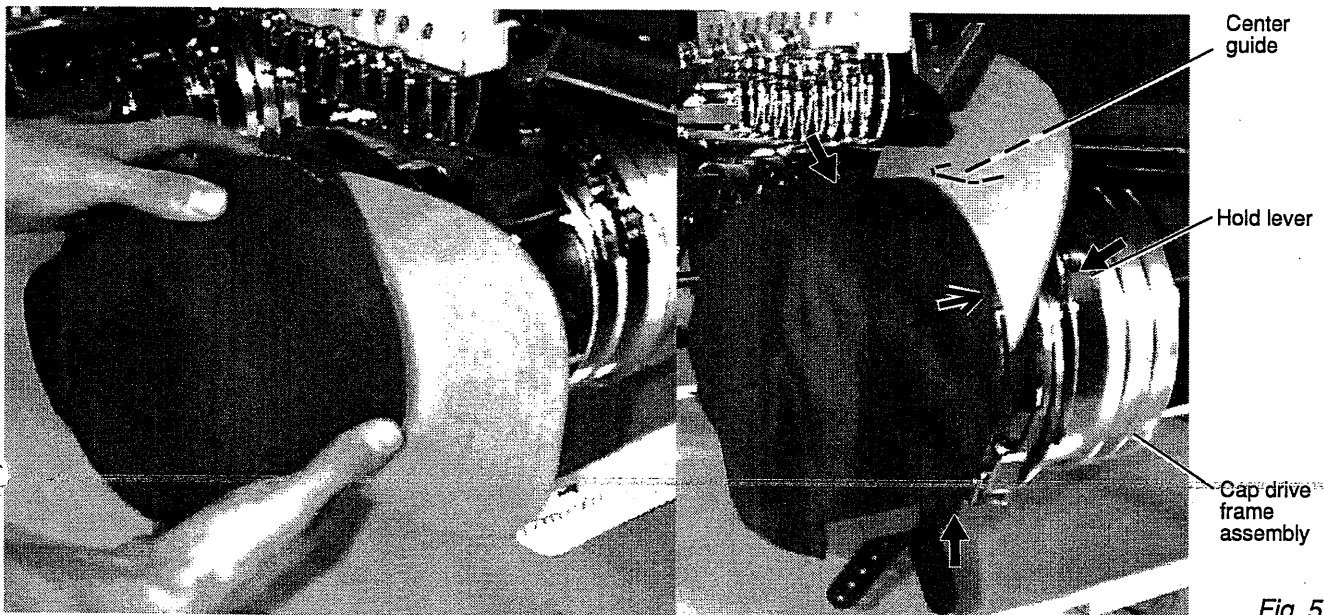


Fig. 5

7 Remove cap hold frame with cap on from cap stretcher.

8 As shown in Fig. 5, place cap frame holder with cap on cap drive frame assembly of embroidery machine. By pushing holder lever at 3 places in arrow marks with fingers, place cap hold frame with cap on so that center guide of drive frame assembly gets in concave of upper cap hold frame.

※ Confirm that cap holder frame is firmly plated on cap drive frame assembly without gap. In case there is gap between cap hold frame and cap drive frame of hold lever doesn't go into hole on cap hold frame, loosen set screw on hold lever to adjust.

End



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Model

Machine No.