

**USER'S MANUAL**

**COMPACT SEWING MACHINE "NEO"**

**TEJTII-C**

To embroider

1. To pass the thread, to stretch the fabric ..... 18
2. Turn ON the power ..... 26
3. To register a design in the memory of the machine ..... 29
4. To decide a design to embroider ..... 40
5. To decide the Color Change Sequence ..... 41
6. To decide the design start position ..... 45
7. To start embroidering ..... 48





## Foreword

This user's manual describes about the correct using method and instructions for use of this product. Please use this machine after understanding the contents of the manual.

This manual may contain discrepancies in detailed specification as compared with the actual production. If you have any question about this manual, consult your TAJIMA distributor.

We believe that "BASICS TAJIMA EMBROIDERY MACHINES" and "MACHINE SETUP INSTRUCTIONS" are useful to deepen your knowledge about this product. Please also read those booklets.

Regarding how to handle the products related, refer to the user's manual exclusive for them included in the manual CD.

Tokai Industrial Sewing Machine Co., Ltd.

## SAFETY PRECAUTIONS

To prevent any harm or damage to the person who use this product or other person, we describe items that must be surely followed as below.



Indicates that there is a lot of danger of death or serious injuries [\*1] if handled by mistake.




Indicates that there is a likelihood of death or serious injuries [\*1] if handled by mistake.





Indicates a potentially hazardous situation which may result in minor or moderate injury [\*2] or property damage if handled by mistake.

\*1: A condition caused by electric shock, injury, fracture of a bone, etc., that leads to aftereffects, or an injury that necessitates hospitalization or visits to a hospital over a long period.

\*2: An injury that does not necessitate hospitalization or visit to a hospital over a long period.

 : Prohibited items

 : Items that may cause electric shock if not observed

 : Items that must be followed carefully to ensure safe operation

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Menu key	Title	Operation in the middle of embroidery
 Data	1 Data input .....29 To use the USB memory	× (Unable)
	1 Data input .....31 To perform the LAN connection using personal computer	×
	1 Data input .....33 To perform serial connection using personal computer	×
	1 Data input .....37 To use a personal computer, bar code reader	×
	2 Selection of data .....40 To decide a design to embroider	×
	3 Deletion of data .....58 To select the design to delete	×
	4 Input mode .....57 To store/not to store the data to the memory of the machine when inputting the design	×
	5 Memory clear .....59 To delete all designs	×
 Ndl. Bar Selection	Setting of color change .....41 To decide Color Change Sequence for desired step only To decide Color Change Sequence for all steps To decide Color Change Mode (Automatic, Manual)	○ (Able)
 Edit	1 Size (X-axis/Y-axis) .....80 To change the size of the design	×
	3 Rotation .....81 To rotate the design	×
	4 Mirror .....82 To reverse the design	×
	5 Repeat .....83 To embroider repeatedly	×



To search from the menu key

 Machine Setting	1 Screen..... 67 To display the total number of stitches of design or rotating speed during operation	○
	2 Thread breakage sensor..... 88 To change detecting sensitivity of upper thread breakage	○
	3 Preset halt..... 76 To stop the machine in the middle of embroidery	×
	4 Thread trimming length..... 89 To change upper thread length at thread trimming	○
	5 Thread trim timing..... 90 To change thread trim timing	○
	6 Jump conversion..... 91 To trim the thread by consecutive jump	○
	7 Automatic jump..... 66 To divide long stitch	○
	8 A/STiming..... 95 To change thread tension	○
	9 Number of inching..... 65 To change times of lowering needle bar by operating slowly	○
	A Tie stitching..... 92 To set tie stitching	○
	B Satin adjustment..... 93 To adjust finely Satin Stitch length	○
	C Boring..... 96 To make Boring Device available for use	×
	D Cording..... 97 To make the Cording Device (KB-2M) available for use	×
	E Sequin..... 98 To make the Sequin Device available for use	×
 Frame Setting	1 Frame speed..... 60 To change the frame travel speed	○
	2 Offset..... 70 To move the frame to the registered position	○
	3 Origin return..... 74 To move the frame to design start position at end of embroidery	○
	4 Frame mode..... 61 Necessary setting after replacing the frame	×
	5 Origin search..... 64 Set whether or not Origin Search is performed when the power is turned ON	×
	6 Trace mode..... 63 To set the trace movement (square/contour)	○

## 1. Handling of each section

**(1)** I want to release the lock of the emergency stop switch.

->Refer to "2-2.Emergency stop switch" in page 9.

**(2)** I want to change the color.

->Refer to "2-3.Color Change handle" in page 11.

**(3)** I want to lower the needle bar by turning the main shaft, I want to return the main shaft angle to the fixed position.

->Refer to "2-4.Main shaft handle" in page 12.

**(4)** I want to move the frame.

->Refer to "6-1.To move the frame" in page 45.

## 2. Preparation before embroidering

**(1)** I want to embroider the design stored in a USB memory.

->Refer to "3-1.To use a USB memory" in page 29.

**(2)** I want to embroider the design stored in the memory of the machine.

->Refer to "4.To decide a design to embroider" in page 40.

**(3)** I want to delete the design stored in the memory of the machine.

->Refer to "2-2.To select the design to delete" in page 58.

**(4)** I want to decide the color change order.

->Refer to "5-2.To decide Color Change Sequence for all steps" in page 42.

**(5)** I want to decide the color change mode (Automatic, Manual).

->Refer to "5-3.To decide Color Change Mode (Automatic, Manual)" in page 43.

**(6)** I want to check the size of the design.

->Refer to "Design information screen 1" in page 15.

**(7)** I want to move the frame and check the size of the design.

->Refer to "6-2.To check if the design fits in embroidery space" in page 46.

**(8)** I want to change the size of the design.

->Refer to "4-1.To change the size of the design" in page 80.

**(9)** I want to embroider repeatedly.

->Refer to "5-1.To embroider repeatedly" in page 83.



### **3. From start to completion of embroidering**

**(1)** I want to change the speed to embroider.

->Refer to "7-1.To adjust embroidery speed" in page 48.

**(2)** I want to mend when the thread snaps.

->Refer to "7-3.To return the frame/to advance the frame" in page 49.

**(3)** I want to cut the thread.

->Refer to "1-1.To trim the thread" in page 54.

**(4)** I want to change the color.

->Refer to "1-2.To change the color" in page 55.

**(5)** I want to cancel the design

->Refer to "2-2.To move the frame to the design start position in the middle of embroidery (to cancel embroidering)" in page 75.

**(6)** I want to move the frame to the front automatically after finishing embroidering.

->Refer to "1-4.To move the frame automatically to the registered position" in page 73.

### **4. Frame replacement**

**(1)** I want to replace the frame.

-> Refer to the separate manual "Frame replacement".

**(2)** I want to know the necessary setting after replacing the frame.

->Refer to "3-2.Necessary setting after replacing the frame" in page 61.

### **5. Optional device**

**(1)** I want to perform the setting of Boring Device.

->Refer to "3-1.To make Boring Device available for use" in page 96.

**(2)** I want to perform setting of Cording Device (KB-2M)

->Refer to "3-2.To make the Cording Device (KB-2M) available for use" in page 97.

**(3)** I want to perform setting of Sequin Device

->Refer to "3-3.To make the Sequin Device available for use" in page 98.

# Chapter 1

## Items that must be followed carefully

1. To use this machine safely.....	2
2. Warning labels .....	4

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# 1. To use this machine safely

## 1-1. Warning


To prevent accidents resulting in injury or death and physical damage, the following items must be observed strictly when operating the machine.




 **WARNING**

-  Do not have your hands, etc. access to the vicinity of needle during operation. Sticking of needle could injure you.
-  Do not have your hands or face access to movable units during running of the machine. Especially, the vicinities of the needle, the rotary hook, the take-up lever, and the pulley are dangerous. It could cause injury.
-  Do not damage, modify or head the power and other cables. Do not exert undue force to them either. Otherwise the cables will be damaged causing fire and electric shock.
-  Insert the power cord surely. If a metallic part touches a blade of the plug, it may cause fire and/or electric shock.
-  Keep away electrical units from water and chemicals. Entry or splashing of them into units leads to short circuits and causes fire or electric shock. If water or chemicals enter units, turn off the power switch and shut off the main power source of the machine, then contact your local distributor.
-  When pulling out power cord, hold the plug to pull out the cord. Pulling the power cord by holding the cord may damage the cord and the plug, causing fire and electric shock.

## 1-2. Caution

When operating the machine, the following items must be observed strictly to prevent accidents resulting in injury or death and property damage.

 **CAUTION**

-  This machine is designed for industrial use. Use this machine for embroidering textile goods, semi-finished goods and similar materials. Do not use this machine for other purposes in principle. It could cause breakdown of the machine.
-  Do not stand on the machine. It could cause injury.
-  Do not use the machine with take-up lever guard or cover of movable unit detached. It could cause injury.


**CAUTION**

- ❗ For using the machine for long time, use the machine with about 70% of the maximum speed as "operation for total fitting" for about one week after purchase. By performing operation for total fitting, life of the machine will become longer or it will be useful to avoid unexpected troubles.
- ❗ Only the persons who are sufficiently trained for the operation must operate the machine. Wrong operation could cause injury.
- ❗ This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- ❗ Children should be supervised to ensure that they do not play with the appliance.
- ❗ Read this user's manual thoroughly, understand the contents of operation securely, and then operate the machine. Wrong operation could cause injury.
- ❗ Wear proper clothes and tidy up yourself so that you can operate the machine smoothly. Operating the machine with improper clothing and appearance could cause injury.

### 1-3. Inspection before starting work

Before starting work, execute inspection (including cleaning, lubrication) of each part.

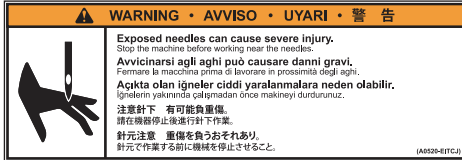
Place	Checking
Covers	Covers might have been attached incorrectly.
Upper thread	The thread might have been passed incorrectly to each part. The tension might have been inadequate. The thread might have entwined around the frame / the drive system.
Under thread	The under thread (bobbin case) might have been set to rotary hook incorrectly. The tension might have been inadequate.
Needle	The needle might have bent. The direction of needle might have been wrong. The needle might have been broken.
Rotary hook	Cleaning/lubrication might have been performed in inadequate frequency.
Middle thread guide adjusting lever	Is position correct?

## 2. Warning labels

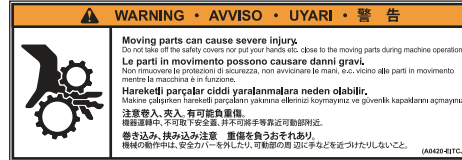
The machine has warning labels that bear instructions for safe operation. When using the machine, machine operators must follow the instructions shown on the warning labels.

Do not detach the warning label nor make the printing surface illegible by paint etc. If the warning label is missed or damaged, contact your local distributor.

### 1 Pay attention around needle.



### 2 Pay attention so that you are not to be caught or put into the machine.



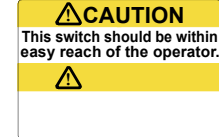
### 3 Pay attention to dropping



### 4 Pay attention to rotary/shuttle hook.



### 5 Installation site

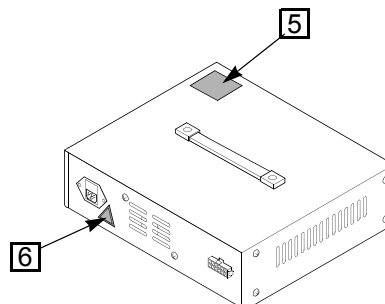
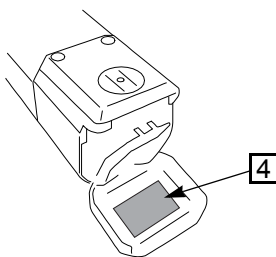
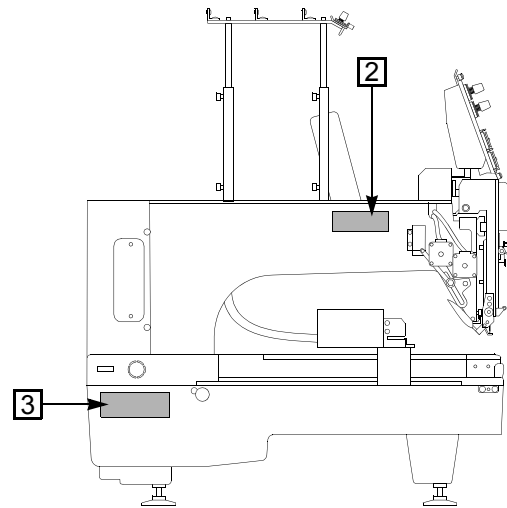
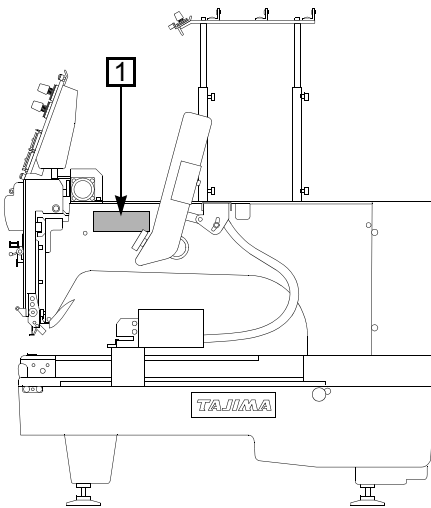


Existence/absence of 4 and 5 differs depending on spec.

### 6 Pay attention to high voltage



There could be danger of electric shock, burning, or death. Persons except for service personnel designated by Tajima should not open covers. When opening covers, wait for four minutes after turning off the power switch.



## Chapter 2

### Name and the way to use of each part

1. Name of each part .....	6
2. How to use each part.....	7
3. Screen display .....	13

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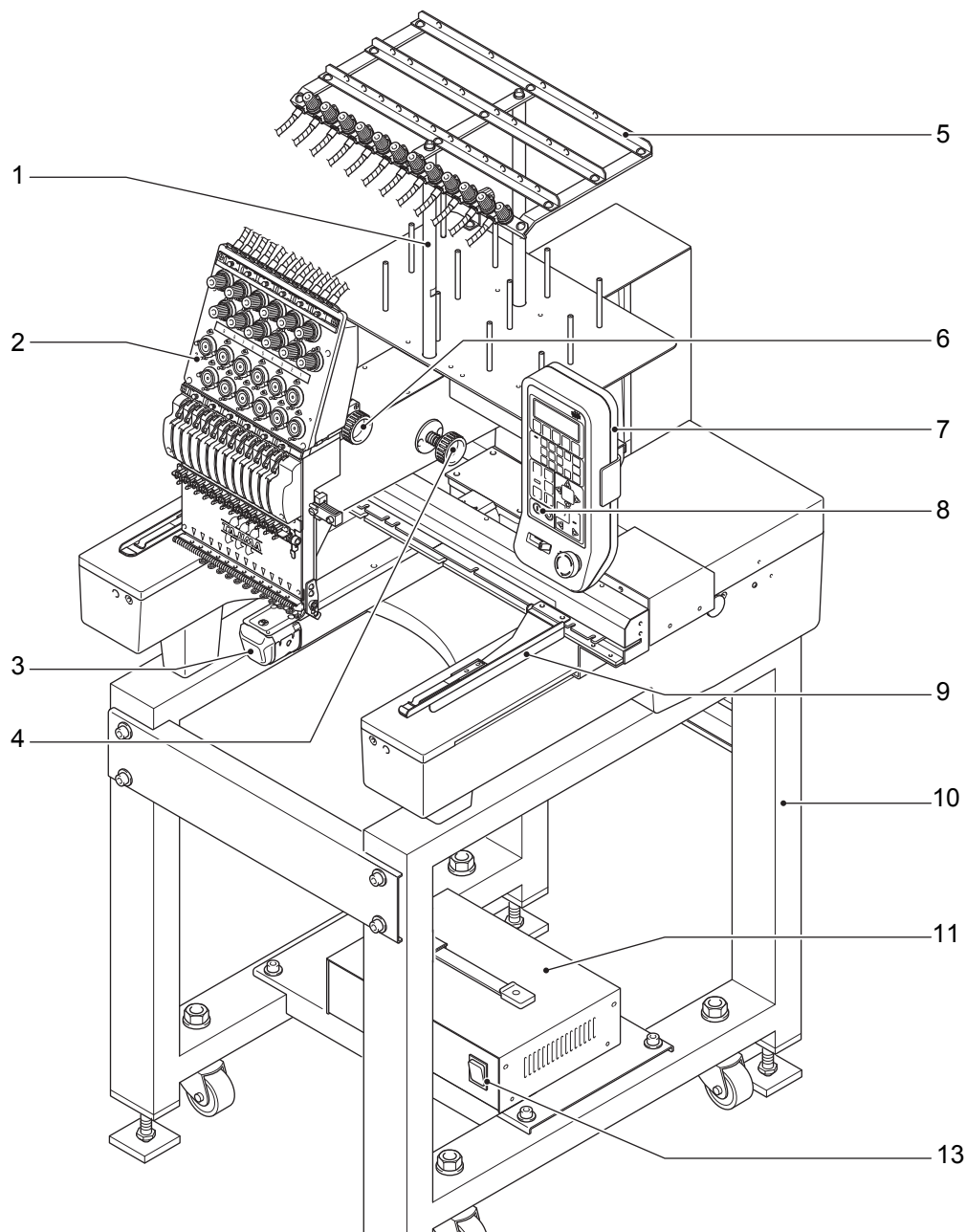
8

9

10

11

# 1. Name of each part



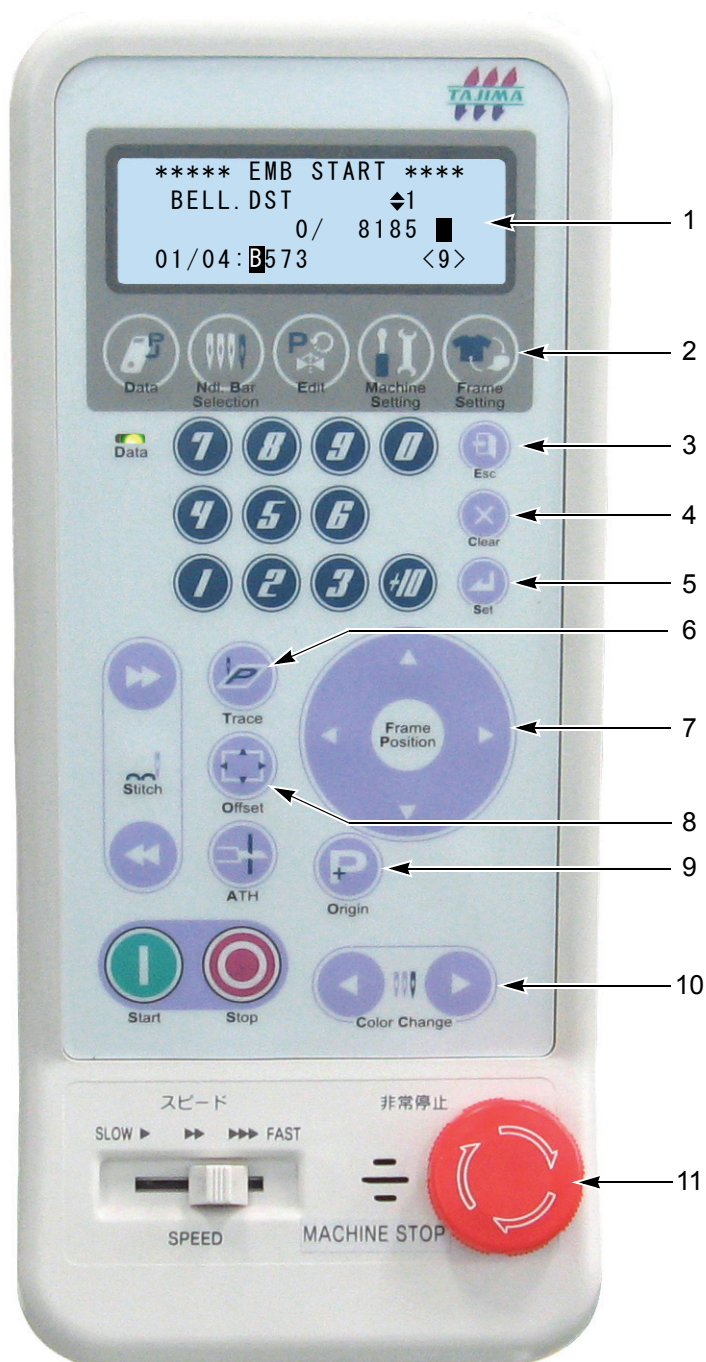
Only main sections are shown here. For details, please look at the separate parts list.

- |                                |                              |
|--------------------------------|------------------------------|
| 1. Thread course support bar   | 7. Operation panel (→p.7)    |
| 2. Head                        | 8. Start/Stop key (→p.48)    |
| 3. Rotary hook (→p.115)        | 9. Tubular goods frame       |
| 4. Main shaft handle (→p.12)   | 10. Stand (option)           |
| 5. Thread course               | 11. Power supply box (→p.26) |
| 6. Color change handle (→p.11) | 12. Power switch (→p.26)     |

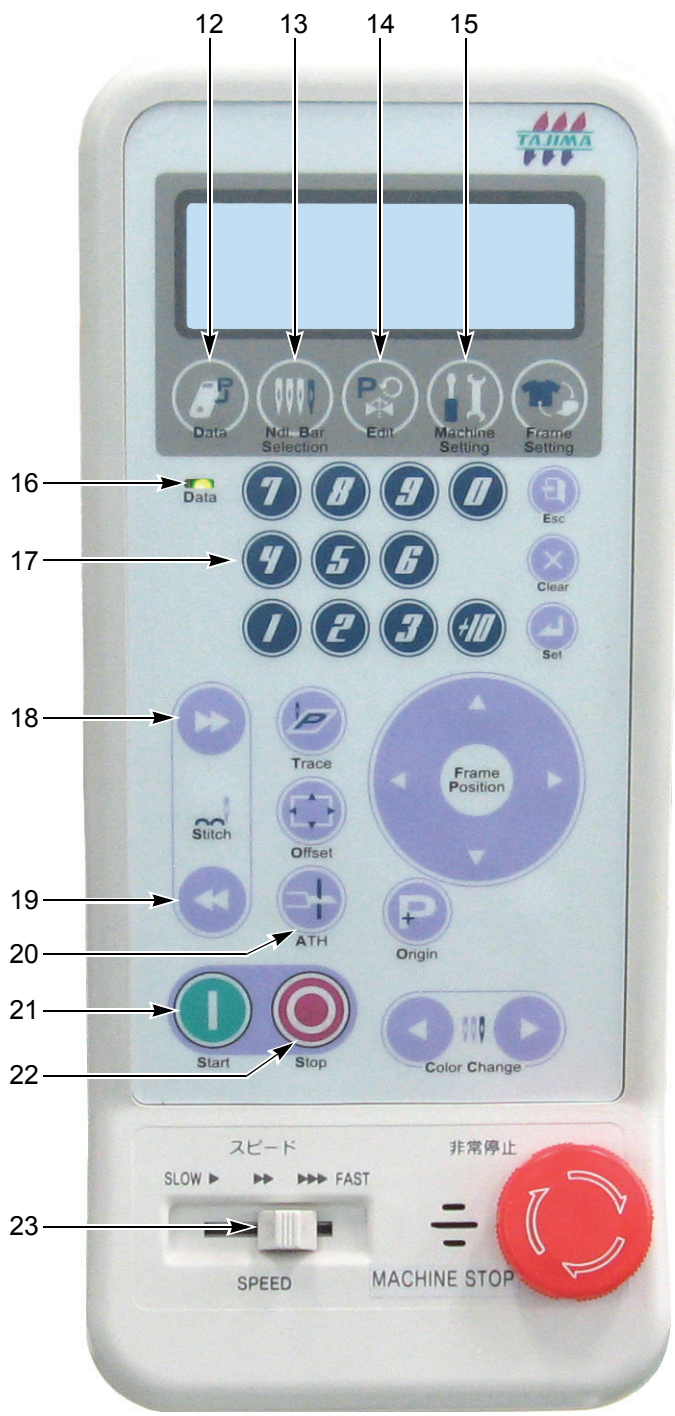


## 2. How to use each part

### 2-1. Operation panel

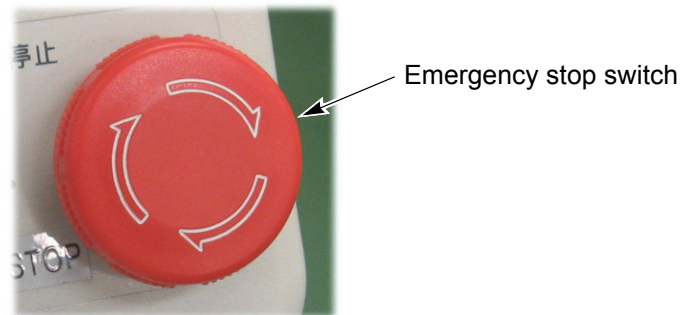


1. Screen display (→p.13)
2. Frame setting key  
Perform operation and setting concerning the frame movement.
3. Escape key  
Return to one previous screen.
4. Clear key (→p.58)  
Delete the design.
5. Set key  
Decide the contents of selection.
6. Trace key (→p.46)  
Check the size of the design before embroidering.
7. Frame travel key (→p.45)  
Move the frame manually. Select the value.
8. Offset key (→p.70)  
Register the desired position to move the frame. To move the frame to registered position.
9. Origin return key (→p.75)  
Cancel the design in the middle of embroidery.
10. Manual color change key (→p.55)  
Perform color change manually.
11. Emergency stop switch (→p.9)  
Stop the operation for emergency.

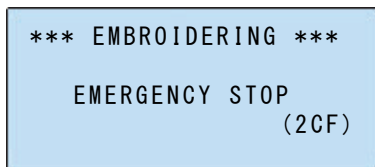


- 12. Data inputting key (→p.29)  
Input / delete the design.
- 13. Color Change setting key (→p.41)  
Set order of needle bar to use.
- 14. Edit key (→p.80)  
Change the size and the direction of the design. Embroider repeatedly.
- 15. Machine setting key (→p.88)  
Perform various settings of the machine.
- 16. Lamp showing input state  
Lit: Design to embroider is selected (ready for embroidery)  
Blinking: Design is being transferred  
Unlit: Design to embroider is not selected
- 17. Numerical key  
Select a numerical value.
- 18. Frame advancing key (→p.50)  
Advance the frame manually.
- 19. Frame return key (→p.49)  
Return the frame manually.
- 20. Thread trimming key (→p.54)  
Trim the thread manually.
- 21. Start key (→p.48)  
Start the operation.
- 22. Stop key (→p.48)  
Stop the operation.
- 23. Speed controller (→p.48)  
Set the embroidery speed.  
Left: Low speed  
Right: High speed

## 2-2. Emergency stop switch

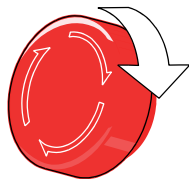


Pressing the emergency stop switch will cause the machine to stop and the buzzer will ring.



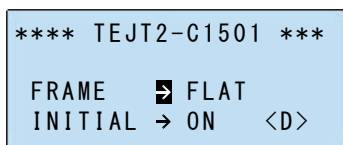
The switch will lock once it is pressed. Release the lock by the following procedure.

- (1) Turn the switch clockwise.

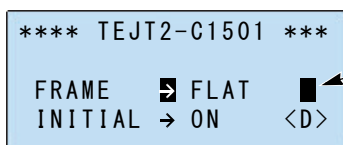


- (2) Turn OFF and ON the power (Wait for 5 seconds or more).

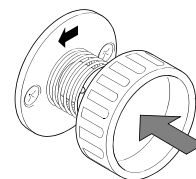
The display will switch to the frame mode screen, and the buzzer will ring.



- (3) Turn the main shaft handle until the fixed position mark will be lit up on the screen.



Fixed position mark



Main shaft handle

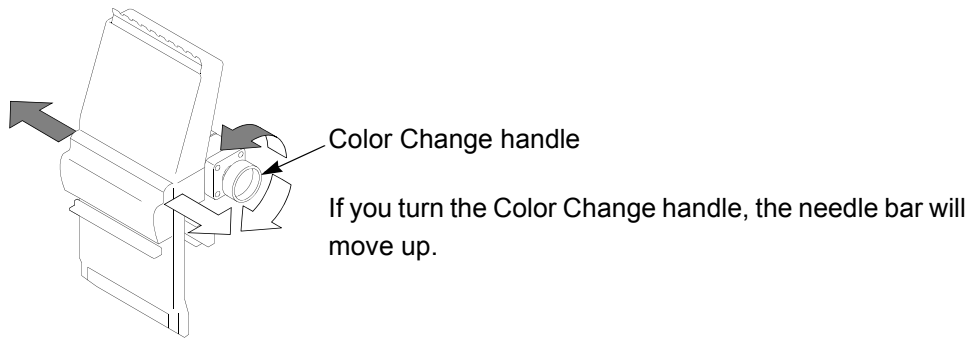
Turn the handle while pushing it.

Fixed position mark

Lit: Main shaft angle is within range of fixed position

Unlit: Main shaft angle is not within range of fixed position

- (4) When the needle bar is down, after you turn the color change handle by hand and move the needle bar case to either left or right once, return it to the original position.



- (5) Execute origin search.

 **CAUTION**

 When you perform the following operation, do not put your hands etc. on the machine table. Pressing "Set" key will cause the frame to move and it could injure you.



```
***** EMB START *****  
BELL. DST          ◆1  
                   0/ 8185 ■  
01/04: B573      <9>
```

It is completed.

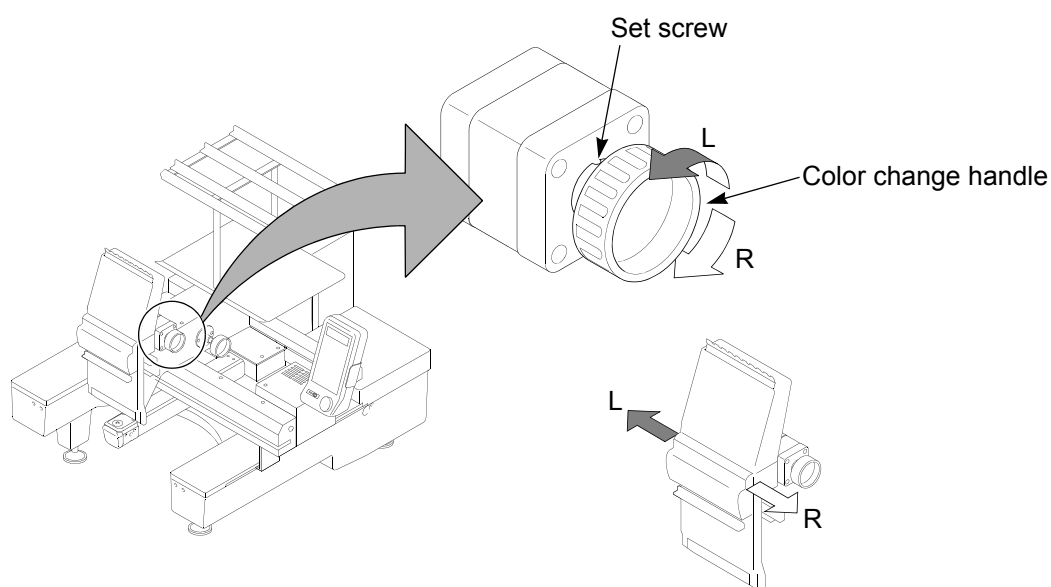
## 2-3. Color Change handle

If you turn the Color Change handle to the direction (left or right) indicated by an arrow, the needle bar will move.

The fixed position of the needle bar differs depending on the position of the set screw. Adjust it so that the set screw locates at directly above or directly below.

When the set screw locates at directly above: Fixed position of the needle bar in an odd number

When the set screw locates at directly below: Fixed position of the needle bar in an even number



When the machine is started working under the circumstance that the current needle position is conflicted with the needle position displayed on the operation panel, the machine movement differs depending on "Color change setting" on the operation panel.

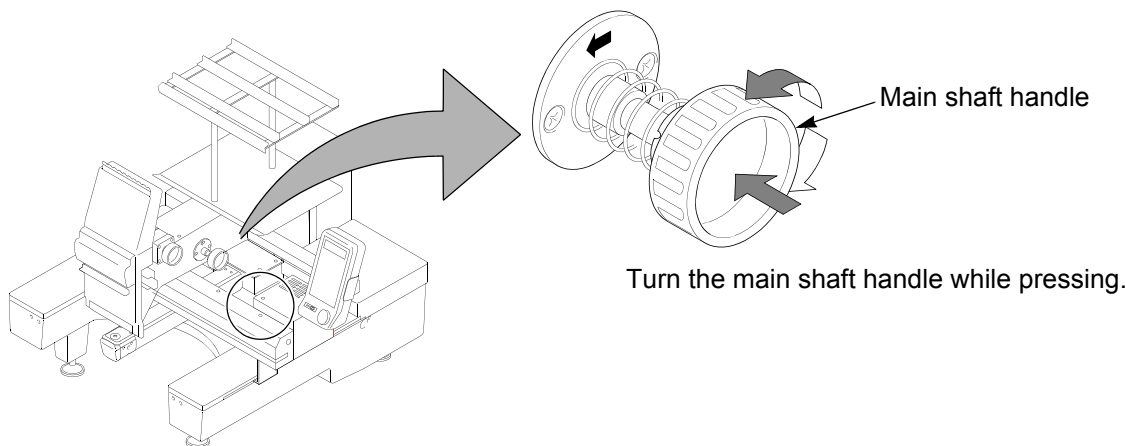
When setting is "Manual": The machine will not work (Code No. 281 will be displayed).

When setting is "Auto": Start operation according to "Color Change setting" after Color Change.

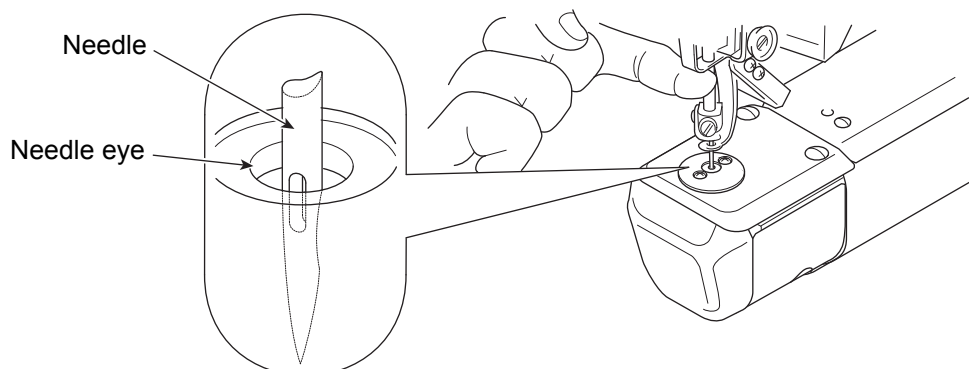


## 2-4. Main shaft handle

If you turn the main shaft handle with the power turned OFF, the main shaft will turn and the needle bar will move down. Use the main shaft handle mainly when checking the needle locating position.



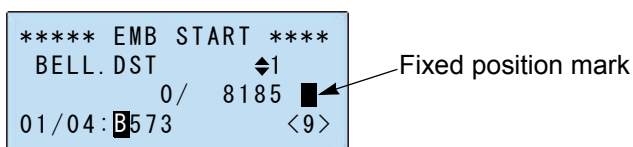
The needle should be located almost the center of needle hole. If the needle is not located at the center, the needle might be bent. Replace it if necessary.



Turning the main shaft handle will cause the main shaft to come off from the fixed position. Therefore, return to the fixed position by the following procedure. There are two ways to return to the fixed position.

### (1) How to return to the fixed position by turning the main shaft handle

Turn ON the power and turn the main shaft handle until the fixed position mark will light up.

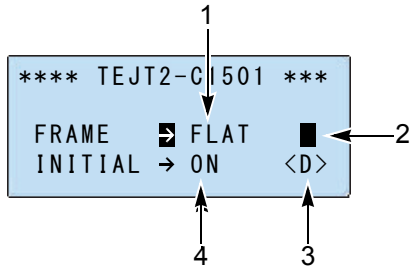


### (2) How to return to the fixed position by pushing the start key

Turn ON the power and start the operation. Pressing the stop key will cause the machine to stop at the fixed position.

### 3. Screen display

#### (1) TEJTII-C screen



This screen will be displayed after the power starts up.

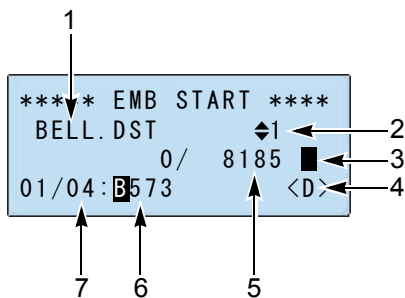
1. Frame used currently(→p.61)
2. Fixed position mark
  - Lit: Main shaft angle is within range of fixed position
  - Unlit: Main shaft angle is not within range of fixed position

#### 3. Current needle position

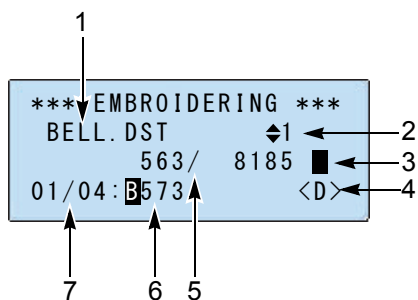
Display	1	2	----	A	B	C	D	E	F
Needle bar No.	1	2	----	10	11	12	13	14	15

4. Setting condition of origin search(→p.64)
  - On: To execute
  - Off: Not to execute

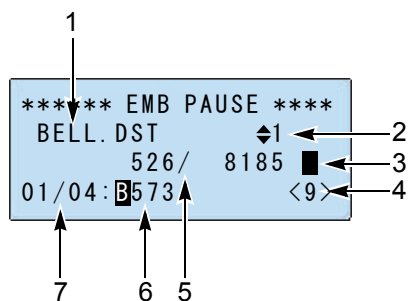
#### (2) Embroidery start screen



1. Design name
2. Feed unit of the frame when returning/advancing the frame(→p.49)
3. Fixed position mark
  - Refer to "(1)TEJTII-C screen"
4. Current needle position
  - Refer to "(1)TEJTII-C screen"
5. Total number of stitches of design
6. Color Change Sequence
7. Number of steps of design

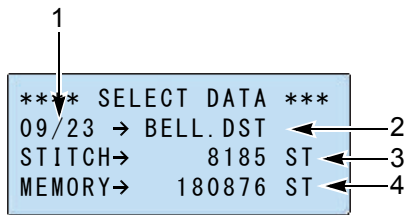
**(3) Screen during embroidery**

1. Design name
2. Feed unit of the frame when returning/advancing the frame(→p.49)
3. Fixed position mark  
Refer to "(1)TEJTII-C screen"
4. Current needle position  
Refer to "(1)TEJTII-C screen"
5. Current number of stitches / Total number of stitches of design
6. Color change order
7. Current step / Step number of design

**(4) Screen under suspension**

1. Design name
2. Feed unit of the frame when returning/advancing the frame(→p.49)
3. Fixed position mark  
Refer to "(1)TEJTII-C screen"
4. Current needle position  
Refer to "(1)TEJTII-C screen"
5. Current number of stitches / Total number of stitches of design
6. Color change order
7. Current step / Step number of design

(5) Data selecting screen

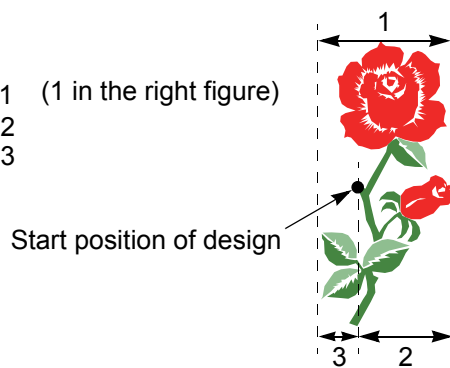
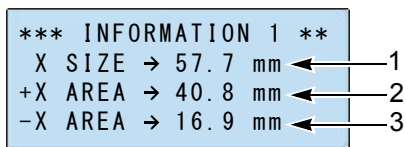


1. Memory No. of design / total design quantity registered in machine memory
2. Design name
3. Number of stitches of design
4. Remaining volume of memory

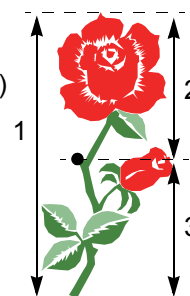
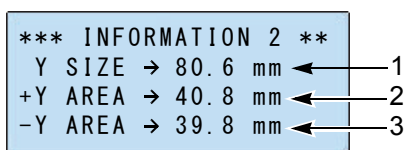


Push the frame travel key (right/left). To return to the original screen, push "Esc" key.

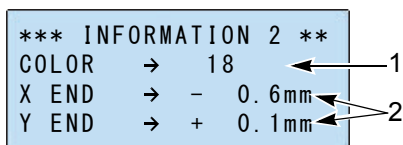
Design information screen 1



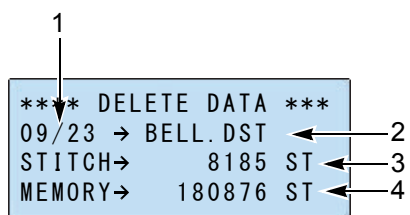
Design information screen 2



Design information screen 3



1. Number of total steps
2. Position of the design end point  
It is the coordinate from the origin.(→p.27)

**(6)** Data deleting screen

The screenshot shows a screen titled '\*\*\* DELETED DATA \*\*\*'. It lists three items for deletion: '09/23 → BELL. DST', 'STITCH → 8185 ST', and 'MEMORY → 180876 ST'. Numbered callouts point to specific parts of the screen: '1' points to the first line, '2' points to the design name 'BELL. DST', '3' points to the stitch count '8185 ST', and '4' points to the memory volume '180876 ST'.

```
*** DELETED DATA ***
09/23 → BELL. DST ← 2
STITCH → 8185 ST ← 3
MEMORY → 180876 ST ← 4
```

1. Memory No. of design / total design quantity registered in the machine memory
2. Design name
3. Number of stitches of the design
4. Remaining volume of memory before deletion



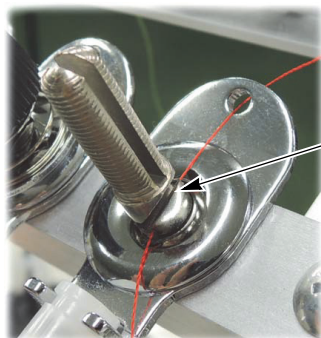
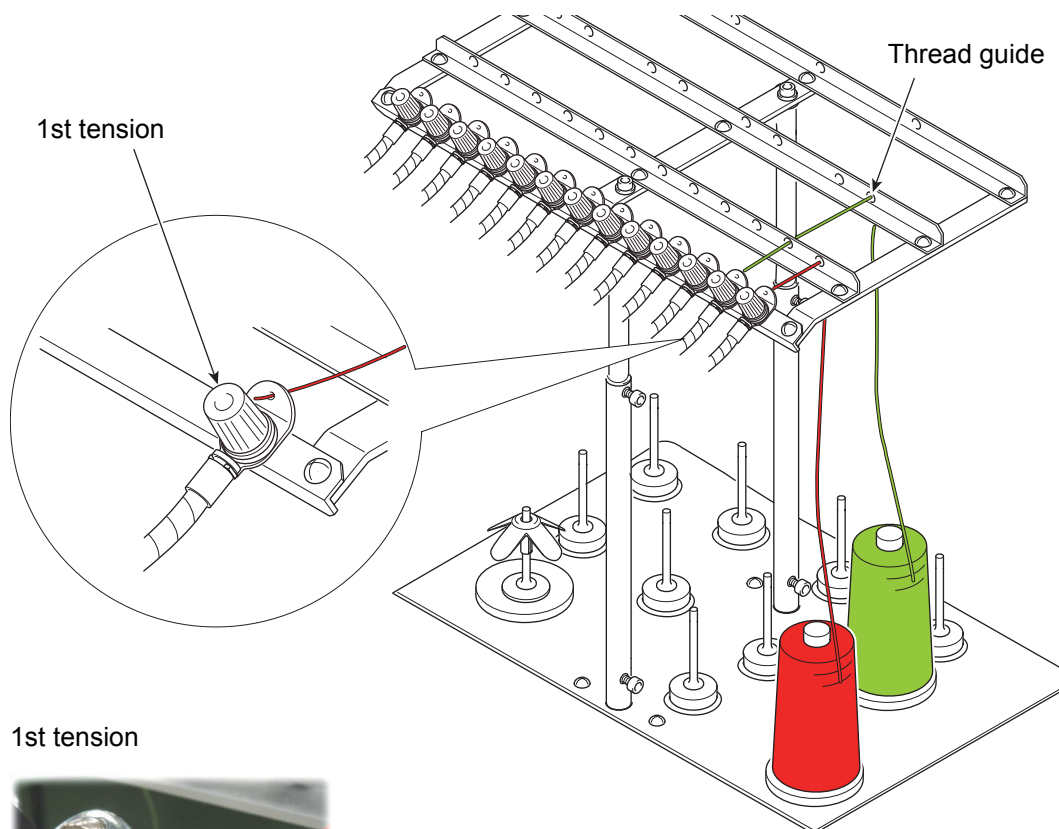
## Chapter 3 To embroider

1. To pass the thread, to stretch the fabric.....	18
2. Turn ON the power .....	26
3. To register a design in the memory of the machine .....	29
4. To decide a design to embroider.....	40
5. To decide the Color Change Sequence .....	41
6. To decide the design start position .....	45
7. To start embroidering .....	48

# 1. To pass the thread, to stretch the fabric

## 1-1. To pass upper thread

(1) Pass the thread through the thread guide to the 1st tension.

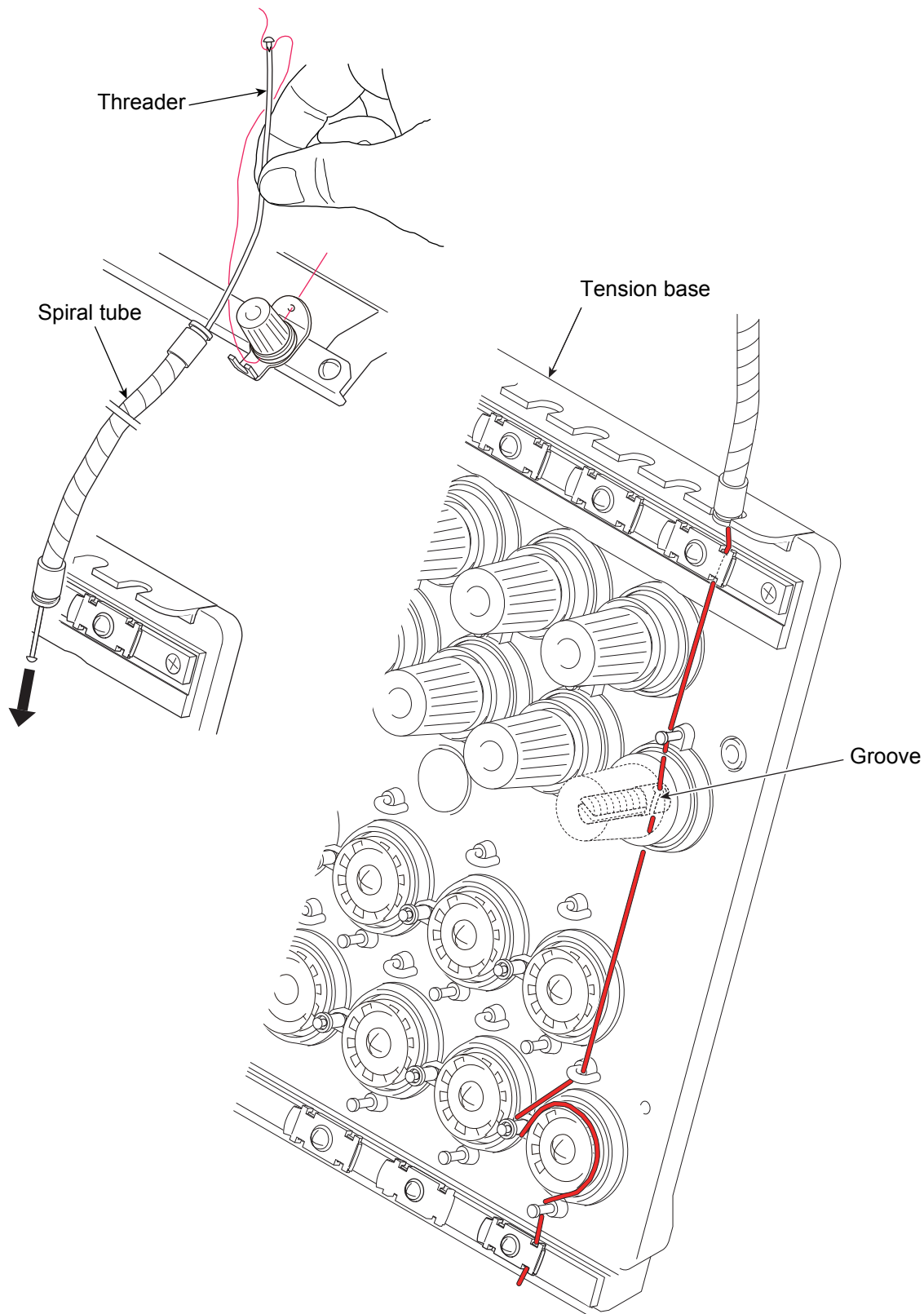


Pass the thread through the groove.

Some parts are detached for explanation in the above picture.

(2) Pass the thread through the spiral tube using the threader (accessory).

(3) Pass the thread to the tension base through the groove.



1
2
3
4
5
6
7
8
9
10
11

**(4) Needle bar case**

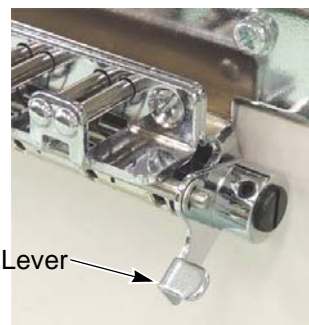
If thread is not passed through each section correctly, it is not possible to perform normal embroidering. In addition, the thread breakage sensor will malfunction to stop the machine. (Code No. 291 will be displayed.)

**! CAUTION**

**!** Thread to the thread take-up spring surely, and return the adjusting lever to previous position after threading. Otherwise it would cause the thread breakage or affect the thread tension badly.

How to use the adjusting lever

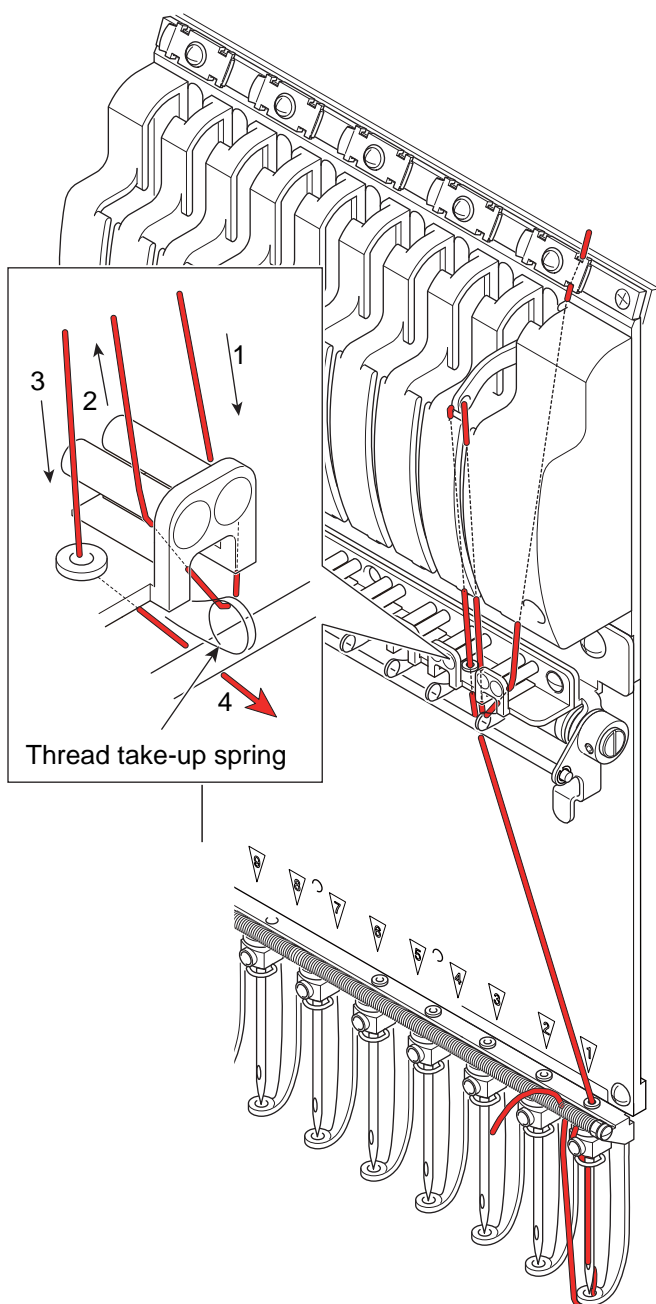
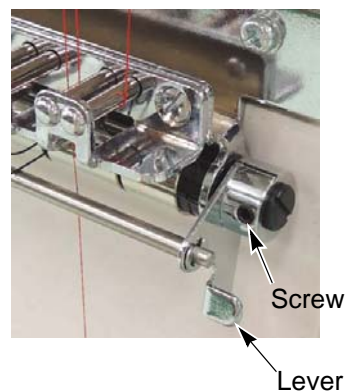
**(1) Raise the lever.**



**(2) Pass the thread.**



**(3) Return the lever after threading. (The screw should face to the front.)**



## 1-2. To adjust the tension of the upper thread

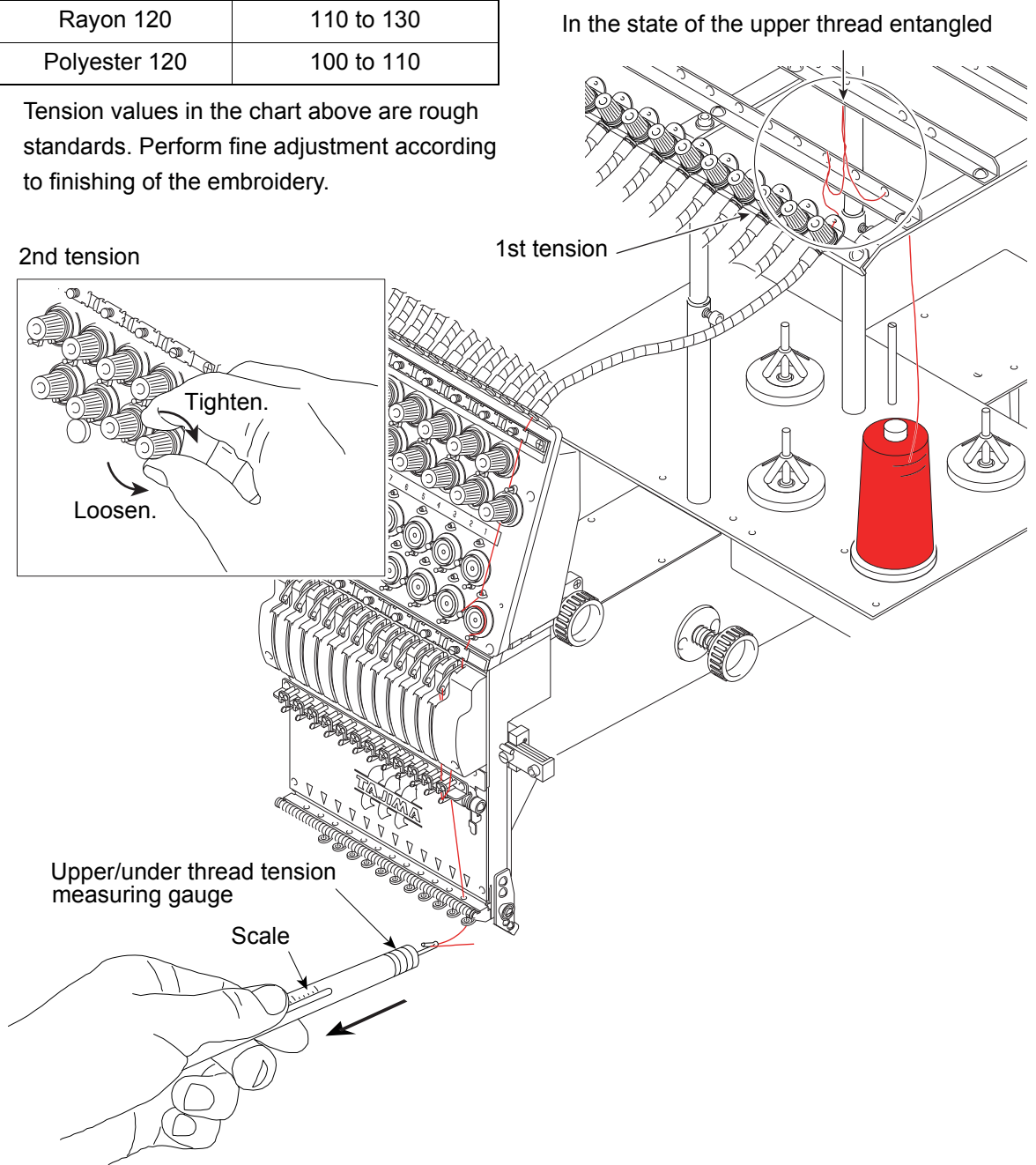
To make finishing of embroidery beautiful or to perform efficient works by reducing the thread breakage, adjust the tension (tensile strength) of upper/under thread adequately.

- (1) Remove entangling of the thread at the 1st tension. It is all right that only light tension is applied here.
- (2) Adjust at the 2nd tension while pulling out the thread so that the tension becomes 100 to 130 g using the upper/under thread tension measuring gauge (sold separately).

Standard value

Thread (d/2)	Tension value (g)
Rayon 120	110 to 130
Polyester 120	100 to 110

Tension values in the chart above are rough standards. Perform fine adjustment according to finishing of the embroidery.



### 1-3. Preparation of the under thread

#### 1-3-1. Put the bobbin into the bobbin case.

(1) Put the bobbin into the bobbin case.

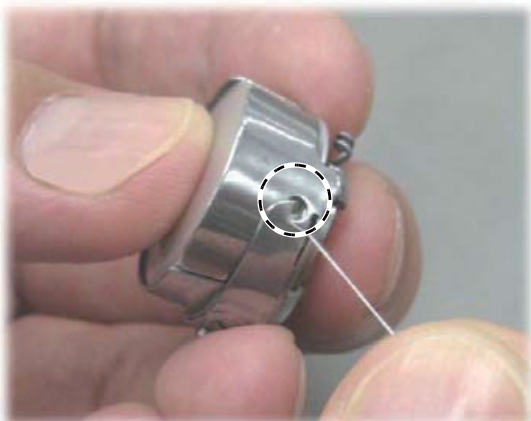


(2) Put the thread into the slit.



Be careful to the direction of the bobbin (indicated by an arrow)

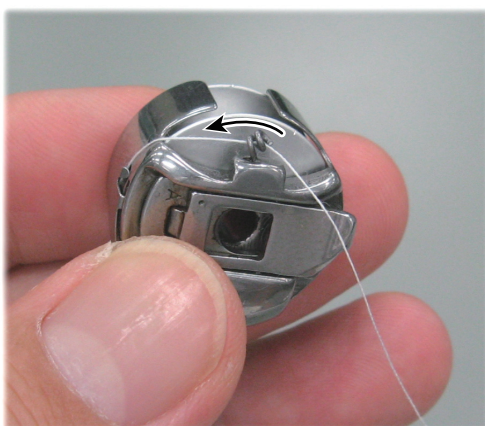
(3) Lead the thread to the spring edge.



(4) Wind the thread to the coil.



(5) Completed.



If the thread is pulled, the bobbin will rotate counterclockwise.

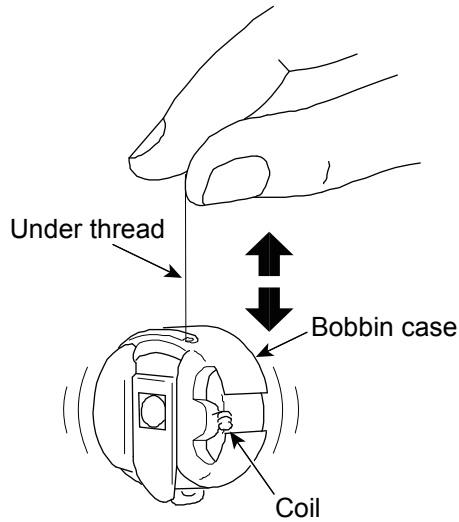
Adjust the tension of the under thread continuously. (→p.23)



### 1-4. To adjust the tension of the under thread

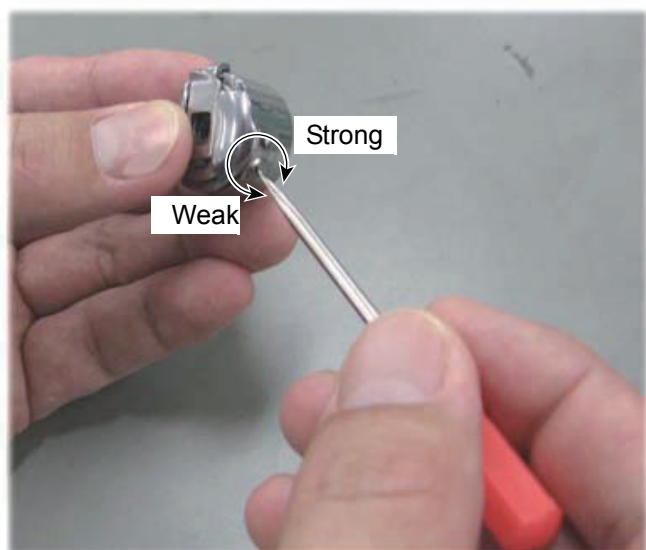
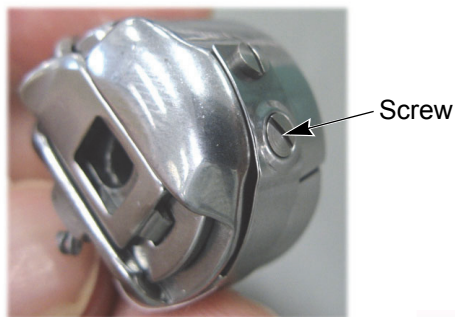
#### 1-4-1. When not using a measuring gauge

When the bobbin case pulled up and down lightly without hooking the under thread through the coil, the standard tension makes the bobbin case descend slowly.



[How to adjust]

Loosening the screw will make the tension looser. Tightening it will make the tension tighter.



**1-4-2.** When using a measuring gauge

The followings are gauges to measure the tension of the upper/under thread. (sold separately)

The standard under thread tension is 20 to 35 g.



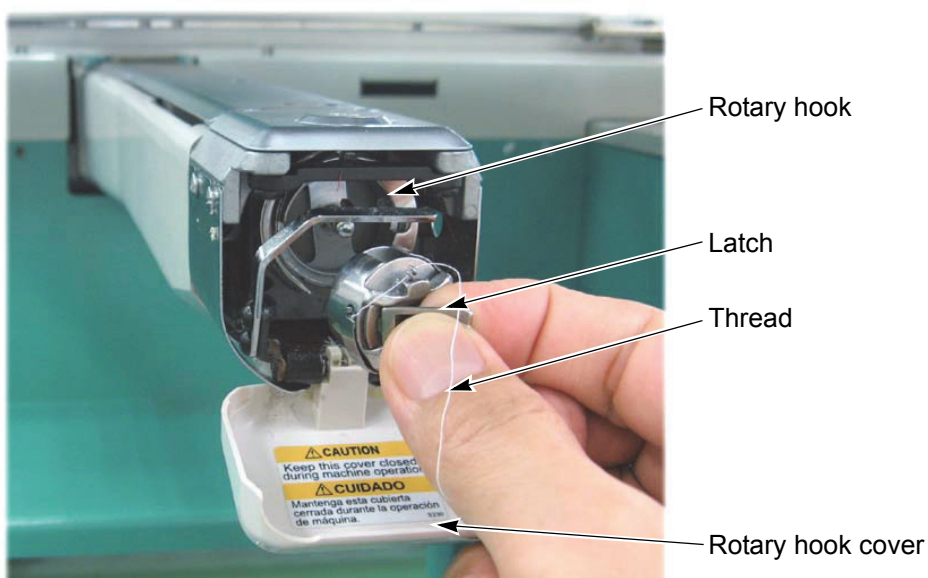
Upper/under thread tension measuring gauge  
Part name: UTG



Under thread tension measuring gauge  
Part name: BTG (common use for jumbo/  
regular rotary hook)

**1-5.** To set a bobbin case to rotary hook

- (1) Pull out the thread about 5 cm from the bobbin case.
- (2) Hold the latch of the bobbin case and insert the bobbin case firmly into the rotary hook.
- (3) Close the rotary hook cover.



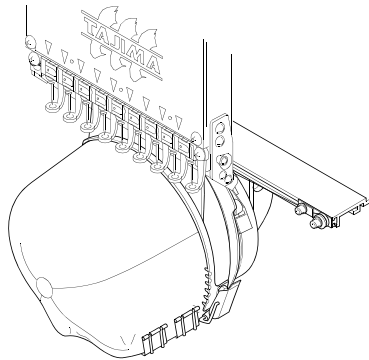
### 1-6. To stretch the fabric

To make finishing of embroidery beautiful or to perform efficient works by reducing the thread breakage, it is important to stretch the fabric correctly on the embroidery frame. Fix the fabric in the state of full stretch so that no lines remain on the fabric.

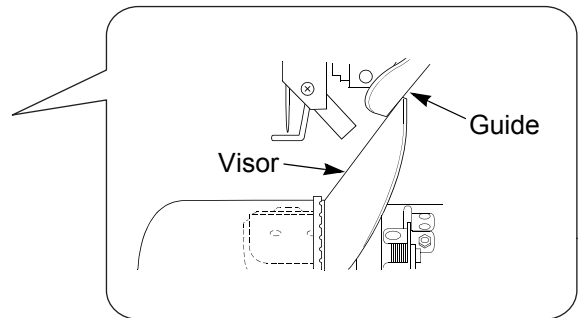
Regarding how to stretch the fabric and replace the embroidery frame, refer to the separate manual "FRAME REPLACEMENT".

[Typical example]

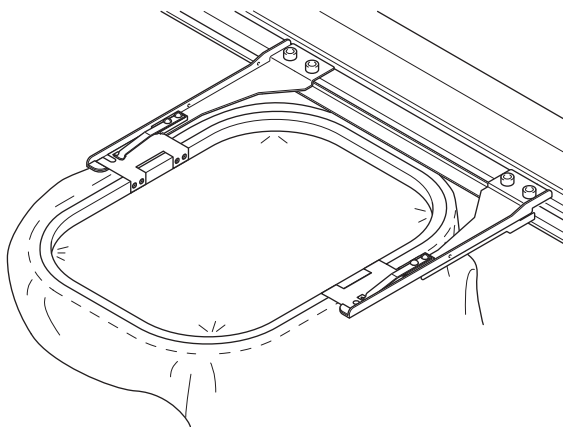
Cap frame



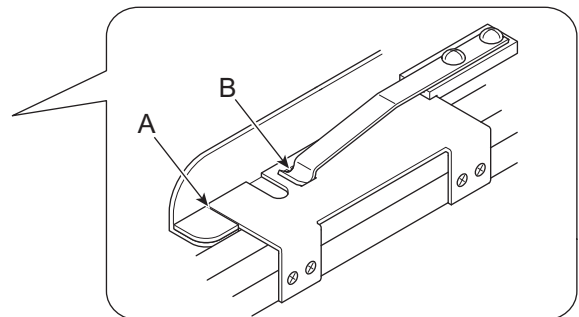
The visor of the cap should be touched to the below guide.



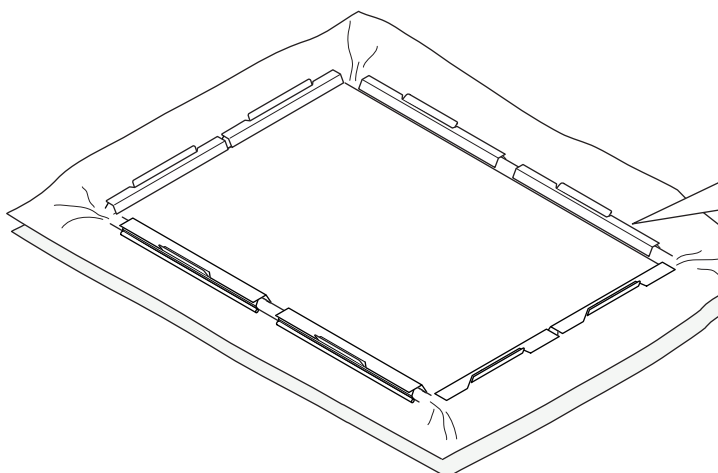
Tubular goods frame



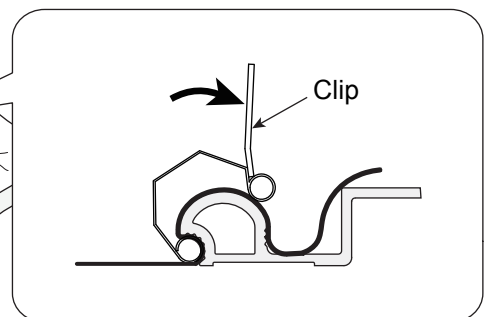
The frame should be fixed at section A and B in the figure below.



Border frame



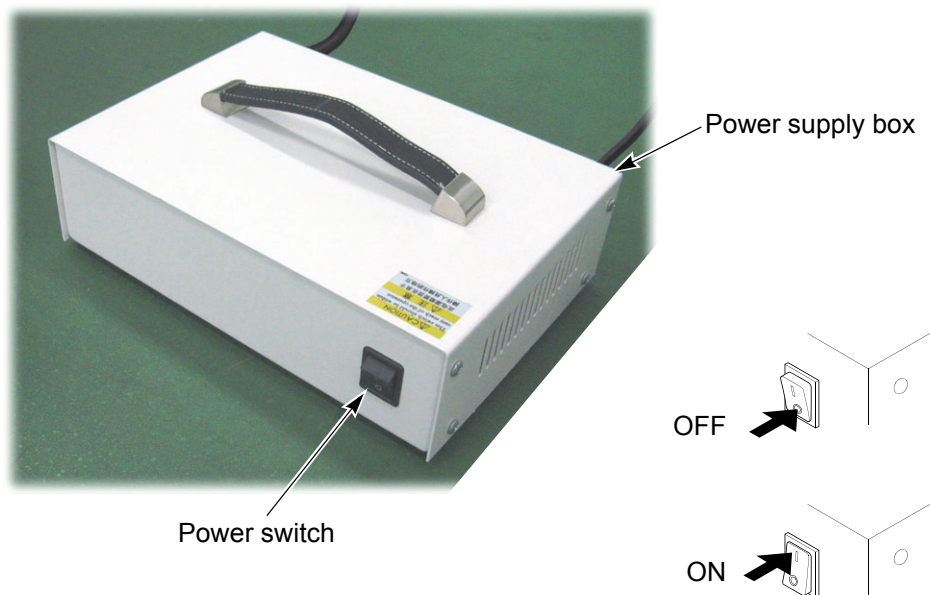
Clips should be used as the figure below.



## 2. Turn ON the power

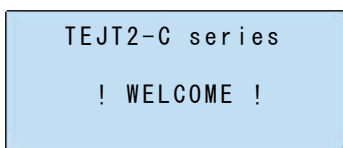
### 2-1. Power switch

To turn ON the power again, wait for 2 or 3 seconds.

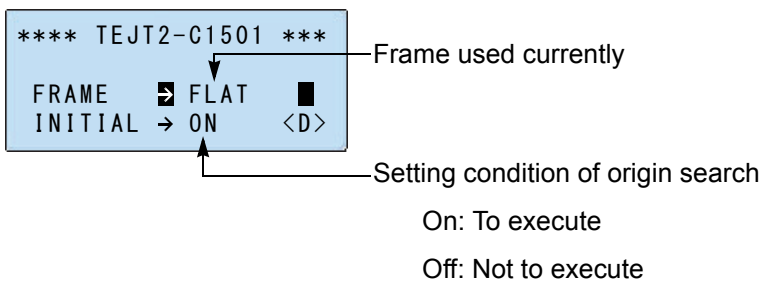


### 2-2. Turn ON the power

(1) After turning ON the power, the below screen will appear. Wait for a while until the screen switches to next.

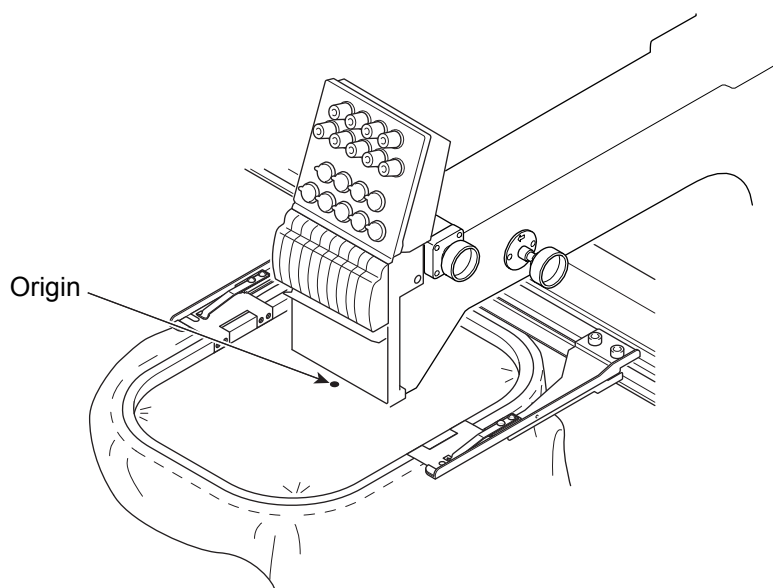


(2) The screen will be switched to the frame mode and the the warning buzzer will sound.



Origin Search is the function to grasp the frame position correctly for the machine. If the Origin Search is performed, the frame will move to the following positions after searching origin

- (a) When performing Origin Search in the middle of embroidery  
→Position where the machine interrupted embroidering
- (b) When performing Origin Search before embroidering starts  
→Position where the machine started embroidering last time
- (c) When performing Origin Search after "Trace"  
→Position where "Trace" was executed




Perform Origin Search under the following conditions. Otherwise, the frame sometimes may not return to the previous position.


- (a) When the frame is moved by hand with the power OFF
- (b) When changing the frame (Example: Cap frame→Tublar frame)
- (c) When the power is shut off in the middle of embroidery
- (d) When the software of the machine has been upgraded

However, do not perform Origin Search because it could cause the damage to the embroidered products or the machine parts under the following conditions.

- (a) When the thread is pulled up from the fabric to the needle in the middle of embroidery
- (b) When the frame hits to some machine parts or optional device etc. by the frame travel

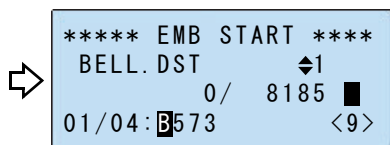
(3) To perform/not to perform Origin Search


**CAUTION**

 When you perform the following operation, do not put your hands etc. on the machine table. Pressing "Set" key will cause the frame to move and it could injure you.

[To execute]

A in the right figure

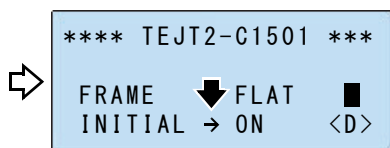
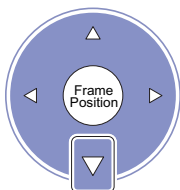


[Not to execute]

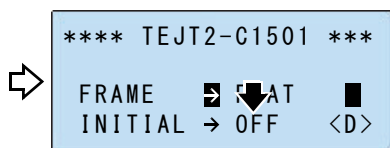
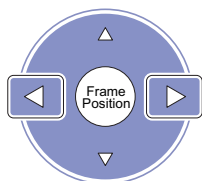
To explain simply, we indicate the selected items in the screen by arrows. (These arrows will not be displayed actually.)

1. Lower the cursor.

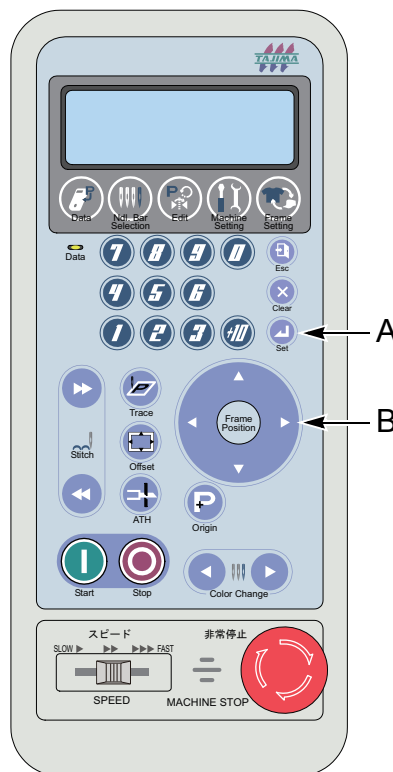
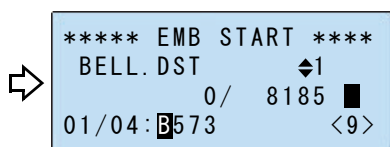
B in the right figure



2. Select OFF.



3. Decide.



### 3. To register a design in the memory of the machine

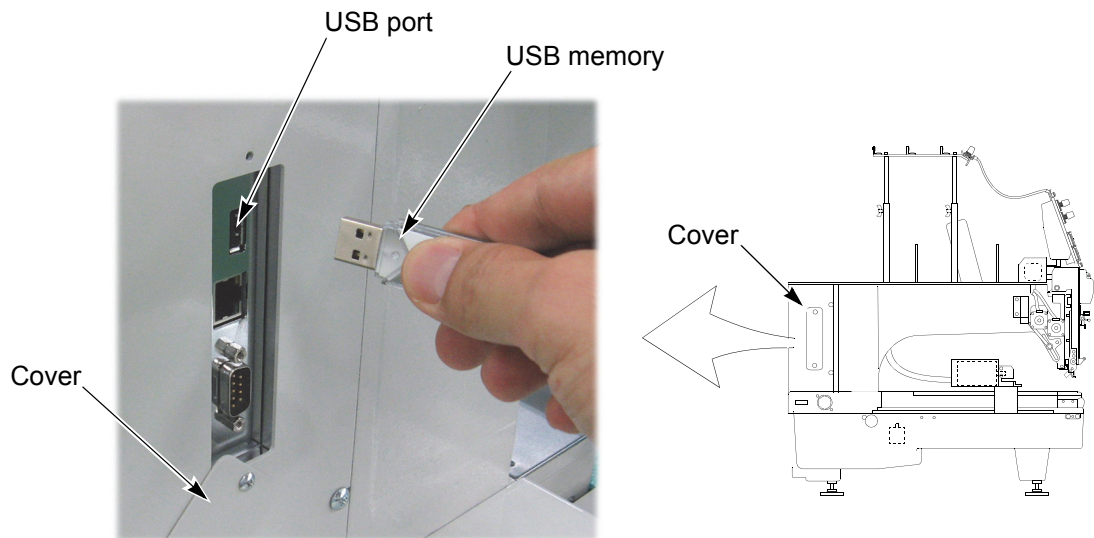
There are following two ways. Performing embroidery work directly from an external device is impossible.

- (1) To use a USB memory
- (2) Use a personal computer (DG/ML by Pulse is necessary)

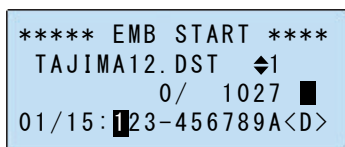
#### 3-1. To use a USB memory

The following is an example when registering a design saved in a USB memory into the machine memory.

- (1) Detach the cover, and insert the USB memory saving designs into the USB port.

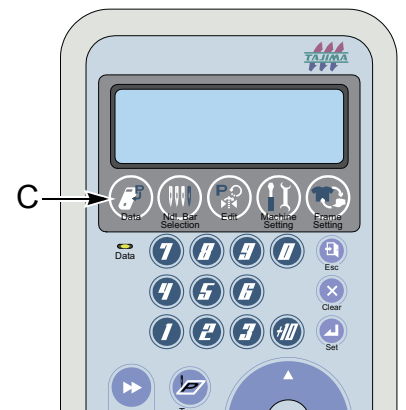
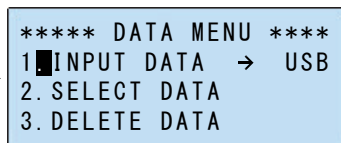


- (2) Start operation from the screen of "EMB START".  
To return to "EMB START" from other screen, press "Esc" key.



- (3) Open "DATA MENU".

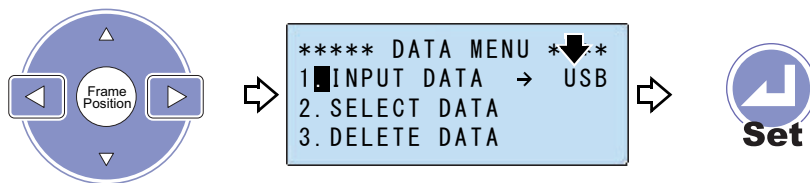
C in the right figure



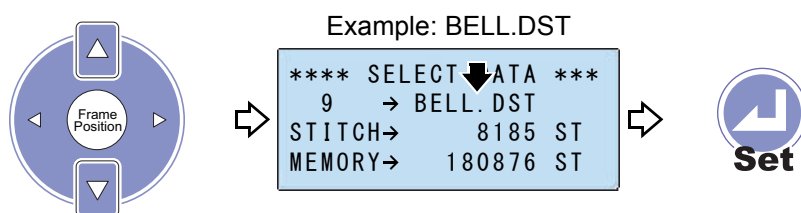


**(4) Select "USB".**

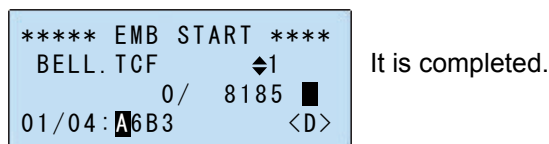
To explain simply, we indicate the selected items in the screen by arrows. (These arrows will not displayed actually.)



**(5) Select a design.**



When the design is "\*\*\*\*.TBF" or "\*\*\*\*.TCF", the following screen will appear after pressing "Set" key. Then, the input of the design has been completed and this design has been enabled to embroider.



When you decide the Color Change Sequence continuously, proceed to the next operation.

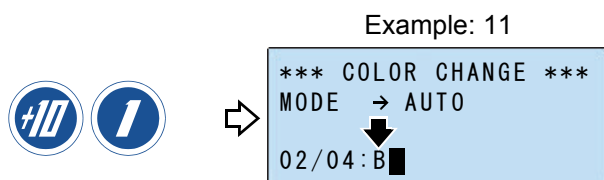
→5.To decide the Color Change Sequence...p.41

**(6) Select the needle bar according to the Color Change Sequence.**

When the needle bar No. is 10 or more, operate according to the below chart.

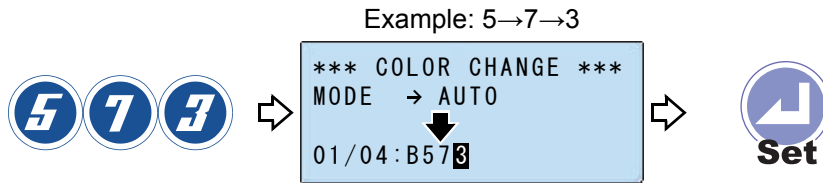
Needle bar No.	10	11	12	13	14	15
Operation						
Display	A	B	C	D	E	F

To select the needle bar again, press the frame travel key. To delete all of the needle bar, press "Clear" key.





(7) Select the remaining needle bars.



If the setting of the needle bar No. is less than the number of the Color Change step, this needle bar No. will be complemented with the remaining steps automatically.

Example:

When setting the needle bar No. up to step 2 in case of step No.7

Needle bar step	1	2	3	4	5	6	7
Needle bar No.	2	5	2	5	2	5	2

: Complemented needle bar numbers

Then, the input of the design has been completed and this design has been enabled to embroider.

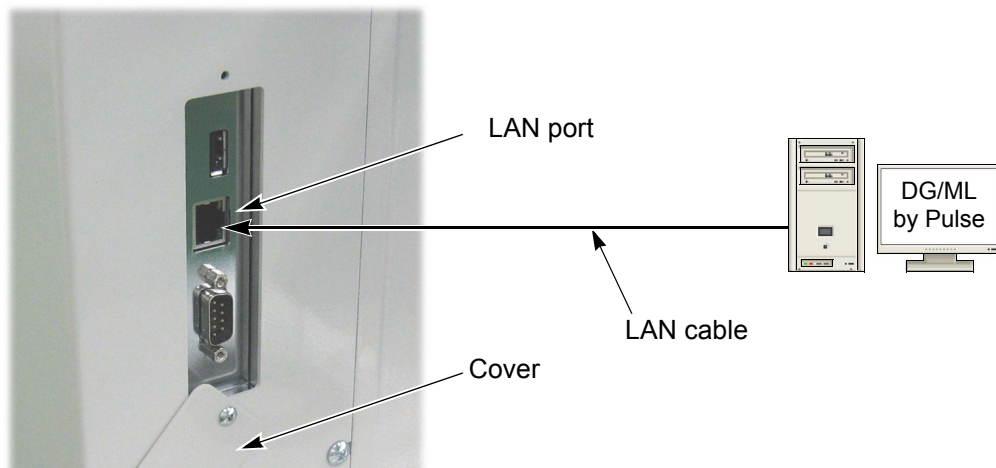
Proceed to the next operation continuously.

→6.To decide the design start position...p.45

### 3-2. To use a personal computer (LAN-connection)

Software sold separately (DG/ML by Pulse) is necessary to perform this operation. For details, consult the distributor. The following is an example when registering a design saved in a personal computer into the machine memory by LAN connection.

- (1) Turn OFF the power of the machine and the personal computer.
- (2) Detach the cover, and connect the LAN cable to the LAN port.

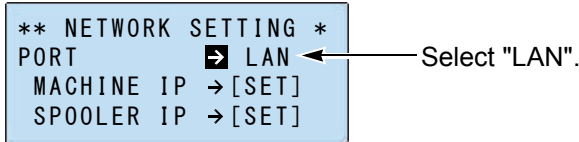


- (3) Turn ON the power of the personal computer, and start up DG/ML by Pulse.

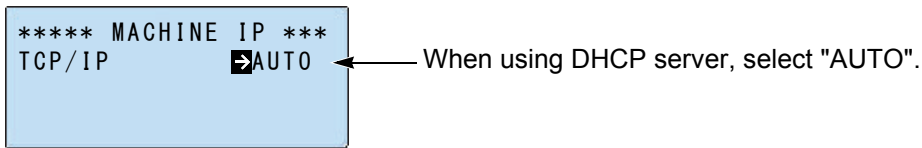
(4) Set the DIP switch DSW1-1 to ON and turn ON the power. Test Mode screen will appear, then press "Set" key.

Select (3) PANEL → (1) NETWORK SETTING, and perform the Network Setting opening the following screens. Regarding the Test Mode, refer to the detail page.(→p.125)

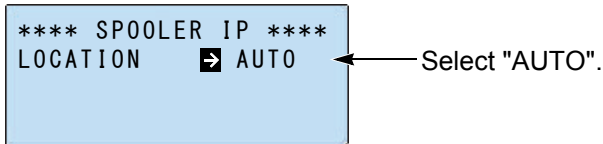
NETWORK SETTING



MACHINE IP



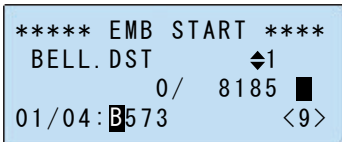
SPOOLER IP



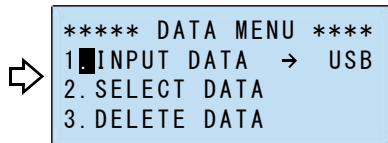
(5) Turn OFF the DIP switch DSW1-1, then turn ON the power again.

(6) Start operation from the screen of "EMB START".

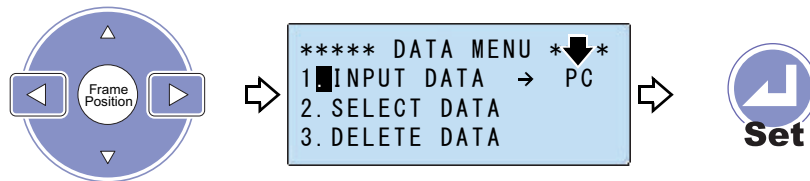
To return to "EMB START" from other screen, press "Esc" key.



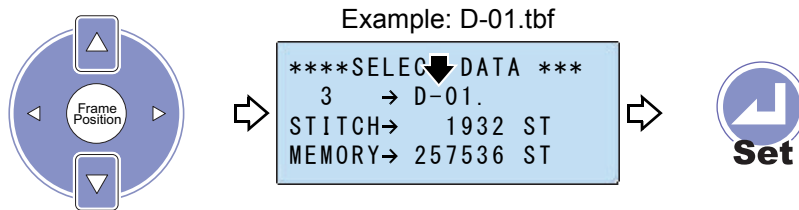
(7) Open "DATA MENU".



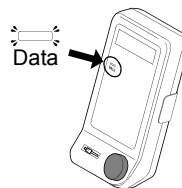
(8) Select "PC".



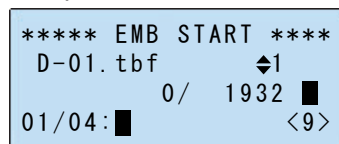
(9) Select a design.



During data transfer, "Data" lamp will blink.



The below screen will appear. Decide the Color Change Sequence.



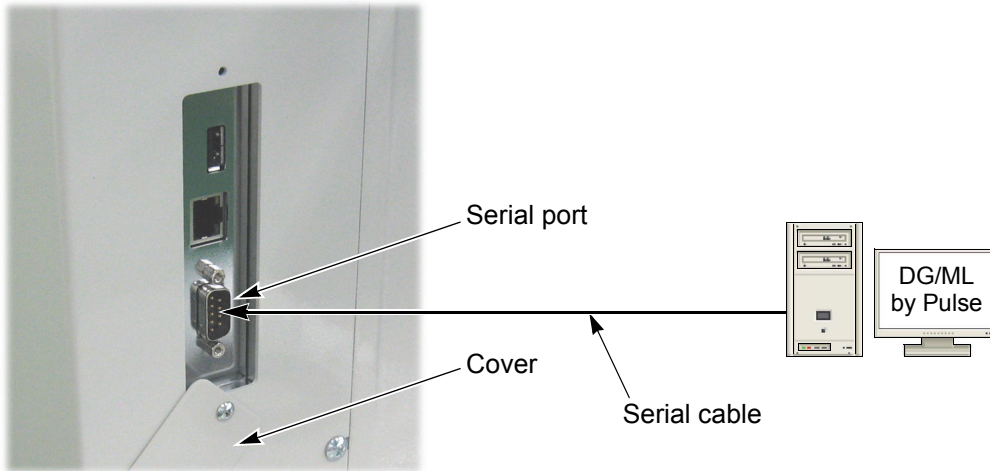
→5.To decide the Color Change Sequence...p.41

### 3-3. To use a personal computer (serial-connection)

Software sold separately (DG/ML by Pulse) is necessary to perform this operation. For details, consult the distributor. The following is an example when registering a design saved in a personal computer into the machine memory by serial connection.

(1) Turn OFF the power of the machine and the personal computer.

(2) Detach the cover, and connect the serial cable to the serial port.

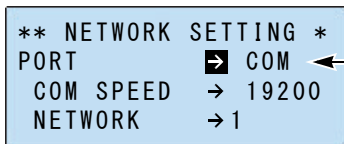


(3) Turn ON the power of the personal computer, and start up DG/ML by Pulse.

(4) Set the DIP switch DSW1-1 to ON and turn ON the power. Test Mode screen will appear, then press "Set" key.

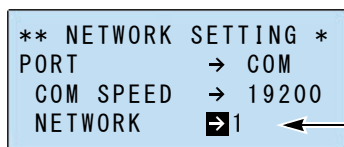
Select (3) PANEL → (1) NETWORK SETTING, and perform the Network Setting opening the following screens. Regarding the Test Mode, refer to the detail page.(→p.125)

NETWORK SETTING



Select "COM".

NETWORK SETTING



Select "1" or "2".

1	Receiving the design data as it is transmitted from a personal computer
2	Selecting and receiving the design data transmitted from a personal computer

Regarding the operation hereafter, proceed to the followings.

When "1" is selected at "NETWORK"

→3-3-1.An operation example when the network is set to "1"...p.35

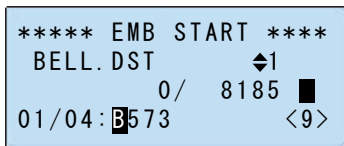
When "2" is selected at "NETWORK"

→3-3-2.An operation example when the network is set to "2"...p.36

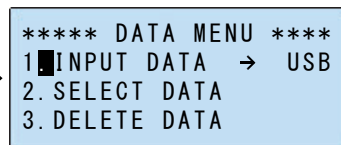
**3-3-1.** An operation example when the network is set to "1"

(1) Start operation from the screen of "EMB START".

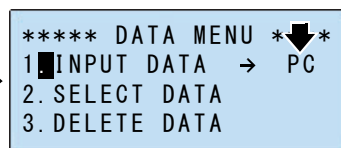
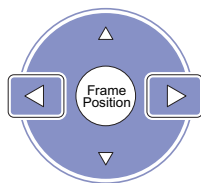
To return to "EMB START" from other screen, press "Esc" key.



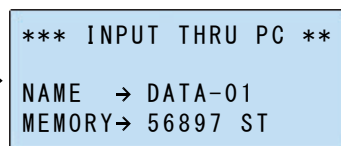
(2) Open "DATA MENU".



(3) Select "PC".



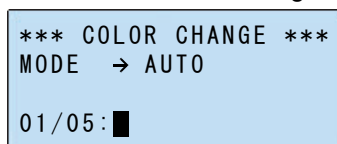
(4) Decide a design.



During data transfer, "Data" lamp on the operation panel will blink.

When the design is "\*\*\*\*.DST", the following screen will appear.

Decide the Color Change Sequence.

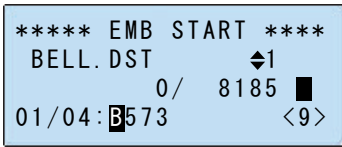


→5.To decide the Color Change Sequence...p.41

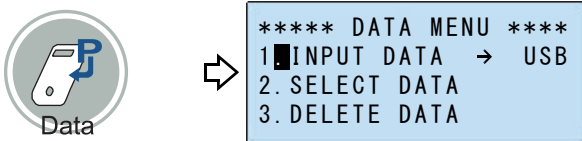
**3-3-2.** An operation example when the network is set to "2"

(1) Start operation from the screen of "EMB START".

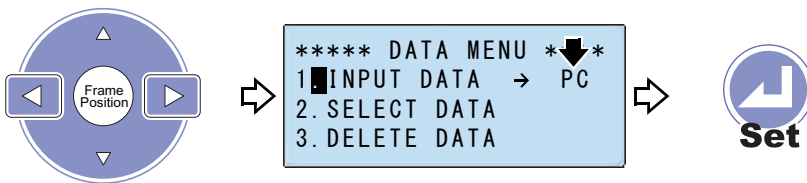
To return to "EMB START" from other screen, press "Esc" key.



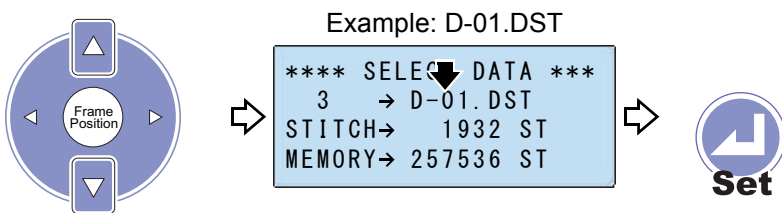
(2) Open "DATA MENU".



(3) Select "PC".



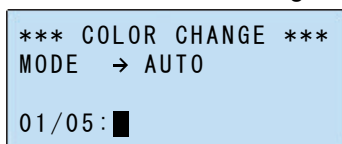
(4) Select a design.



During data transfer, "Data" lamp on the operation panel will blink.

When the design is "\*\*\*\*.DST", the following screen will appear.

Decide the Color Change Sequence.



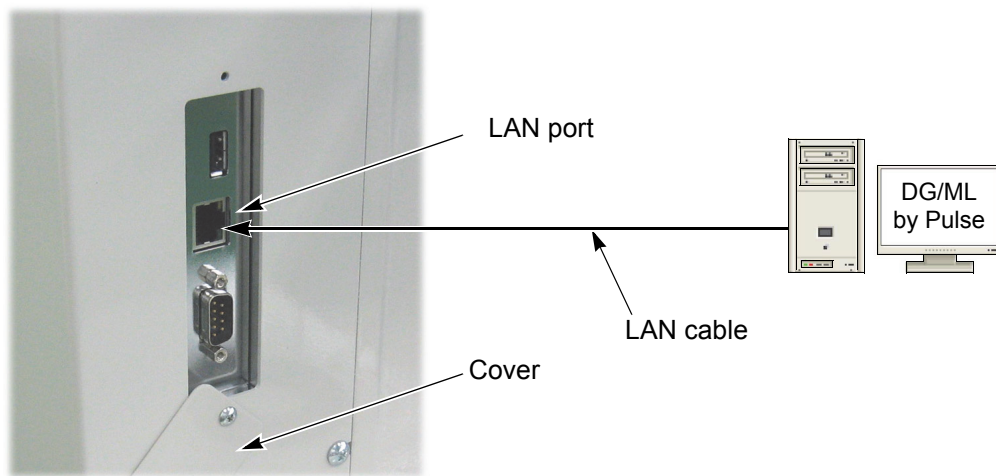
→5.To decide the Color Change Sequence...p.41

### 3-4. To use personal computer (bar code reader)

Software sold separately (DG/ML by Pulse) is necessary to perform this operation. For details, consult the distributor. Prepare the bar code reader corresponding to the USB for using. We do not handle the bar code reader.

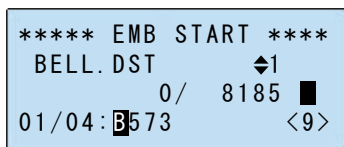
The following is an example when registering a design saved in a personal computer into the machine memory using the bar code reader.

- (1) Turn OFF the power of the machine and the personal computer.
- (2) Detach the cover, and connect the LAN cable to the LAN port.

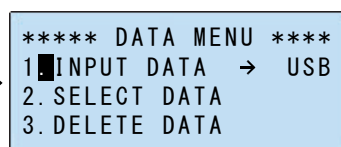


- (3) Turn ON the power of the personal computer, and start the design spooler.
- (4) Connect the bar code reader to the USB port.
- (5) Turn ON the power of the machine.
- (6) Start operation from the screen of "EMB START".

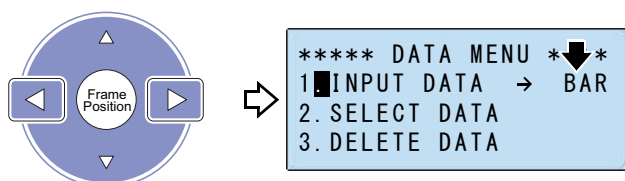
To return to "EMB START" from other screen, press "Esc" key.



- (7) Open "DATA MENU".



**(8)** Select "BAR".

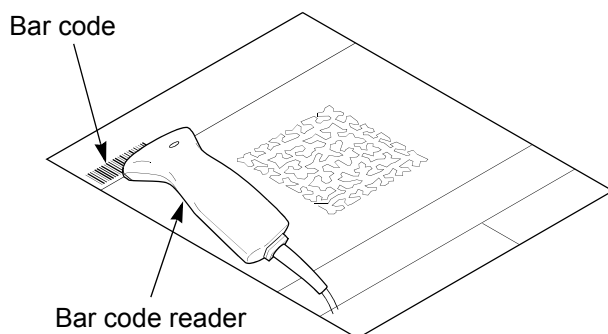


**(9)** Switch to the bar code input screen.



**(10)** Read the bar code.

Move the bar code reader so that infra-red ray falls on the whole of bar code.





**(11)** Decide.

```

*** COLOR CHANGE ***
MODE → AUTO
01/05: █

```

When the Color Change is not set to the color being input as the above screen.

→5.To decide the Color Change Sequence...p.41

When the design is "\*\*\*\*.TBF" or "\*\*\*\*.TCF", the following screen will appear after pressing "Set" key. Then, the input of the design has been completed and this design has been enabled to embroider.

```

***** EMB START *****
BELL. TCF      ◆1
                0/ 8185 █
01/04: A6B3    <D>

```

When you decide the Color Change Sequence continuously, proceed to the next operation.

→5.To decide the Color Change Sequence...p.41

## 4. To decide a design to embroider

Select the design in the memory of the machine and enable to embroider.

### (1) Start operation from the screen of "EMB START".

To return to "EMB START" from other screen, press "Esc" key.

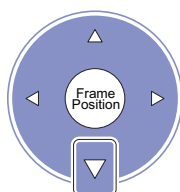
```
***** EMB START ****
TAJIMA12.DST  ◆1
                0/ 1027 ■
01/15: 123-456789A<D>
```

### (2) Open "DATA MENU".



```
***** DATA MENU ****
1. INPUT DATA → USB
2. SELECT DATA
3. DELETE DATA
```

### (3) Select "SELECT DATA".

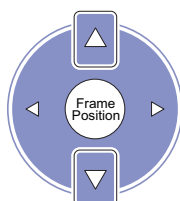


```
***** DATA MENU ****
1. INPUT DATA → USB
2. SELECT DATA
3. DELETE DATA
```



When the screen is not switched even after pressing "SELECT DATA", change the setting. (→p.57)

### (4) Select a design.



Example: BELL.DST

```
***** SELECT DATA ***
09/23 → BELL.DST
STITCH→ 8185 ST
MEMORY→ 180876 ST
```



It is completed.

If the frame travel key (left and right) is pressed, the detailed design information will be displayed.

(→p.15)

When you decide the Color Change Sequence continuously, proceed to the next operation.

→5.To decide the Color Change Sequence...p.41

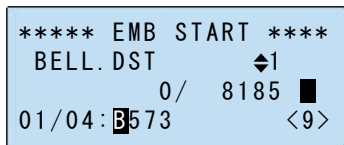
## 5. To decide the Color Change Sequence

"Step" described hereafter means the section divided by Color Change code in the design data. The first section is called step 1, and the next section is called step 2.

### 5-1. To decide Color Change Sequence for desired step only

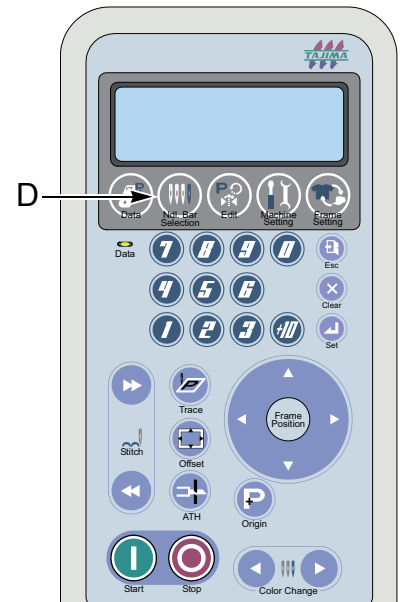
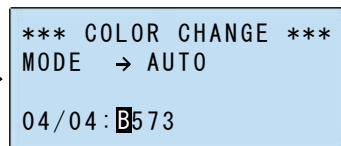
(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

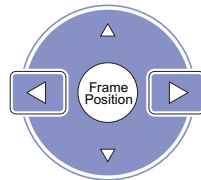


(2) Open "COLOR CHANGE".

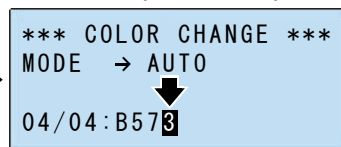
D in the right figure



(3) Move the cursor to the step you want to change.



Example: 4th step

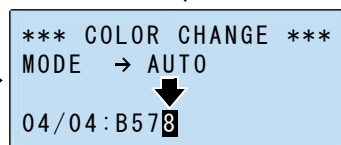


(4) Select the needle bar No.

To select the needle bar again, press the frame travel key. To delete all of the needle bar, press "Clear" key.



Example: 8



It is completed.

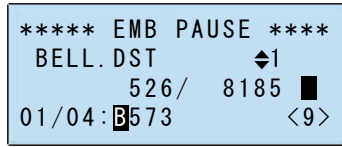
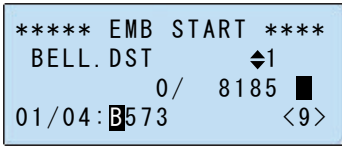
Proceed to the next operation continuously.

→6.To decide the design start position...p.45

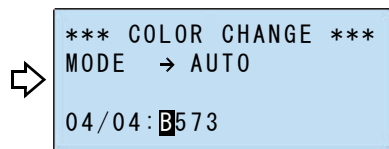
### 5-2. To decide Color Change Sequence for all steps

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.



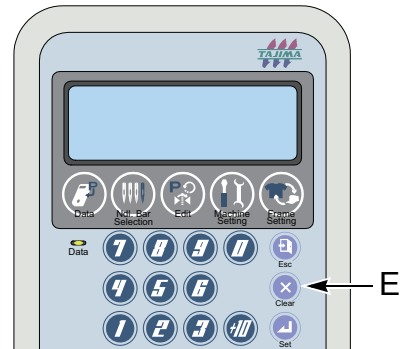
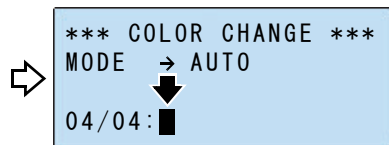
(2) Open "COLOR CHANGE".



(3) Delete all of the needle bar Nos.

To select the needle bar again, press the frame travel key.

E in the right figure



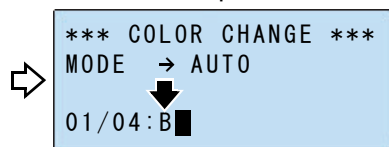
(4) Select the needle bar according to the Color Change Sequence.

When the needle bar No. is 10 or more, operate according to the below chart.

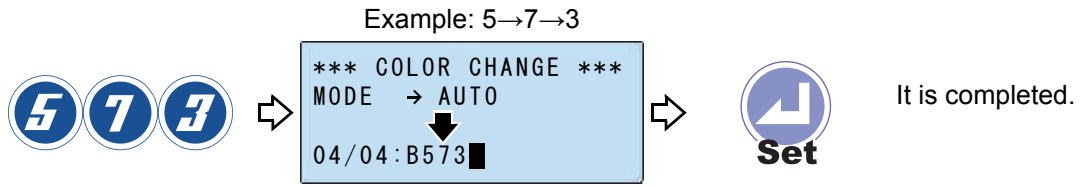
Needle bar No.	10	11	12	13	14	15
Operation						
Display	A	B	C	D	E	F

To select the needle bar again, press the frame travel key.

Example: 11



(5) Select the remaining needle bars.



If the setting of the needle bar No. is less than the number of the Color Change step, this needle bar No. will be complemented with the remaining steps automatically.

Example:

When setting the needle bar No. up to step 2 in case of step No.7

Needle bar step	1	2	3	4	5	6	7
Needle bar No.	2	5	2	5	2	5	2

: Complemented needle bar numbers

Proceed to the next operation continuously.

→6.To decide the design start position...p.45

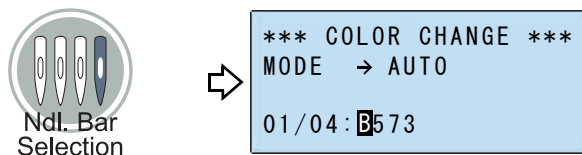
### 5-3. To decide Color Change Mode (Automatic, Manual)

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

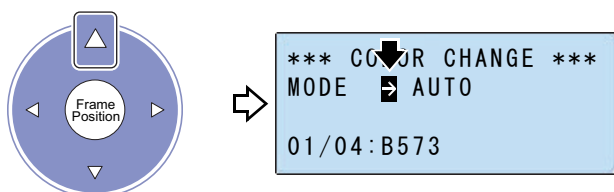
To return to "EMB START" from other screen, press "Esc" key.



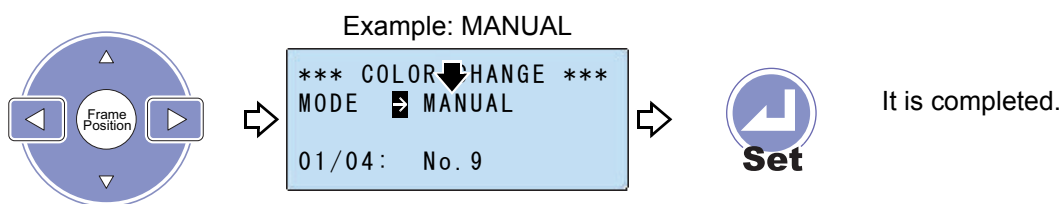
(2) Open "COLOR CHANGE".



(3) Select "MODE".



(4) Select the Color Change Mode.



AUTO	Auto Color Change is performed according to the Color Change Sequence. Operation will be started after the Color Change.
MANUAL	Auto Color Change is not performed. Auto Start is not performed.

## 6. To decide the design start position

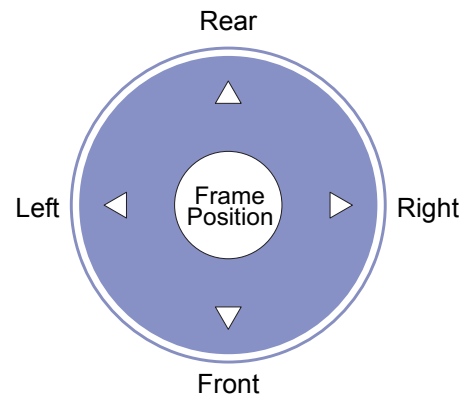
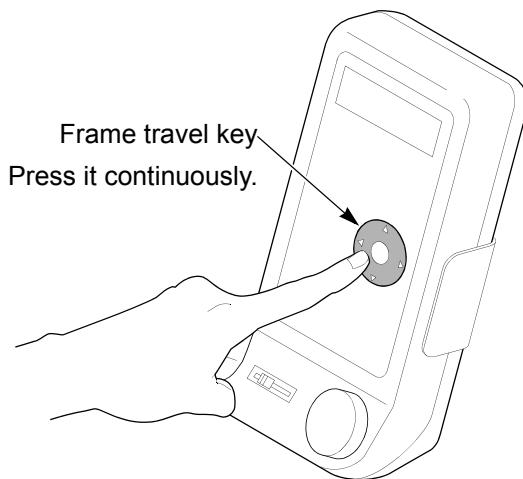
### 6-1. To move the frame

When moving the frame, press the frame travel key continuously.

The frame travel speed can be switched to three steps. (low speed, middle speed, high speed)(→ p.60)


**CAUTION**

 When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.



↓ During the frame travel

```

**** XY POSITION ***
FRAME → FLAT
X AXIS → - 2.8 mm
Y AXIS → + 10.3 mm
    
```

The current frame position will be displayed. The frame coordinates from the Origin.(→p.27)

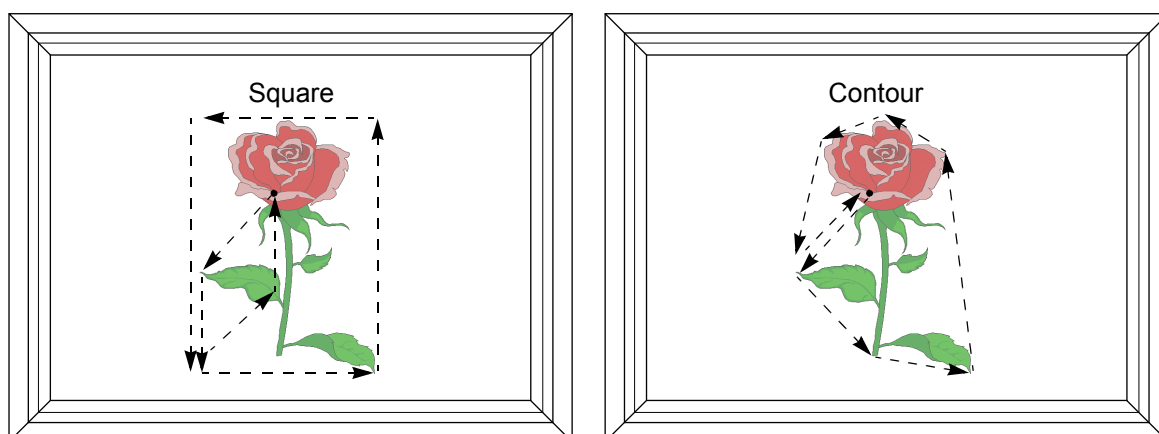


## 6-2. To check if the design fits in embroidery space

There are 2 types of movements for Tracing. After checking the present setting condition, perform the following operation. For the frame movement, refer to the detail page.(→p.63)

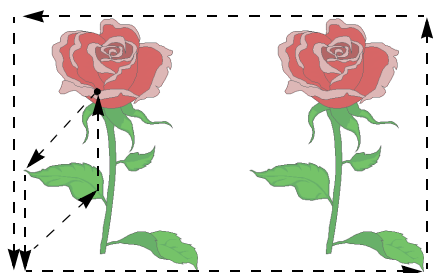

**CAUTION**

 When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.



When the size or the direction of the design was changed, perform Tracing for the embroidery space of the design after changing.

When the Repeat is set, the machine will perform Tracing the whole embroidery space.



**(1)** Start operation from the screen of "EMB START".

To return to "EMB START" from other screen, press "Esc" key.

```
***** EMB START ****
BELL. DST      ◆1
              0/ 8185 ■
01/04: B573   <9>
```

**(2) Execute Tracing.**

If "Trace" key is pressed, the frame will move.

The position where "Trace" key is pressed will be the start position of the design.

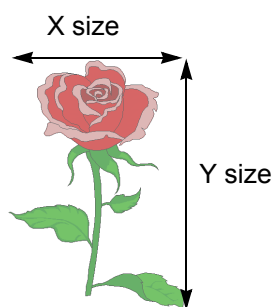
F in the right figure



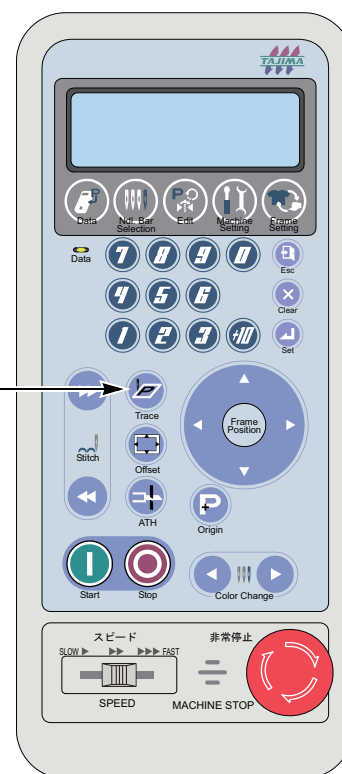
```

***** TRACE *****
BELL.DST          ↕1
X SIZE→          95.4 mm
Y SIZE→          110.7 mm
    
```

The size of the design will be displayed during Tracing.



F



# 7. To start embroidering

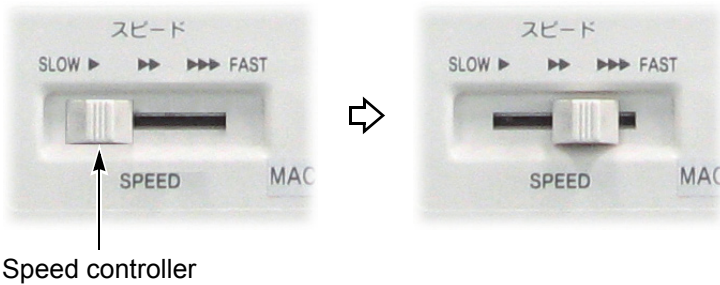
## 7-1. To adjust embroidery speed

There are each of proper embroidery speeds for the designs to embroider. At the beginning, start operation from the the low speed, and speed up gradually while checking the embroidery condition.

- (1) Set the speed controller to the left position (low speed). (the figure A)
- (2) After starting operation, speed up moving the speed controller to the right gradually. (the illustration B)

Figure A

Figure B

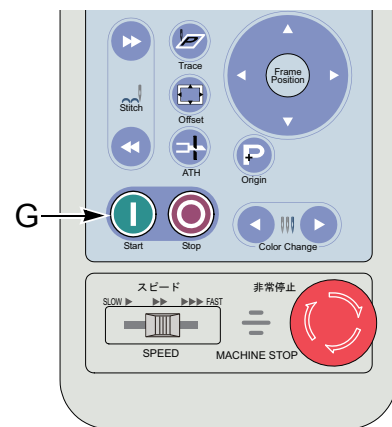
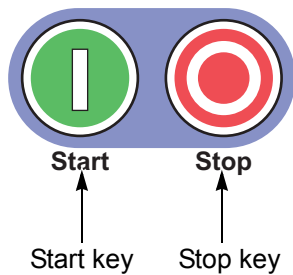


## 7-2. Start/Stop key

CAUTION

Before starting the machine, pay enough attention to the surrounding safety. Moving the needle bar and/or the frame could injure you.

G in the right figure



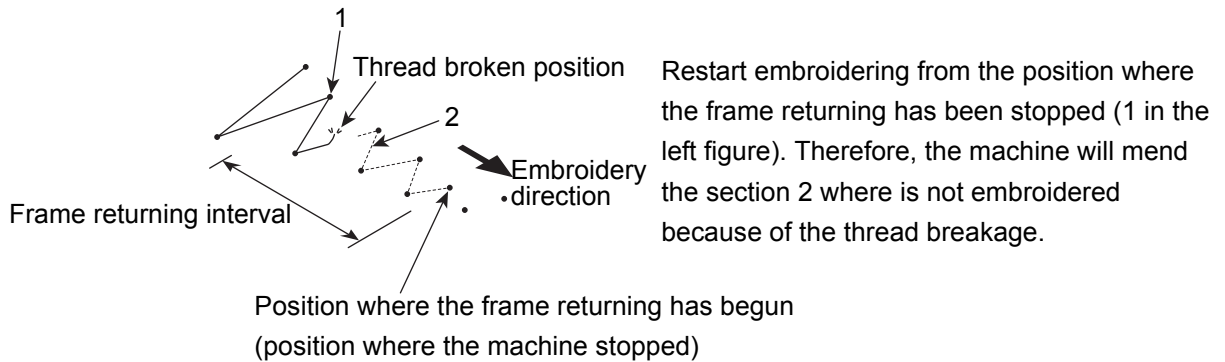
- (1) To start operation, press the start key.
- (2) To stop operation, press the stop key.
- (3) To start slow operation, keep on pressing the start switch. Release it and the machine will operate normally.

### 7-3. To return the frame/to advance the frame

#### 7-3-1. To return the frame

This function will return the frame to the direction where stitches return with the needle bar stopped.

Return the frame for a few stitches when the thread breaks, and perform mending from that position.



**⚠ CAUTION**

⊘ When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.

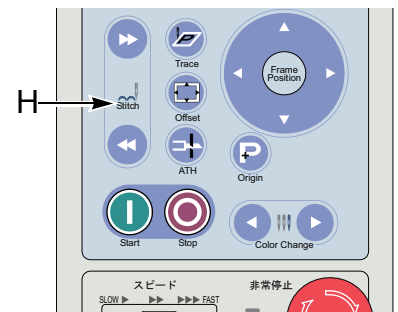
#### (1) Decide the frame feed unit.

H in the right figure



Example: 10

```
***** EMB PAUSE ↓*****
BELL. DST   ▲10
           526 / 8185 ■
01 / 04 : B573 <9>
```

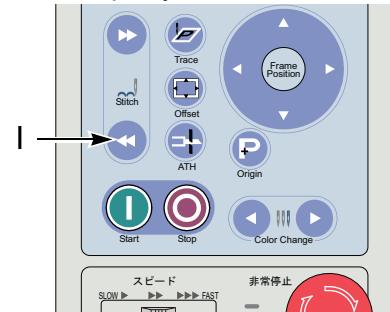
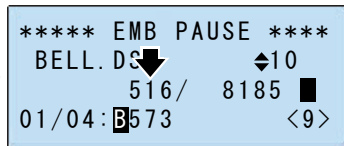


1	Return/Advance the frame for 1 stitch.
10	Return/Advance the frame for 10 stitches.
100	Return/Advance the frame for 100 stitches.
C	Return the frame to the Color Change position just before. / Advance the frame to the Color Change position just after.
n	Return/Advance the frame for stitch No. you want(→p.51)

**(2)** To return the frame

Pressing the frame return key one time will return the frame for 10 stitches. Keeping on pressing this key will cause the frame to return to the Color Change position just before in consecutive movement. To stop the machine in the middle of operation, press the stop key.

I in the right figure

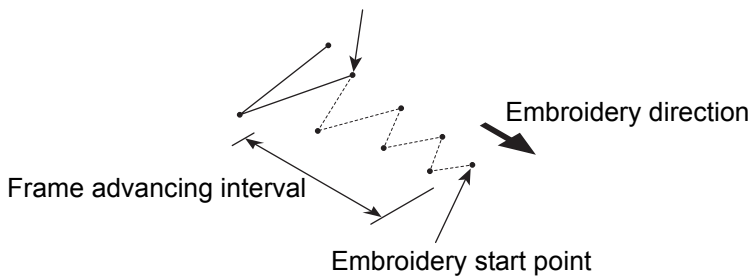


**7-3-2.** To advance the frame

This function will move the frame to the direction where stitches advance with the needle bar stopped.

The frame can be moved immediately to the embroidery start point when you want to start from the middle of embroidery.

Position where the frame advance has begun

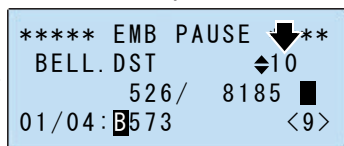


CAUTION

When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.

**(1)** Decide the frame feed unit.

Example: 10

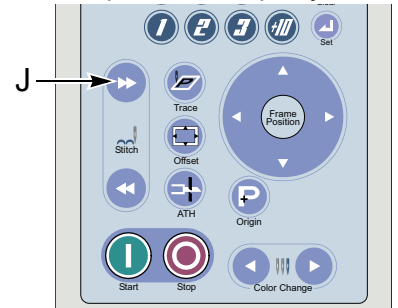
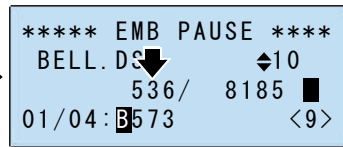


1	Return/Advance the frame for 1 stitch.
10	Return/Advance the frame for 10 stitches.
100	Return/Advance the frame for 100 stitches.
C	Return the frame to the Color Change position just before. / Advance the frame to the Color Change position just after.
n	Return/Advance the frame for stitch No. you want(→p.51)

**(2) To advance the frame**

If the frame advancing key is pressed one time, the frame will advance for 10 stitches. Keeping on pressing it will cause the frame to advance to the Color Change position just after by consecutive movement. To stop the machine in the middle of operation, press the stop key.

J in the right figure



**7-3-3. To return/advance the frame to the stitch No. you want**

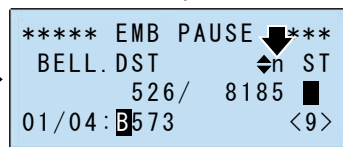
**CAUTION**

When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.

**(1) Decide the frame feed unit.**



Example: n

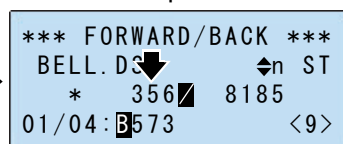


1	Return/Advance the frame for 1 stitch.
10	Return/Advance the frame for 10 stitches.
100	Return/Advance the frame for 100 stitches.
C	Return the frame to the Color Change position just before. / Advance the frame to the Color Change position just after.
n	Return/Advance the frame for stitch No. you want

**(2) Select the stitch No.**

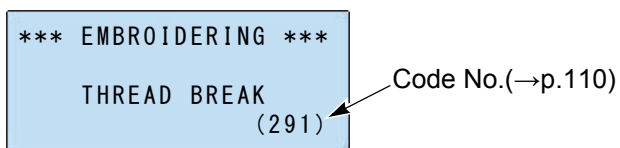


Example: 356



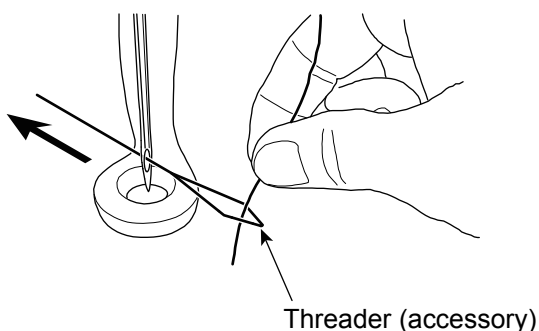
### 7-4. Countermeasure when the thread breaks

The machine will stop automatically, and the operation panel will display as below.



Restart embroidering according to the following procedure.

- (1) Press the stop key.
- (2) Pass the upper thread, or change the under thread (bobbin).



- (3) After returning the frame for a few stitches, press the start key.

### 7-5. Completion of embroidery

Destination to move of the frame differs depending on setting of the machine.

Setting for Offset(→p.73)	
AUTO	MANUAL
<p>Move the frame to the registered position.</p>	<p>The frame will not move.</p> <p>However, when Auto Origin Return is set, the frame will move to the design start position.</p>



## Chapter 4

### For basic use

1. To operate manually .....	54
2. To store the design, to delete the design .....	57
3. To set the frame movement .....	60
4. To increase embroidering efficiency .....	65
5. To change screen display .....	67

1

2

3

4

5

6

7

8

9

10

11

# 1. To operate manually

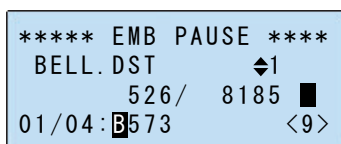
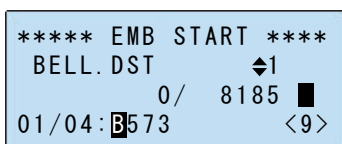
## 1-1. To trim the thread


**CAUTION**

 When performing this operation, do not put your hands etc. near the needle or on the machine table. Moving needle bar or frame could injure you.

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

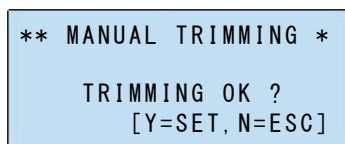
To return to "EMB START" from other screen, press "Esc" key.



(2) To execute the thread trimming

When pressing "Set" key, the needle bar will move up/down to trim thread.

A in the figure below



It is completed.

When tie stitching is set, one stitch embroidery will be performed and then thread will be trimmed.

For tie stitches, refer to the detail page.(→p.92)



## 1-2. To change the color


**CAUTION**

 When performing this operation, do not put your hands etc. around the needle bar case. Moving needle bar case could injure you.

### 1-2-1. When Color Change mode is "AUTO"

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

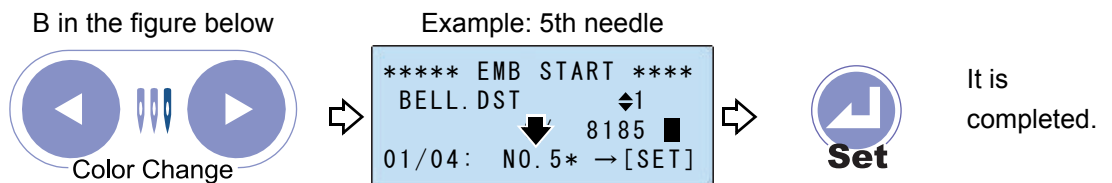
To return to "EMB START" from other screen, press "Esc" key.

```
***** EMB START ****
BELL. DST      ◆1
                0/ 8185 ■
01/04: B573    <9>
```

```
***** EMB PAUSE ****
BELL. DST      ◆1
                526/ 8185 ■
01/04: B573    <9>
```

(2) To execute the Color Change

When pressing "Set" key, the needle bar case will move.



**1-2-2.** When Color Change mode is "MANUAL"

**(1)** Start operation from the screen of "EMB START" or "EMB PAUSE".

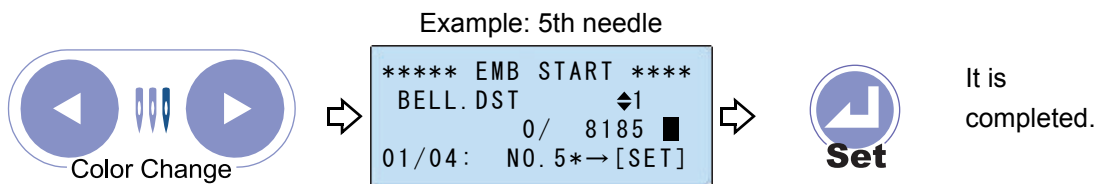
To return to "EMB START" from other screen, press "Esc" key.

```
***** EMB START *****
BELL. DST      ◆1
              0/ 8185 █
01/04: NO. 9   <9>
```

```
***** EMB PAUSE *****
BELL. DST      ◆1
              526/ 8185 █
01/04: NO. 9   <9>
```

**(2)** To execute Color Change

When pressing "Set" key, the needle bar case will move.

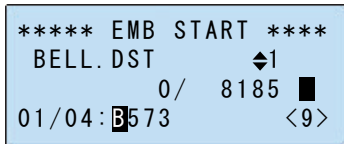


## 2. To store the design, to delete the design

### 2-1. To store/not to store the data to the memory of the machine when inputting the design

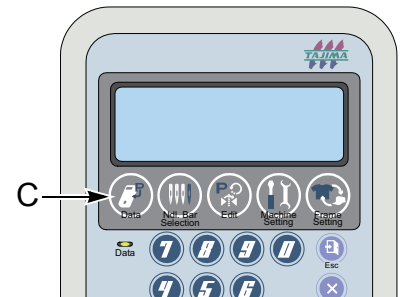
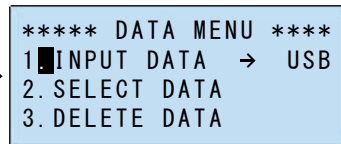
(1) Start operation from the screen of "EMB START".

To return to "EMB START" from other screen, press "Esc" key.

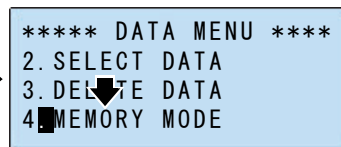
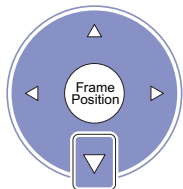


(2) Open "DATA MENU".

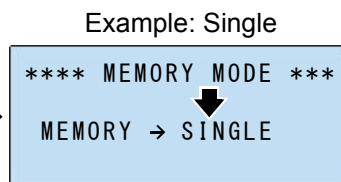
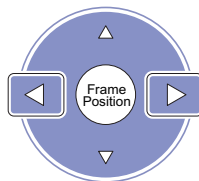
C in the right figure



(3) To select "4. MEMORY MODE"



(4) To select input mode



It is completed.

MULTI	Save input design in the memory of the machine (usual setting).
Single	Design cannot be selected at "SELECT DATA". It is possible to embroider only one design registered in the memory of the machine. When the design is input next, the original data will be overwritten.

## 2-2. To select the design to delete

(1) Start operation from the screen of "EMB START".

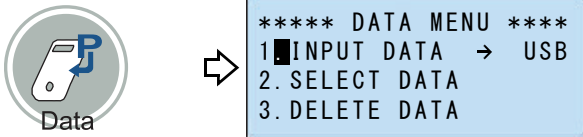
To return to "EMB START" from other screen, press "Esc" key.

```

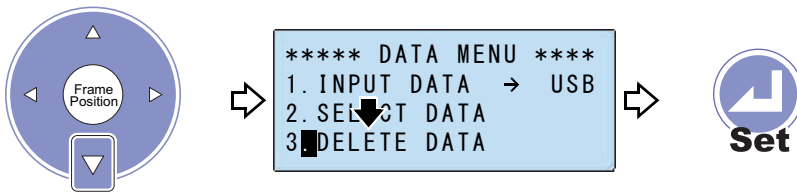
***** EMB START ****
TAJIMA12.DST  ◆1
              0/ 1027 ■
01/15: 123-456789A<D>

```

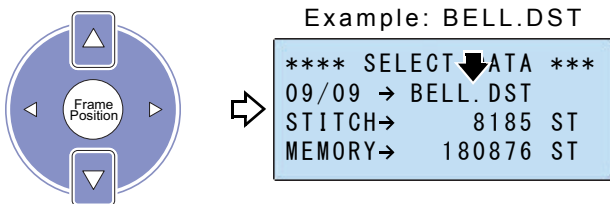
(2) Open "DATA MENU".



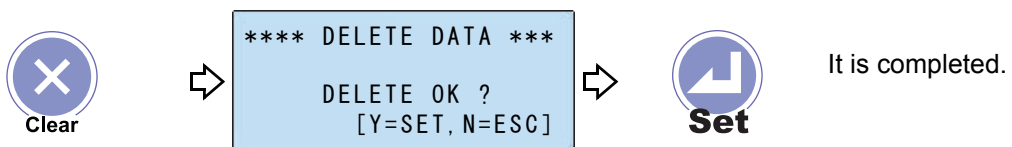
(3) To select "3. DELETE DATA"



(4) To select the design to delete



(5) To delete the design



### 2-3. To delete all designs

(1) Start operation from the screen of "EMB START".

To return to "EMB START" from other screen, press "Esc" key.

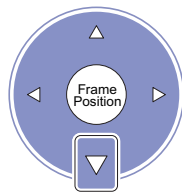
```
***** EMB START ****
BELL.DST      1
              0/ 8185
01/04: 573    <9>
```

(2) Open "DATA MENU".



```
***** DATA MENU ****
1. INPUT DATA → USB
2. SELECT DATA
3. DELETE DATA
```

(3) To select "5. INITIAL MEMORY"



```
***** DATA MENU ****
3. DELETE DATA
4. MEMORY MODE
5. INITIAL MEMORY
```

(4) Delete all designs.



```
** INITIAL MEMORY **
DELETE ALL DATA OK ?
[Y=SET, N=ESC]
```



It is completed.



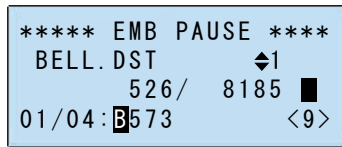
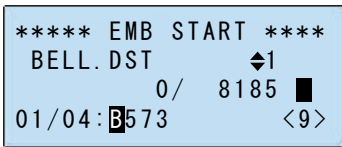
### 3. To set the frame movement

#### 3-1. To change the frame travel speed

The frame movements to be applied are manual frame travel, origin search, origin return, trace and offset.

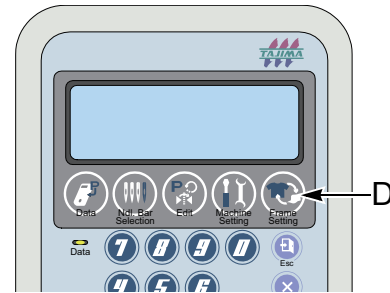
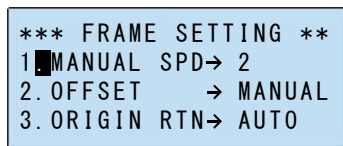
(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

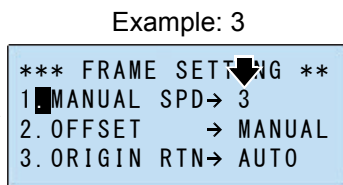
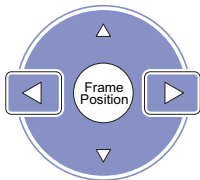


(2) To open "FRAME SETTING"

D in the right figure



(3) To select frame travel speed



It is completed.

1	2	3
Low speed	Middle speed	High speed

### 3-2. Necessary setting after replacing the frame

After exchanging the frame, select the frame according to the following procedure.


CAUTION

 When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.

**(1)** Start operation from the screen of "EMB START".

To return to "EMB START" from other screen, press "Esc" key.

```

***** EMB START *****
BELL. DST      ◆1
                0/ 8185 ■
01/04: B573    <9>
    
```

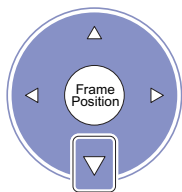
**(2)** To open "FRAME SETTING"



```

*** FRAME SETTING **
1. MANUAL SPD → 2
2. OFFSET    → MANUAL
3. ORIGIN RTN → AUTO
    
```

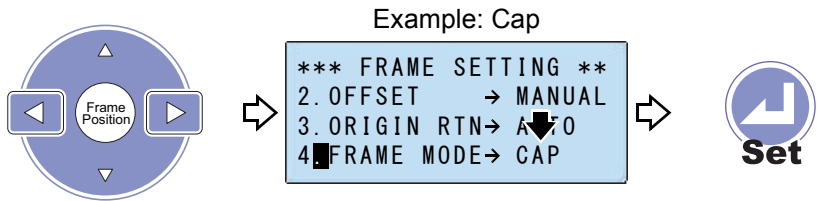
**(3)** To select "4. FRAME MODE"



```

*** FRAME SETTING **
2. OFFSET    → MANUAL
3. ORIGIN RTN → AUTO
4. FRAME MODE → FLAT
    
```

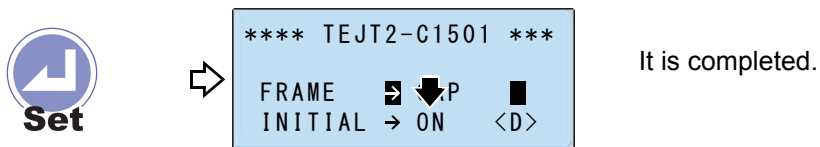
**(4)** To select the frame



<p>FLAT (Tubular goods frame) (Auto clamp frame)</p>	
<p>CAP (Cap frame)</p>	
<p>CYLNR (Cylindrical frame)</p>	
<p>BORDER (Border frame)</p>	
<p>X-WIDE (X-extension border frame)</p>	

**(5)** To execute Origin Search

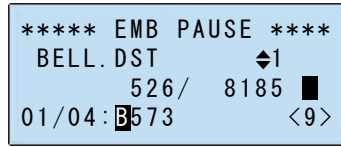
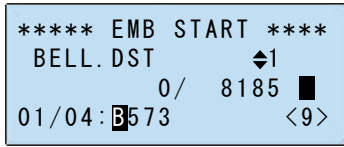
When Origin Search is "OFF", move down the cursor to "ON", then press "Set" key. Pressing "Set" key will cause the frame to move.



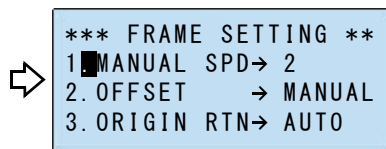
### 3-3. To set the trace movement (square/contour)

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

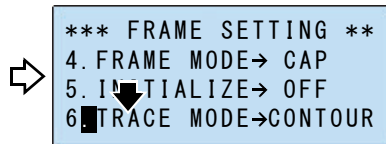
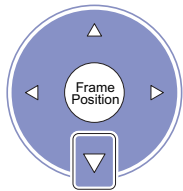
To return to "EMB START" from other screen, press "Esc" key.



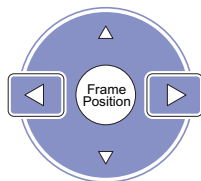
(2) To open "FRAME SETTING"



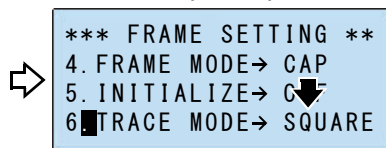
(3) To select "6. TRACE MODE"



(4) To select the frame



Example: Square



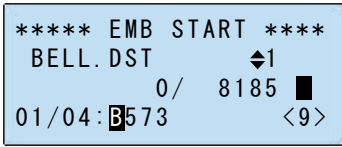
It is completed.

SQUARE	Design will be traced by rectangle.
CONTOUR	Contour of the design will be traced.

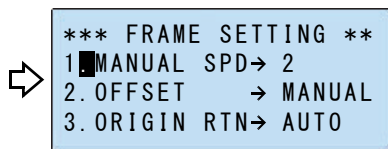
### 3-4. Set whether or not Origin Search is performed when the power is turned ON

(1) Start operation from the screen of "EMB START".

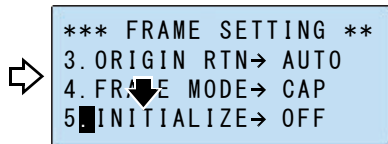
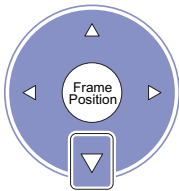
To return to "EMB START" from other screen, press "Esc" key.



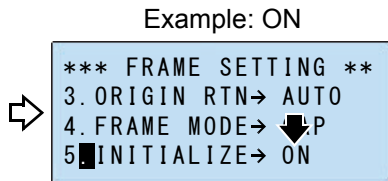
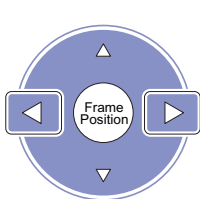
(2) To open "FRAME SETTING"



(3) To select "5. INITIALIZE"



(4) To select the display of Origin Search



It is completed.

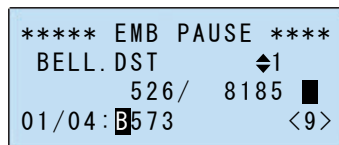
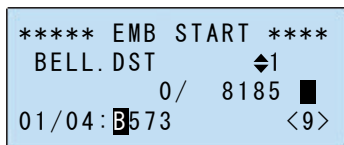
## 4. To increase embroidering efficiency

### 4-1. To change times of lowering needle bar by operating slowly

Set times of lowering the needle bar by operating slowly after thread trimming. When starting the machine by pressing start key after stopping the machine by pressing stop key, the machine will run normally.

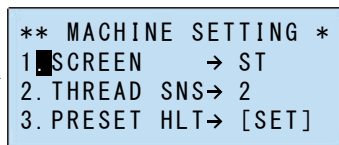
(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

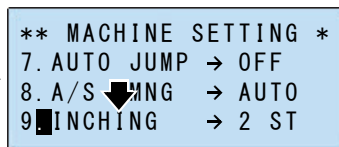
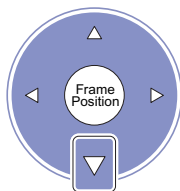


(2) To open "MACHINE SETTING"

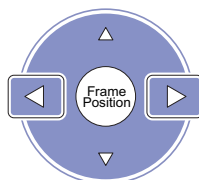
E in the right figure



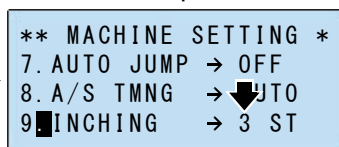
(3) To select "9. INCHING"



(4) To select times



Example: 3



It is completed.

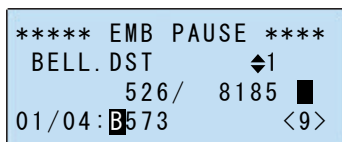
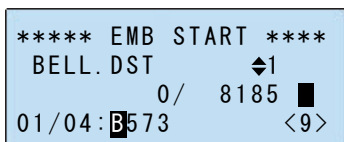
Selecting range: 2 to 9 times

## 4-2. To divide long stitch

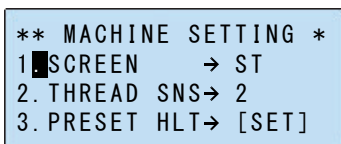
This function makes the frame movement to divide by jump automatically when a stitch length exceeds a setting value. This function reduces the load generated at the frame drive due to heavy weight of the material to be embroidered. However, dividing by jump will reduce embroidering efficiency.

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

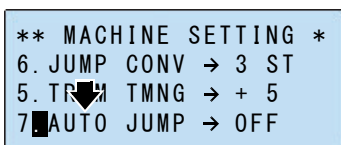
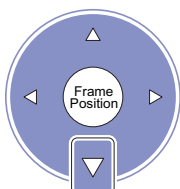
To return to "EMB START" from other screen, press "Esc" key.



(2) To open "MACHINE SETTING"

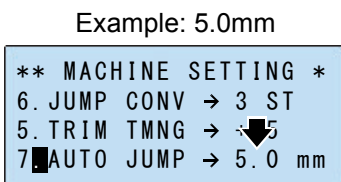
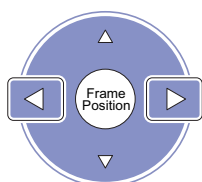


(3) To select "7. AUTO JUMP"



(4) To select the stitch length to perform Automatic Jump

Pressing the key longer will make the value be fast-forwarded.



It is completed.

## 5. To change screen display

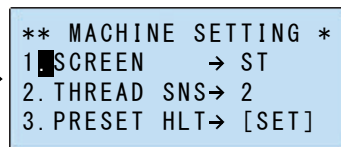
### 5-1. To display the total number of stitches of design or rotating speed during operation

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

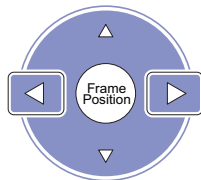
To return to "EMB START" from other screen, press "Esc" key.



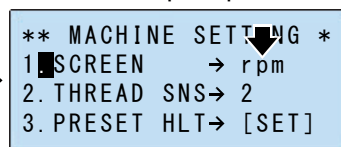
(2) To open "MACHINE SETTING"



(3) To select screen display



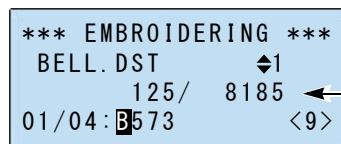
Example: rpm



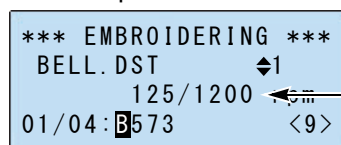
It is completed.

The below screen will appear during operation.

When "ST" is selected



When "rpm" is selected







## Chapter 5

### For practical use

1. To move the frame to the registered position.....	70
2. To move the frame to design start position .....	74
3. To stop the machine in the middle of embroidery .....	76
4. To change the size and the direction of the design.....	80
5. To embroider repeatedly .....	83

1

2

3

4

5

6

7

8

9

10

11

# 1. To move the frame to the registered position

## 1-1. To register the frame position

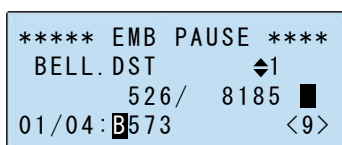
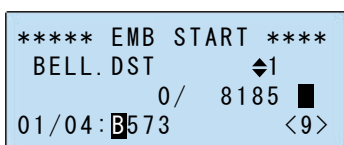
The registered position is stored in the machine and it is possible to use for all designs. The registered position will be held even after turning off the power. When the frame type is changed, the registered position will be reset.


CAUTION

 When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.

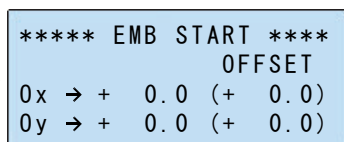
(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

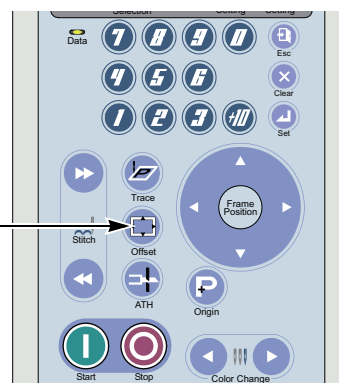


(2) To open the offset setting screen

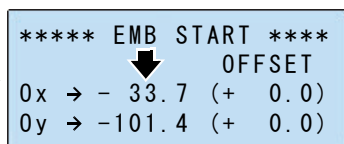
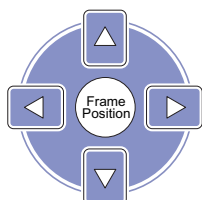
A in the right figure



A



(3) To move the frame to the position you desire and register



It is completed.

If "OFFSET" explained on the other page is set to "AUTO", the frame will be moved to the position registered here at temporary stop or end of the embroidery.

For "OFFSET", refer to the detail page.(→p.73)

**1-2.** To change the registered position of the frame

 **CAUTION**

 When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.


**(1)** Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

<pre>***** EMB START **** BELL. DST      ▲1                 0/ 8185 ■ 01/04: B573    &lt;9&gt;</pre>	<pre>***** EMB PAUSE **** BELL. DST      ▲1                 526/ 8185 ■ 01/04: B573    &lt;9&gt;</pre>
--	--

**(2)** To open Offset setting screen

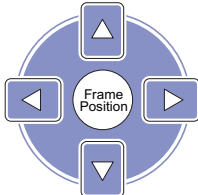
Pressing "Offset" key will move the frame.


⇒


```
***** EMB START ****
                OFFSET
0x → - 33.7 (- 33.7)
0y → -101.4 (-101.4)
```

**(3)** To change the frame position

Pressing the frame travel key will make the frame moving.


⇒

```
***** EMB START ****
                ▼      OFFSET
0x → - 10.7 (- 33.7)
0y → -133.4 (-101.4)
```

⇒

It is completed.

**1-3.** To move the frame to the registered position

 **CAUTION**

 When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.

**(1)** Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

```
***** EMB START ****
BELL. DST      ▲1
              0/ 8185 ■
01/04: B573    <9>
```

```
***** EMB PAUSE ****
BELL. DST      ▲1
              526/ 8185 ■
01/04: B573    <9>
```

**(2)** To move the frame to the registered position

Pressing "Offset" key will move the frame.



```
***** EMB START ****
              OFFSET
0x → - 10.7 (- 10.7)
0y → -133.4 (-133.4)
```

**(3)** To return the frame to previous position

Pressing "Offset" key will move the frame.

Pressing the start key instead of "Offset" key will cause the machine to start operation after returning to the previous position.



```
***** EMB PAUSE ****
TAJIMA12. DST ▲1
              142/ 1027 ■
03/15: 12B-456789A<D>
```

It is completed.

### 1-4. To move the frame automatically to the registered position

Move the frame automatically to the position registered at temporary stop or end of the embroidery.

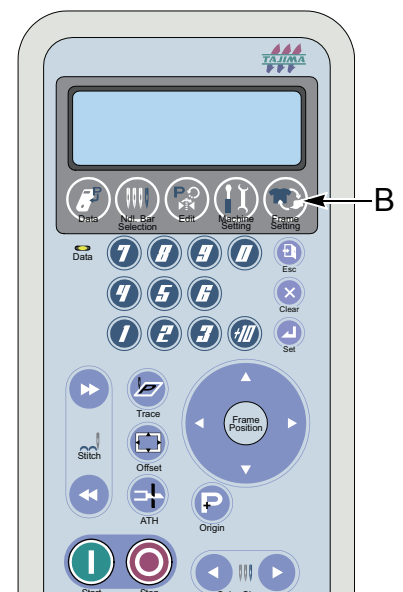
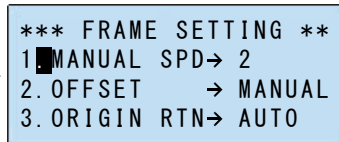
(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

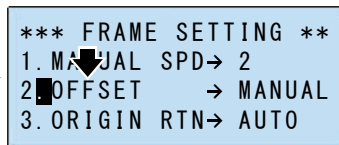
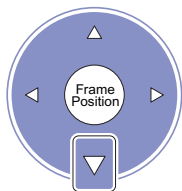


(2) To open "FRAME SETTING"

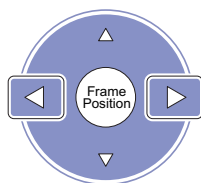
B in the right figure



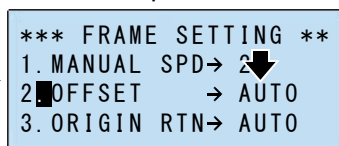
(3) To select "2. OFFSET"



(4) To select Frame Travel



Example: AUTO



It is completed.

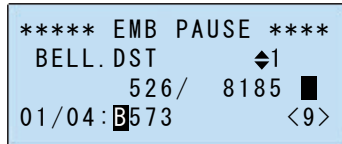
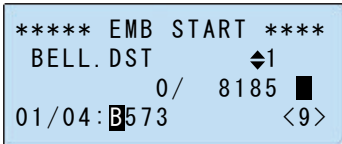
MANUAL	Not to perform Frame Travel
AUTO	Move the frame automatically to the position registered at "Temporary stop" or end of the embroidery

## 2. To move the frame to design start position

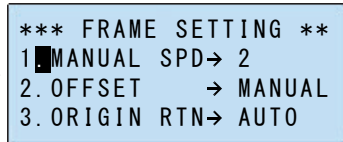
### 2-1. To move the frame to design start position at end of embroidery

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

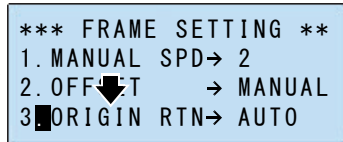
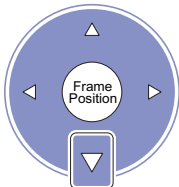
To return to "EMB START" from other screen, press "Esc" key.



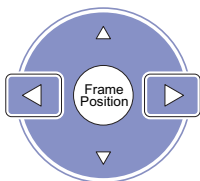
(2) To open "FRAME SETTING"



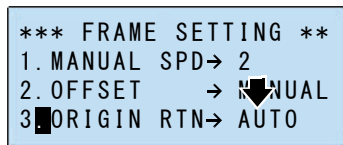
(3) To select "3. ORIGIN RTN"



(4) To select Frame Travel



Example: AUTO



It is completed.

MANUAL	Stop at the end position of the embroidery. It is possible to perform Frame Back.
AUTO	Move the frame to the start position of the design automatically after completion of the embroidery.

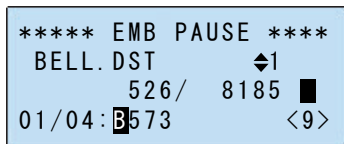
**2-2.** To move the frame to the design start position in the middle of embroidery  
(to cancel embroidering)

Performing this operation will cause the design in process of embroidery to be cancelled. When you desire to restart the embroidery, advance the frame to the position where the embroidery was interrupted.(→p.50)

 **CAUTION**

 When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.

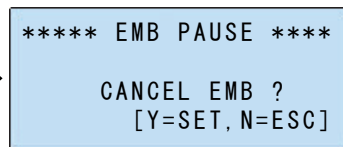
**(1)** Start operation from the screen of "EMB PAUSE".



**(2)** To move the frame to the design start position

Pressing "Set" key will move the frame.

C in the figure  
below



It is completed.





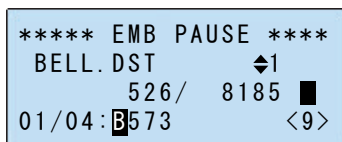
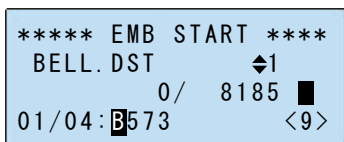
### 3. To stop the machine in the middle of embroidery

#### 3-1. To stop operation when reaching the set stitches

Use this function as a rough standard etc. notifying the time to replace the under thread.

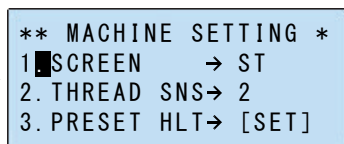
(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

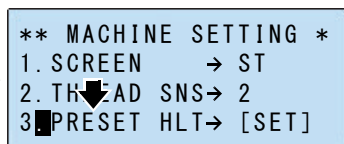
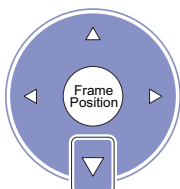


(2) To open "MACHINE SETTING"

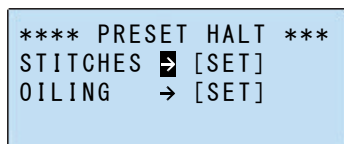
D in the right figure



(3) To select "3. PRESET HLT"

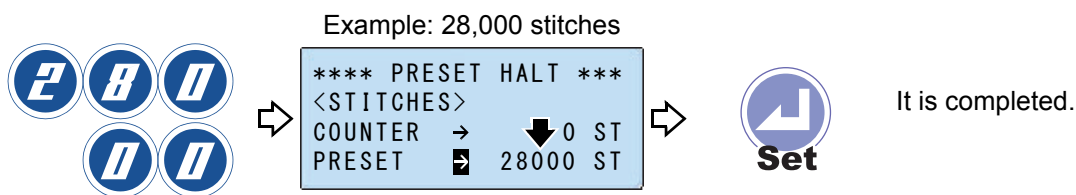


(4) To decide "STITCHES"



**(5)** To select the number of stitch

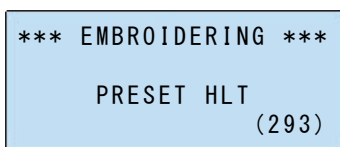
To select the value again, press "Clear" key.



Selectable range is 0 to 999,999.

When "Counter" of the upper row reaches 28000ST, it will be automatically reset. To make "Counter" as 0ST before stop, move up the cursor to "Counter", then press "Clear" key.

The warning buzzer will sound and display as the below figure after the stop of the machine.



To cancel, press the stop key.

**3-2.** To inform lubrication time

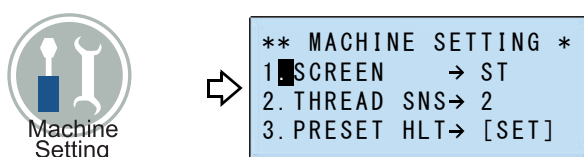
After the set value is reached, then if you start operation, displaying of "MAINT. REQUIRD" will notify the lubrication time.

**(1)** Start operation from the screen of "EMB START" or "EMB PAUSE".

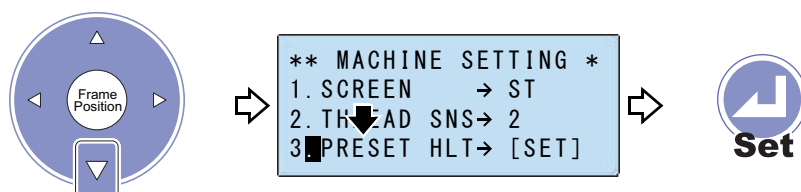
To return to "EMB START" from other screen, press "Esc" key.



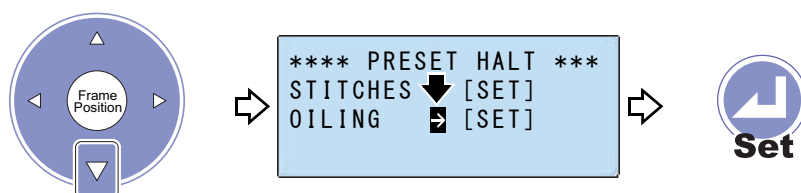
**(2)** To open "MACHINE SETTING"



**(3)** To select "3. PRESET HLT"

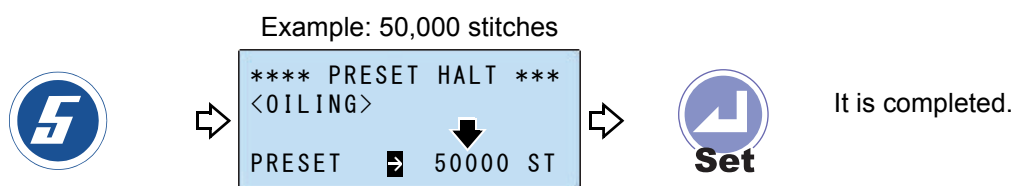


**(4)** To select "OILING"



**(5)** To select the number of stitch

To select the value again, press "Clear" key.



Selectable range is 10,000 to 990,000. For lubrication to rotary hook, though the recommended value is "50,000", adjust according to using condition of the machine. When the set value is reached and then the operation is started, the warning buzzer will sound and the display as the figure below will appear.(→p.116)

```

** MAINT. REQUIRD **
ONE DROP OF OIL

→AS PER INST. MANUAL
    
```

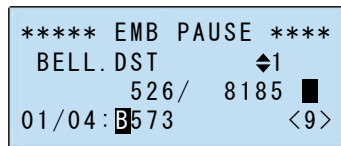
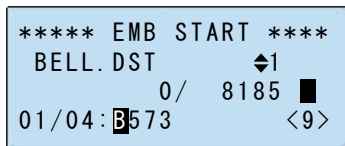
To cancel, press the stop key.

### 3-3. To stop the machine temporarily after Color Change

This function is effective when you desire to stop the machine temporarily during the embroidery for applique embroidery etc.(→p.108)

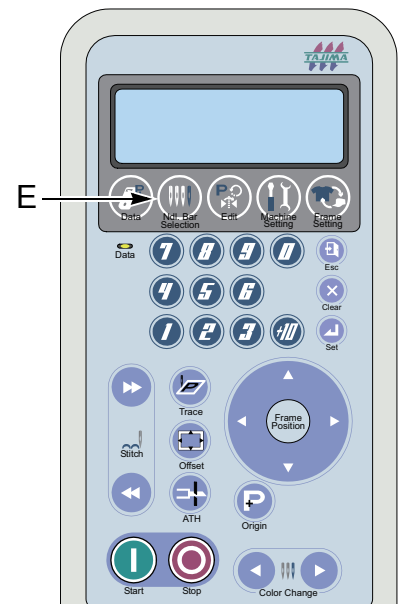
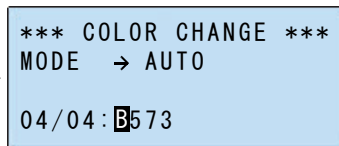
(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

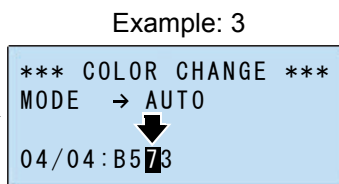
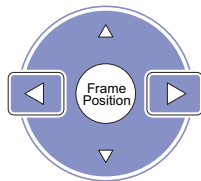


(2) Open "COLOR CHANGE".

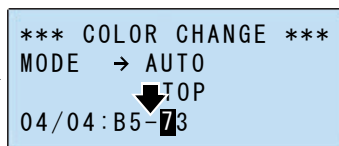
E in the right figure



(3) Select step



(4) To insert Stop mark



It is completed.

The machine will stop after step 2 finishes in the example above. To cancel, press the stop key.

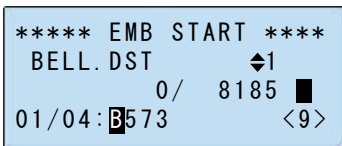
## 4. To change the size and the direction of the design

### 4-1. To change the size of the design

For details, refer to the outline of the function.(→p.104)

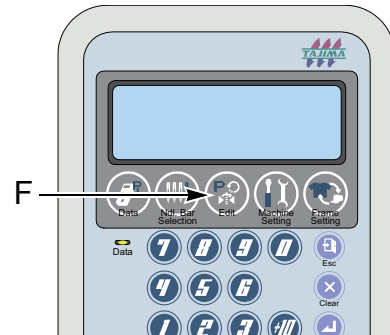
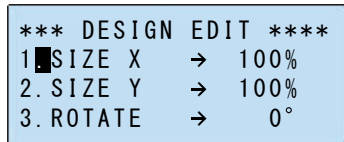
(1) Start operation from the screen of "EMB START".

To return to "EMB START" from other screen, press "Esc" key.

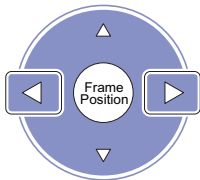


(2) To open "DESIGN EDIT"

F in the right figure



(3) To select scale ratio



Example: 110%



It is completed.

When setting scale ratio of X (crosswise) and Y (lengthwise) individually, lower the cursor and select scale ratio of Y before pressing the "Set" key.

## 4-2. To rotate the design

For details, refer to the outline of the function.(→p.104)

### (1) Start operation from the screen of "EMB START".

To return to "EMB START" from other screen, press "Esc" key.

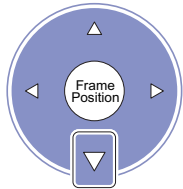
```
***** EMB START ****
BELL. DST      ◆1
                0/ 8185 ■
01/04: B573    <9>
```

### (2) To open "DESIGN EDIT"



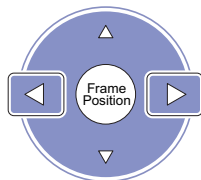
```
*** DESIGN EDIT ***
1. SIZE X → 100%
2. SIZE Y → 100%
3. ROTATE → 0°
```

### (3) To select "3. ROTATE"



```
*** DESIGN EDIT ***
1. SIZE X → 100%
2. SIZE Y → 100%
3. ROTATE → 0°
```

### (4) To select the rotation angle



Example: 90°

```
*** DESIGN EDIT ***
1. SIZE X → 100%
2. SIZE Y → 100%
3. ROTATE → 90°
```



It is completed.

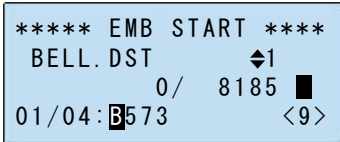
Select 45° unit.

### 4-3. To reverse the design

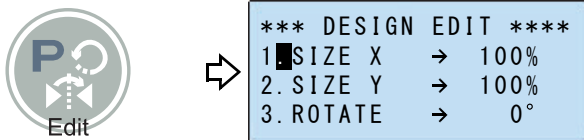
For details, refer to the outline of the function.(→p.105)

(1) Start operation from the screen of "EMB START".

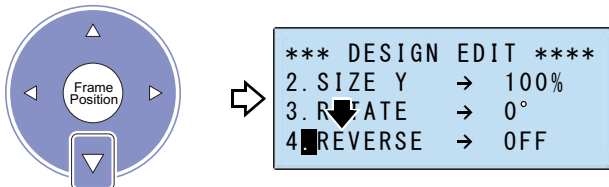
To return to "EMB START" from other screen, press "Esc" key.



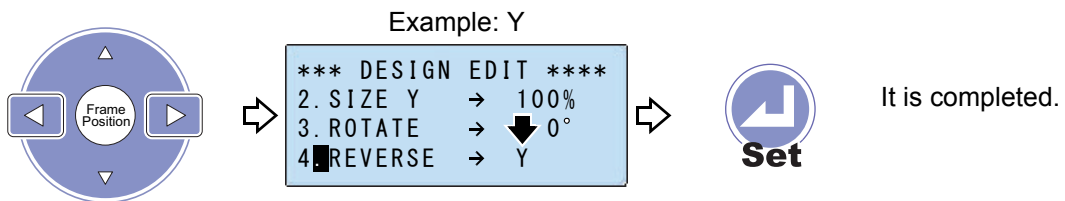
(2) To open "DESIGN EDIT"



(3) To select "4. REVERSE"



(4) Select the axis as the base line for reversing the design data.



	OFF	X	Y
Not to reverse			

## 5. To embroider repeatedly

### 5-1. To embroider repeatedly

For details, refer to the outline of the function.(→p.106)

 **CAUTION**

 When performing this operation, do not put your hands etc. on the machine table. Moving frame could injure you.

(1) Start operation from the screen of "EMB START".

To return to "EMB START" from other screen, press "Esc" key.

```

***** EMB START ****
BELL. DST      ◆1
                0/  8185 ■
01/04: B573    <9>
    
```

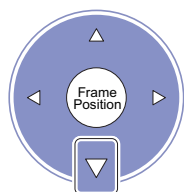
(2) To open "DESIGN EDIT"



```

*** DESIGN EDIT ***
1. SIZE X   → 100%
2. SIZE Y   → 100%
3. ROTATE   →  0°
    
```

(3) To select "5. REPEAT"



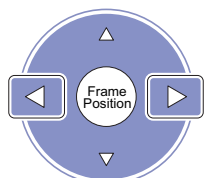
```

*** DESIGN EDIT ***
3. ROTATE   →  0°
4. REVERSE  →  OFF
5. REPEAT   →  [SET]
    
```



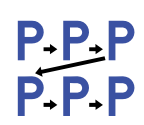
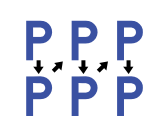


**(4)** To select repeating direction

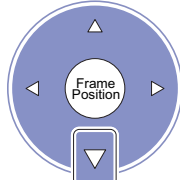


Example: VERTICAL

```
** REPEAT SETTING **
PRIOR [down arrow] HORIZONTAL
X TIMES→ 1
Y TIMES→ 1
```

HORIZONTAL	VERTICAL
	

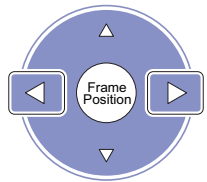
**(5)** To select "X TIMES"



```
** REPEAT SETTING **
PRIOR [down arrow] HORIZONTAL
X TIMES [down arrow] 1
Y TIMES→ 1
```

**(6)** To select repeating times of crosswise direction

Pressing the key longer will make the value be fast-forwarded.

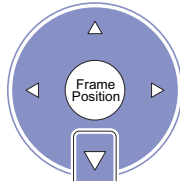


Example: 3 times

```
** REPEAT SETTING **
PRIOR → [down arrow] HORIZONTAL
X TIMES [down arrow] 3
Y TIMES→ 1
```

Selectable range: 1 to 99 times

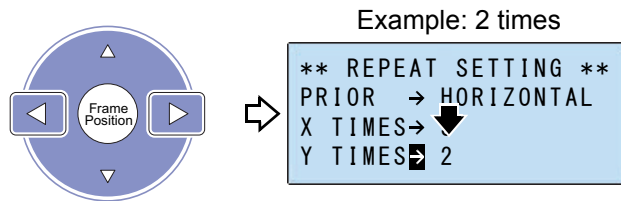
**(7)** To select "Y TIMES"



```
** REPEAT SETTING **
PRIOR → HORIZONTAL
X TIMES [down arrow] 3
Y TIMES [down arrow] 1
```

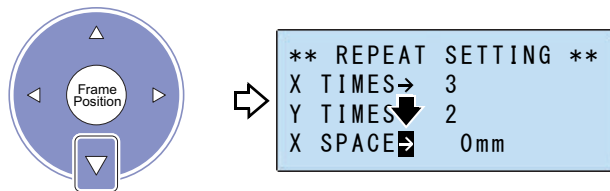
**(8)** To select repeating times of lengthwise direction

Pressing the key longer will make the value be fast-forwarded.



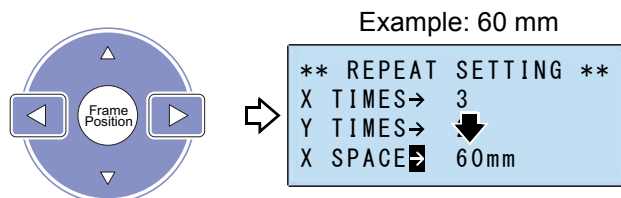
Selectable range: 1 to 99 times

**(9)** To select "X SPACE"



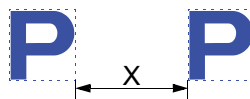
**(10)** To select the space of crosswise direction

Pressing the key will make the frame moving.

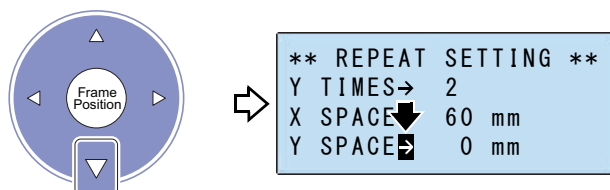


Selectable range: 0 to 255 mm

Space means the distance between designs.

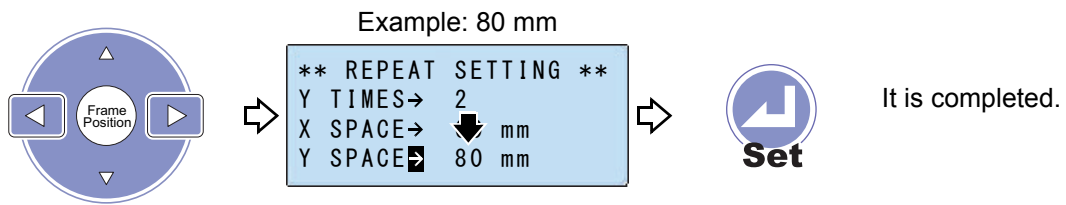


**(11)** To select "Y SPACE"



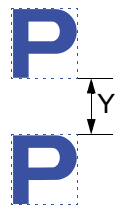
**(12)** To select the space of lengthwise direction

Pressing the key will make the frame moving.



Selectable range: 0 to 255 mm

Space means the distance between designs.



## Chapter 6

### Machine setting

1. Setting for thread trimming .....	88
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4. Language setting of operation panel .....	102

1

2

3

4

5

6

7

8

9

10

11

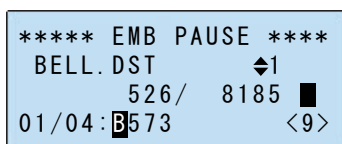
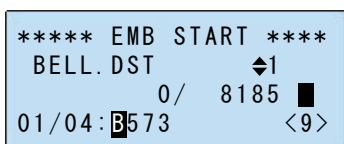
# 1. Setting for thread trimming

## 1-1. To change detecting sensitivity of upper thread breakage

It is not possible to change detecting sensitivity of under thread breakage.

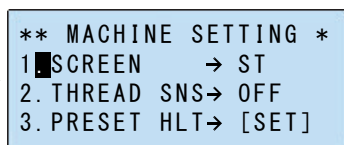
(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

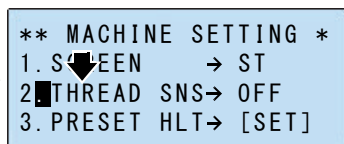
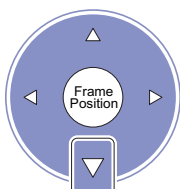


(2) To open "MACHINE SETTING"

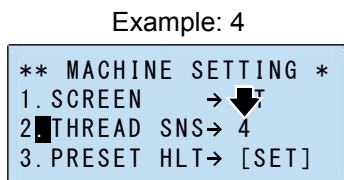
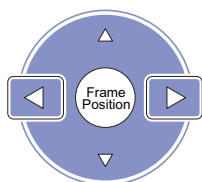
A in the right figure



(3) To select "2. THREAD SNS"



(4) To select detecting sensitivity of thread breakage

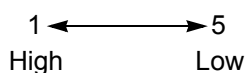


It is completed.

Selectable range

OFF: Not to detect thread breakage (not to stop the machine even if thread is broken)

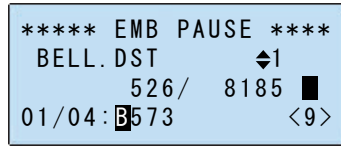
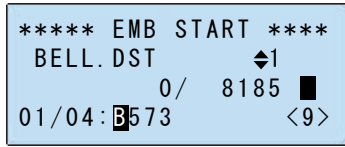
1 to 5: It indicates sensitivity of detection.



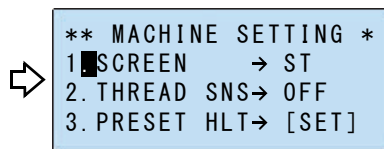
## 1-2. To change upper thread length at thread trimming

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

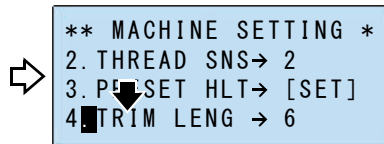
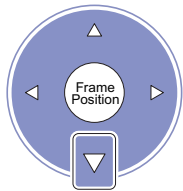
To return to "EMB START" from other screen, press "Esc" key.



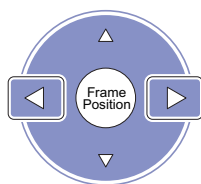
(2) To open "MACHINE SETTING"



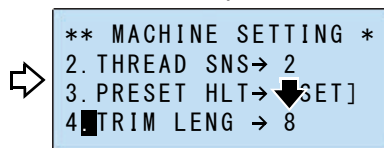
(3) To select "4. TRIM LENG"



(4) To select the length of upper thread

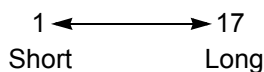


Example: 8



It is completed.

Selectable range: 1 to 17



**1-3.** To change thread trim timing

**CAUTION**

**!** Thread trim timing is set to optimum value. To change these values, consult the distributor. Some operating condition could cause occurrence of fault in thread trimming.

**(1)** Start operation from the screen of "EMB START" or "EMB PAUSE".

To return to "EMB START" from other screen, press "Esc" key.

```
***** EMB START ****
BELL. DST      ▲1
              0/ 8185 ■
01/04: B573    <9>
```

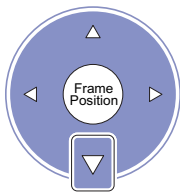
```
***** EMB PAUSE ****
BELL. DST      ▲1
              526/ 8185 ■
01/04: B573    <9>
```

**(2)** To open "MACHINE SETTING"



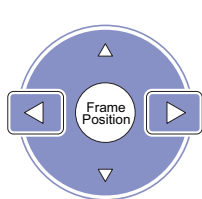
```
** MACHINE SETTING *
1. SCREEN      → ST
2. THREAD SNS → OFF
3. PRESET HLT → [SET]
```

**(3)** To select "5. TRIM TMNG"



```
** MACHINE SETTING *
3. PRESET HLT → [SET]
4. TRIM LENG → 6
5. TRIM TMNG → + 5
```

**(4)** To select thread trim timing



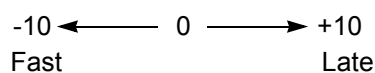
Example: +4

```
** MACHINE SETTING *
3. PRESET HLT → [SET]
4. TRIM LENG → 6
5. TRIM TMNG → + 4
```



It is completed.

Selectable range: -10 to 0 to +10

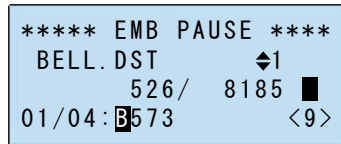
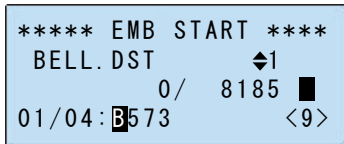


### 1-4. To trim the thread by consecutive jump

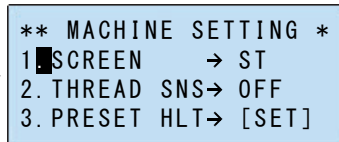
This is the setting how many consecutive stitches of jump code cause thread trimming and moving the frame to the next step.

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

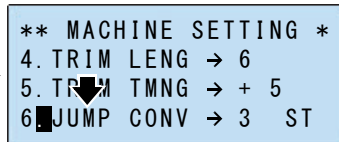
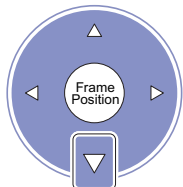
To return to "EMB START" from other screen, press "Esc" key.



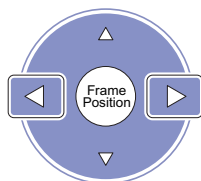
(2) To open "MACHINE SETTING"



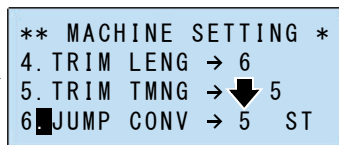
(3) To select "6. JUMP CONV"



(4) To select the number of consecutive jump codes



Example: 5 times



It is completed.

When the jump code continues 5 times, the thread will be trimmed and the frame will move to the next stitch in the example above.



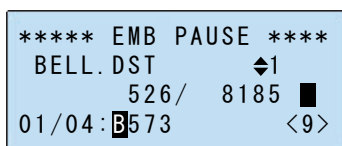
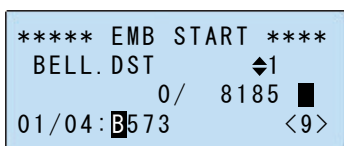
## 2. Setting for sewing

### 2-1. To set tie stitching

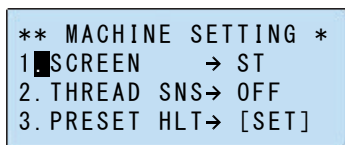
This is a setting for tie stitching that will be performed at the start and the end of the embroidery. Stitch length of tie stitching is 0.8 mm.

(1) Start operation from the screen of "EMB START" or "EMB PAUSE".

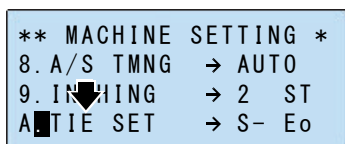
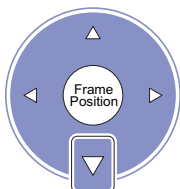
To return to "EMB START" from other screen, press "Esc" key.



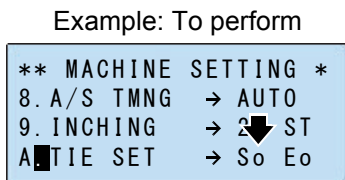
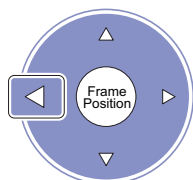
(2) To open "MACHINE SETTING"



(3) To select "A. TIE SET"



(4) To select Tie Stitching at start of embroidery

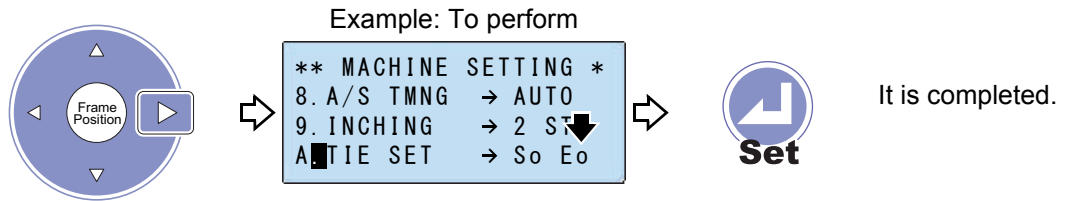


Tie Stitching at start of embroidery

So: To perform

S-: Not to perform

**(5)** To select Tie Stitching at end of embroidery



Tie Stitching at end of embroidery

Eo: To perform

E-: Not to perform

**2-2.** To adjust finely Satin Stitch length

For this function, switch the DIP switch DSW2-4 depending on target Satin Stitch length.(→p.135)

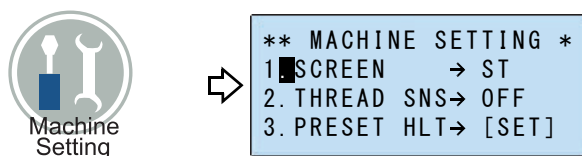
Stitch length	DIP switch (DSW2-4)
Less than 0.6 to 1.5 mm	ON
1.5 mm and more	OFF

**(1)** Start operation from the screen of "EMB START" or "EMB PAUSE".

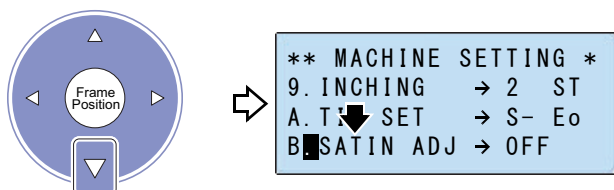
To return to "EMB START" from other screen, press "Esc" key.



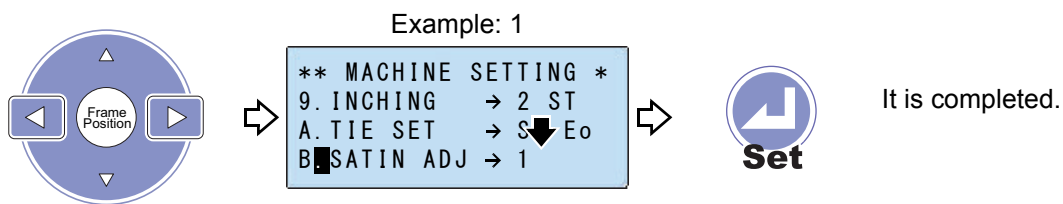
**(2)** To open "MACHINE SETTING"



(3) To select "B. SATIN ADJ"



(4) To select added value

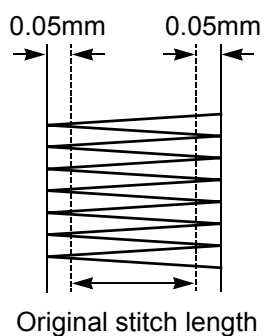


Selectable range


Value	-5	-4	-3	-2	-1	OFF
mm	0.5	-0.4	-0.3	-0.2	-0.1	Not to perform

Value	1	2	3	4	5
mm	0.1	0.2	0.3	0.4	0.5

If "1" is selected, 0.05 mm for one side will be added (totally 0.1 mm for both sides will be added).



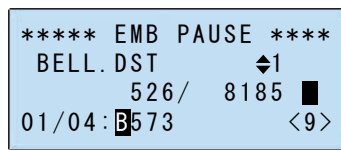
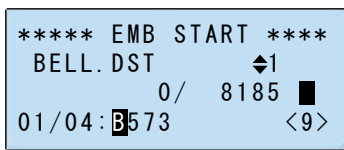
**2-3.** To change thread tension

 **CAUTION**

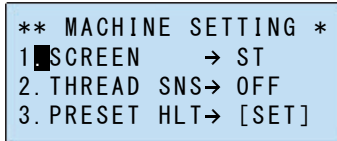
**!** A/S timing (the main shaft angle which the frame starts to move) is set to optimum values. To change these values, consult the distributor. Some operating condition could cause occurrence of fault in embroidering.

**(1)** Start operation from the screen of "EMB START" or "EMB PAUSE".

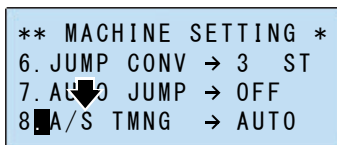
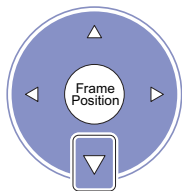
To return to "EMB START" from other screen, press "Esc" key.



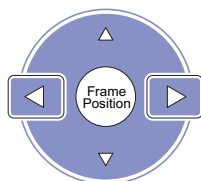
**(2)** To open "MACHINE SETTING"



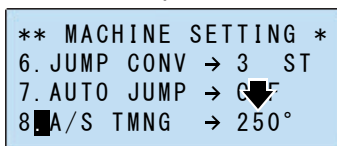
**(3)** To select "8. A/S TMNG"



**(4)** To select the main shaft angle which the frame starts to move



Example: 250°



It is completed.

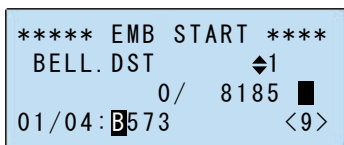
AUTO: To adjust the frame drive automatically  
 250°: To perform the frame drive with fixed value

### 3. Setting for option

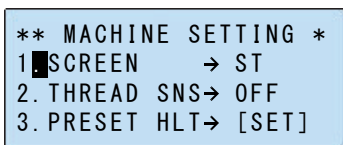
#### 3-1. To make Boring Device available for use

(1) Start operation from the screen of "EMB START".

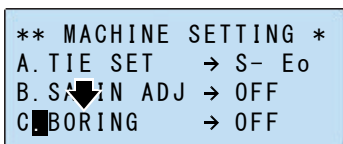
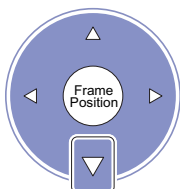
To return to "EMB START" from other screen, press "Esc" key.



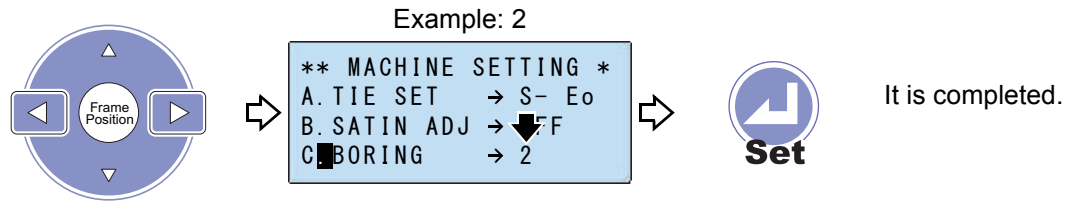
(2) To open "MACHINE SETTING"



(3) To select "C. BORING"



**(4)** To use the boring device



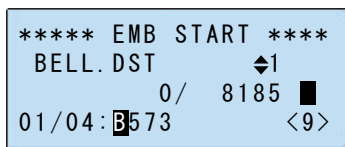
OFF	Not to use
1	To use When switching to boring, the frame will not move. Select if there is the frame travel data in the design.
2	To use When switching to boring, the frame will move 12 mm. Select if there is not any frame travel data in the design.

12 mm

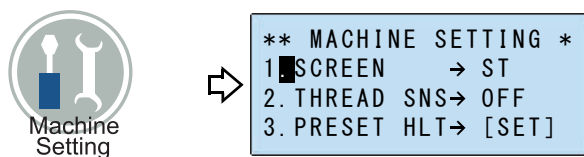
**3-2.** To make the Cording Device (KB-2M) available for use

**(1)** Start operation from the screen of "EMB START".

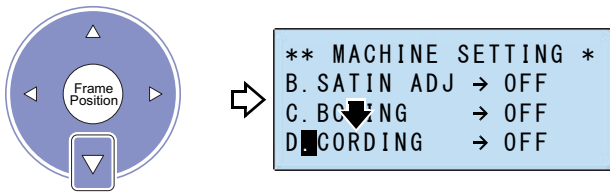
To return to "EMB START" from other screen, press "Esc" key.



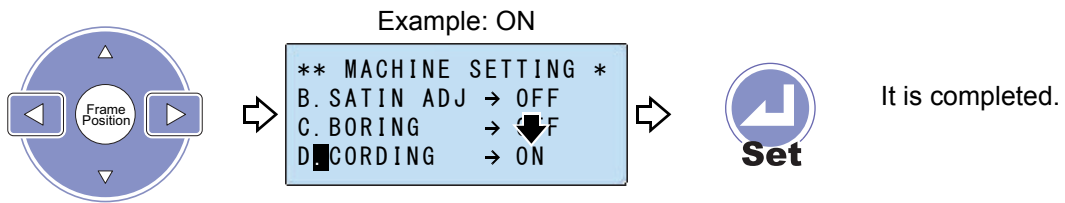
**(2)** To open "MACHINE SETTING"



(3) To select "D. CORDING"



(4) To use cording device

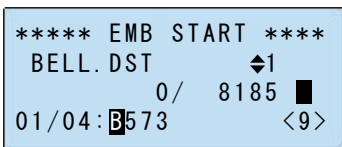


ON: To use  
OFF: Not to use

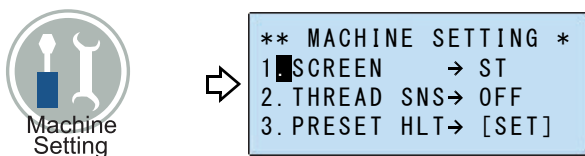
### 3-3. To make the Sequin Device available for use

(1) Start operation from the screen of "EMB START".

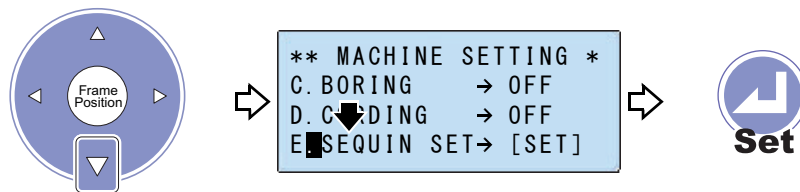
To return to "EMB START" from other screen, press "Esc" key.



(2) To open "MACHINE SETTING"



**(3)** To select "E. SEQUIN"

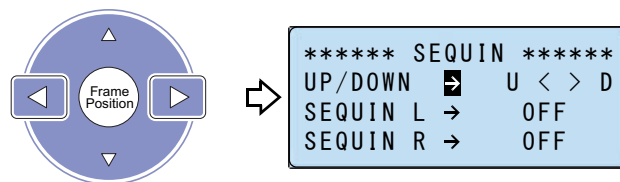


**(4)** To move up/down the Sequin Device manually

The Sequin Device will work only when the needle bar equipped with the Sequin Device is selected.

**⚠ CAUTION**

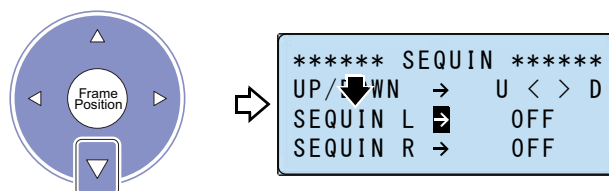
⊘ When performing this operation, do not put your hands etc. near the needle. Moving up/down of the Sequin Device could injure you.



U: To raise the device

D: To lower the device

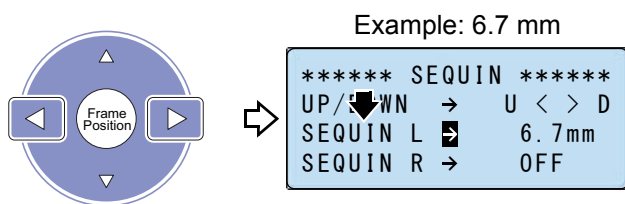
**(5)** To select sequin L (left)





**(6)** To select sequin feed amount of sequin L

Pressing the key longer will make the value be fast-forwarded.



Selectable range

High speed sequin device "A": 3.0 to 9.9 mm

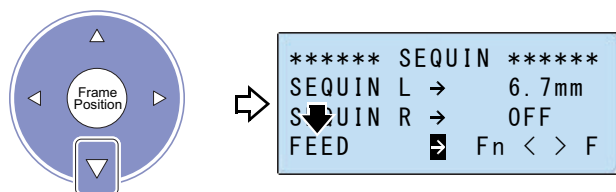
Sequin device IV "AL": 3.0 to 23.0 mm

The value added by 1.0 mm to the diameter of sequin chip to use is a rough standard of feed amount. The larger the feed amount, the lower the maximum speed.

Example: Feed amount 23.0 mm => 600 rpm

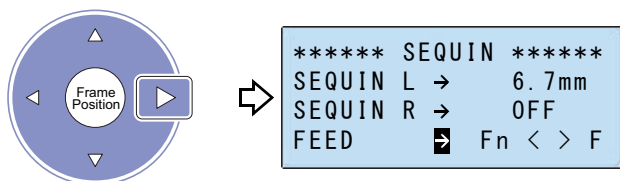
When selecting sequin feed amount of sequin R, operate in the same procedure.

**(7)** To feed sequin chip manually



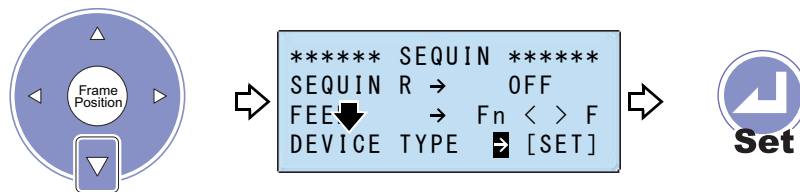
**(8)** To execute

The sequin device will work only when the needle bar equipped with the sequin device is selected.

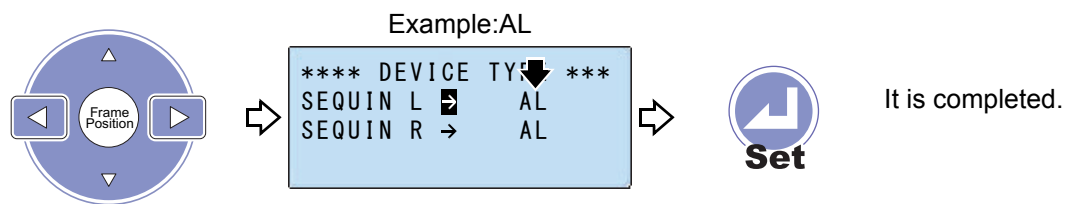


Pressing key each time will feed out the piece of sequin chip one by one.

**(9)** To select "DEVICE TYPE"



**(10)** To select the type of the Sequin Device



A: High Speed Sequin Device

AL: Sequin Device IV

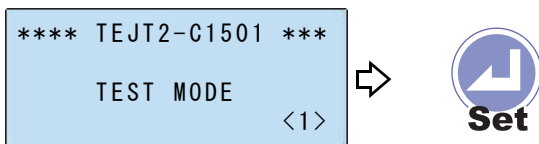
When selecting the type of sequin R, move down the cursor to perform same operation.

To return to the screen of "EMB START", press "Esc" key.

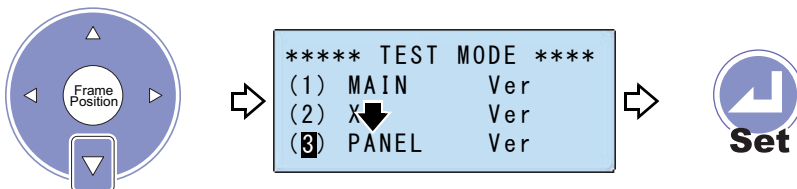
## 4. Language setting of operation panel

### 4-1. To switch a language

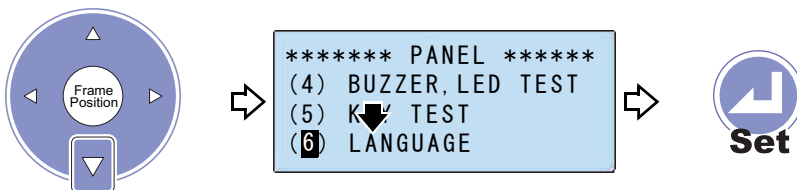
- (1) Set DIP switch DSW1-1 at the side face of the operation panel to ON , and turn "OFF" =>turn "ON" the power.
- (2) When the screen of "TEST MODE" starts up, press "Set" key.



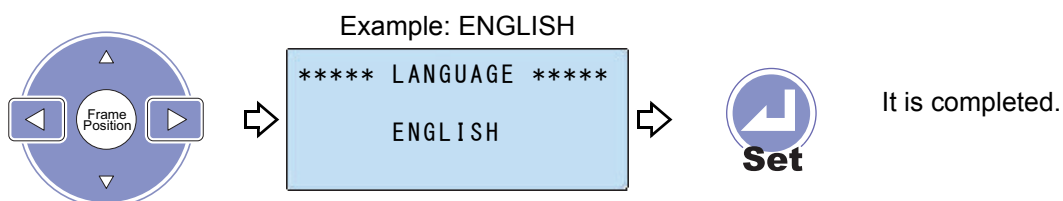
- (3) To select "(3) PANEL"



- (4) To select "(6) LANGUAGE"



- (5) To select a language desired



Selectable range

JAPANESE / ENGLISH / DEUTSCH / RUSSKIJ / CESKY /  
 PORTUGUESE / ESPANOL / ITALIANO

- (6) Turn OFF the power and set DSW1-1 to OFF.

# Chapter 7

## Outline of function

1. Size and direction of the design.....	104
2. Repeat .....	106
3. Frame Travel to the registered position .....	107

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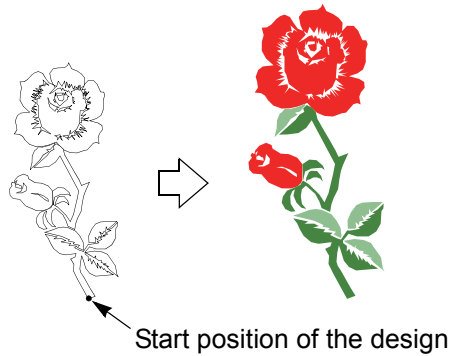
11

## 1. Size and direction of the design

### 1-1. Size of the design

Enlarge or reduce the design in a range of 80% to 120%. It is possible to set the scale factor in lengthwise and crosswise individually.

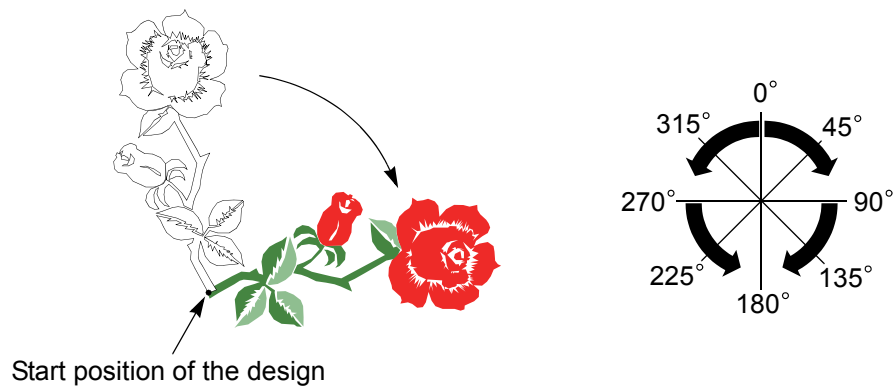
Setting example: 120% in vertical, horizontal



### 1-2. Direction of the design (rotation)

Rotate the design in a range of 45° to 315°.

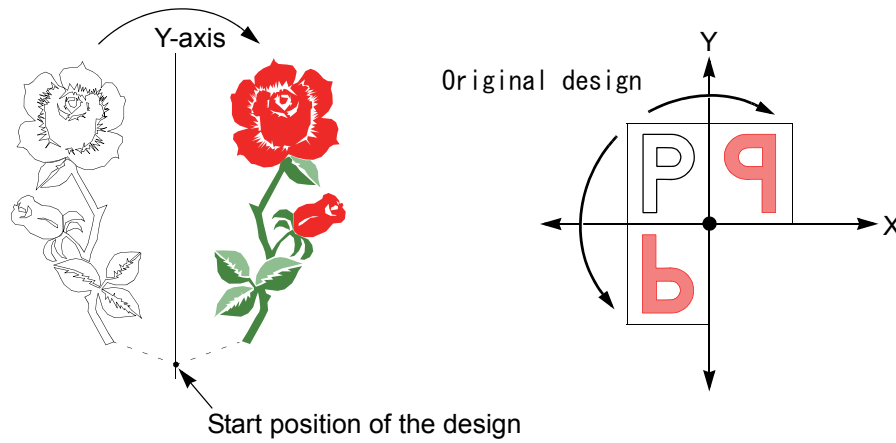
Setting example: 90°



### 1-3. Reverse of the design (mirror)

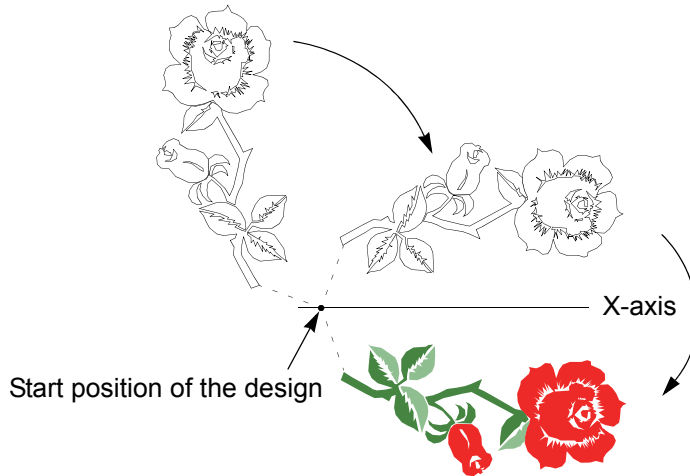
Reverse the design.

**(1) Setting example: Y**



**(2) Setting example: Rotation of 90°, reversion in X-axis**

When both rotation and reversion are set, the order will be rotation → reversion.



## 2. Repeat

Repeat the design. To make this function effective, perform the following setting.

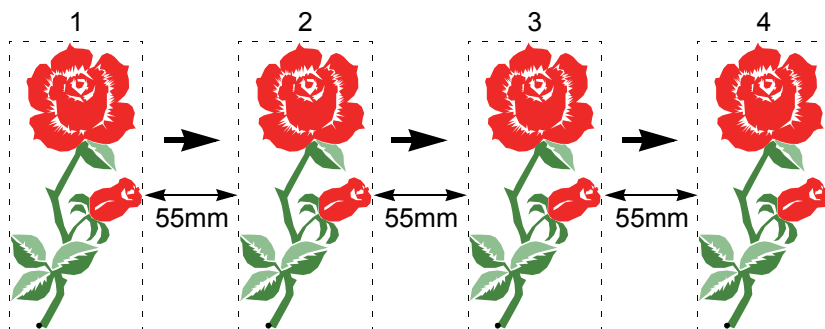
“To decide Color Change Mode (Automatic, Manual)”→“AUTO”(→p.43)

### (1) Example of repeat (Horizontal only)

(a) Order: Horizontal

(b) X (Crosswise) times: 4 times

(c) X (Crosswise) space 55 mm



### (2) Example of repeat (Vertical, horizontal)

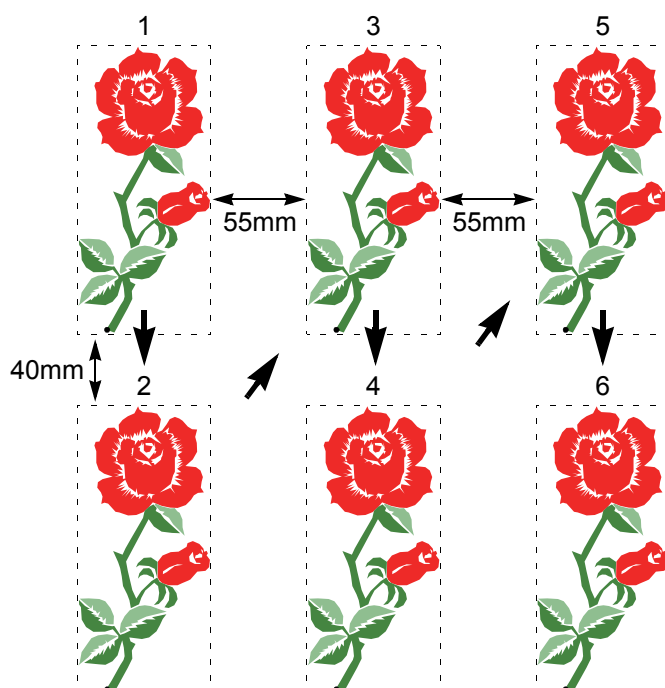
(a) Order: Vertical

(b) X (Crosswise) times: 3 times

(c) Y (Lengthwise) times: 2 times

(d) X (Crosswise) space 55 mm

(e) Y (Lengthwise) space 40 mm



### 3. Frame Travel to the registered position

This function is convenient to use for the following purposes.

#### 3-1. Frame replacement

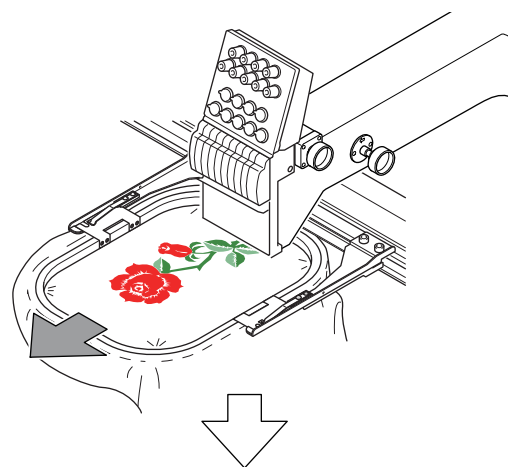
After the embroidery is finished, move the frame to your side (registered position) automatically for replacing the frame and/or the fabric. To make this function effective, perform the following setting.

“To decide Color Change Mode (Automatic, Manual)”→“AUTO”(→p.43)

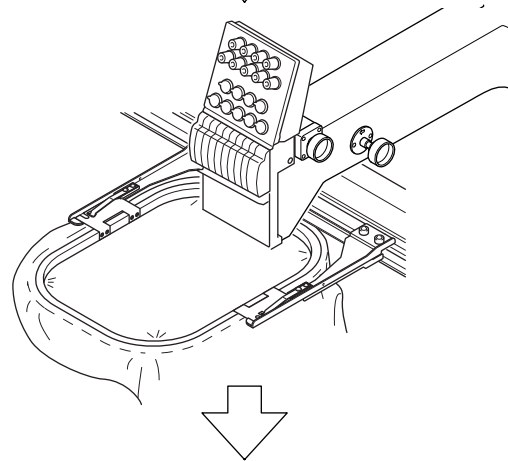
“To move the frame automatically to the registered position”→“AUTO”(→p.73)

“To move the frame to design start position at end of embroidery”→“AUTO”(→p.74)

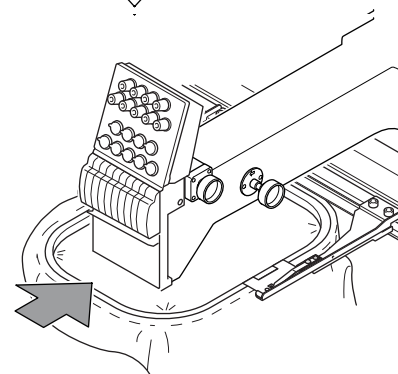
- (1)** After the embroidery is finished, the frame will move to your side automatically.



- (2)** Replace the frame.



- (3)** Pressing the start key will move the frame to the design start position automatically and embroider the same design at same place.





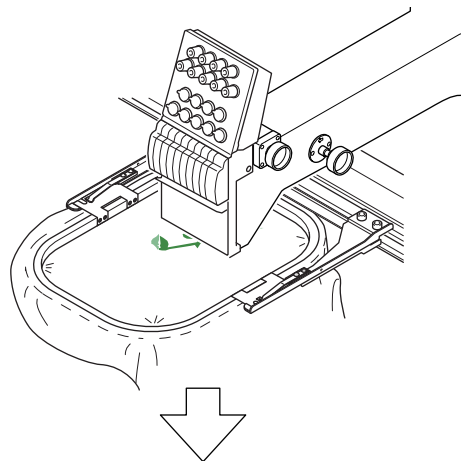
### 3-2. Layout of applique

A operator should stop the machine in the middle of embroidery and move the frame to your side (registered position) manually to place an applique.

To make this function effective, make the following setting.

"To decide Color Change Mode (Automatic, Manual)" → "AUTO" (→p.43)

- (1) Stop the machine at the position where an applique is placed. Press "ATH" key to trim the thread.

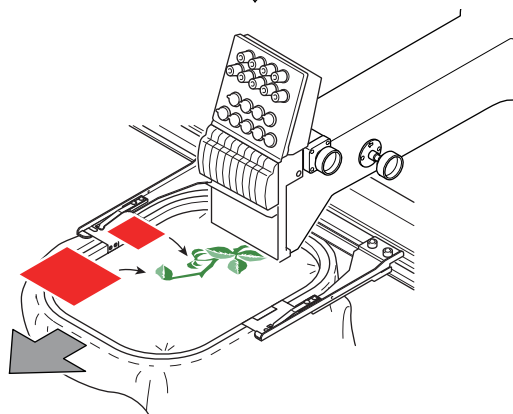


- (2) Press "Offset" key. Since the frame will move to your side, place an applique.

It is possible to move the frame to your side automatically by the following setting.

"" (→p.79)

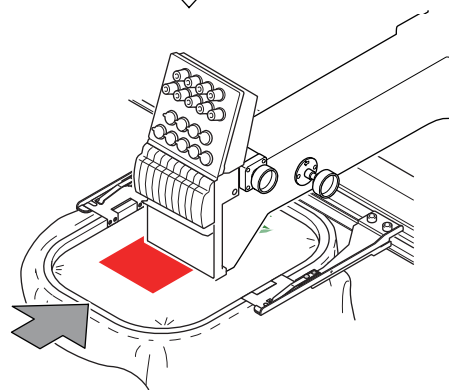
"To move the frame automatically to the registered position" → "AUTO" (→p.73)



- (3) Press "Offset" key or Start key.

Pressing "Offset" key will return the frame to the previous position.

Pressing start key will return the frame to the previous position and start the embroidery.



## Chapter 8

# Countermeasure when some trouble occurs in the machine

1. When the machine stops during operation ..... 110
2. Trouble examples and Corrective actions ..... 112

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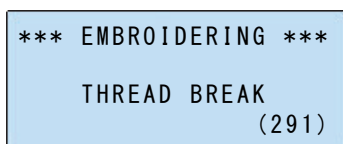
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## 1. When the machine stops during operation

When the machine stops during embroidery, a code No. indicating stop factor will be displayed on the screen (the illustration below is an example). Restoring methods are different depending on the code Nos. indicated.



### 1-1. Stop factor and canceling method

There are following 2 kinds of stop factors of the machine. To reset the code No., press the stop key. When a code number of 300 series occurs, contact the distributor.

#### (1) Related to usual stop

Example: 291 (thread breakage), 2BA (memory capacity exceeded) etc.

#### (2) Related to abnormality of the machine

Example: 2FC (abnormal temperature in the machine), 316 (irregular signal of main shaft motor) etc.

Code No.	Stop factor	Corrective Action
211	The main shaft has stopped deviating from the fixed position.	Set the main shaft angle to the fixed position.(→p.12)
225	Embroidery space was exceeded.	Move the frame to fit the frame in a embroidery space.
281	The target needle position is not detected even after 15 seconds after start of color change.	Adjust the needle position.(→p.11) Check or replace the potentiometer (needle position sensor). Correct mis-input of needle position.
291	Thread breakage is detected.	Check upper thread/under thread.
293	Preset halt by the number of specified stitches.	Change under thread.
2B1	Network does not work normally.	Check connecting condition of cable, setting condition of a personal computer.
2BA	Memory capacity exceeded	Press "Esc" key (stop data input). After deleting unnecessary designs, perform data input.
2CF	Stop by emergency stop switch	Release the lock of the emergency stop switch.
2E2	Air pressure has become lower than the rated value.	Check the air compressor. Check the origin of air supply.

2FC	Abnormal temperature in the machine	Check if the room temperature is too high. Check the cooling fan.
316	A main shaft motor error signal is detected.	Replace the power card, main shaft motor.
322	An X-axis motor error signal is detected. Breakage of X-axis motor harness is detected.	Replace the power card, X-axis motor. Turn OFF the power and check the connecting condition of the motor harness.
323	A Y-axis motor error signal is detected. Breakage of Y-axis motor harness is detected.	Replace the power card, Y-axis motor. Turn OFF the power, and check the connecting condition of the motor harness.
3A6	Bad retracting position of ATH knife	Check the position of ATH movable knife.
3B5	Communication error in the controller	Turn ON the power again.
3B6	Communication error with the external device	Check the connecting cable, external device. Input IP address manually.
3D5	RAM memory error	Install the operation program again. Replace CONSOLE 1 card.
B01	Format error of the floppy disk	Initialize the floppy disk. Replace with a new formatted floppy disk.
B04	USB memory is not inserted.	Insert USB memory.
BC1	No design is registered in the external device connected to an USB memory, bar code reader.	Insert USB memory in which designs are registered. Select the other design in the external device.
BC3	The disk driver has an abnormality.	Replace the disk driver.
	Sector(s) of the floppy disk are damaged.	Initialize the floppy disk. Replace with a new formatted floppy disk.
	It is not possible to read a USB memory, floppy disk and/or bar code.	Replace with a new USB memory. Replace with a new bar code reader.

## 2. Trouble examples and Corrective actions

### 2-1. Thread breakage is highly visible.

Cause	Troubleshooting
Passing method of the upper thread is wrong. The upper thread may be caught in something.	Pass the upper thread correctly. Check it.
Bad thread tension	Adjust tension. Upper thread: 120 to 140g, under thread: 20 to 30g
Quality of thread is bad. Poor thread flow	Use good quality thread. Spray silicone.
Direction of needle is bad or needle bents.	Adjust to face to the front or to the right a bit. Replace.
Applique glue is stuck on needle.	Remove adhered glue.
Contamination, run-out of oil of rotary hook	Clean and lubricate the machine.
The fabric is lifted too much against the needle plate. The fabric touches the needle plate too much.	Stretch the fabric again so that it touches needle plate lightly.
Run-out of oil of needle bar	Lubricate.
There is a scratch on the thread course.	Grind a scratch with sandpaper etc. Replace.
Bad height of presser foot	Perform adjustment so that height fits to fabric/material.

### 2-2. Needle breaks

Cause	Troubleshooting
Bad thread tension	Adjust tension.
The material is too thick or hard.	Use material suitable for embroidery.
Bobbin is deformed and it touches the needle.	Replace the bobbin.
Bad quality of needle, mismatching to embroidery condition	Use good quality needle. Use needle that fits to embroidery condition.
Vibration of the machine is big.	Adjust leveling.

### 2-3. Bad finishing of sewing




Cause	Troubleshooting
Bad thread tension	Adjust tension.
Quality of thread is bad. Poor thread flow	Use good quality thread. Spray silicone.
Density of design data does not match with material and/or thread.	Correct data.
Bad frame attaching and fixing of the fabric	Attach the frame correctly. Fix the fabric firmly.
Thread, needle and/or size of needle plate do not match with embroidery.	Make combination that fits to design data/material.
R.P.M. is too high.	Decrease R.P.M.

## Chapter 9 Maintenance




1. Items that must be followed carefully.....	114
2. Cleaning.....	115
3. Lubrication .....	116
4. Greasing .....	118
5. Inspection, Repair .....	120

## 1. Items that must be followed carefully


### **WARNING**


-  Daily maintenance (cleaning, lubrication, greasing, inspection) should be performed by personnel who has been trained properly.
-  "Repair" and "Replacement of electrical component" must be done only by the service personnel assigned and trained by Tajima or qualified technician.
-  When starting operation again, attach all the detached covers as they originally were.

### **CAUTION**

-  Perform daily maintenance (cleaning, lubrication, greasing, inspection). Neglect of daily maintenance could cause troubles. Damage due to neglect of daily maintenance may be judged as "Outside the scope of warranty".
-  If the machine is not used for a long period, turn the power switch ON in regular intervals. Although each card of the machine has a backup battery, data may be lost for about one month because voltage of the battery will come down gradually due to discharge when power switch is turned off.
-  Assure enough illumination. Assure 300 lux or more for working areas including underneath part of the machine table when changing under threads or performing daily maintenance.

## 2. Cleaning


**WARNING**

 When performing cleaning, be sure to turn off the power switch. You could be injured seriously by being entangled in the machine.

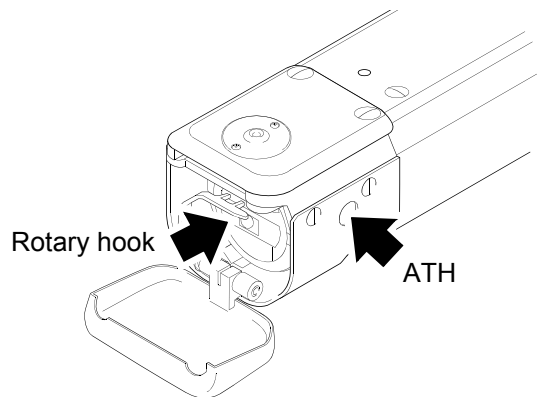
Clean each section by using a commercially available cleaning tool or brush (accessory). Using of an Vacuum cleaner or an Air compressor will facilitate working.

Main cleaning spots are indicated by an arrow in the figure below. If dirt is highly visible at other spots besides these spots, clean up there accordingly.

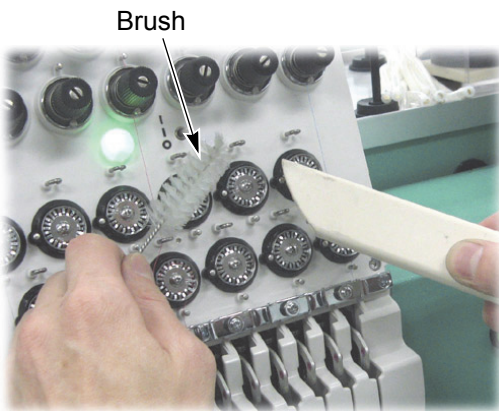
Cleaning area	Cycle
Rotary hook, ATH (thread trimming device)	Every day
Each section of head	Once/week

### (1) Rotary hook, ATH

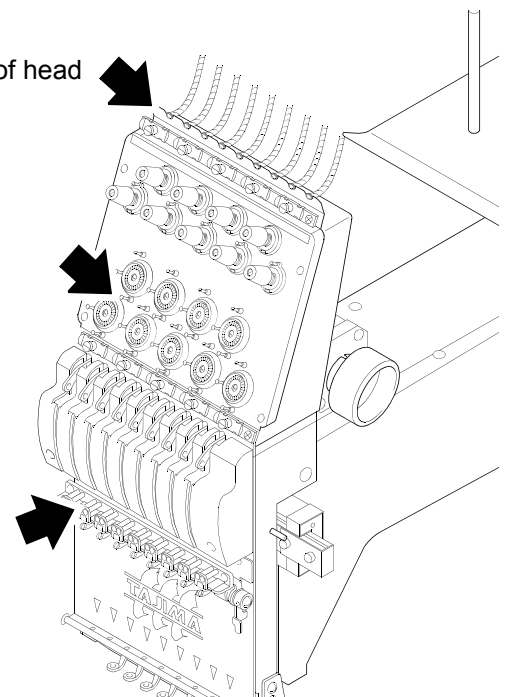
An example when using an air compressor



An example when using a cleaner




Each section of head





### 3. Lubrication


**WARNING**

 To perform lubrication of the machine, turn off the power switch. You may sustain severe injuries due to being entangled by moving machine units.

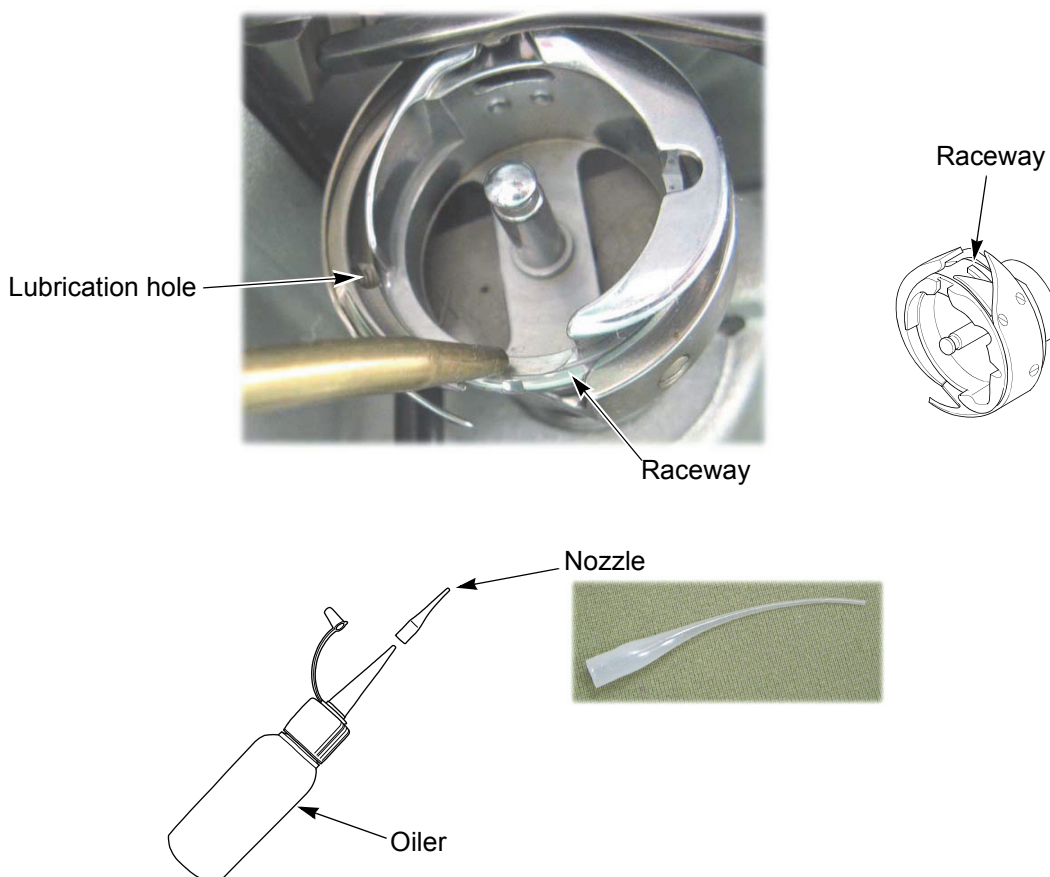
Select TF oil (packed with the machine), or the equivalent (viscosity grade = equivalent to VG20) to this one for use.

To perform lubrication, use the oiler (accessory) and its nozzle (accessory).

Lubricating spot	Cycle
Rotary hook	Once per 5 to 6 hours
Inside of head	Once/week
Cylinder bed	Once/week

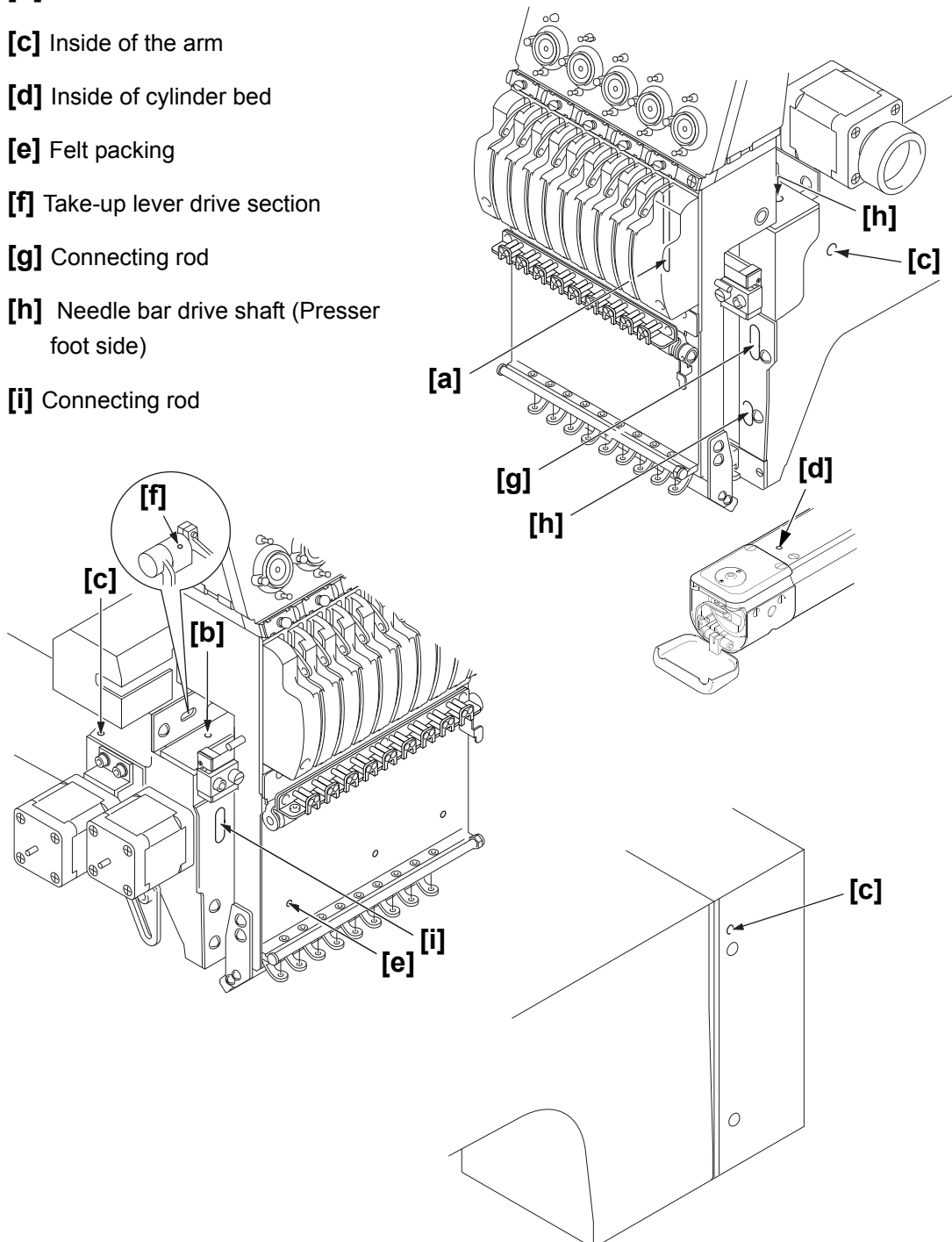
#### (1) Rotary hook

There are 2 lubricating spots (the lubrication hole and the raceway at the hook). When lubricating to the lubrication hole, attach the nozzle (accessory) to the tip of the oiler. Cut the tip of the nozzle according to necessary length.




**(2)** Inside of head, cylinder bed

- [a]** Needle bar
- [b]** Needle bar drive shaft
- [c]** Inside of the arm
- [d]** Inside of cylinder bed
- [e]** Felt packing
- [f]** Take-up lever drive section
- [g]** Connecting rod
- [h]** Needle bar drive shaft (Presser foot side)
- [i]** Connecting rod



## 4. Greasing

### **WARNING**

 During machine greasing, turn off the power switch. You may sustain severe injuries due to being entangled by moving machine units.

When performing greasing, consult the distributor. Select mineral oil-based lithium grease (recommended) or the equivalent for use.

[Typical example]

Tube type

Spray type

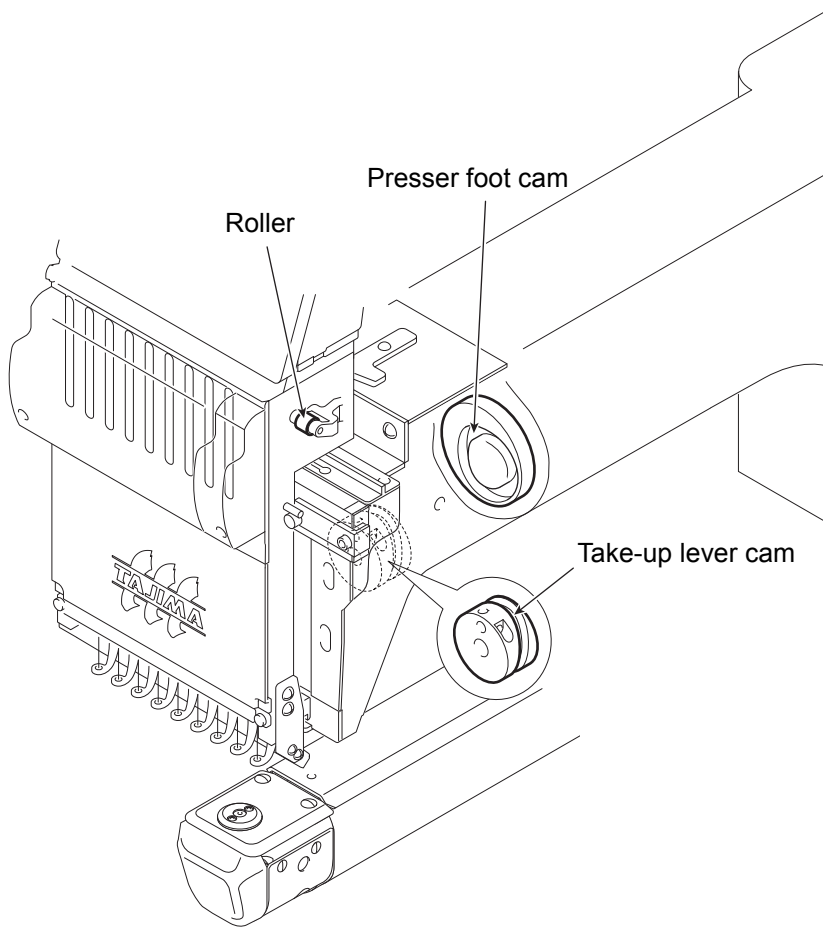


If the following message will be displayed at the start of operation, grease each section. Pressing the stop key will cancel the message.

Greasing cycle is either earlier time, when the message is displayed, or once per three months.


```
** MAINT. REQUIRD **  
GREASE→CAMS TAKE  
UP, PRESSER  
→AS PER INST. MANUAL
```


Greasing spot	Cycle
Inside of the arm	Once/3 months




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## 5. Inspection, Repair


 **WARNING**


 Before inspection, be sure to turn off the original power supply. Some circuits are still applied voltage eve if the original power supply was turned off. Wait until these circuits are completely out of voltage (4 minutes) and then start working.

Inspection point	Action	Inspection cycle
Attaching of each type of cover	Attach all the covers.	At start of working
Setting condition of embroidery thread	Set it correctly.	
Check breakage and/or bent of needle.	Replace the needle.	
Lubricating condition of each section	Lubricate.	
Belt tension (main shaft, X/Y drive system)	Consult the distributor.	Once/3 months

 **WARNING**

 Before repairing the machine, be sure to turn off the original power supply. Some circuits are still applied voltage eve if the original power supply was turned off. Wait until these circuits are completely out of voltage (4 minutes) and then start working.

 If the machine needs the repair, the repair must be done only by the service personnel assigned and trained by Tajima or qualified technician. (Consult your distributor.) Do not change the specification nor modify the parts of the machine without due consultation with Tajima. Such modification may have the risk against the operational safety.

 When restarting the machine after repairs, attach all removed covers etc. as they were.

 **CAUTION**

 For the repair, use Tajima genuine parts for replacement.

# Chapter 10

## Other functions

1. Upgrading of version.....	122
2. Test Mode .....	125

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# 1. Upgrading of version

The latest software at shipment is installed to the machine. When the latest improved software is necessary after that, upgrade a version according to the following procedure.

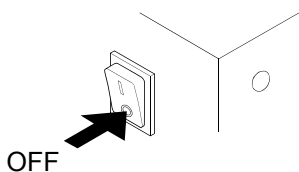
Regarding the contents and how to obtain the latest improved software, ask for the distributor.


CAUTION

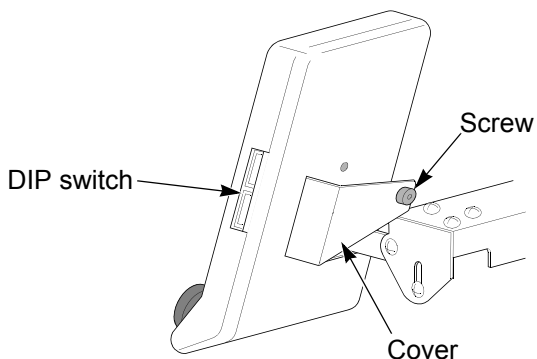
! Performing this operation will cause all items of "MACHINE SETTING" to return to initial values. Therefore, set again.

For the method to upgrade version, follow the procedure below.

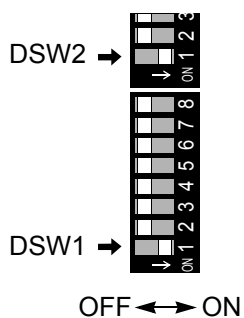
**(1)** Turn OFF the power.



**(2)** Loosen the screw located at the back of the operation panel, and detach the cover.

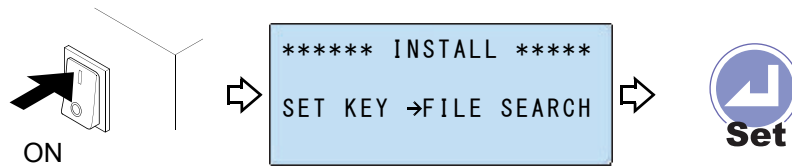


**(3)** Turn "ON" the DIP switches DSW2-1 and DSW1-1.



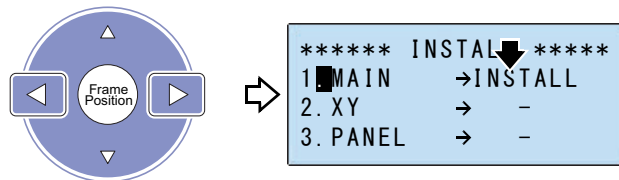
(4) Save the latest software to USB memory. Insert USB memory into USB port.

(5) Turn ON the power, and if the following screen is displayed, press "Set" key.



(6) Select "INSTALL".

Softwares are classified to 3 types, "MAIN", "XY" and "PANEL". If you do not understand the contents of a software, execute installation of all 3 types.

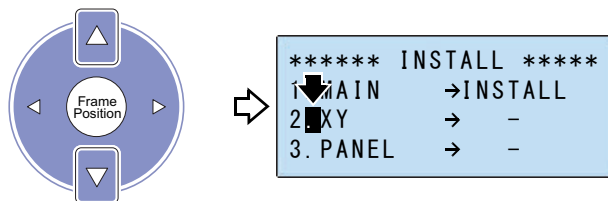


MAIN: Contents concerning CPU

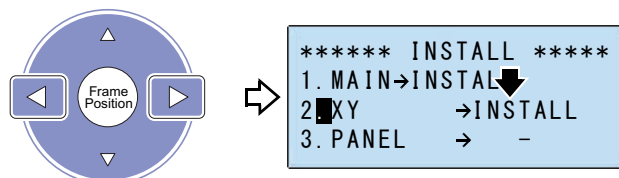
XY: Contents concerning the frame movement

PANEL: Contents concerning operation

(7) Select "XY".

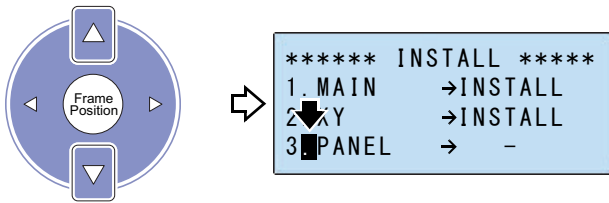


(8) Select "INSTALL".

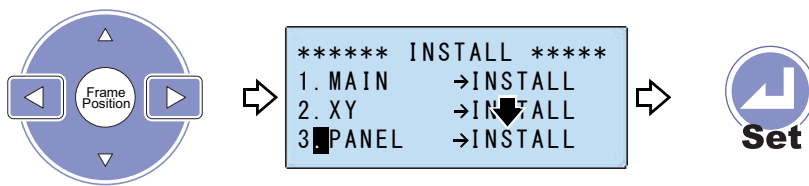




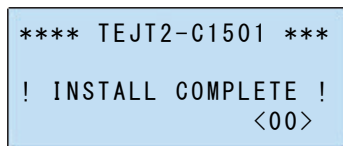
**(9)** Select "PANEL".



**(10)** Select "INSTALL".



The following screen will appear after installation is completed.



**(11)** Turn OFF the power switch.

**(12)** Turn "OFF" the DIP switches DSW2-1 and DSW1-1.

**(13)** Attach the cover.

This completes upgrading of the version. Since the following setting items returned to initial values, set again.

All items of "MACHINE SETTING"

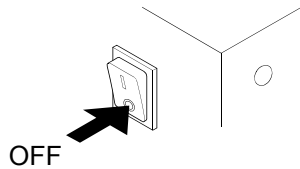
"LANGUAGE" (ENGLISH)

## 2. Test Mode

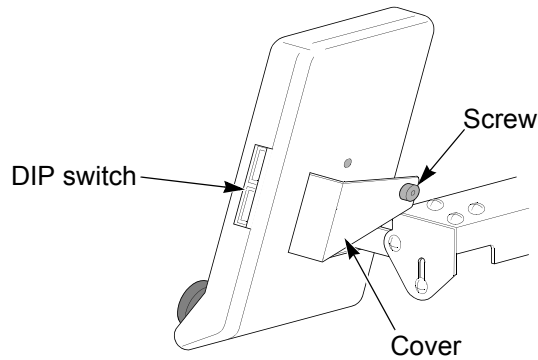
Test mode has functions concerning mainly the maintenance such as displaying version of software, checking status of the operation panel and adjustment of various kinds of sensors, etc.

For the method of switching to test mode, follow the procedure below.

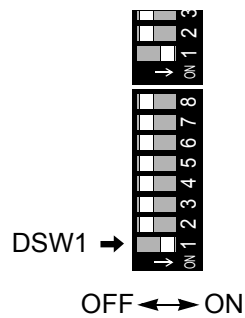
- (1) Turn OFF the power.



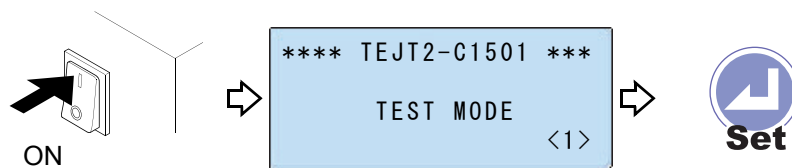
- (2) Loosen the screw located at the back of the operation panel, and detach the cover.



- (3) Turn "ON" the DIP switch DSW1-1.



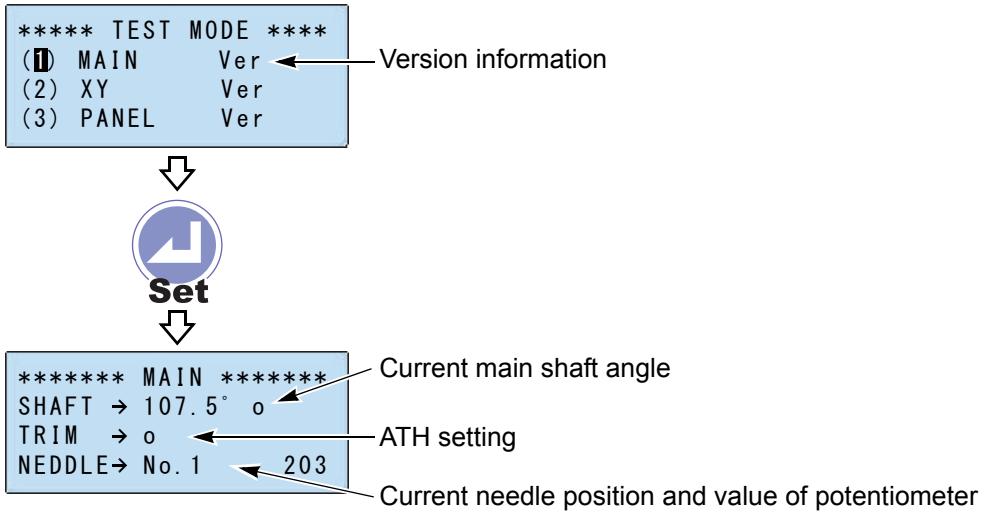
- (4) Turn ON the power, and if the following screen is displayed, press "Set" key.



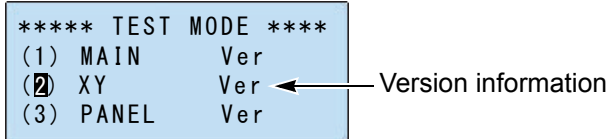
## 2-1. Screen display

This screen is used by mainly technical personnel of the distributor for the maintenance. This manual does not explain in detail.

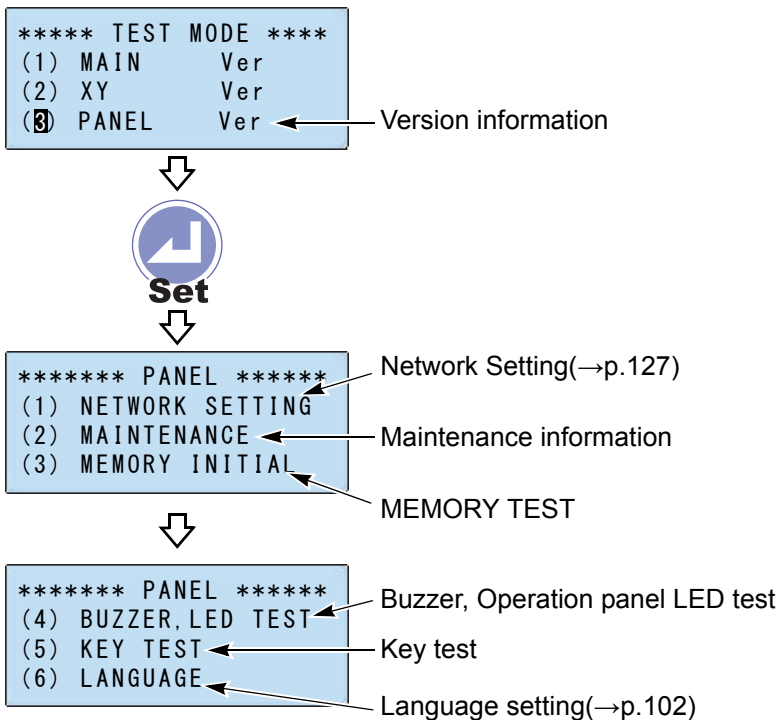
### 2-1-1. MAIN



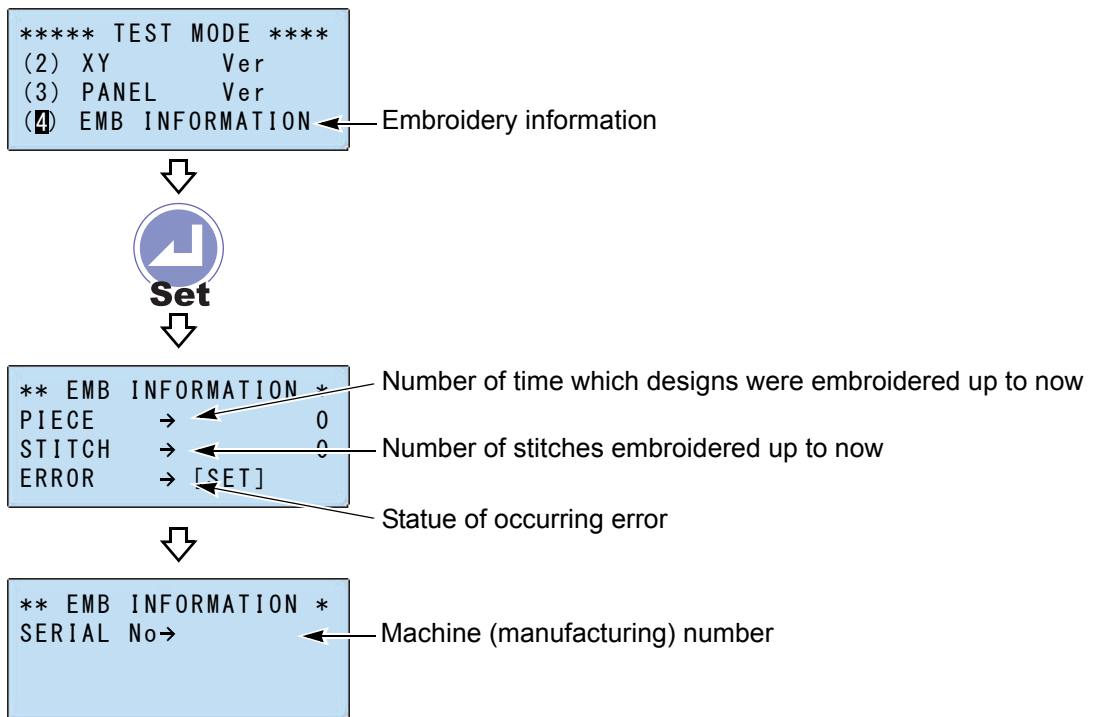
### 2-1-2. XY



### 2-1-3. PANEL



### 2-1-4. Embroidery information

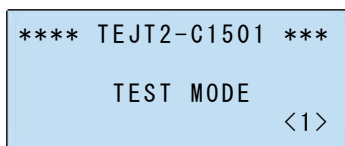


## 2-2. Network Setting

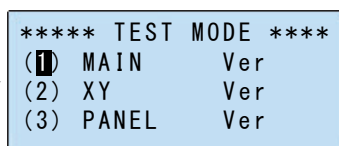
When inputting a design from a personal computer (LAN connection or serial connection) to the memory of the machine, the following setting is necessary.

### 2-2-1. To switch to the screen of "NETWORK SETTING"

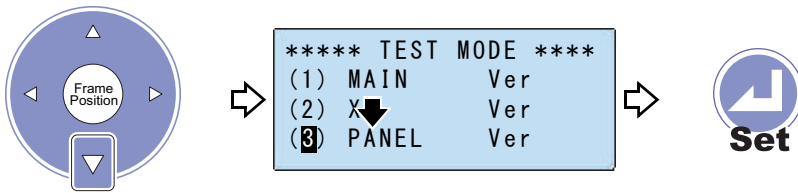
- (1) Set DIP switch DSW1-1 at the side face of the operation panel to ON , and turn "OFF" =>turn "ON" the power.
- (2) Start operation from the screen of "TEST MODE".



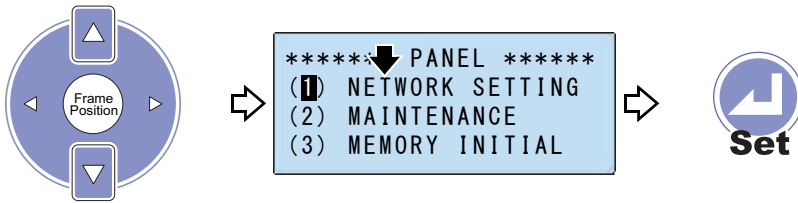
- (3) Open the screen of "TEST MODE".



(4) Select "(3) PANEL".



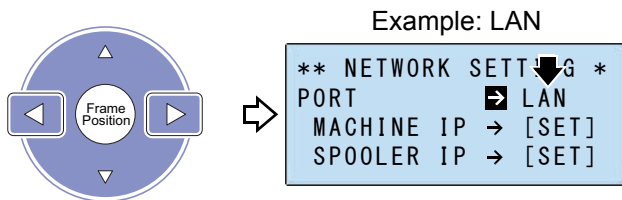
(5) Select "(1) NETWORK SETTING".



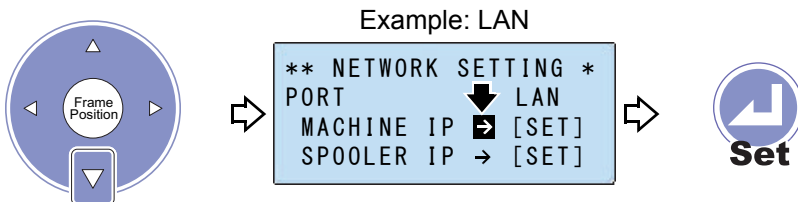
2-2-2. When selecting the LAN port

When you select the COM port, proceed to the detail page.(→p.131)

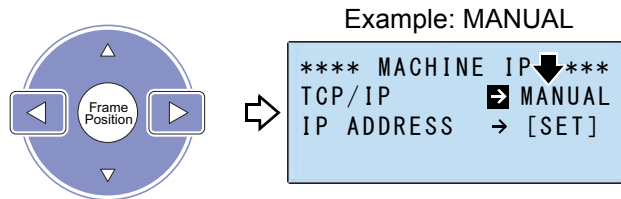
(1) Select "PORT".



(2) Select "MACHINE IP".

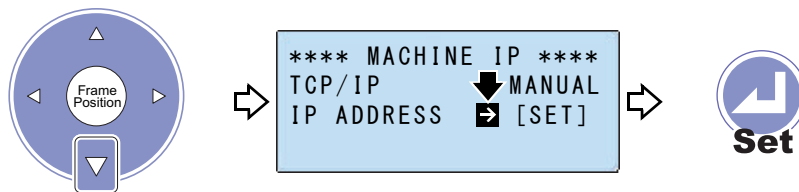


**(3) Select TCP/IP.**

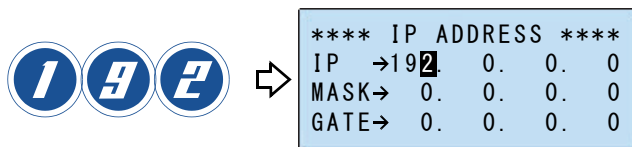


Although it is set to "AUTO" usually, when communication error [3B6] occurred by LAN connecting condition, input each IP address value at "MANUAL".

**(4) Select "IP address".**

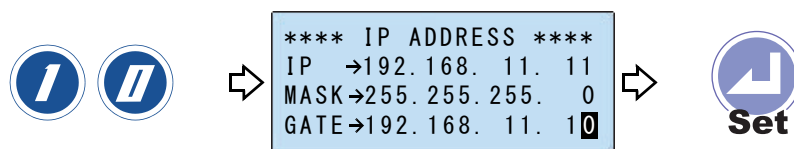


**(5) Input address values.**



Set the value of each IP address the same as the value of each IP address of the external device (DG/ML).

**(6) Input all address values.**



Set the value of each IP address the same as the value of each IP address of the external device (DG/ML).

(7) Return to the screen of "NETWORK SETTING".

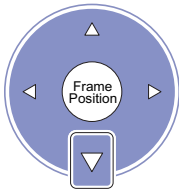


```

** NETWORK SETTING *
PORT          [ ] LAN
MACHINE IP → [SET]
SPOOLER IP → [SET]

```

(8) Select "SPOOLER IP".



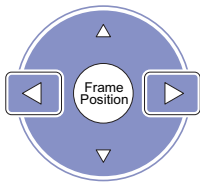
```

** NETWORK SETTING *
PORT          → LAN
MACHINE IP → [SET]
SPOOLER IP [ ] [SET]

```



(9) Select searching method.



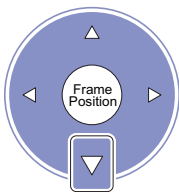
Example: MANUAL

```

**** SPOOLER IP [ ] ****
SEARCH          [ ] MANUAL
IP → 0. 0. 0. 0

```

(10) Select "IP".



```

**** SPOOLER IP ****
LOCATION [ ] → MANUAL
IP → 0. 0. 0. 0

```

(11) Select the address value.



```

**** SPOOLER IP ****
LOCATION → MANUAL
IP → 192.168.11.1 [ ]

```

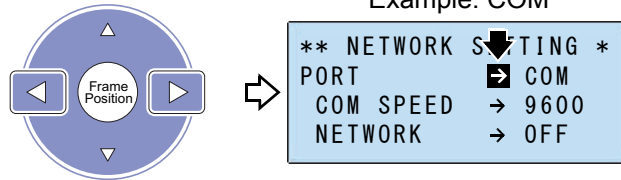


It is completed.

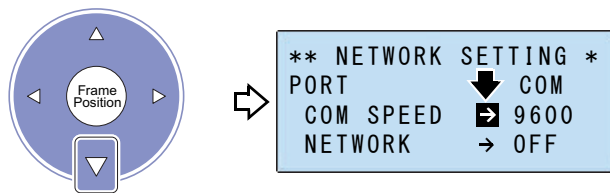
(12) Turn OFF the power and set DSW1-1 to OFF.

**2-2-3.** When selecting COM port

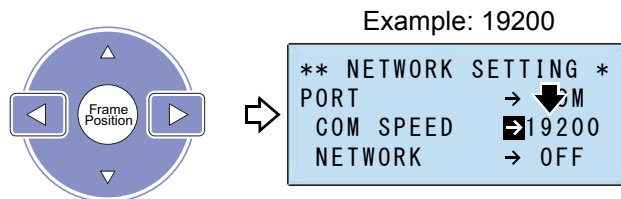
**(1)** Select "PORT".



**(2)** Select "COM SPEED".

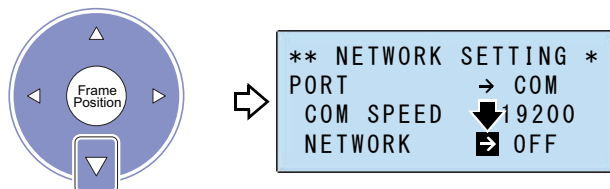


**(3)** Select the data transfer speed.



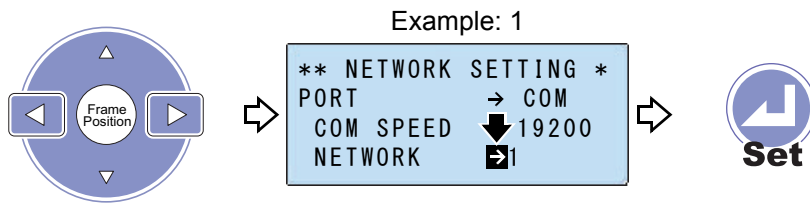
Selectable range: 9600, 19200, 38400

**(4)** Select "NETWORK".





(5) Select the method of receiving data.



Off: Not receive

- 1: Receiving the design data as it is transmitted from the personal computer
- 2: Selecting and receiving the design data transmitted from the personal computer

(6) Turn OFF the power and set DSW1-1 to OFF.

# Chapter 11

## Appendix

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# 1. Specifications

## 1-1. Power supply specifications

Since power spec. of the machine is specified clearly as shown below, use the machine under these conditions.

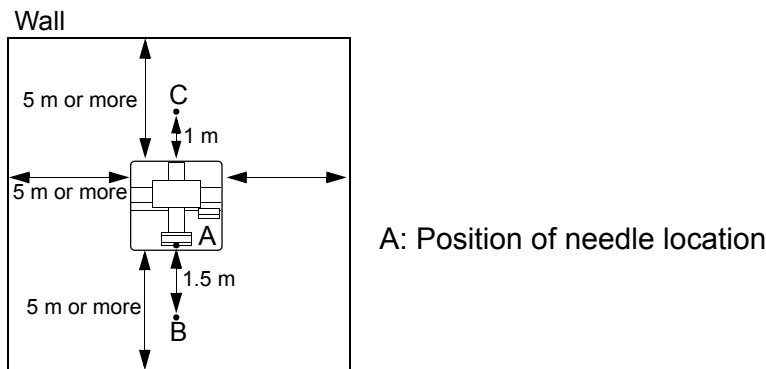
**⚠ WARNING**

⚠ Since there is a danger of electric shock due to leak current, be sure to ground the earth cable of the machine. In addition, degree of grounding should be type D or higher (grounding resistance 100 ohms or less).

- (1) Power supply: Single-phase 100 to 120 V, 200 to 240 V
- (2) Power consumption (max): 225 W
- (3) Frequency: 50/60 Hz
- (4) Insulation resistance: 10M ohms and larger (at 500 V Megger)

## 1-2. Ambient noise level

The ambient noise level of the machine is less than 82 db. Measuring environment is as the figure below.

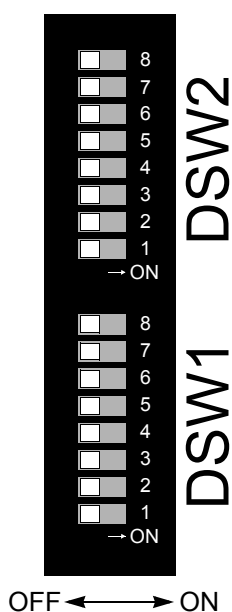


- (1) Measuring position  
Higher value is adopted after measured at B and C. The height is measured at 1.6 m from the floor.
- (2) Working condition of the machine  
Fabric is stretched on the border frame, and embroidery with satin stitches 4 mm in length will be executed.
- (3) RPM  
Maximum number of revolutions of the machine
- (4) Measuring instrument  
Conformity to IEC61672-1: 2002 Class 1

## 2. DIP switch of operation panel

### 2-1. DIP switch

DIP switch is at the right side of the operation panel. After switching DIP switch, turn ON the power again.



Mark \* in the below chart means the setting at shipment.

DSW2

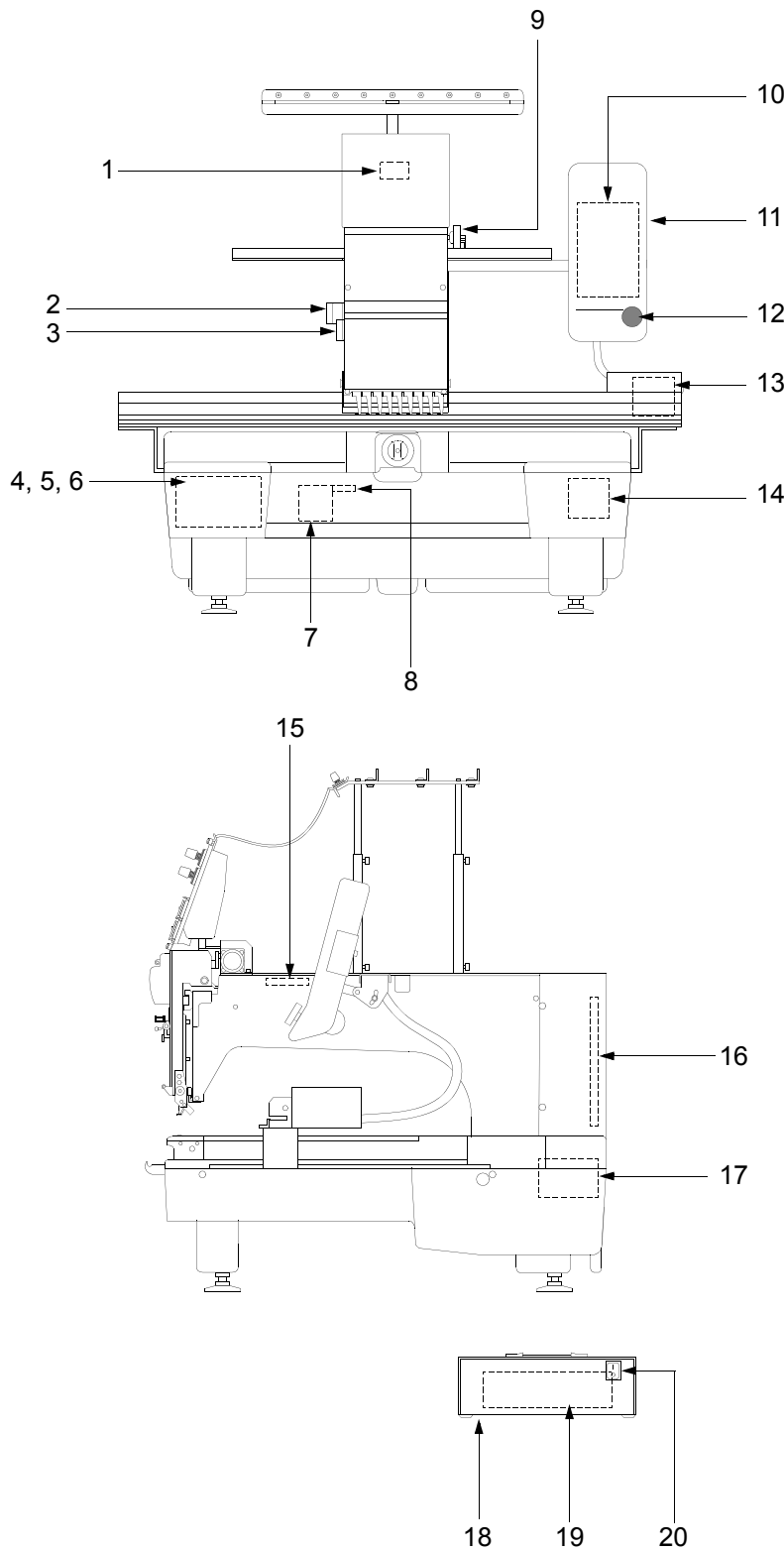
No.	Contents	OFF	ON
8	-	* -	-
7	-	* -	-
6	-	* -	-
5	-	* -	-
4	Satin Conversion	* Correct a stitch length of 1.5 mm or more.	Correct a stitch length of 0.6 mm or more.
3	Satin adjustment	* Corrects X and Y at the same time	Corrects X and Y individually
2	Source of installation	* -	-
1	Operation mode 2	* Normal operation mode	Installation mode Turn ON DSW1-1

DSW1

No.	Contents	OFF	ON
8	-	* -	-
7	-	* -	-
6	-	* -	-
5	Beam sensor	* Not corresponding	Corresponding
4	Hoop travel direction: Arrow symbols and actual travel direction	* Frame standard	Design standard
3	Buzzer sounds	* 10 times	One time
2	-	* -	-
1	Operation mode 1	* Normal operation mode	TEST MODE

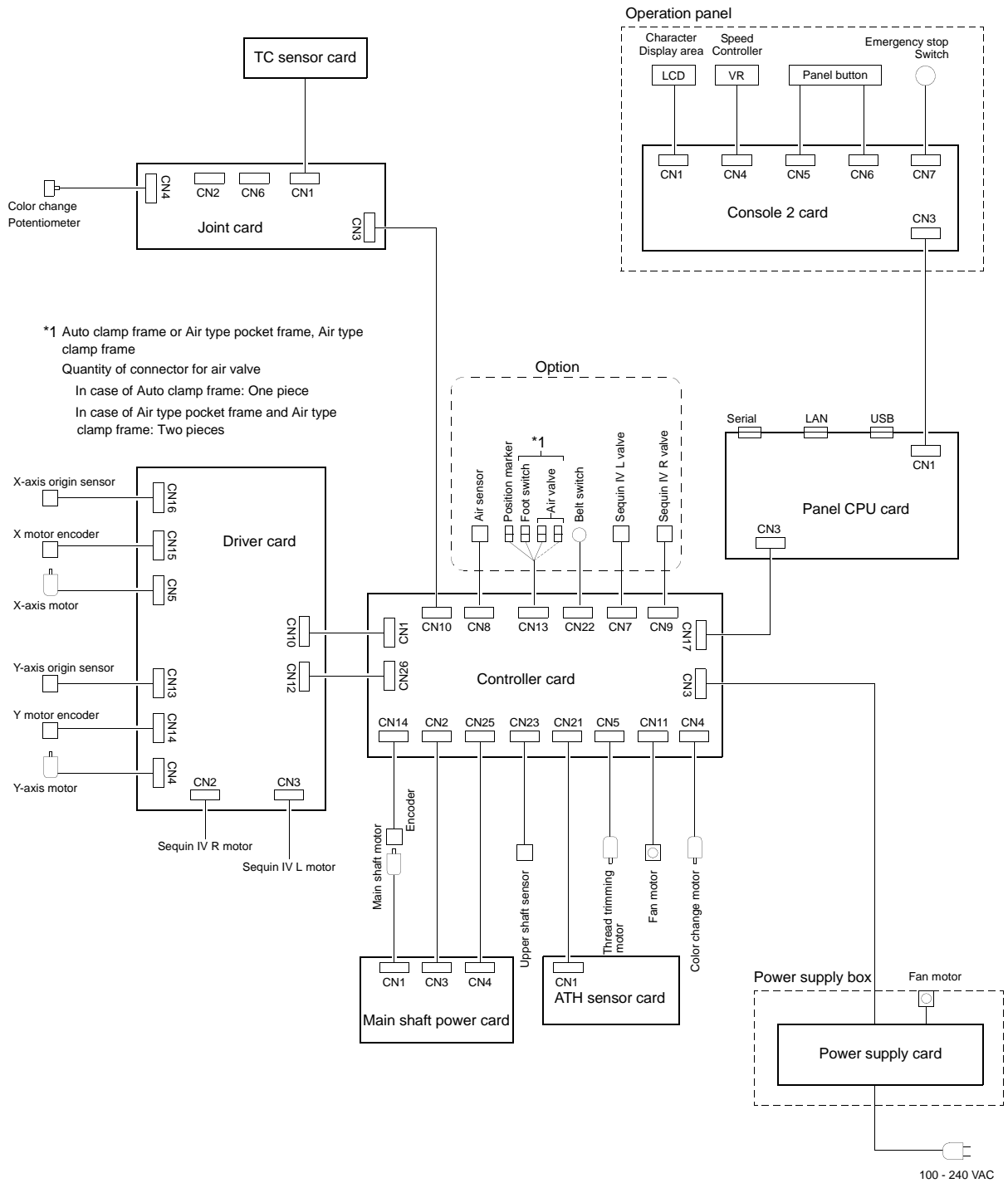
### 3. Electrical component

#### 3-1. Layout of electric parts



- 1. TC sensor card
- 2. Upper thread holding motor
- 3. Jump motor
- 4. Controller card
- 5. Main shaft power card
- 6. Driver card
- 7. ATH motor
- 8. ATH sensor card
- 9. Color change motor
- 10. Console 2 card
- 11. Operation panel
- 12. Emergency stop switch
- 13. X-axis motor
- 14. Y-axis motor
- 15. Joint card
- 16. Panel CPU card
- 17. Main shaft motor
- 18. Power supply box
- 19. Power supply card
- 20. Power switch

### 3-2. Electrical system diagram



## 4. Terminology

<A>

ATH

Abbreviation of Automatic Thread Trimming and Holding Device.

Auto Jump

To make a stitch divided into stitches of the setting value or less automatically when its stitch length exceeds the setting value. It is effective to prevent the stepping out of the frame and the displacement of the design.

<D>

Data mode

Storing mode of design data (T, T2, T3).

Data set

To input the design data to the memory of the machine to start the machine.

DST

Stitch data of Tajima ternary format. Data storing mode is T.

<F>

Fixed position

Angle of the main shaft at which the main shaft motor stops (stop position).

Frame coordinates

Frame position in embroidery space. It is indicated such as "X: -153.2, Y: +120.4".

Frame origin

An anchoring point to calculate the current frame position (X: 0.0, Y:0.0).

<I>

Inching

Movement to stabilize start of sewing by moving needle bar slowly before the main shaft starts usual operation. It is executed before thread trimming to stabilize thread trimming.

<J>

Jump

To make only the frame move in the state that needle bar does not move down during operation. It is possible to make a longer stitch than one stitch of the maximum length.

<R>

Return Stitches

Tie stitch to be executed at start of sewing (stitch to prevent mis-stitching at start).

<S>

Satin stitch

Repeated zigzag stitches. It is mainly used for hem of applique, logo, mark, flower design etc.

Step

The section divided by color change code in the design data. The first section is called step 1, and the next section is called step 2.

<T>

Tatami stitch

Stitch to be filled in a certain amount of area. It is mainly used for big logo, background, underlay etc.

TBF

Stitch data of Tajima binary format. Data storing mode is T2. It can hold many more function codes compared to DST. It is necessary to handle TBF, CT0 and DGF as a set on a personal computer.

TCF

Data integrating TBF, CT0 and DGF. Integration facilitates handling of design data. Data storing mode is T3.

## &lt;X&gt;

## X-axis drive system

Drive system to make the embroidery frame move in crosswise (X) direction.

## X data

Data to make the embroidery frame move in crosswise (X) direction. It is indicated by moving direction (code: +/-) and value (mm).

## &lt;Y&gt;

## Y-axis drive system

Drive system to make the embroidery frame move in lengthwise (Y) direction.

## Y data

Data to make the embroidery frame move in lengthwise (Y) direction. It is indicated by moving direction (code: +/-) and value (mm).

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1st Edition May, 2006

11th Edition April, 2014

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