

## ■ Reverse stitch

Use the reverse stitch button when you want carry out back tacking (reverse stitching) at the beginning and end of sewing.

### Setting > Foot switch functions

#### Foot switch functions

It is possible to set so as to carry out reverse stitching as long as the reverse stitch button is held pressed.  
(Refer to page 108)

#### <When start/stop button is used>

The sewing machine carries out reverse stitching as long as the reverse stitch button is held pressed, and stops the sewing when the reverse stitch button is released.

#### <When foot controller is used>

The sewing machine carries out reverse stitching as long as the reverse stitch button is held pressed, and sews the material in the forward direction when the reverse stitch button is released.

In the case of sewing one-point stitches or letters, the sewing machine stops after the completion of lock stitches.

### Setting > Stitch speed

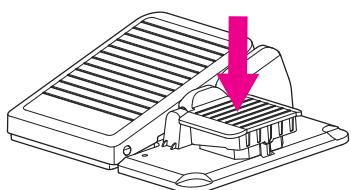
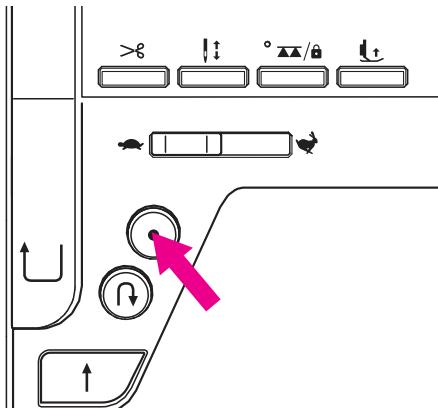
#### Adjustable reverse stitch speed

Sewing speed of the reverse stitching can be changed.  
(Refer to page 107)

### Sewing > Icons

#### Setting the automatic back tacking, thread trimming and presser foot lifting

The back tacking at the beginning and end of sewing and the back tacking and thread trimming / presser foot lift after thread trimming at the end of sewing can be set. (Refer to page 39)



## ■ Lock stitch

Use the lock stitch button when you want to carry out discreet back tacking (lock stitching) at the beginning and end of sewing.

### ★ Sewing start

Press the lock stitch button at the position you want to carry out lock stitching.

The sewing machine carries out lock stitching and stops.

#### Setting > Foot switch functions

##### Foot switch functions

It is possible to set so as to carry out lock stitching by pressing the foot switch. (Refer to page 108)

### ★ Sewing end

#### <When start/stop button is used>

Push the lock stitch button at the end of sewing.

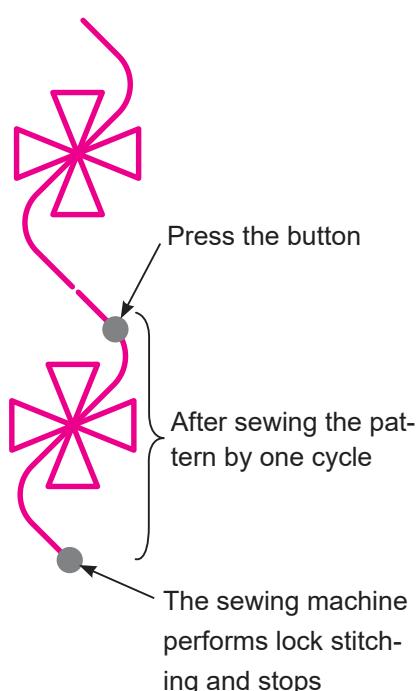
The sewing machine sews lock stitches and stops.

#### <When foot controller is used>

Press the foot switch when the end of sewing is reached.

The sewing machine sews lock stitches and stops.

\* Example)



\* When you push the button while sewing one-point stitches or letters, the sewing machine sews until one cycle of the selected pattern is completed, sews lock stitches and stops. The start/stop button lights up in orange during the one cycle.

#### Setting > Stitch speed

##### Adjustable reverse stitch speed

Sewing speed of the reverse stitching and lock stitching can be set. (Refer to page 107)

#### Sewing > Icons

##### Setting the automatic back tacking, thread trimming and presser foot lifting

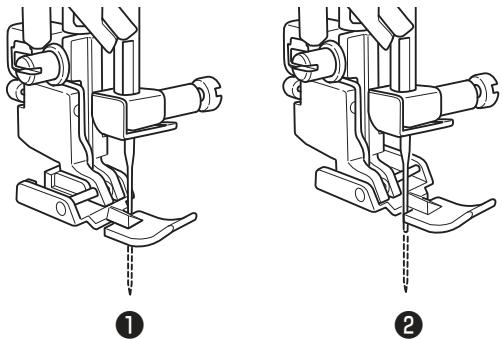
The back tacking at the beginning and end of sewing and the back tacking and thread trimming / presser foot lift after thread trimming at the end of sewing can be set. (Refer to page 39)

## 6.2. Inserting zippers

No.	Pattern	Presser foot
001		Zipper presser foot (B)

 **Leave the machine in Lock mode**

\* Make sure to use center needle position (Stitch pattern No. 001).

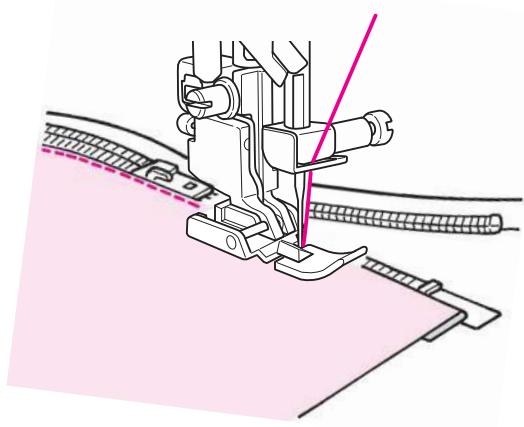


**1**

**Attach the zipper presser foot (B) to the machine.**

When sewing the left side of the zipper, place the zipper under the right portion ① of the zipper presser foot.

When sewing the right side of the zipper, place the zipper under the left portion ② of the foot.



**2**

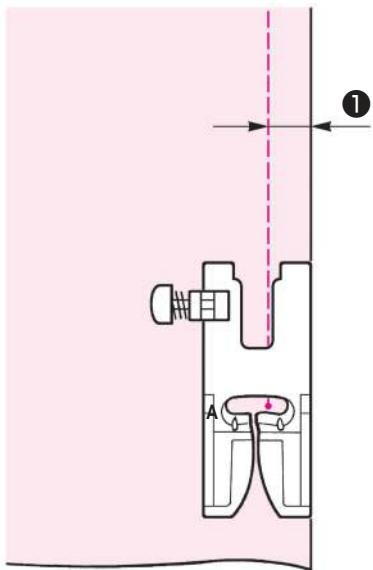
**Continue sewing until the top end of the slider is reached. Then, move the slider away from you, and continue sewing until the end of zippers is reached.**

## 6.3. Patchwork piecing

No.	Pattern	Presser foot
002		Standard presser foot (A)
003		<b>⚠ Leave the machine in Lock mode</b>

To sew pieces of cloth together is called piecing in patchwork.

In the case of piecing, set the seam allowance generally to 7 mm or 1.4 inches for sewing.



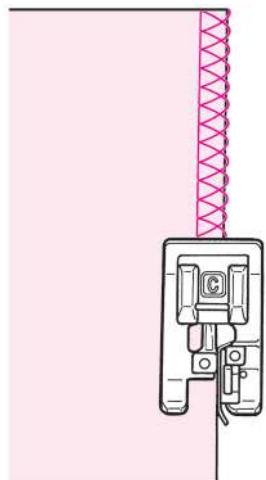
**1** Cut the fabric with seam allowance.

**2** Align the right end of the presser foot and the edge of the fabric and sew.

The needle will enter 7 mm (1/4") ① from the edge of the fabric, so the seam allowance of 7 mm (1/4") can be sewn.

## 6.4. Overcasting stitch

No.	Pattern	Presser foot
016		Overcasting presser foot (C)
017		<b>⚠ Leave the machine in Lock mode</b>
018		Lightweight material



This stitch is used to prevent the edge of fabric from fraying.

Push the fabric towards the guide and sew.  
If the fabric and guide are apart, it will not make a nice stitch formation. Make sure to guide the fabric along the guide and sew slowly.

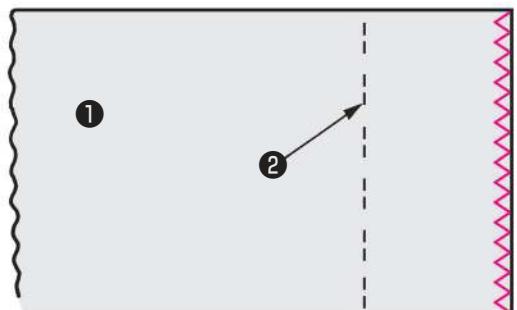
\* Before sewing, make sure to check that the needle will not hit the presser foot.

## 6.5. Blind stitch

No.	Pattern	Presser foot
025		Blind stitch presser foot (D)
026		Lightweight material
027		Stretchy fabrics

**⚠ Leave the machine in Lock mode**

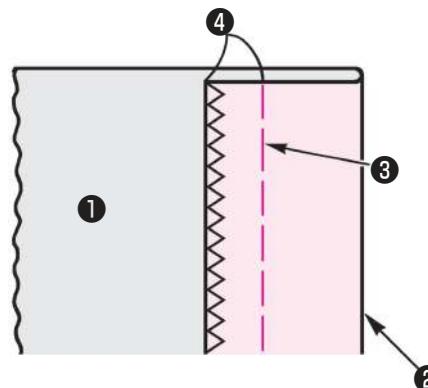
### ■ Folding fabrics



**1** Sewing overcasting stitches on the edge of fabric.

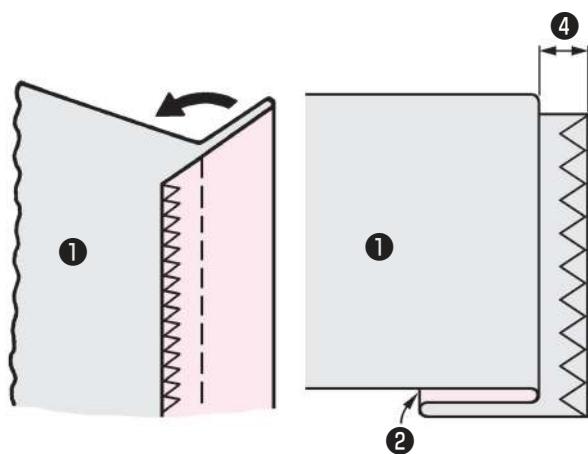
(Refer to page 69 for overcasting stitches)

- ① Fabric (wrong side)
- ② Finish line



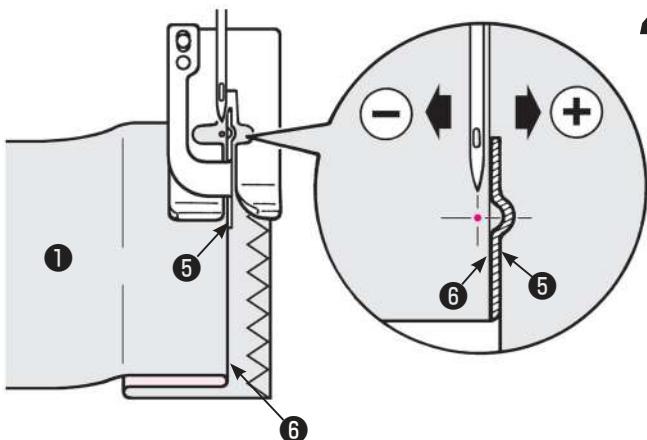
**2** Carry out basting ③ by hand.

④ 0.5 - 0.6 cm



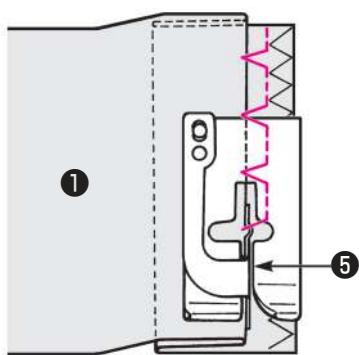
**3** Fold from basting line.

Leave 0.5 to 0.6 cm.

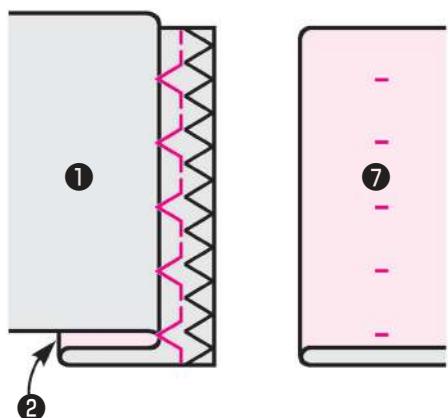


**4** Align guide ⑤ of the presser foot with folded edge ⑥. Turn the handwheel and adjust the zigzag width with the zigzag width adjusting dial so that zigzag stitches reach the folded edge.

\* Pay attention so that needle will not hit the presser foot.



**5** Position the folded edge against the guide ⑤ and sew.

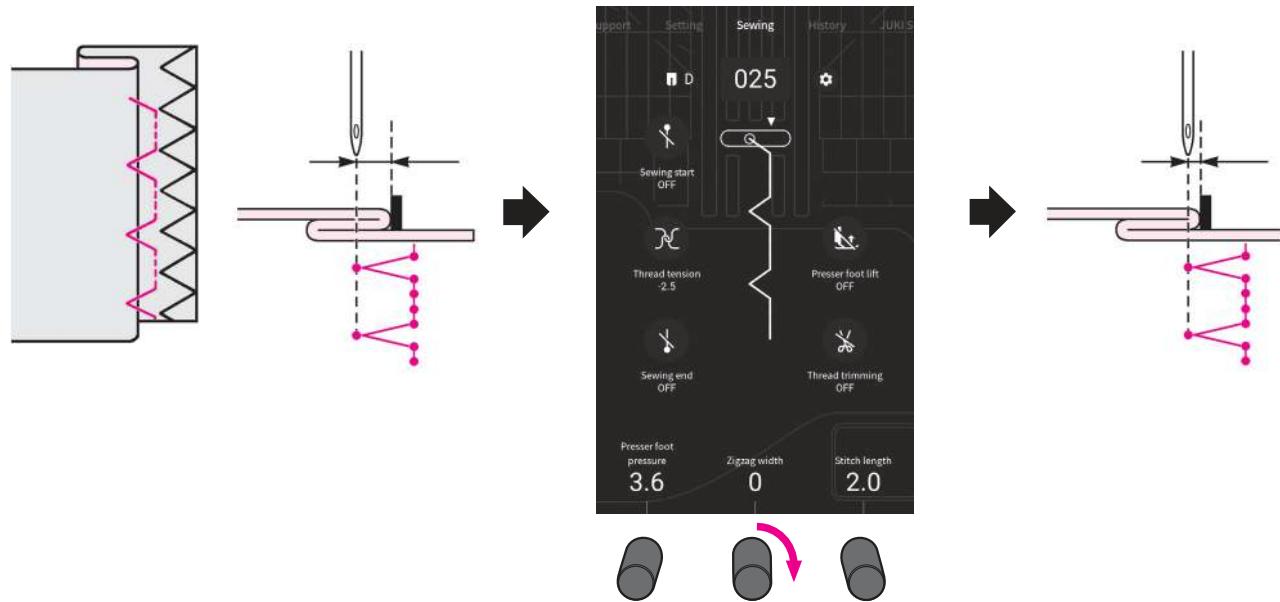


**6** Turn over the fabric after sewing.

⑦ Fabric (right side)

## ■ When changing the needle entry point

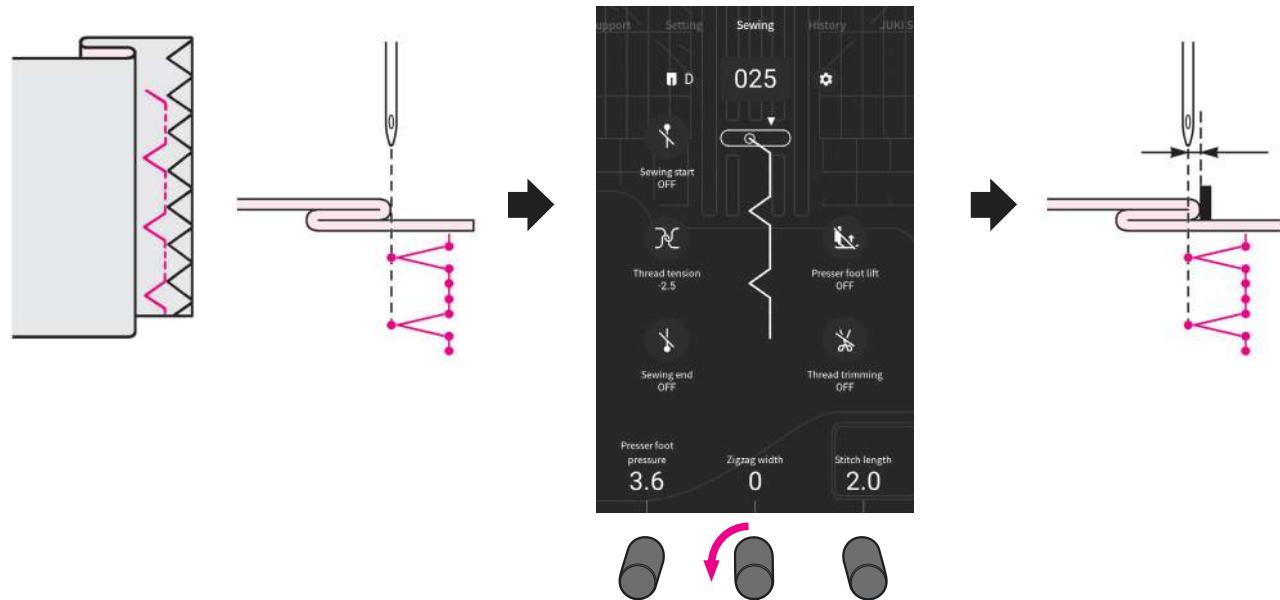
### 1. If the stitches reach too far beyond the folded edge



**Turn the zigzag width adjusting dial clockwise (to the right).**

(Turn the handwheel to check the needle entry point. When adjusting, make sure the needle is in the up position.)

### 2. If the stitches fail to reach the folded edge

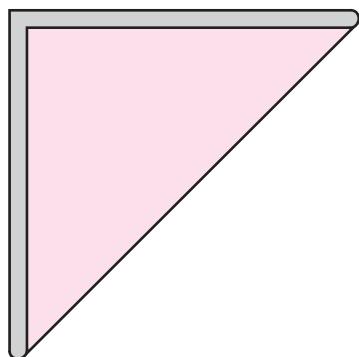


**Turn the zigzag width adjusting dial counterclockwise (to the left).**

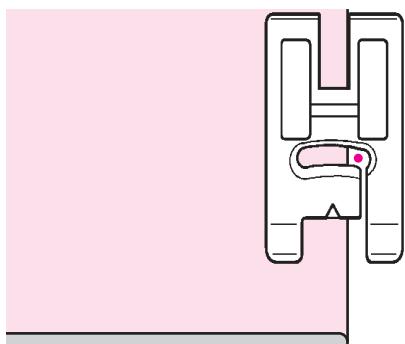
(Turn the handwheel to check the needle entry point. When adjusting, make sure the needle is in the up position.)

## 6.6. Shell tuck

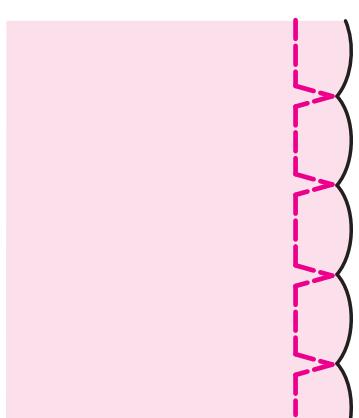
No.	Pattern	Presser foot
028		Manual buttonhole presser foot (I)
029		<b>⚠ Leave the machine in Lock mode</b>



**1** Fold the material in the bias direction.



**2** Sew the material so that the needle enters the portion that is located on the right side of the top of the folds.



**3** The seashell-shaped tucking is produced.

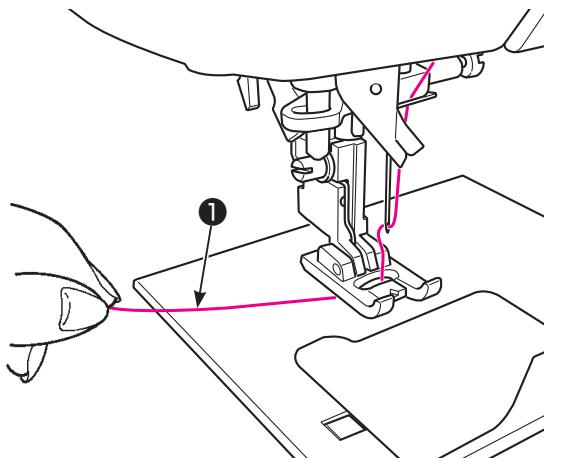
## 6.7. Bartacking

No.	Pattern	Presser foot
032		Manual buttonhole presser foot (I)
033		<b>⚠ Leave the machine in Lock mode</b>

Bartacking is used to reinforce the part of the seam that is likely to ravel.

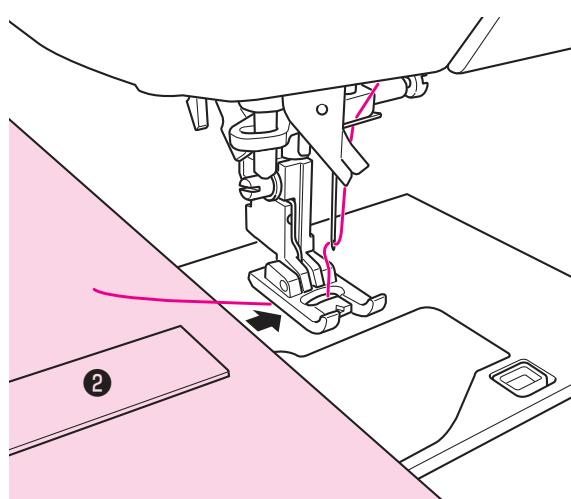
- \* The length of the bartack is determined by pushing the reverse stitch button, but it will automatically make a u-turn when it reaches the maximum of 20 stitches.
- \* If the presser foot cannot be parallel to throat plate, use filler fabric or cardboard.

### Example of use)

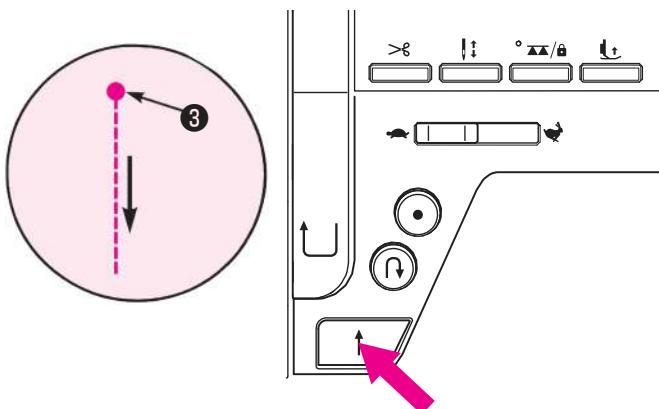


**1** Pass the needle thread through the presser foot.

① 10 cm



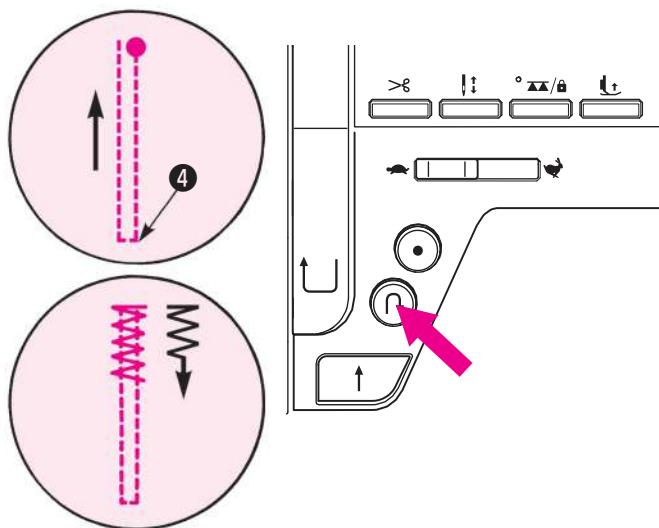
**2** Place the fabric ② under the presser foot.



### 3 Start sewing.

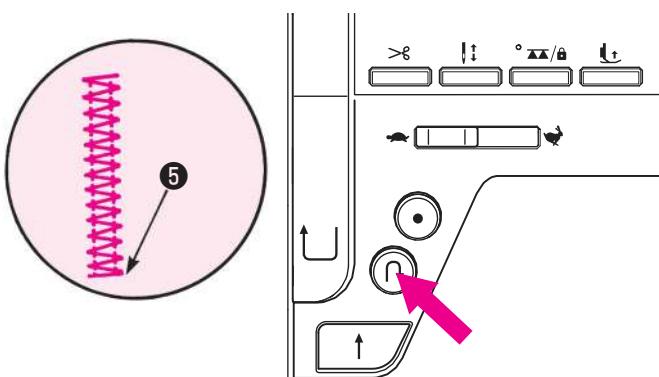
Push the start/stop button and the machine starts to sew straight stitches.

③ Starting point



### 4 When it comes to the turning point ④ push the reverse stitch button.

The machine goes back to the starting point by sewing straight stitches and then it sews zigzag stitches to the point where the reverse stitch button is pushed.



### 5 When the machine comes to the sewing end point, push the reverse stitch button.

The machine sews lock stitches ⑤ and stops.

MEM

\*  No. 033 In the case of bartacking (memory)

Since the length of a bartack that is sewn for the first time is stored in memory, step of procedure

4 is not required for bartacking for the 2nd time and beyond.

If you want to change the bartack length stored in memory, any other pattern should be selected.

## 6.8. Eyelet

No.	Pattern
036	
037	
038	

No.	Pattern	Presser foot	
039		Manual buttonhole presser foot (I)	
040		<b>⚠ Leave the machine in Lock mode</b>	



### 1 Sew an eyelet.

The sewing machine automatically performs lock stitching at the end of sewing and stops.



### 2 Open a hole with an eyelet punch or a pair of scissors.

This hole can be used for passing a string or ribbon or as a flower hole.

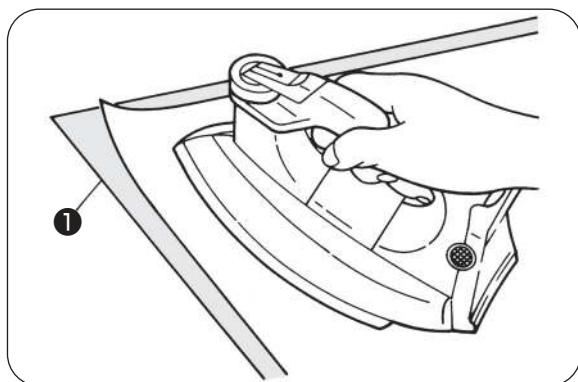
## 6.9. Decorative stitches

No.	Presser foot
201~240, 301~306, 401~422, 501~512, 601~684, 701~786, 801~837, 901~915, Letters, etc.	Manual buttonhole presser foot (I)

**⚠ Leave the machine in Lock mode**

\* Refer to "12. List of stitch patterns" for the types of patterns.

### ■ Preparation before sewing



In order to beautifully sew a pattern on light-weight material

①, trial stitching is necessary while sticking a piece of interlining on the wrong side of the material.

Use an iron to attach a fusible interlining to the wrong side of fabric.

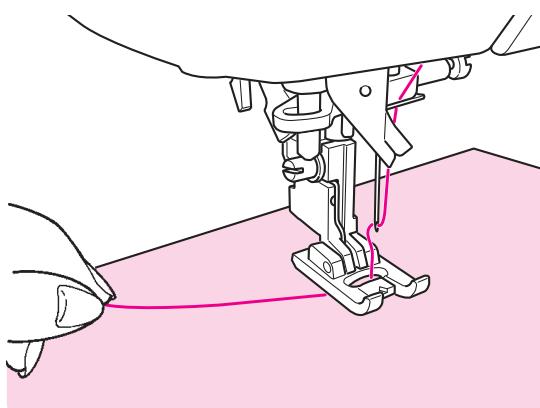
\* If stitch length is excessively short, the bobbin thread may appear on the right side of material or may cause stitch gathering.

Be sure to adjust the darning and carry out trial stitching.

### Setting > Darning adjustment Darning adjustment

Try trial sewing, adjust while checking the pattern.  
(Refer to page 104)

### ■ How to stitch a pattern (letters)



**Pass down the needle thread through the presser foot hole and draw it sideways.  
Place the fabric underneath the presser foot and start.**

The machine will stop automatically when sewing is finished.

- \* Note that the sewing speed varies according to stitch patterns (letters) to be sewn.
- \* If the automatic thread trimmer is used while sewing, the machine starts to sew from the beginning.
- \* In case of condensed sewing, if the stitch length is too small, the stitches may get stuck.

### ■ Disposing thread ends of jump stitches



**Get rid of unnecessary thread on the front side of fabric by scissors.**

## 6.10. Lace / feather / overlapping and tiling (blackwork) patterns

No.	Pattern	No.	Pattern	No.	Pattern	No.	Pattern
901		904		909		913	
902		906		910		914	
903		907		911		915	
904		908		912			

Presser foot

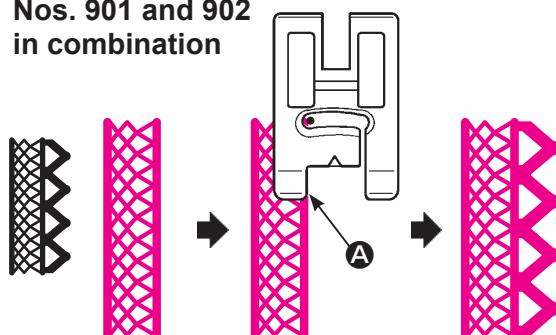
Manual buttonhole presser foot (I)

**⚠ Leave the machine in Lock mode**

Lace- / feather-like patterns can be produced by sewing patterns in parallel. In addition to the above, other patterns such as decorative patterns can be sewn with overlapped or tiled a wider variety of patterns.

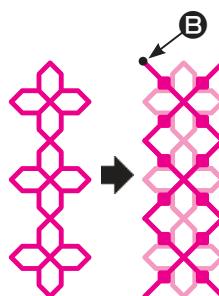
### ■ How to sew a combination of patterns

- For sewing pattern Nos. 901 and 902 in combination



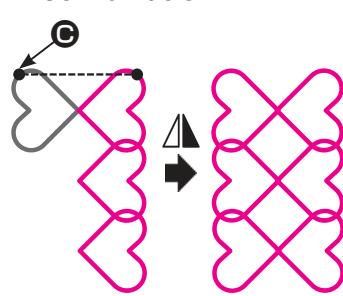
- ① Sew the pattern No. 901.
- ② Select the pattern No. 902. Sew the pattern No. 902 while aligning the inner edge of the presser foot with the edge of the pattern (A).

- For sewing pattern Nos. 772 and 776 in combination



- ① Sew the pattern No. 772.
- ② Determine starting point B of the pattern No. 776 so that the pattern can be sewn accurately overlapped with the already-sewn pattern No. 772. Then, sew the pattern No. 776 over the already-sewn pattern No. 772.

- For sewing pattern Nos. 778 and 778 in combination



- ① Sew the pattern No. 778.
- ② Providing a space of approximately 7 mm from the already-sewn pattern No. 778, adjust starting position C of the pattern No. 778 to the position that is same in height of the already-sewn pattern No. 778. Then, sew the pattern No. 778 with horizontally inverted.

**Caution: In the case of tile stitching, patterns may be slightly misaligned depending on the patterns to be combined, material, thread and type of stitching to be used.**

Example)

No.901+902



903+904



906△+905+906



907+908+909



910+911



No.912△+912



913△+913



914△+914



915△+915



772+776



778△+778



782△+782



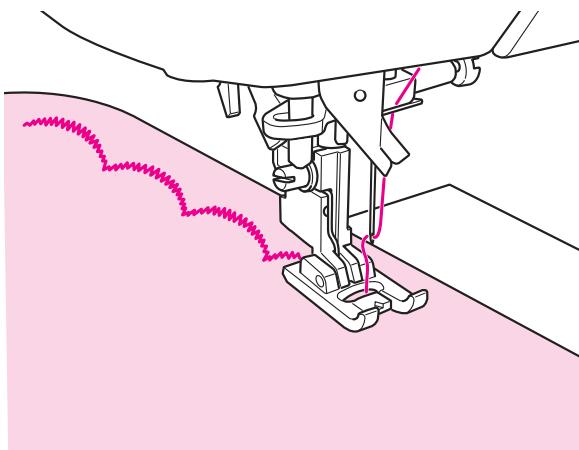
## 6.11. Scallop stitches

No.	Pattern	No.	Pattern	No.	Pattern	No.	Pattern
501	◐	504	◑	507	◐	510	◑
502	◑	505	◐	508	◑	511	◐
503	◑	506	◐	509	◑	512	◐

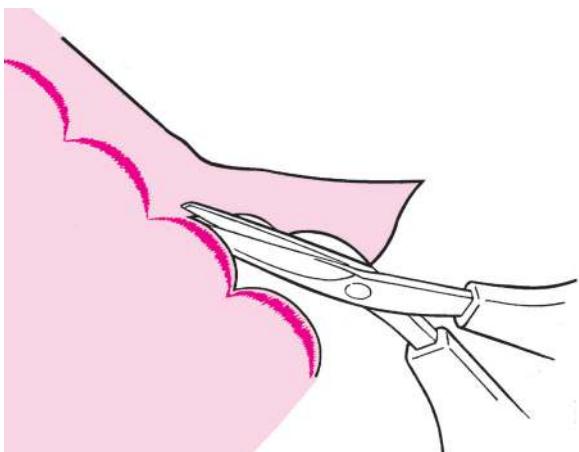
Presser foot
Manual buttonhole presser foot (I)

**⚠ Leave the machine in Lock mode**

This stitch is used for decorating edging on items such as table cloths, collars on blouse, etc.



**1** To keep the pattern intact, leave some margin and sew on the edge of the cloth.



**2** Cut the sewn fabric carefully so that stitches are not cut by the scissors.



### Elongation

The length of the patterns can be adjusted.  
(Other than the pattern No. 501) (Refer to page 98)

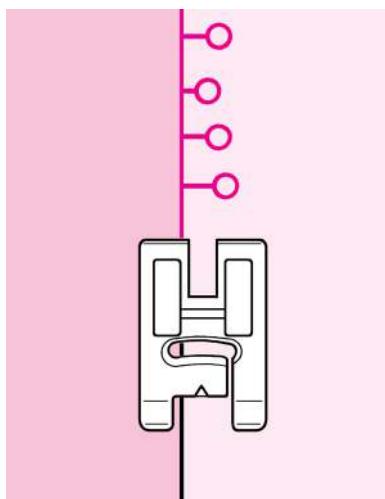
## 6.12. Random pattern

No.	Pattern	No.	Pattern
206	□□□	217	±±±
208	□□□	219	±±±
210	□□	221	▽▽▽
212	□□	223	▽▽▽

No.	Pattern	No.	Pattern
225	———	233	◇◇◇
227	○○○	235	✗✗✗
229	●●●	237	○○○
231	○○○		

Presser foot
Manual buttonhole presser foot (I)
<b>⚠ Leave the machine in Lock mode</b>

### Example)



When sewing random stitch patterns, the zigzag width automatically changes by section. This means that the finished patterns provide a sense of fun.

## 6.13. Tapering

No.	Pattern	No.	Pattern	No.	Pattern
301		303		305	
302		304		306	

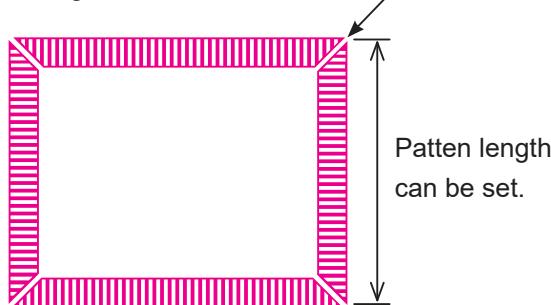
Presser foot
Manual buttonhole presser foot (I)
<b>⚠ Leave the machine in Lock mode</b>

For a tapering stitch pattern, the zigzag width can be set so that it is gradually increased at the start of sewing and is gradually decreased at the end of sewing.

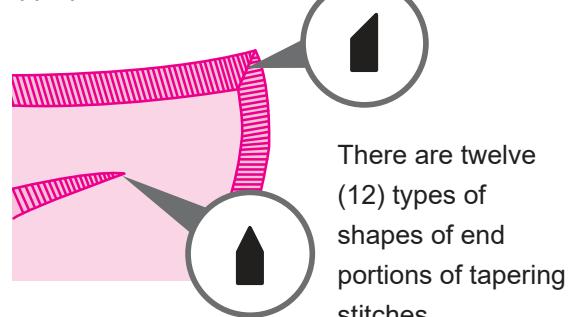
Use the tapering stitch pattern for mitering, etc.

### Example of use)

#### Mitering



#### Appliqu  of a leaf



### Angle and shape of tapering stitches

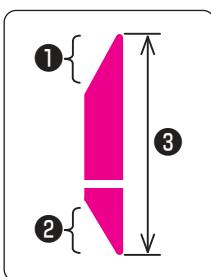
#### Tapering, top

- ▲ 30°       ▲ 15°
- ▲ 45°       ▲ 30°
- ▲ 60°       ▲ 45°
- ▲ 30°       ▲ 60°
- ▲ 45°       ▲ 90°
- ▲ 60°       ▲ 120°

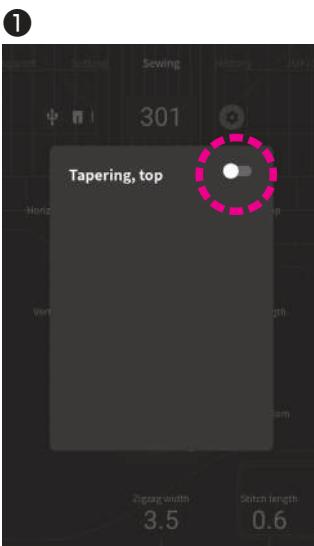
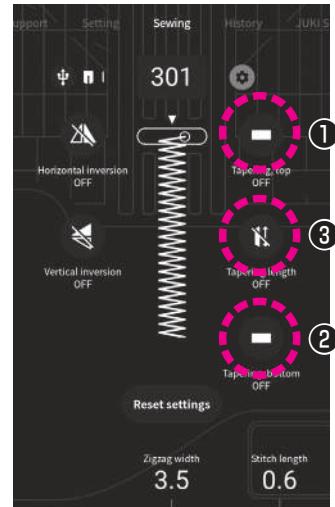
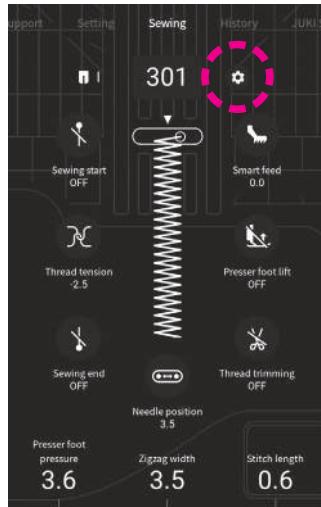
#### Tapering, bottom

- ▼ 30°       ▼ 15°
- ▼ 45°       ▼ 30°
- ▼ 60°       ▼ 45°
- ▼ 30°       ▼ 60°
- ▼ 45°       ▼ 90°
- ▼ 60°       ▼ 120°

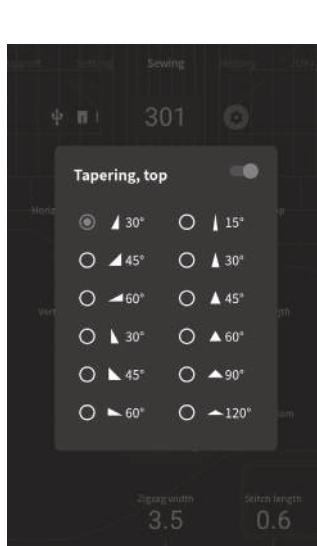
## ■ Setting the size of tapering stitch pattern



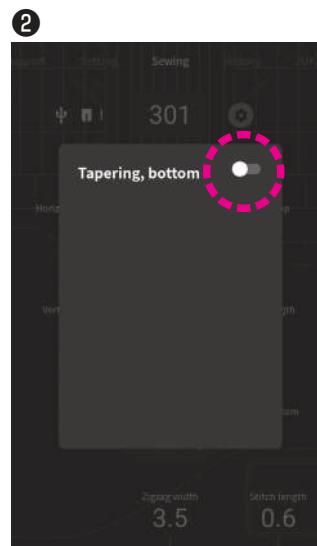
Tapering angles ① and ② and tapering length ③ can be set according to the pattern you want to sew.



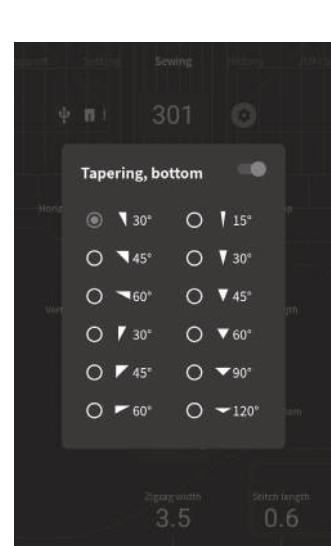
Place [Tapering, top] in ON.



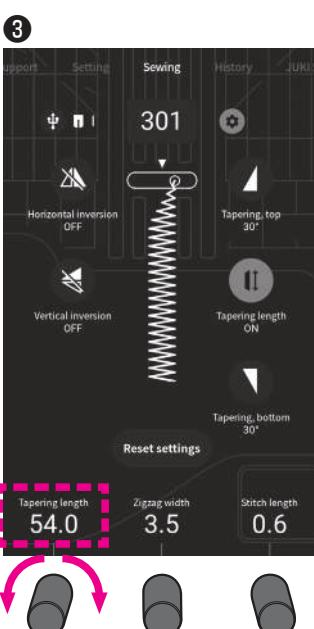
Select the angle and shape of the tapering stitch part.



Place [Tapering, bottom] in ON.



Select the angle and shape of the tapering stitch part.



Set the length of the tapering stitch pattern by turning the adjusting dial.

## ● How to sew the pattern

Start the sewing machine to sew the pattern.

- ① The zigzag width gradually increases.
- ③ The sewing machine sews the pattern by the set length.
- ② The zigzag width is gradually decreased toward the end of sewing. The sewing machine performs lock stitching at the end of sewing and automatically stops.

## ■ Manual stitching

Set angles ① and ② .

Start the sewing machine to sew the pattern.

①

The zigzag width gradually increases.

When the set zigzag width is reached, the sewing machine continues sewing keeping that zigzag width.

②

Press the lock stitch button when the part you want to start ② is reached.

The zigzag width is gradually decreased according to the set angle. Then, the sewing machine performs lock stitching at the end of sewing and automatically stops.

## ● Storing the length of the tapering stitch pattern in memory



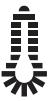
After you have completed sewing of the tapering stitches, the length of the tapering stitch pattern you have just sewn can be stored in memory by setting [Tapering length] to ON.

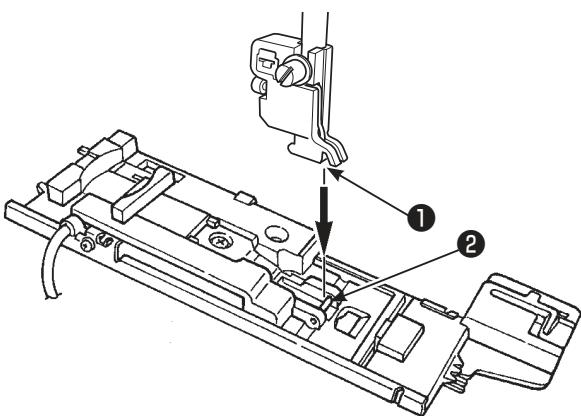
## 6.14. Buttonhole stitches

- \* The buttonhole length is automatically determined only by placing a button on the buttonhole presser foot.
- \* The machine can sew buttonholes for buttons with diameters of 0.7 - 3.2 cm.
- \* In case of stretchy fabrics, use non-elastic interlining on the wrong side of the fabric.
- \* Make sure to perform test sewing to see that the machine sews buttonholes correctly.
- \* Buttonhole Nos. 114 - 117 are for knit fabrics and should be used with a knit needle.

Presser foot
Buttonhole presser foot (E)
<b>⚠ Leave the machine in Lock mode</b>

No.	Pattern	Application
101		<p>Buttonhole for medium to heavy weight materials Standard buttonhole</p> <p>Manual 2-step buttonhole Use this buttonhole, when there is an overlapped section in the fabric or when you want to sew larger buttonhole than 3.2 cm diameter. (Refer to page 91)</p> <p>Manual 2-step buttonhole (Memory) * It is possible to store the size of buttonhole you have sewn once in memory.</p> <p>Buttonhole for heavy weight materials Stitch density is coarse. This pattern is used for coats, etc.</p> <p>Sews buttonhole double</p> <p>Decorative buttonholes</p> <p>Buttonholes for women's blouses and children's clothes. Also for light weight materials</p>
102		
103		
104		
105		
106		
107		
108		
109		

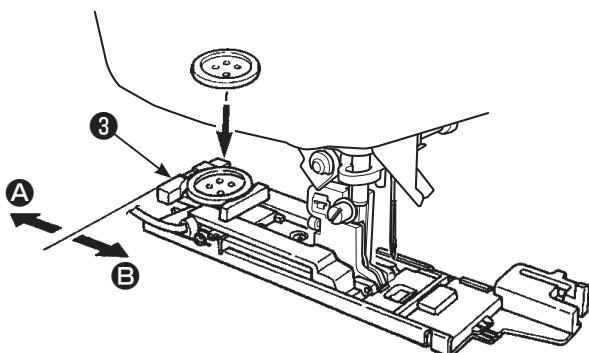
No.	Pattern	Application
110		<p>Keyhole buttonhole for heavy weight materials such as suits, jackets, coats, etc.</p> <p>Round keyhole</p> <p>Large and thick keyholes for heavy weight materials</p> <p>For sewing buttons on the front plackets of pants, etc.</p> <p>Buttonhole for light weight knit (also used as decorative button-hole)</p> <p>Buttonhole for medium weight knit (also used as decorative buttonhole)</p> <p>Buttonhole for light weight knit Sews buttonhole double</p> <p>Buttonhole for medium weight knit Sews double buttonhole</p>
111		
112		
113		
114		
115		
116		
117		
118		
119		<p>Decorative buttonholes Decorative buttonhole which look like hand-sewn</p> <p>Basting stitch for buttonholing (Refer to page 90)</p>
120		
121		



## 1 Set the presser foot.

Lift the needle and lift the presser foot.

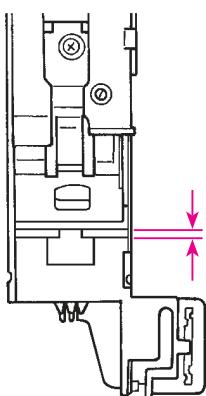
Align the groove ① of the presser foot holder with the ② of the presser foot and lower the presser foot holder to set.



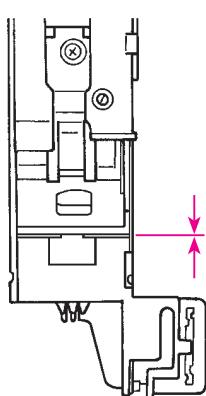
## 2 Set the button.

Pull the button holder ③ toward ④A, place the button on the button holder, and then push the holder toward ④B to set the buttonhole length.

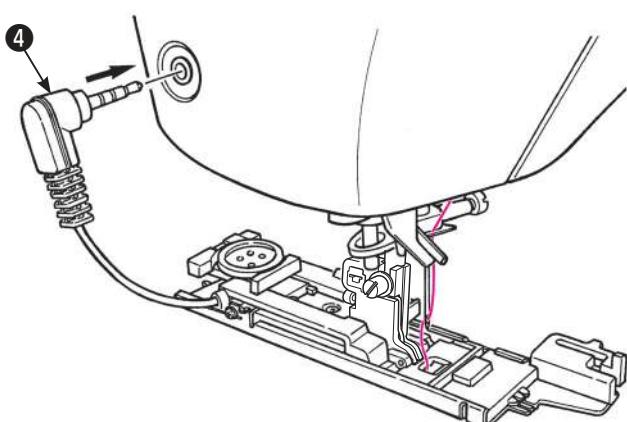
\* Check the following points after setting the presser foot and then start to sew buttonholes.



Check that there is a clearance.



If there is not a clearance, the machine will not sew neat stitches.



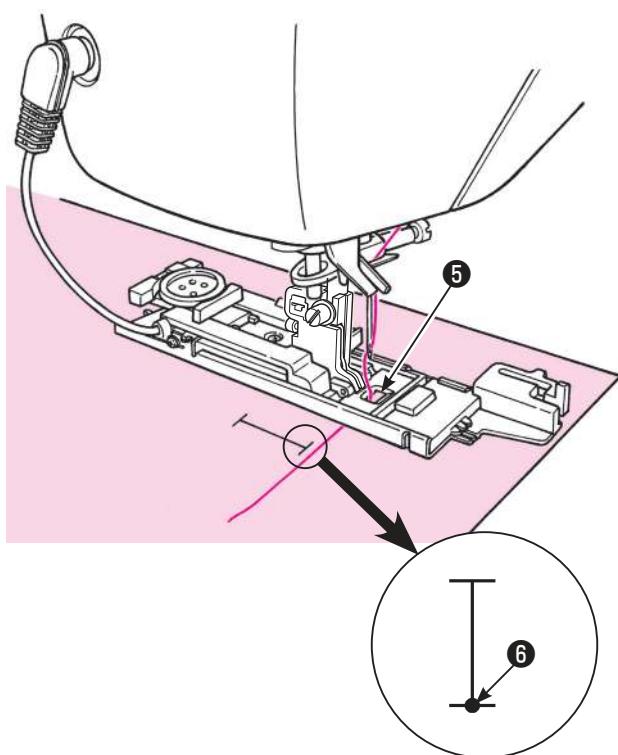
## 3 Set the buttonhole sensor pin ④ .

Insert the sensor pin into the sensor pin hole at the face plate cover.

- \* Insert the pin into the hole completely.
- \* If the machine starts to sew without inserting the pin into the hole, the following message will be shown on the display.



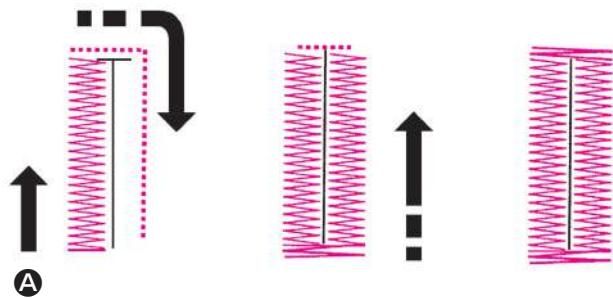
Set the sensor pin and restart.



## 4 Place the fabric under the presser foot.

Raise the presser foot, pass the needle thread through the hole on the presser foot 5 and pull it out sideways.

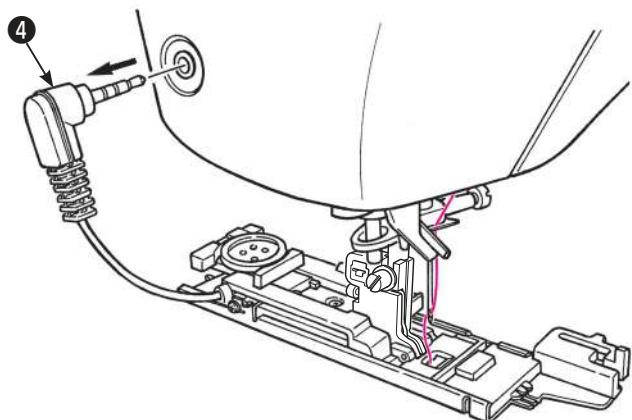
Place the fabric under the presser foot, align the marking with the sewing-start point 6. Penetrate the needle into the fabric by turning the hand wheel and lower the presser foot.



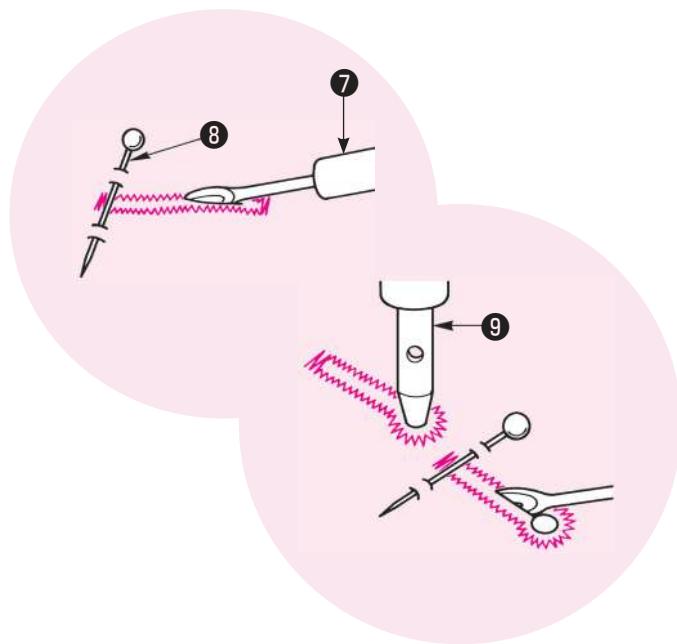
## 5 Start sewing. A

The machine will stop automatically after sewing the buttonhole.

- \* If a buttonhole of the same size will be sewn again, push the thread trimming button to trim the threads and raise the presser foot. Under this condition move to another point, lower the presser foot and then start sewing.
- \* Do not change stitch length and/or zigzag width during buttonholing. Otherwise this will cause imbalanced stitches.
- \* If thread trimming button is pushed while sewing buttonhole, the machine will stop and will not complete the buttonhole.
  
- \* Depending on material to be sewn and weaving direction of the material, there might be a slight difference in zigzag widths between right and left lines of buttonholes. Test sewing is recommended.



**6** Unplug the sensor pin **4** after sewing.



**7** Opening the buttonhole using a ripper **7**.

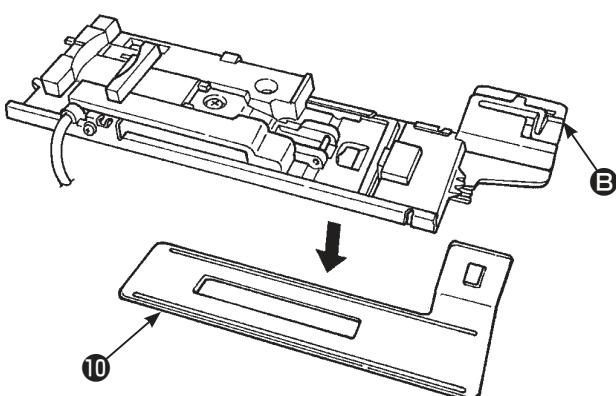
**[Double bartack]**

Pierce a stopper pin **8** at the bartack and open the buttonhole with a ripper **7**. Be careful not to cut the stitches.

**[Keyhole buttonhole]**

Place a cardboard under the buttonhole and make a hole with the eyelet punch **9**. Then pierce a stopper pin at the bartack and open the buttonhole with a ripper.

● Buttonhole clamping plate



**⚠ Leave the machine in Lock mode**

It will be easier to sew buttonholes on the thin fabrics and/or near the overlapped sections, if the clamping plate is used.

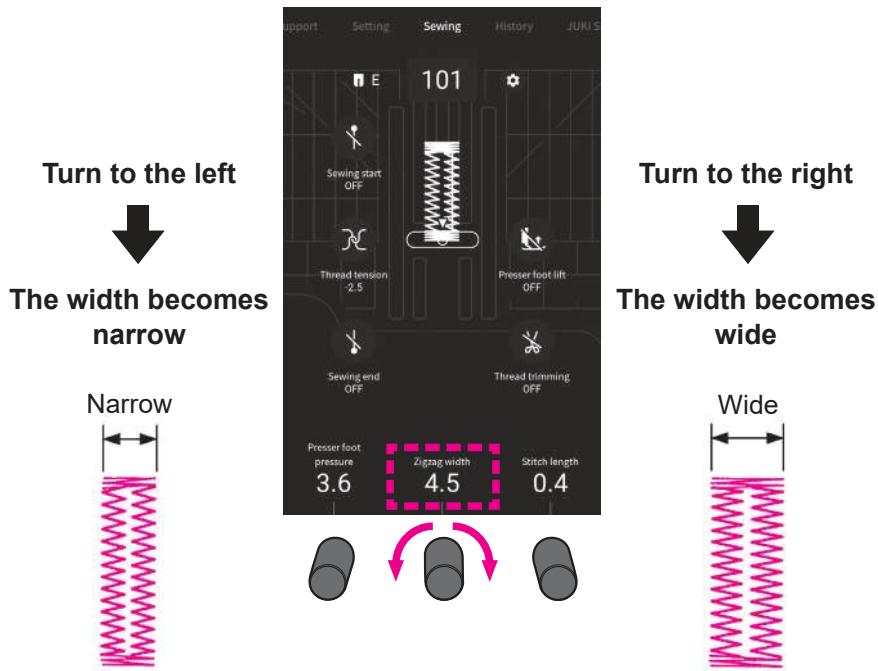
1. Attach the buttonhole presser foot to the presser foot holder, with the clamping plate **10** together.
2. Place the fabric between the presser foot and the clamping plate.

\* You can remove the clamping plate by holding **B**.

## ■ When changing the width of the buttonhole

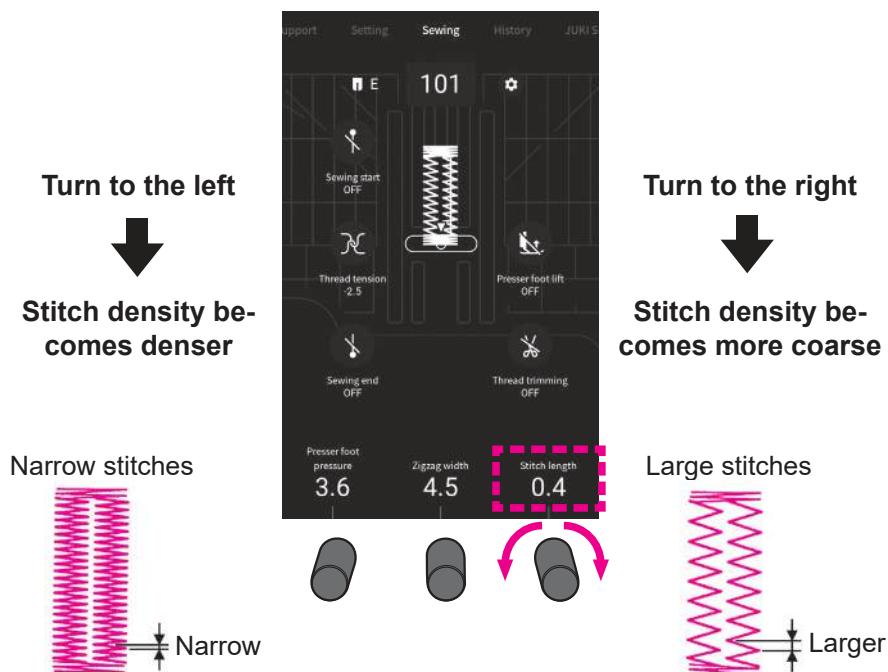
Turn the adjusting dial.

\* The setting of the buttonhole width and stitch length will be cancelled when the power is shut down or another pattern is selected.



## ■ When changing the density of the seam

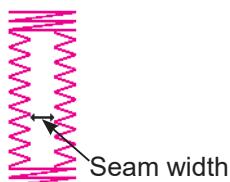
Turn the adjusting dial.



## ■ Change of seam width of buttonhole

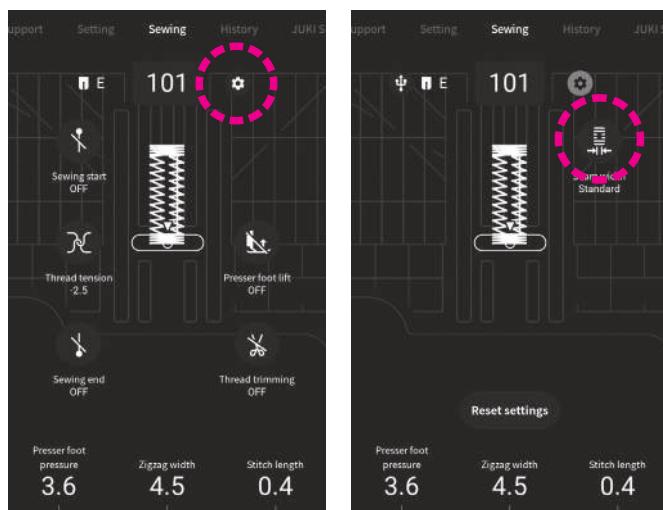
\* The knife width is reset when you turn the power OFF.

The seam width of buttonhole is changeable.



Standard      Large      Small

\* Initial value has been factory-set to "Standard".



Invert the pattern. Then, press .

The knife width can be changed in three steps by pressing the icon.



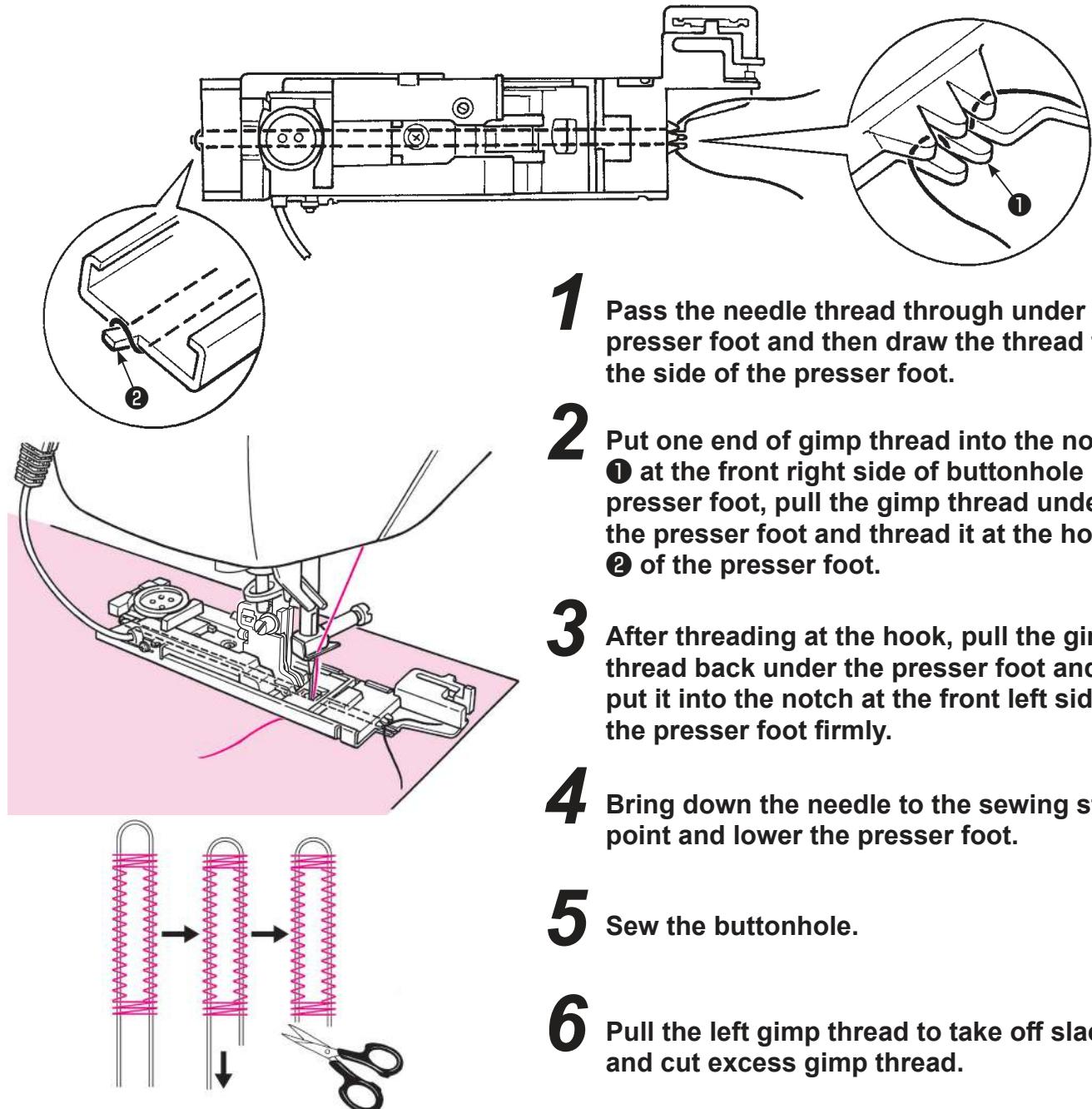
## ■ Buttonhole with gimp

No.	Pattern	Presser foot
101		Buttonhole presser foot (E)

**⚠ Leave the machine in Lock mode**

Buttonholes with gimp thread prevent the buttonholes from stretching and can make them more secure.

\* A buttonhole with gimp thread should be sewn using the double bartack pattern (Pattern No. 101)



## ■ Basting stitch for buttonholing

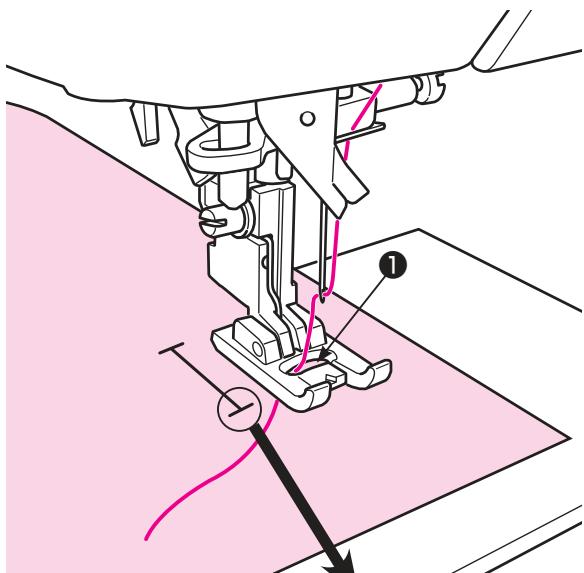
No.	Pattern
121	

This stitch is used as basting for Pattern No. 401 Buttonholing.  
It is also applicable to welt-buttonholing.

## 6.15. Manual 2-step buttonhole

No.	Pattern	Presser foot
102		Manual buttonhole presser foot (I)
103		<b>⚠ Leave the machine in Lock mode</b>

\* Refer to page 88 when you want to change the zigzag width and stitch length of a buttonhole.



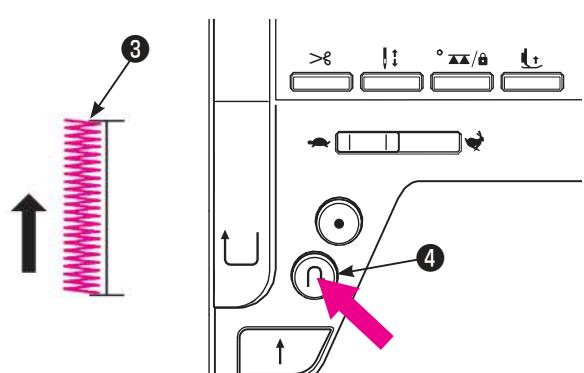
**1** Set the manual buttonhole presser foot (I).

**2** Pass the needle thread through the hole of the presser foot **1** and pull it out sideways together.

**3** Bring down the needle on the sewing start point **2** and lower the presser foot.

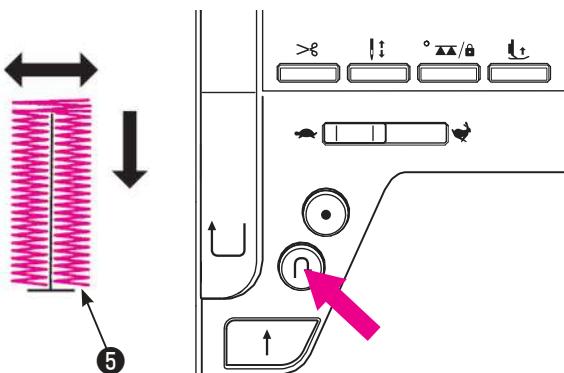
**4** Push start/stop button to sew.

\* At this time, if the start/stop button is pushed, the machine will stop sewing. And if the start/stop button is pushed again, then the machine will continue to sew the left side of the buttonhole.

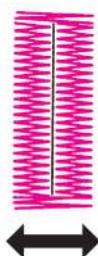


**Push the reverse stitch button **4** when it reaches the necessary length **3** of the left side of the buttonhole.**

**Sew bartack and the right side of the buttonhole, then the machine sews bartack and right side of the buttonhole.**

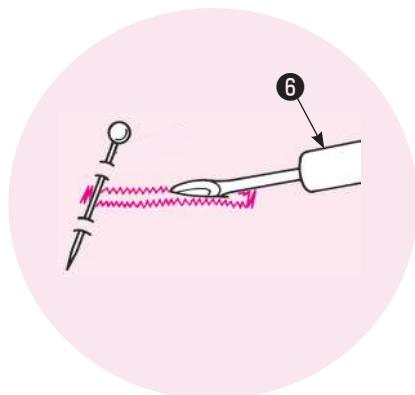


**5** Push reverse stitch button when it comes to the sewing start point ⑤ .



**6** Sew bartack and lock stitches until the machine stops automatically.

Trim the thread. Lift the presser foot. Then, remove the material from the sewing machine.



**7** Pierce a stopper pin at the bartack and open the buttonhole with a ripper ⑥ . Be careful not to cut the stitches.

\* In the case of a 2-step buttonhole, sewing direction of the left and that of the right side is different. Due to this and according to fabrics to be sewn, it may be possible that the density of each side looks different.



\* No. 103 In the case of 2-step buttonhole (Memory)

Since the length of a buttonhole that is sewn for the first time is stored in memory, step of procedure

**4** is not required for buttonhole for the 2nd time and beyond.

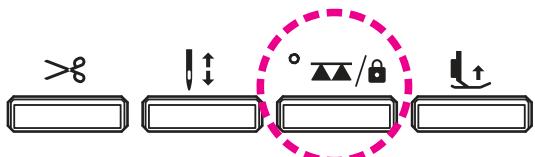
If you want to change the buttonhole length stored in memory, any other pattern should be selected.

## 6.16. Sewing buttons

No.	Pattern	Presser foot
122	⊖	Manual buttonhole presser foot (I)

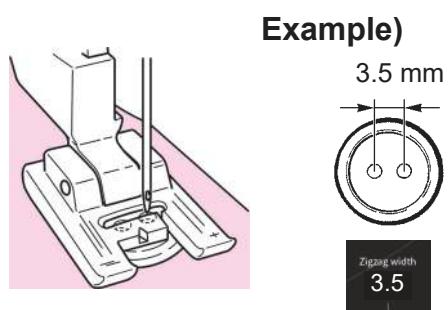
**⚠ Leave the machine in Lock mode**

\* Do not use the automatic thread trimming function when sewing buttons.

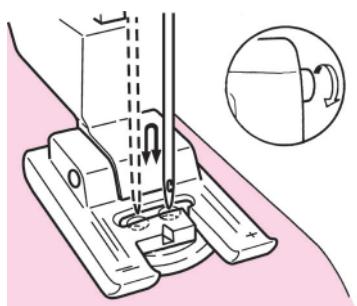


**1** Lower the feed dog by pressing the feed dog UP / DOWN / LOCK MODE button.

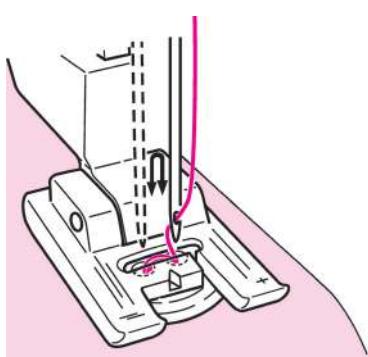
Lamp lights up: The feed dog is at its lower position  
Lamp goes out: The feed dog is at its upper position.



**2** Place a button under the presser foot and adjust the zigzag width according to the distance between holes in button.



**3** Make sure that needle enters holes in button, by turning hand wheel manually.



**4** Carry out sewing while turning the handwheel by hand.

**⚠** If you pull the material, the button could be moved from the correct position causing needle breakage. Buttons can be sewn without fail by using the separately-available button sewing presser foot (refer to page 124).

**5** Trim needle and bobbin threads by about 10cm (4 inches) long after sewing. Make a knot to secure the stitches.

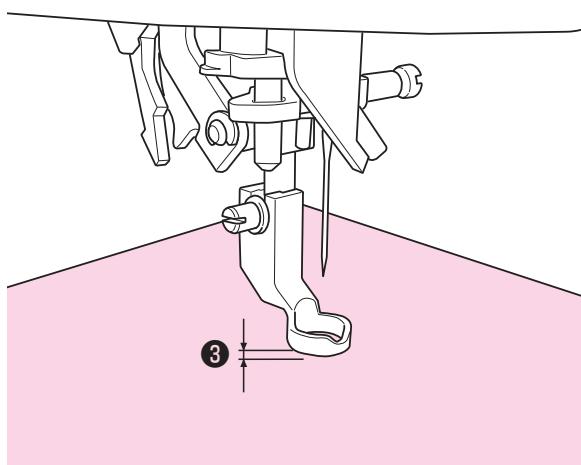
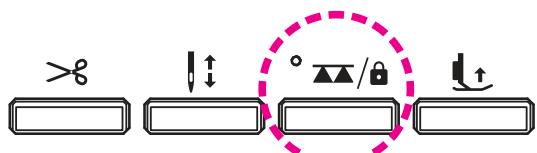
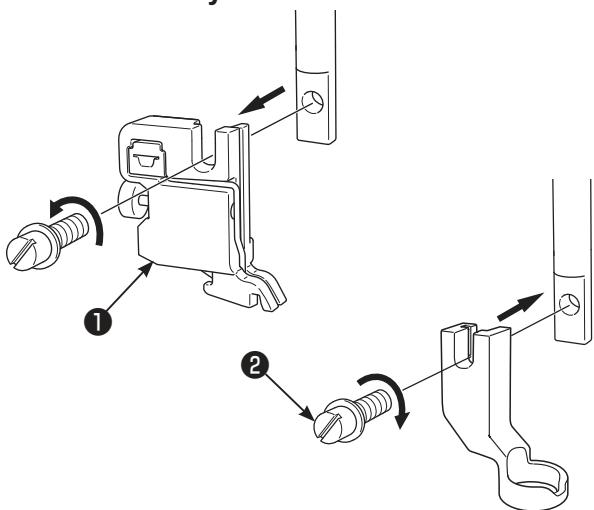
## 6.17. Quilting (free motion)

No.	Pattern	Presser foot
001		Quilt presser foot (for the ruler) (Q)

 **Leave the machine in Lock mode**

- \* **Be sure to sew straight stitch pattern (center stitch base).**

In the case of performing free-motion stitching using a zigzag pattern, the separately-available quilt presser foot (zigzag type) and presser foot joint are necessary.



It is called free motion quilting when moving the fabrics freely towards any directions without using the feed dog of sewing machine.

Free curve seams, etc. can be produced with the feed dog lowered (drop feed) regardless of the direction of sewing (i.e., 360 degrees) by moving the material by hand.

**1** Put top layer of fabric with patchwork and/or appliquéd, quilting cotton and bottom fabric together by using pin or basting stitches.

**2** Assemble the quilt presser foot.

Raise the presser bar. Loosen the setscrew for presser foot holder and remove the presser foot holder ①. (Refer to page 20)

Set the quilting foot and tighten the setscrew ② for presser foot.

**3** Lower the feed dog by pressing the feed dog UP / DOWN / LOCK MODE button.

Lamp lights up: The feed dog is at its lower position

Lamp goes out: The feed dog is at its upper position.

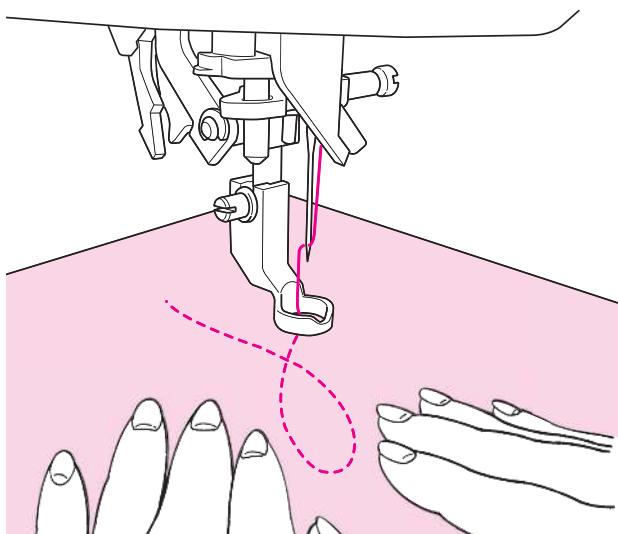
**4** Place the fabric underneath the presser foot and lower the presser foot.

**5** Adjust the presser foot height according to the material thickness.

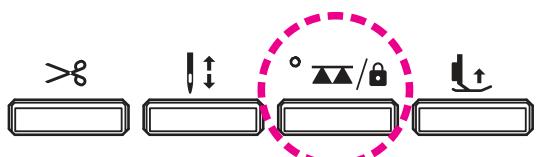
- Height of the presser foot can be changed with the presser foot screw.
- It is also possible to adjust the presser foot height using the micro-lifter height setting function. (Refer to page 38)

The material can be moved smoothly with no resistance by adjusting the presser foot height to about 1 mm ③ above the material.

- \* The sewing machine is capable of sewing beautifully even multi-layered sections of material by decreasing the presser foot pressure.



**6** Use both hands to hold the fabrics and move it without letting it loose. The target stitch length is about 1.5 to 2.0 mm.



**7** When you have completed sewing of free-motion quilting, press the feed dog UP / DOWN / LOCK MODE button to lower the feed dog.

The feed dog will be up and engaged at the same time as the machine starts to sew.

\* The quilt ruler is also applicable.

### Tips

#### ● How to lock stitches

- At sewing start, pull up the bobbin thread on the top layer of the fabric, hold both needle and bobbin threads together and sew 3 stitches on the same point. After that move fabrics as you wish.  
In this way, stitches on the wrong side of the fabrics look neat.
- At sewing-end sew 3 stitches on the same point and stop.

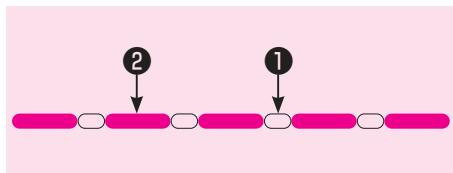
#### ● How to sew stitches with the same stitch length

- When the foot controller is used, the fabrics can be guided by both hands and you can move the fabrics freely.
- Set the speed controller to medium or medium low first, press the foot controller completely and move the fabrics.
  - if stitches become too large, set the speed controller to “faster”
  - if stitches become too small, set the speed controller to “slower”.

## 6.18. Hand look quilt stitches

No.	Pattern	Presser foot
418		Manual buttonhole presser foot (I)

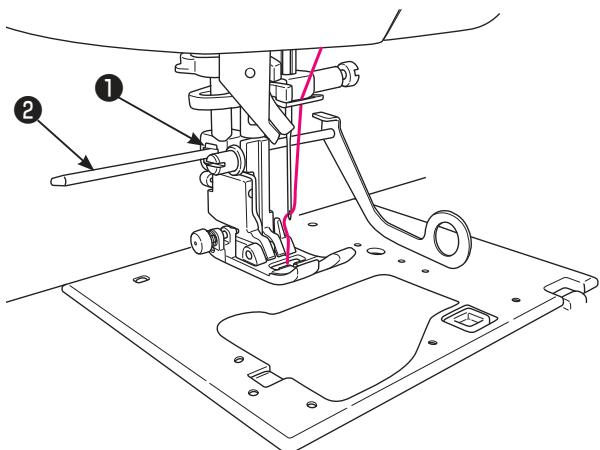
 **Leave the machine in Lock mode**



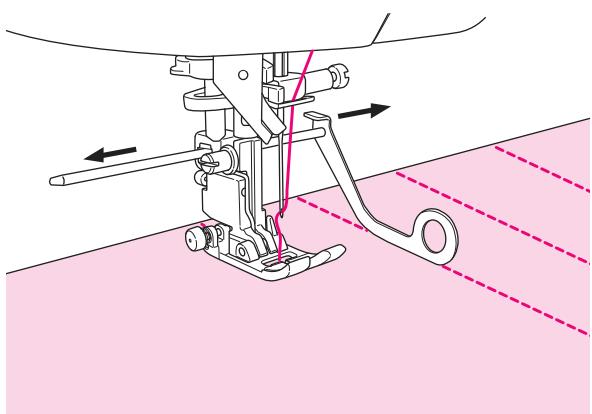
Handsewn look seams can be sewn by using a transparent thread as the needle thread.

- ① Needle thread
- ② Bobbin thread

## 6.19. Quilting (quilt guide)



**1** Insert the quilt guide **2** into the groove of the presser foot holder **1** .



**2** Sew while tracing the stitches with the tip of the quilt guide.

Distance between sewing lines can be adjusted freely.

## 6.20. Elongation

No.	Pattern	No.	Pattern	No.	Pattern	No.	Pattern
502	🌙	510	⟩	680	▲	836	▢
503	⟩	677	⌗	681	▶	837	▢
508	⟩	678	⌗	682	⌗		
509	﴿	679	⌗	835	▢		

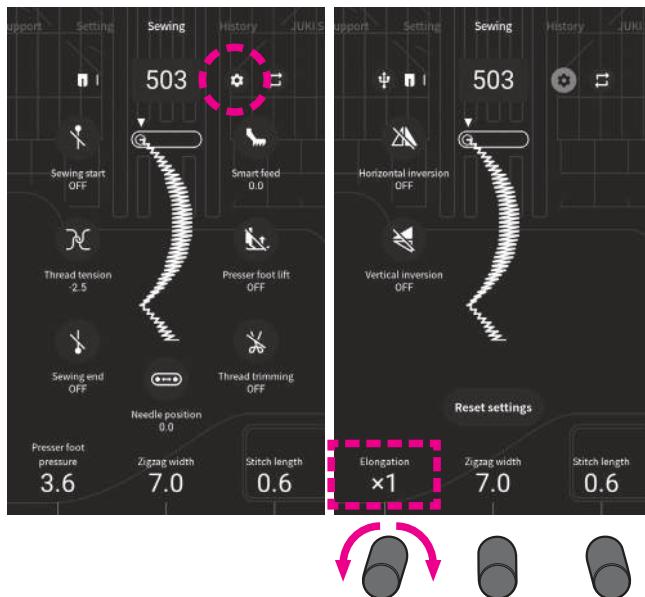
Presser foot
Manual buttonhole presser foot (I)
<b>⚠ Leave the machine in Lock mode</b>

The pattern length can be changed without changing the stitch density of a pattern.

Setting range: “×1” - “×5”

\* Initial value has been factory-set to “×1”.

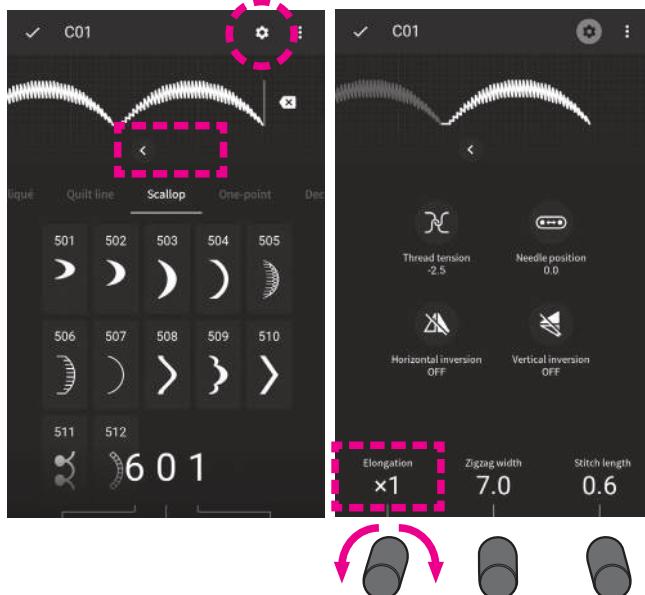
### Single mode



Invert the pattern. Then, press .

Set the elongation size by turning the adjusting dial.

### Combination mode



Select the pattern you want to edit with .

Press .

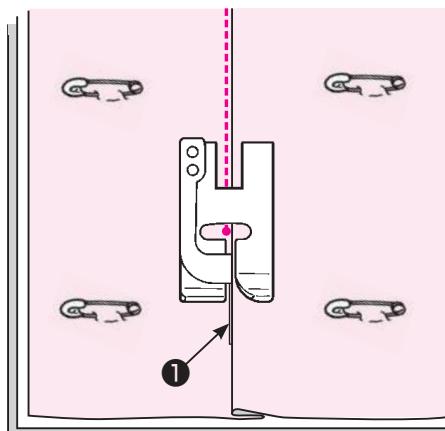
Set the elongation size by turning the adjusting dial.

## 6.21. Stitch in ditch quilting

No.	Pattern	Presser foot
001		Edge Sewing presser foot (R)

 **Leave the machine in Lock mode**

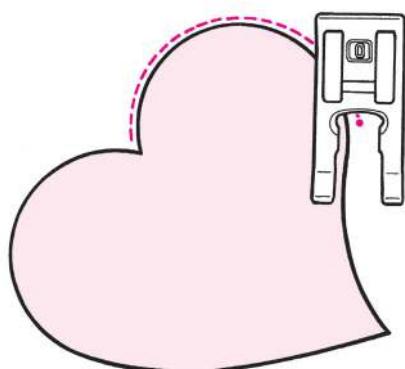
This is for quilting the edge of patchworks and appliqués. The machine will sew the lower (thinner) side of the fabric layers. As a result, the stitches will not be noticeable and have an effect to make the design look three dimensional or emphasized.



- 1** Put the top layer of fabric with patchwork and/or appliqués, quilting cotton and bottom layer of fabric together by pin or basting stitches.
- 2** Put the guide of the presser foot along with the crease and sew.

The needle enters behind the guide, so that the edge of the crease can be sewn.

If the desired points can not be sewn, adjust the needle position. (Refer to page 40)



### ● Curved concealed quilting

Use manual buttonhole presser foot (I) or the open toe presser foot (O). Sew curves by lifting the presser foot and changing the direction very often.

Also this can be done by free motion with the quilt presser foot. (Refer to page 94)

## 6.22. Attaching a quilt sleeve

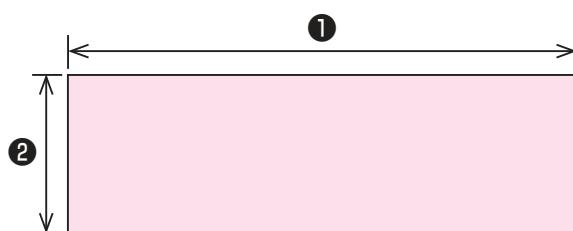
No.	Pattern	Presser foot
044		Edge Sewing presser foot (R)

**Leave the machine in Lock mode**

This stitch type is narrow blind stitch for attaching a sleeve (material to be sewn on the back of quilted tapestry for passing a rod) to the quilt.

The narrow blind stitches are not likely to be visible from the top surface of the quilted fabric.

### ■ How to make a quilt sleeve



#### 1 Prepare a material for quilt sleeve.

① Quilting width

② 22cm

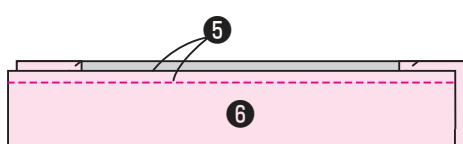


#### 2 Fold both ends by 2 cm respectively. Sew the folded edges with 2-step zigzag stitches (zigzag width 0.7 cm, stitch length 0.1 cm).

\* Perform blind stitching at a slow sewing speed in order to prevent puckering.

③ 2cm

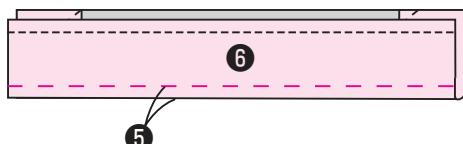
④ Quilt sleeve (back)



#### 3 Sew the quilt sleeve as illustrated in the figure.

⑤ 1cm

⑥ Quilt sleeve (top)

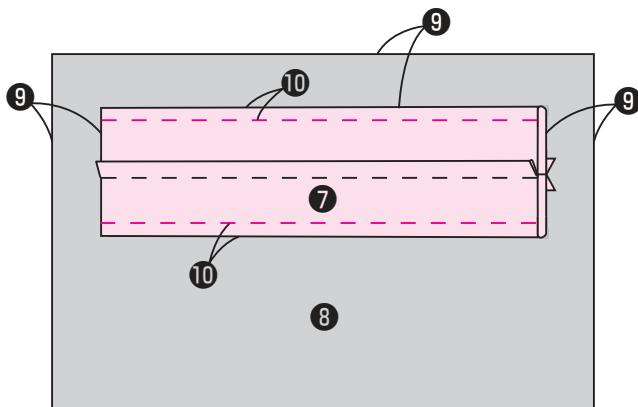


#### 4 Manually sew basting stitches on the loop side of the folded edge.

⑤ 1cm

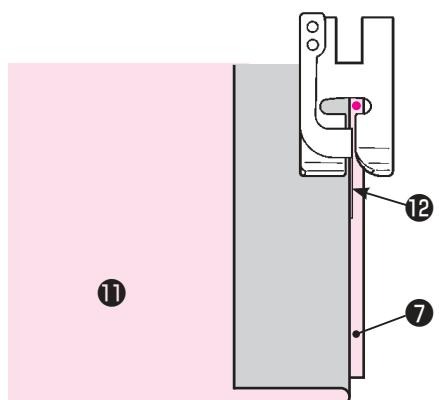
⑥ Quilt sleeve (top)

## ■ Attach the quilt sleeve to the quilted fabric



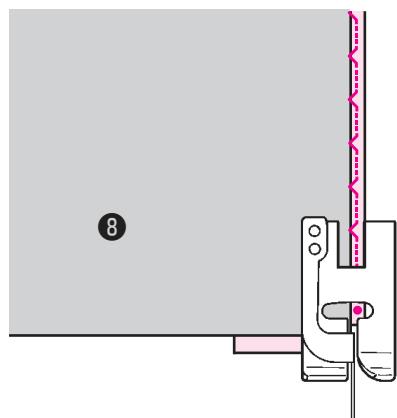
**5** Sew basting stitches as illustrated in the figure.

- ⑦ Quilt sleeve (top)
- ⑧ Quilted fabric (back)
- ⑨ 2cm
- ⑩ 0.2cm

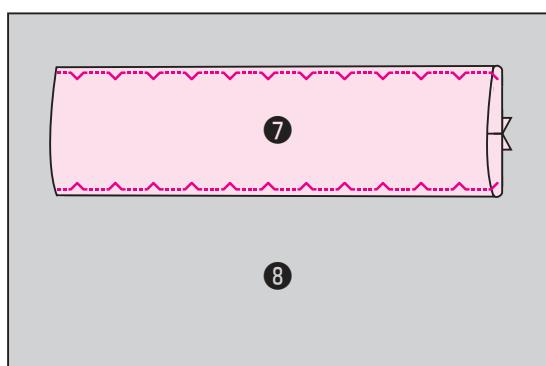


**6** Fold the quilted fabric at the basting stitch seam. Join the quilt sleeve to the quilted fabric while pressing the presser foot guide against the folded edge of the quilted fabric. Perform lock stitching at the start and end of sewing by pressing the reverse stitch button.

- ⑦ Quilt sleeve (top)
- ⑪ Quilted fabric (top)
- ⑫ Guide



**7** For the opposite side, fold the quilted fabric at the basting stitch seam and join the quilt sleeve to the quilted fabric while pressing the presser foot guide against the folded edge of the quilted fabric.



**8** After you have completed sewing, remove the basting stitch seam.

# 7. Operation of the operation panel

## 7.1. Support

Main usage of the sewing machine can be checked.

Select the item you want to check.

Support	Setting	Sewing
<a href="#">Operation of the main body</a>		
<a href="#">Installing the wide table</a>		
<a href="#">Installing the knee lifting lever</a>		
<a href="#">Changing the position of the foot switch</a>		
<a href="#">Speed control</a>		
<a href="#">Low speed inching</a>		
<a href="#">Presser foot lift</a>		
<a href="#">Lock mode</a>		
<a href="#">Preparation for winding of bobbin thread</a>		
<a href="#">Setting the bobbin</a>		
<a href="#">Needle thread preparation - Threading the machine head</a>		
<a href="#">Threading the needle</a>		
<a href="#">Changing the needle</a>		
<a href="#">Table of correspondence among fabric, thread and needle</a>		
<a href="#">Changing the presser foot</a>		
<a href="#">Setting and releasing of JUKI Smart Feed</a>		
<a href="#">How to lower the feed dog</a>		
<a href="#">Changing the throat plate and feed dog</a>		
<a href="#">Twin needle sewing</a>		
<a href="#">Maintenance</a>		
		<a href="#">Operation of the operation panel</a>
		<a href="#">Basic operation for sewing</a>
		<a href="#">Selection of patterns for the single stitching mode</a>
		<a href="#">Thread tension adjustment</a>
		<a href="#">Back tacking</a>
		<a href="#">Thread trimming</a>
		<a href="#">Presser foot lift</a>
		<a href="#">Setting JUKI Smart Feed</a>
		<a href="#">Changing the baseline</a>
		<a href="#">Setting the presser foot pressure and the micro-lifter</a>
		<a href="#">Setting the zigzag width</a>
		<a href="#">Setting the stitch length</a>
		<a href="#">Setting the repetition stitching</a>
		<a href="#">Editing the sewing patterns</a>
		<a href="#">Editing the patterns - Horizontal inversion</a>
		<a href="#">Editing the patterns - Vertical inversion</a>
		<a href="#">Setting the elongation size</a>
		<a href="#">Adjusting the knife width for buttonholing</a>
		<a href="#">Setting the tapering</a>
		<a href="#">Individual horizontal and vertical inversion</a>
		<a href="#">Selecting the patterns for combination stitching</a>
		<a href="#">Editing the patterns for combination stitching</a>
		<a href="#">Pattern-by-pattern horizontal/vertical inversion of patterns</a>
		<a href="#">Combination pattern stitching</a>
		<a href="#">Pattern-by-pattern elongation size setting</a>
		<a href="#">Pattern-by-pattern thread tension setting</a>
		<a href="#">Pattern-by-pattern baseline setting</a>
		<a href="#">Pattern-by-pattern zigzag width/stitch length</a>
		<a href="#">Setting the interval between patterns</a>
		<a href="#">History</a>
		<a href="#">Selecting the history</a>
		<a href="#">Editing the history</a>
		<a href="#">USB media (USB thumb drive)</a>
		<a href="#">Writing / capturing the pattern data</a>
		<a href="#">Writing / capturing the backup data</a>
		<a href="#">Common setting</a>
		<a href="#">Setting the darning</a>
		<a href="#">Stop position of needle</a>
		<a href="#">Pivot</a>
		<a href="#">Sound volume</a>
		<a href="#">Brightness</a>
		<a href="#">Stitch speed</a>
		<a href="#">Presser foot lifting height</a>
		<a href="#">Cancel safety</a>
		<a href="#">Foot switch functions</a>
		<a href="#">Twin needle setting</a>
		<a href="#">Wireless LAN</a>
		<a href="#">Factory data reset</a>
		<a href="#">Software version</a>
		<a href="#">Machine log</a>
		<a href="#">Language setting</a>
		<a href="#">Accessibility</a>
		<a href="#">Shutdown</a>
		<a href="#">Software update</a>

## 7.2. Setting

Functions (17 kinds) can be set/changed.

		Application	Default setting
①	 Darning adjustment	Adjust the shape of stitch pattern.	0
②	 Stop position of needle	It is possible to set the position of the needle (upper or lower position) at the time of stopping the sewing machine.	Lower stop
③	 Pivot	It is possible to set so that the presser foot automatically goes up when the sewing machine stops with its needle down.	OFF
④	 Sound volume	Volume of the sound that is produced when the sewing machine is started up or when the icon on the operation panel is pressed can be changed.	-
⑤	 Brightness	Brightness of the operation panel or sewing area can be adjusted.	-
⑥	 Stitch speed	Sewing speed at the start of sewing and reverse stitching can be set.	Low speed
⑦	 Presser foot lifting height	The machine can be set to the presser foot lifting amount.	6mm
⑧	 Cancel safety	The sewing machine can be set to allow operation even when the presser foot is lifted.	-
⑨	 Foot switch functions	Function can be selected for foot switch.	Reverse stitch
⑩	 Two needles	The sewing machine can be set to perform twin-needle stitching.	OFF
⑪	 Wireless LAN	It is possible to connect the sewing machine to the wireless LAN.	-
⑫	 Factory data reset	Sewing machine data can be initialized.	-
⑬	 Software version	Software version can be checked. *It is also possible to update the software.	-
⑭	 Machine log	Sewing machine log can be checked. *Writing and capturing of the backup data can also be carried out.	-
⑮	 Language	The language used for displaying messages, etc. can be changed.	(Depending on destination)
⑯	 Accessibility	The color of the screen can be changed.	OFF
⑰	 Shutdown	It is possible to turn the power OFF with the data protected.	-

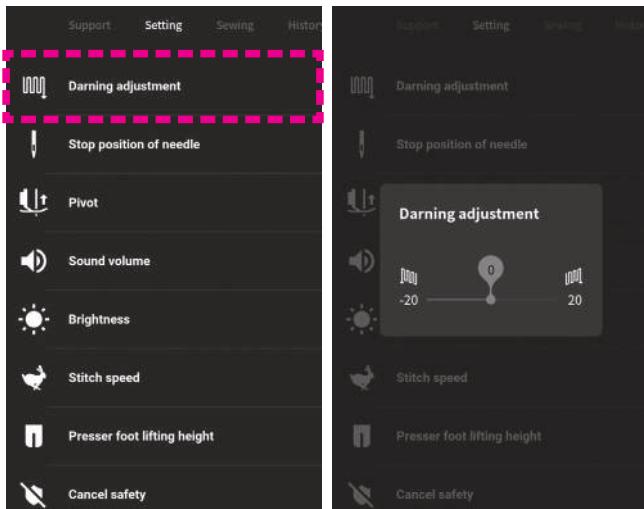
## ① Darning adjustment

Adjust the shape of stitch pattern.

Adjustable range: -20 - 20

Check the longitudinal balance of feed when you want to sew a pattern beautifully, or having changed the material, thread or interlining.

This adjustment value reflects all patterns.



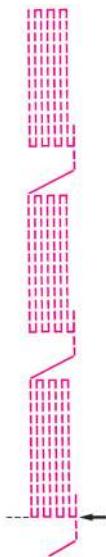
Select [Darning adjustment] from [Setting].

Try trial sewing, adjust while checking the pattern.  
Adjust the darning by sliding the slide bar to the right and left.



When you tap the portion outside the setting screen, the screen returns to the common setting screen.

### ○ Correct shape



### ✗ When right side is higher than left side



Increase the numeric value. Adjust the shape of darning stitches while performing trial sewing.

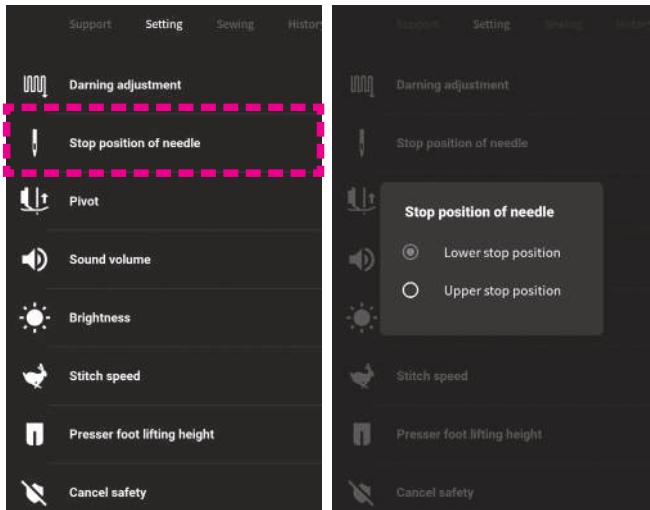
### ✗ When right side is lower than left side



Decrease the numeric value. Adjust the shape of darning stitches while performing trial sewing.

## ② Stop position of needle

It is possible to set the position of the needle (upper or lower position) at the time of stopping the sewing machine.



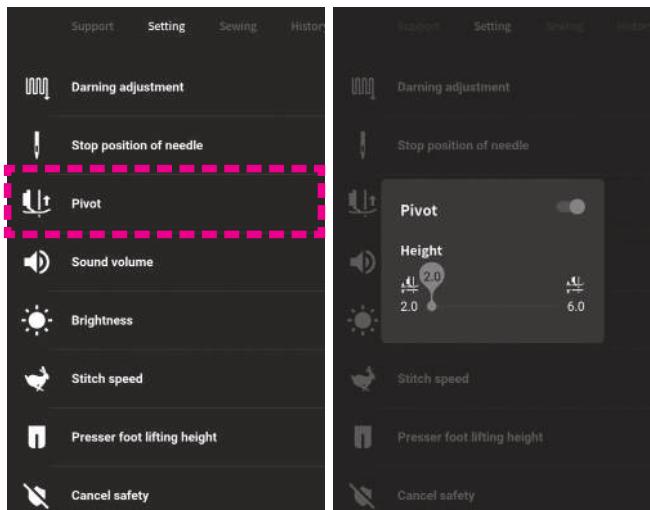
Select [Stop position of needle] from [Setting].

Select the “Lower stop position” or the “Upper stop position”.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

## ③ Pivot

It is possible to set so that the presser foot automatically goes up when the sewing machine stops with its needle down.



Select [Pivot] from [Setting].

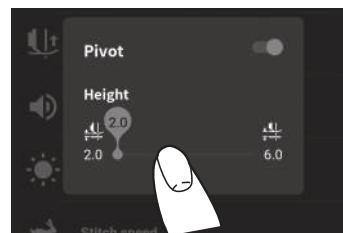
- **Setting the ON / OFF of the pivot function**

 : ON

 : OFF

- **Setting the pivot height**

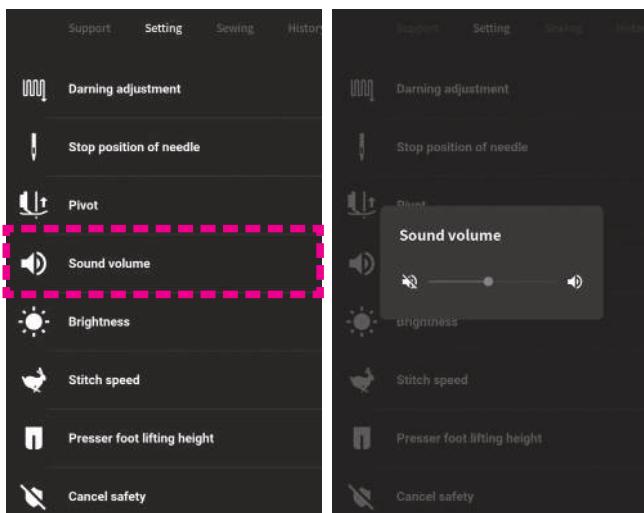
Set the pivot height by sliding the slide bar to the right or left.



When you tap the portion outside the setting screen, the screen returns to the common setting screen.

## ④ Sound volume

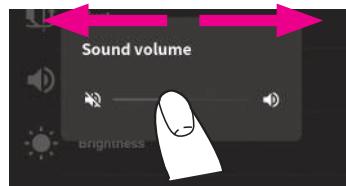
Volume of the sound that is produced when the sewing machine is started up or when the icon on the operation panel is pressed can be changed.



Select [Sound volume] from [Setting].

Adjust the sound volume by sliding the slide bar to the right or left.

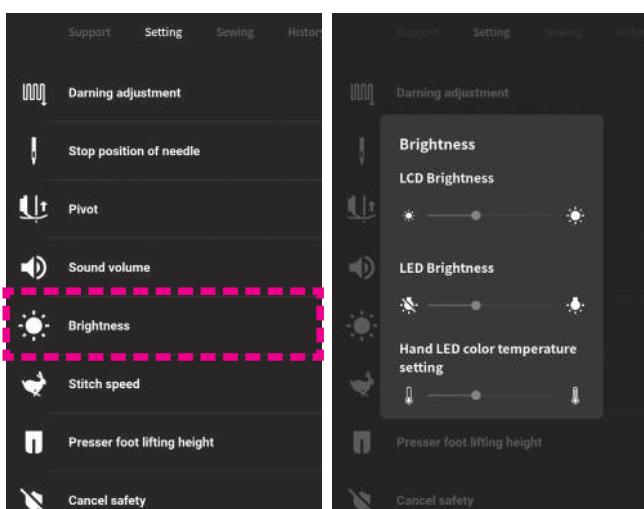
The sound volume is decreased      The sound volume is increased.



When you tap the portion outside the setting screen, the screen returns to the common setting screen.

## ⑤ Brightness

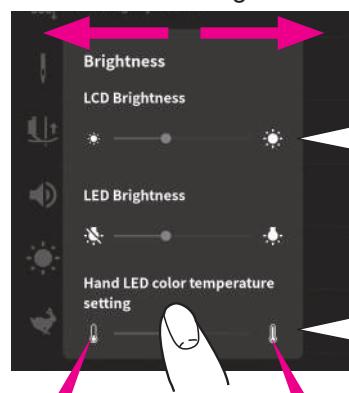
Brightness of the operation panel or sewing area can be adjusted.



Select [Brightness] from [Setting].

Adjust the brightness by sliding the slide bar to the right or left.

The screen is dimmed.      The screen is brightened.



When the brightness of the screen is increased, the operation panel may become warm.

The hand LED light color becomes bluish.      The hand LED light color becomes reddish.

Viewability of the hand LED light is improved by changing the color temperature according to the color of material and thread.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

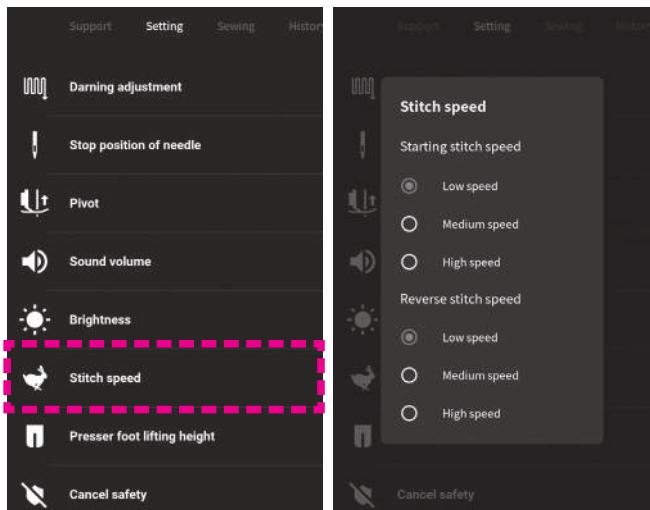
If you leave the operation panel without operating it continuously for three minutes, the operation panel screen will become dark.

The screen will resume its brightness by tapping the screen.

## ⑥ Stitch speed

Sewing speed at the start of sewing and reverse stitching can be set.

\* Initial value has been factory-set to “Low speed”.



Select [Stitch speed] from [Setting].

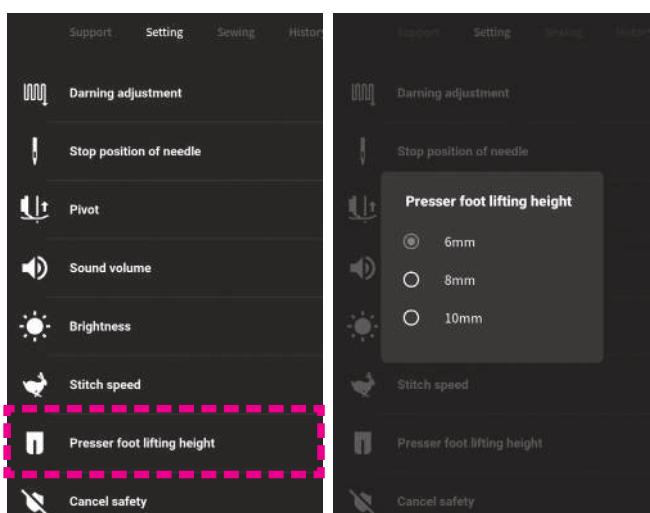
Set the sewing speed at the start of sewing and that of the reverse stitching.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

## ⑦ Presser foot lifting height

The machine can be set to the presser foot lifting amount.

\* Initial value has been factory-set to “6mm”.



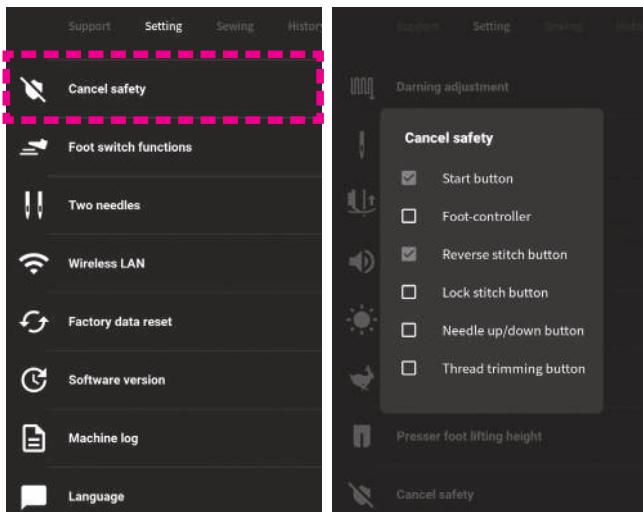
Select [Presser foot lifting height] from [Setting].

Select the presser foot lifting height from three different heights; “6 mm”, “8 mm” and “10 mm”.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

## ⑧ Cancel safety

The sewing machine can be set to allow operation even when the presser foot is lifted.



### Attention

**Added care should be taken to check the sewing machine operation when cancelling the safety function.**

Select [Cancel safety] from [Setting].

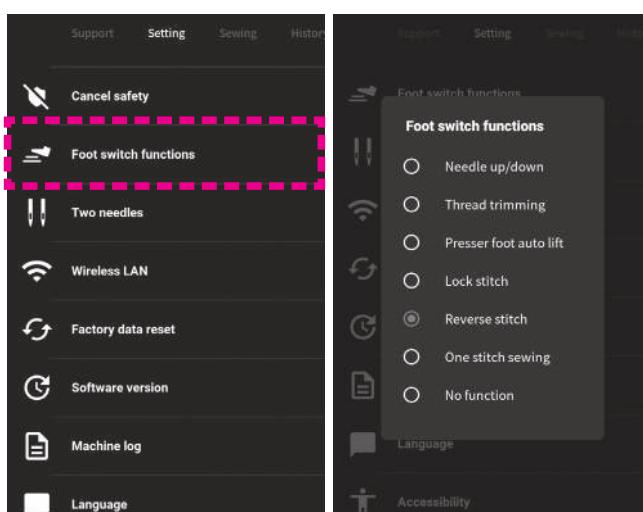
Put a checkmark to the item safety function for which you want to cancel. Then, the safety function for the item is cancelled to allow you to operate the sewing machine even when the presser foot is lifted.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

## ⑨ Foot switch functions

Function can be selected for foot switch.

\* Initial value has been factory-set to “Reverse stitch”.



Select [Foot switch functions] from [Setting].

Select the operation to which you want to assign the foot switch function.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

- \* If the foot switch function is set to “reverse stitch” or “lock stitch” while automatic back tacking, thread trimming and presser foot lifting have been set, it is possible to carry out back tacking, thread trimming and presser foot lifting at the end of sewing.

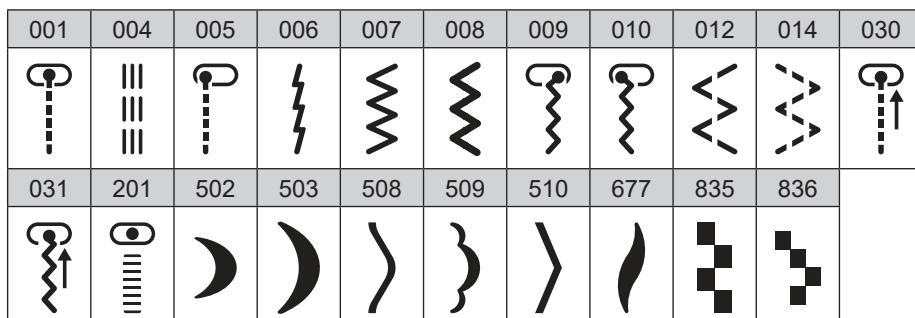
## ⑩ Two needles

The sewing machine can be set to perform twin-needle stitching.

### Attention

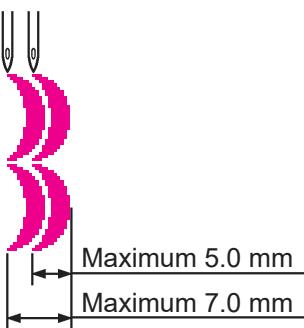
When you want to change the needle or the presser foot, be sure to turn the power OFF or place the sewing machine under the lock mode in advance.

**Caution: When carrying out the twin needle stitching, it is necessary to set the twin needle before selecting a pattern.**



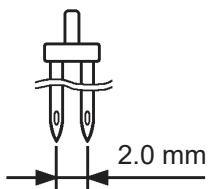
Presser foot
Standard presser foot (A)
Manual buttonhole presser foot (I)

### Example)



Decorative sewing patterns can be sewn beautifully using the twin needle.

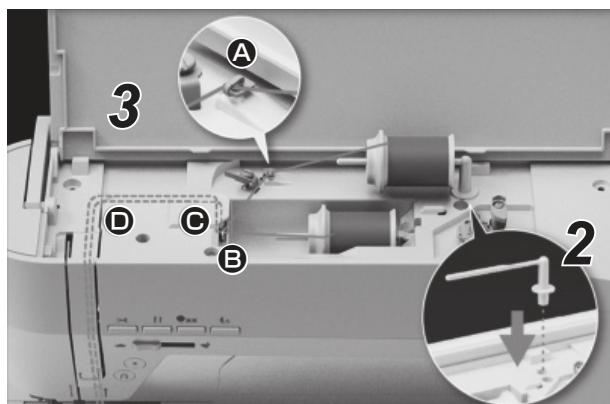
When you select the twin needle setting, the stitch width setting is limited to 5 mm at the maximum.



### 1 Change the needle to the twin needle.

Make sure to use a twin needle with size of 2.0 mm.

\* The twin needle is separately available.



### 2 Place the supplementary spool pin.

### 3 Thread to the thread guide A first. After that, thread paths are same up from B to C.

\* When twin needle sewing, make sure to use thread size smaller than No. 60.

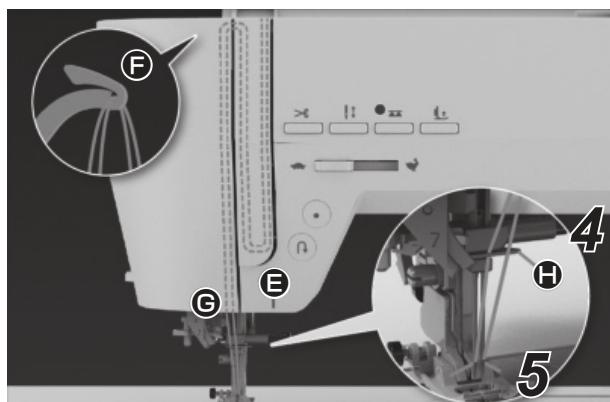
### 4 Do not thread H for right-hand needle.

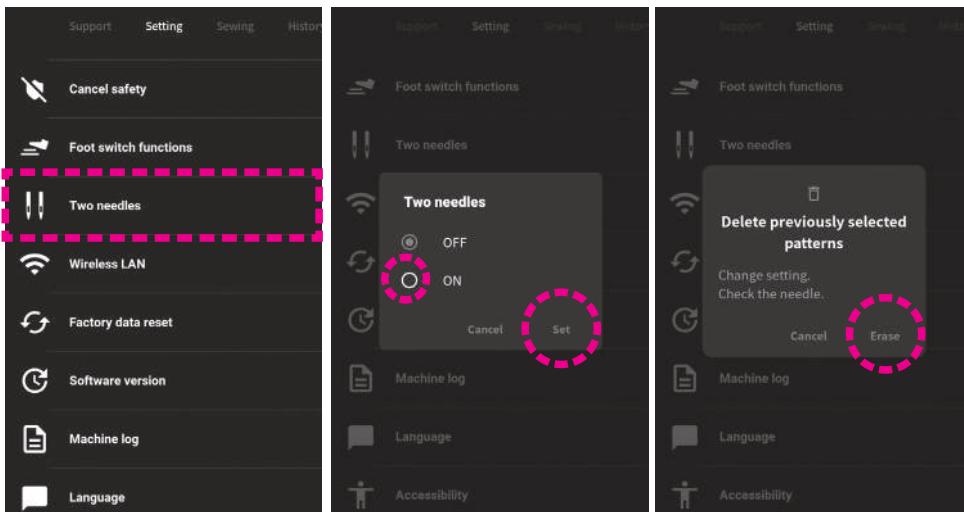
### 5 Thread to right-hand and left-hand needles separately.

\* Automatic needle threader can not be used.

Thread each needle manually.

\* Automatic thread trimmer can not be used in case of twin needle sewing.





## 6 Setting the twin needle.

Select [Two needles] from [Setting].

Select [ON] and press [Set].

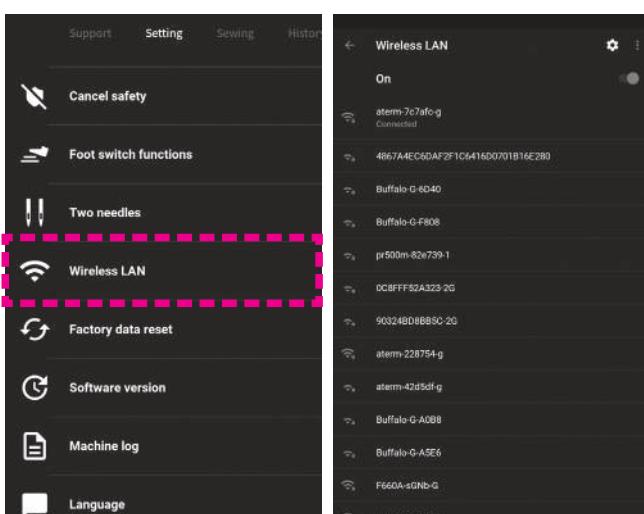
The setting is confirmed by pressing [Erase].

## 7 Select a pattern.

When you set the sewing machine to the twin-needle stitching, patterns that can be sewn with two needles are displayed.

## ⑪ Wireless LAN

It is possible to connect the sewing machine to the wireless LAN.



Select [Wireless LAN] from [Setting].

### ● Wireless LAN setting

 : ON

 : OFF

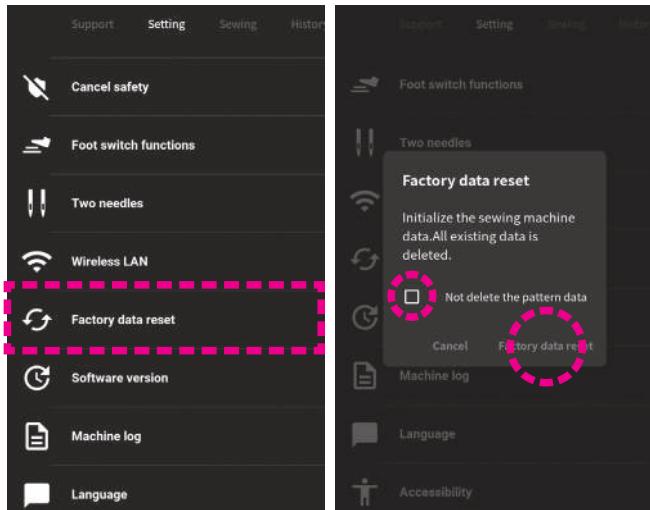
When you set the wireless LAN to "ON", available connection destination addresses of the wireless LAN are displayed.

Select the wireless LAN connection destination address to which you want to connect the sewing machine.

When you press the "√" shown at the upper left of the screen, the setting is confirmed and the screen returns to the previous screen.

## ⑫ Factory data reset

Sewing machine data can be initialized.



Select [Factory data reset] from [Setting].

If you do not want to delete the pattern data, place a checkmark (✓) in the box.

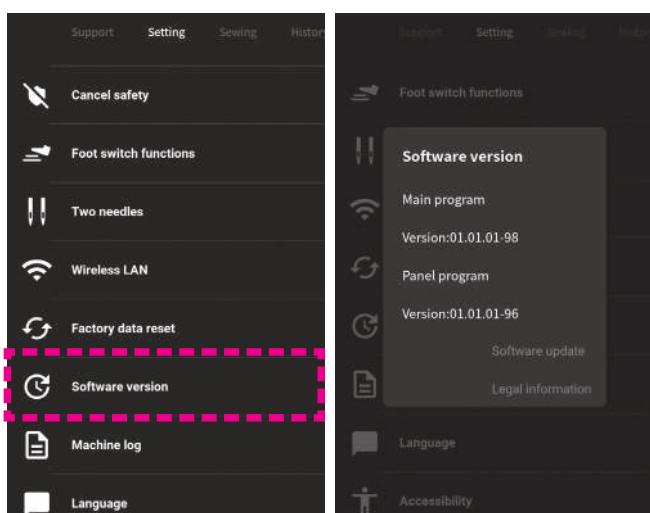
The data is initialized by pressing [Factory data reset].

If you press [Cancel], the initialization will be cancelled.

## ⑬ Software version

Software version can be checked.

\*It is also possible to update the software.



Select [Software version] from [Setting].

The software version is displayed.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

When you want to update the software, press [Software update].

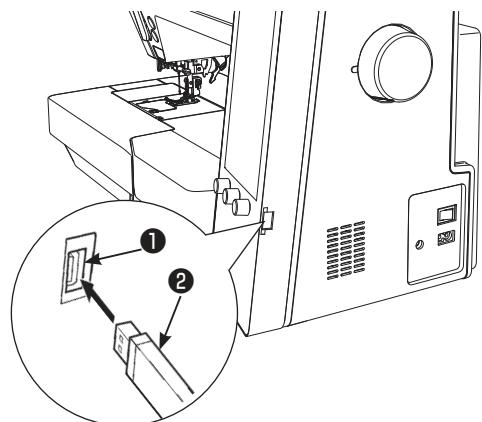
## ● Updating the software

Contact your distributor if you have any question about the software.

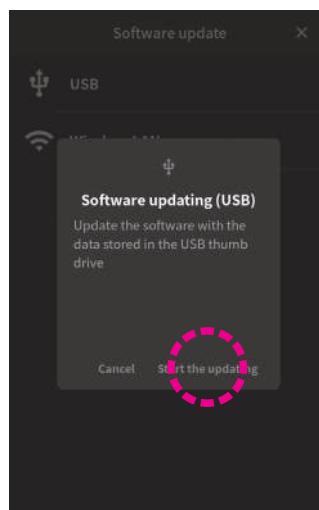
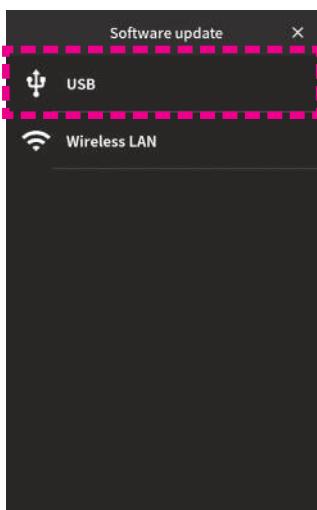
< In the case of using a USB thumb drive >



**Do not turn the power OFF while updating of the software is in progress.**

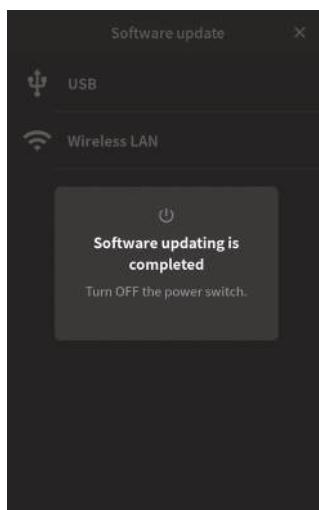
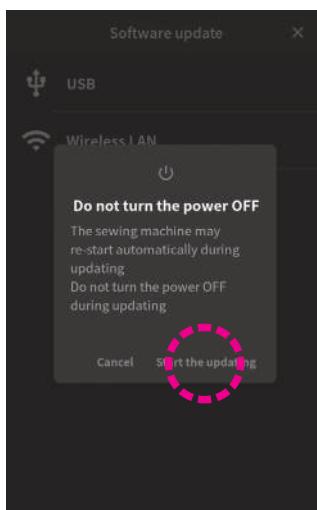


Insert USB thumb drive ② into USB slot ① .



Select [USB].

Press [Start the updating].



When you press [Start the updating] on the next screen, updating of the software starts.

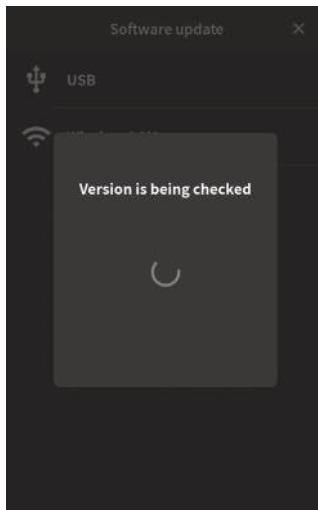
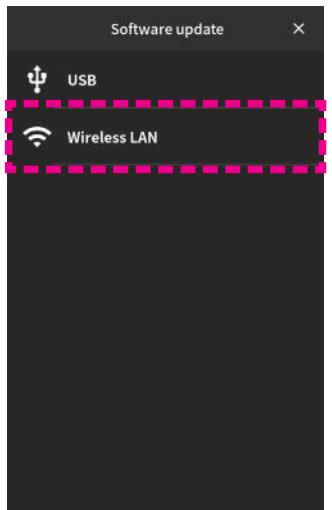


**Do not turn the power OFF while updating of the software is in progress.**

When the software has been normally updated, the message [Software updating is completed] is displayed.

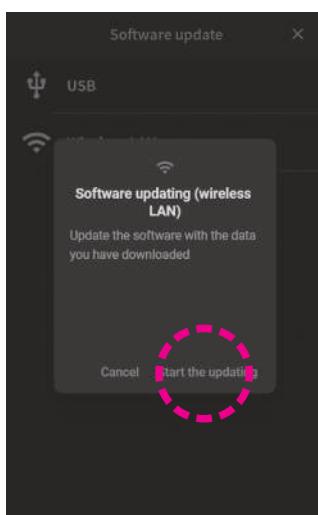
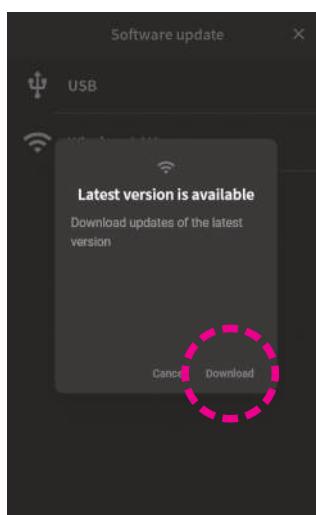
Remove the USB thumb drive and turn OFF the power to the sewing machine. Then, re-turn the power ON.

## < In the case of using the wireless LAN >



Select [Wireless LAN].

The software version is checked.

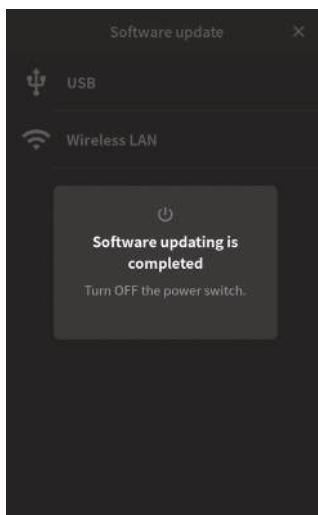
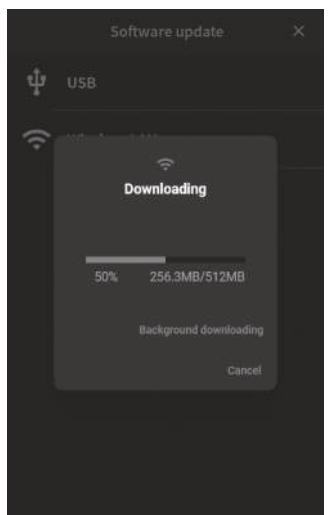


Press [Download].

When you press [Start the updating] on the next screen, updating of the software starts.



**Do not turn the power OFF while updating of the software is in progress.**



When the software has been normally updated, the message [Software updating is completed] is displayed.

Turn OFF the power to the sewing machine. Then, return it ON.

## ● Capturing the backup data

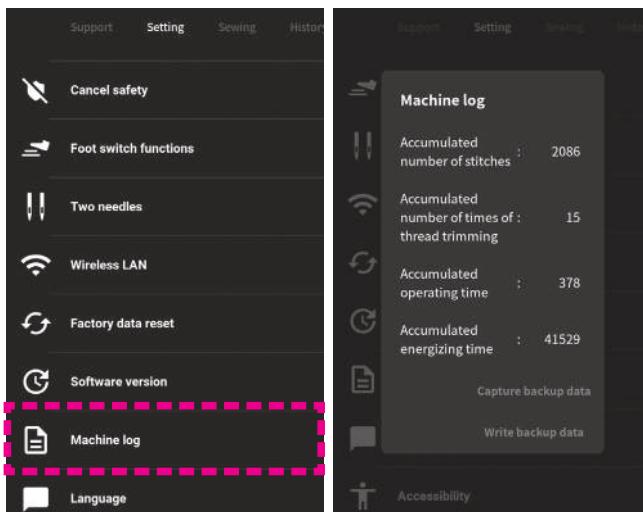
The settings you have made are held even after updating of the software. However, if the settings are accidentally initialized, the settings can be restored by capturing the backup data.

Refer to the next page for writing and capturing of the backup data.

## ⑯ Machine log

Sewing machine log can be checked.

\* Writing and capturing of the backup data can also be carried out.

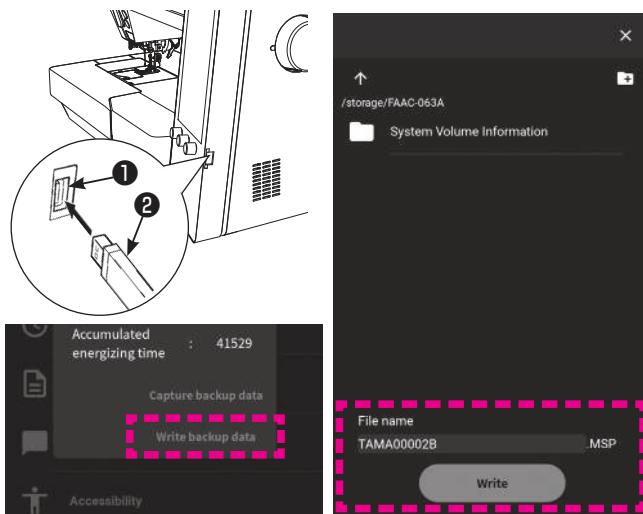


Select [Machine log] from [Setting].

The sewing machine log is displayed.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

### ● Writing the backup data

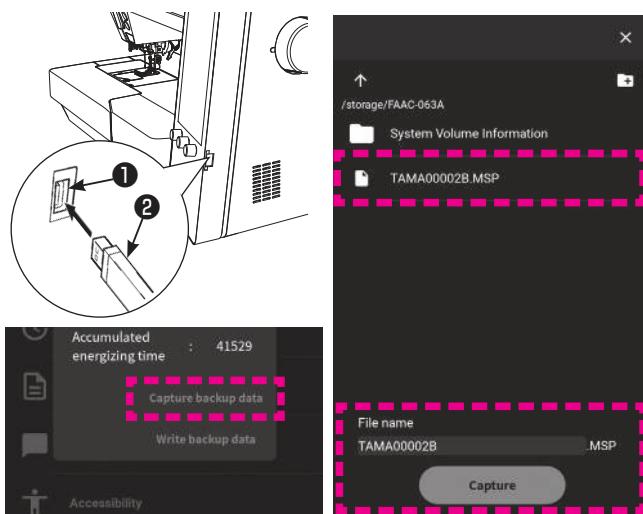


Insert USB thumb drive ② into USB slot ① .

Press [Write backup data].

Enter an arbitrary file name and press [Write].

### ● Capturing the backup data



Insert USB thumb drive ② into USB slot ① .

Press [Capture backup data].

Select the file you want to capture. Press [Capture].

Do not turn the power OFF while capturing (saving) is in progress .

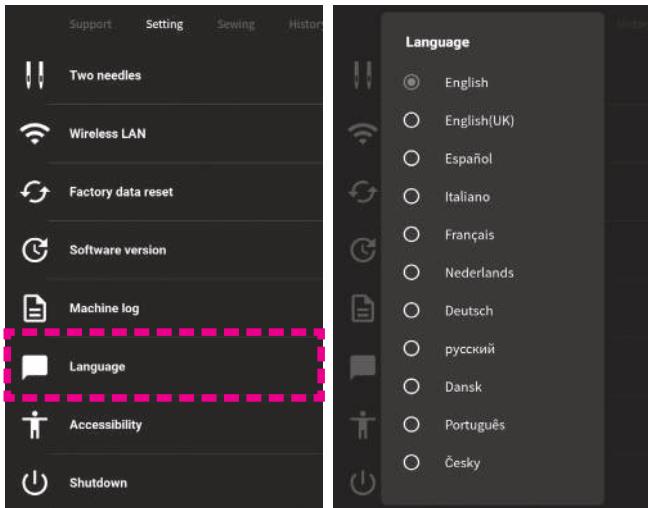
When the backup data has been normally captured, the message "Turn OFF the power switch" is displayed.

Turn OFF the power to the sewing machine. Then, return it ON.

## ⑯ Language

The language used for displaying messages, etc. can be changed.

\* Default setting is depending on destination.



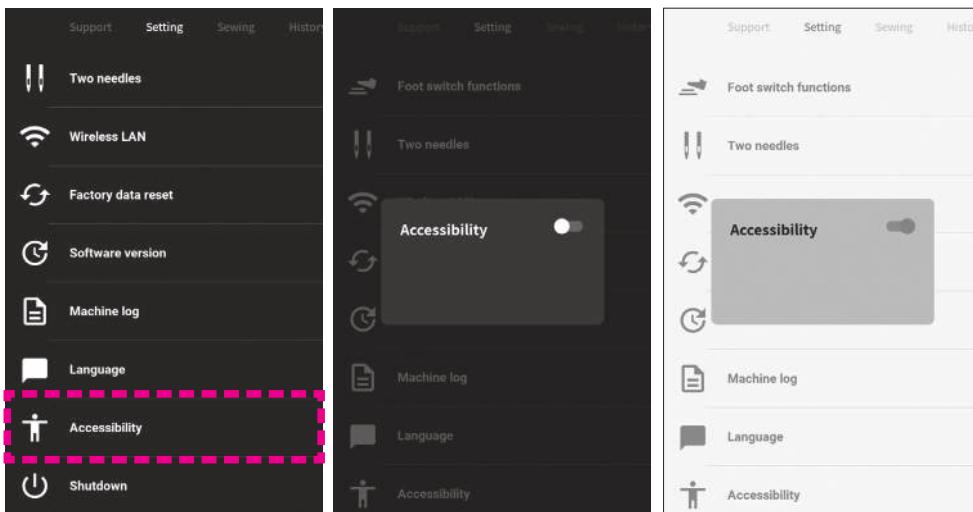
Select [Language] from [Setting].

Select the language you want to use for display.

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

## ⑯ Accessibility (Black-and-white inversion of display)

The color of the screen can be changed.



Select [Accessibility] from [Setting].

- **Setting the user accessibility**

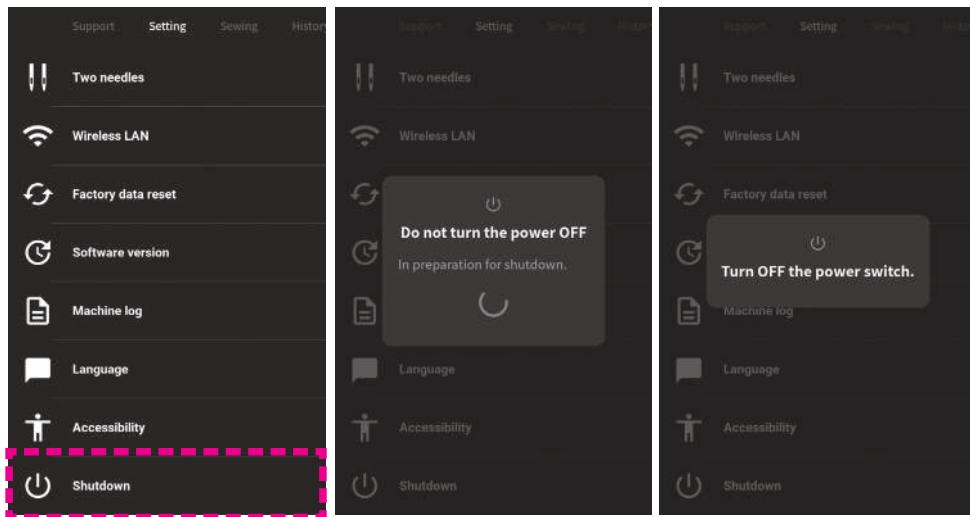
 : ON

 : OFF

When you tap the portion outside the setting screen, the screen returns to the common setting screen.

## ⑯ Shutdown

It is possible to turn the power OFF with the data protected.



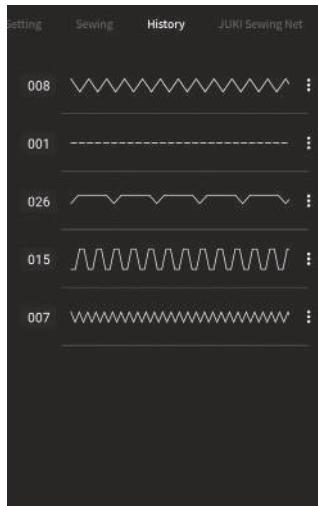
Select [Shutdown] from [Setting].

When the message "Turn OFF the power switch" is displayed on the screen, turn OFF the power switch.

## 7.3. Sewing

Refer to "5. Setting for the pattern sewing" for details.

## 7.4. History



Patterns you have sewn and settings you have made are kept in history.

(Maximum number of items kept in history: 10)

- \* After you have sewn a pattern once, the pattern is displayed in [History] when you select a different pattern.

If you want to sew the pattern with the same settings again, select the pattern from [History].

Since the set values are also kept in history, the pattern you have sewn before and its set values can be reproduced.

The setting that is changed from the initial setting is displayed in blue on the sewing screen.

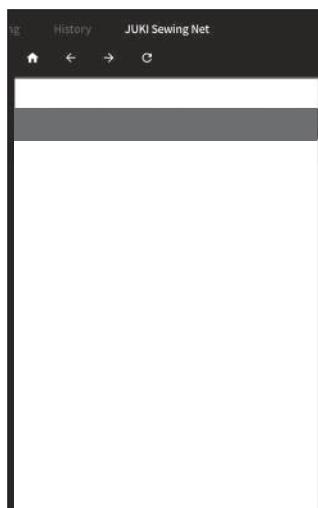


When you select pattern on the history screen, the pattern is selected and the sewing screen is displayed.

When you press , the menu is displayed.

Deletion of the history and writing of data in a USB thumb drive can be carried out using the menu.

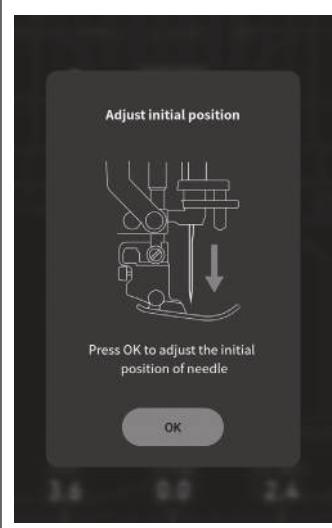
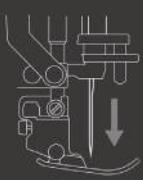
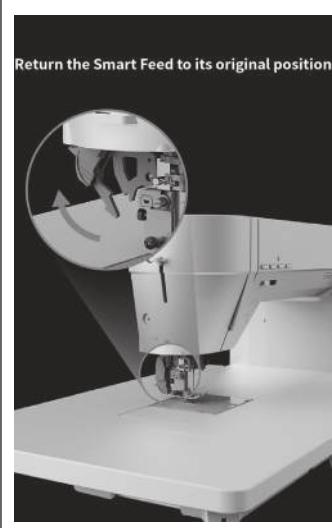
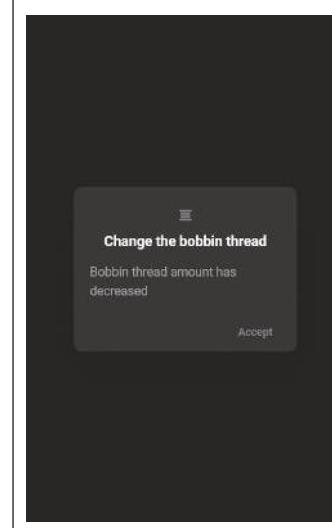
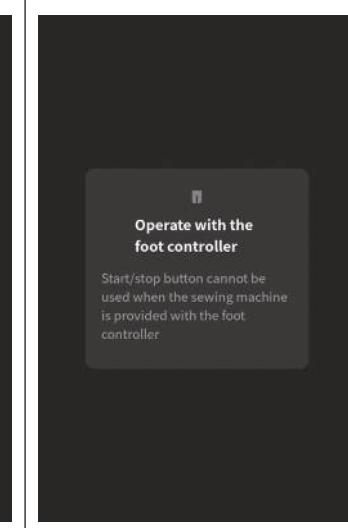
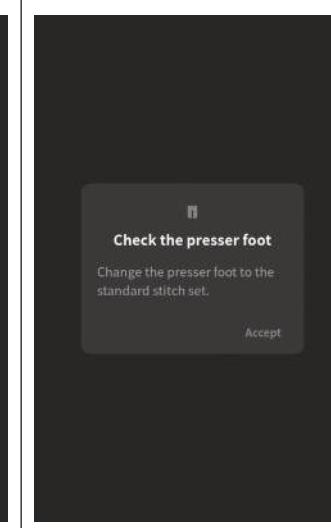
## 7.5. JUKI Sewing Net

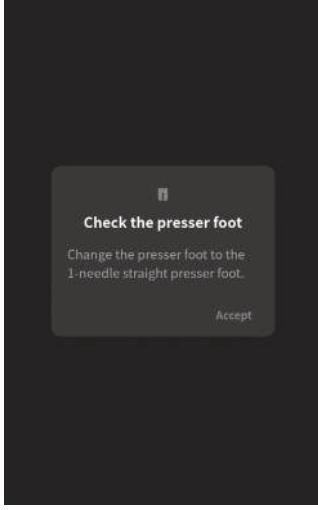
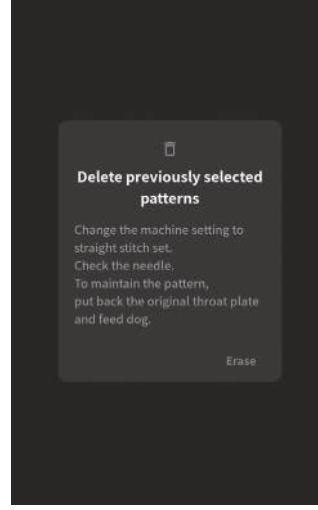
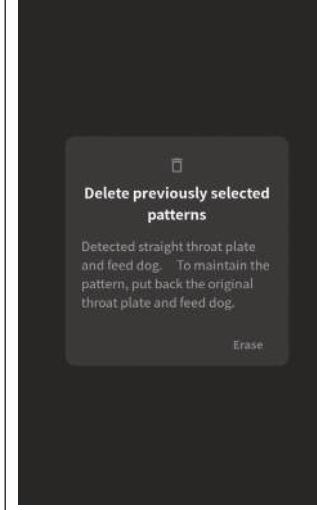
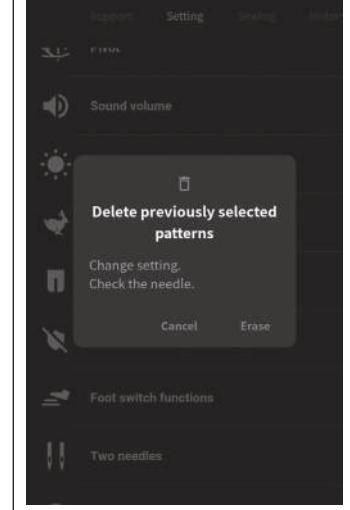
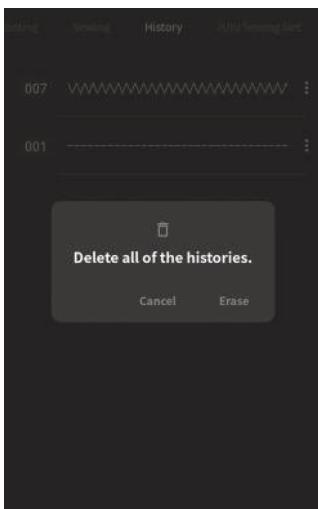
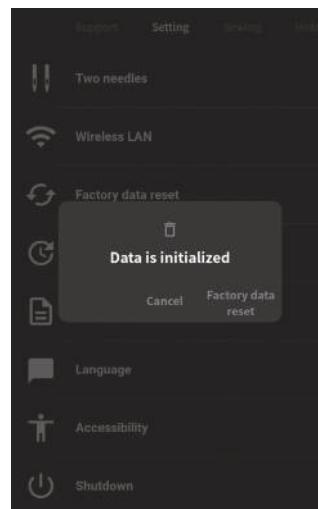
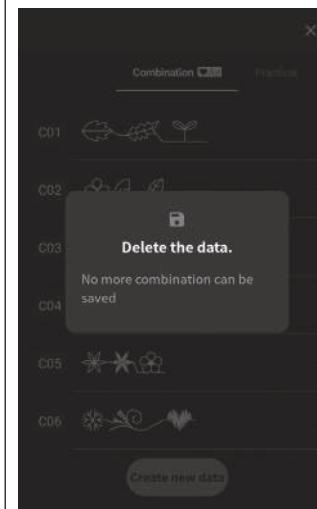
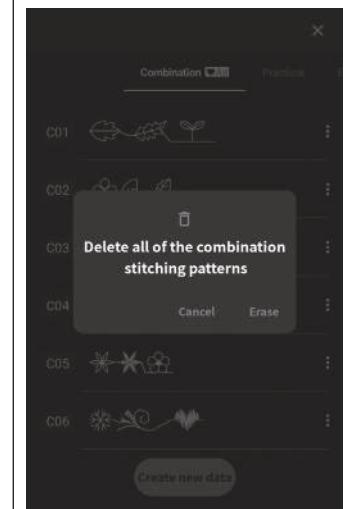


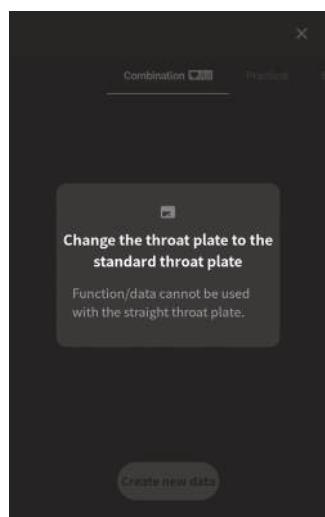
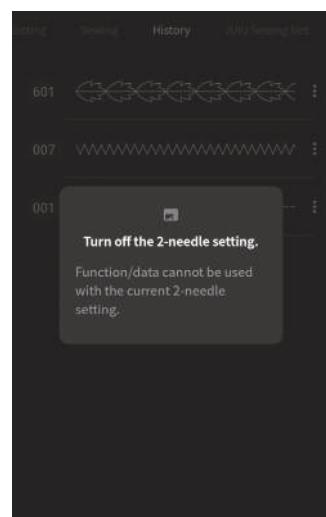
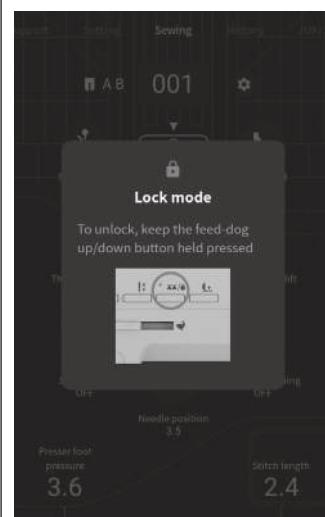
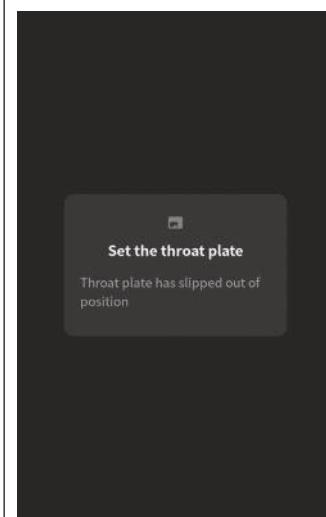
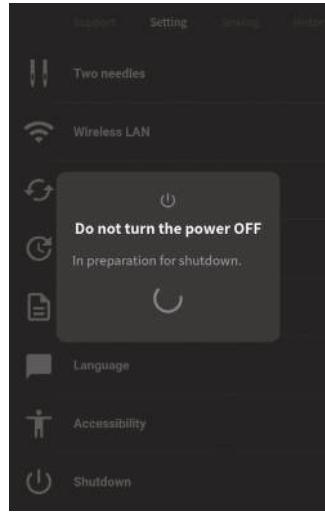
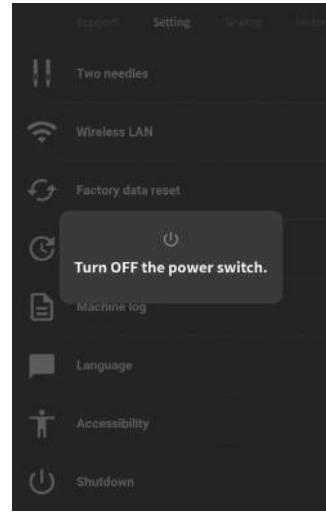
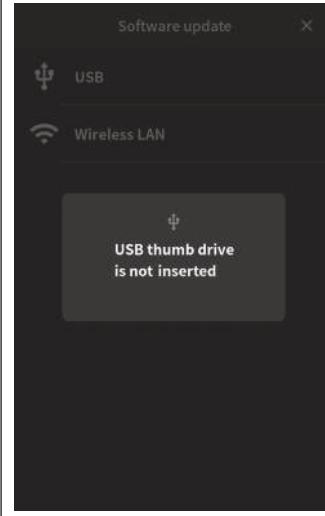
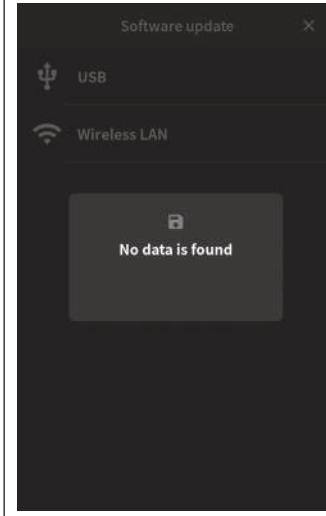
In the case the sewing machine is connected to the wireless LAN, JUKI website will be displayed.

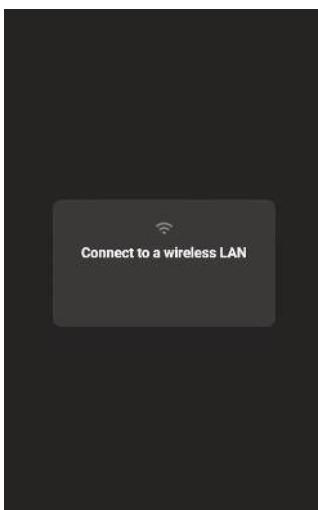
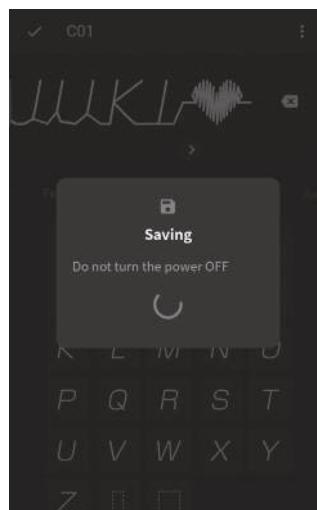
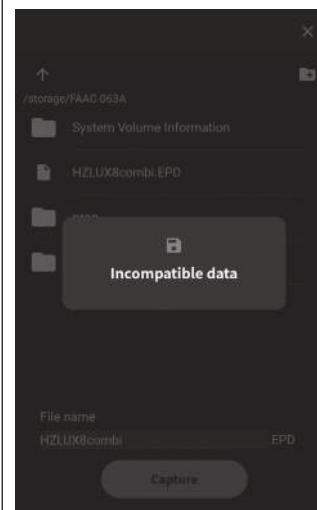
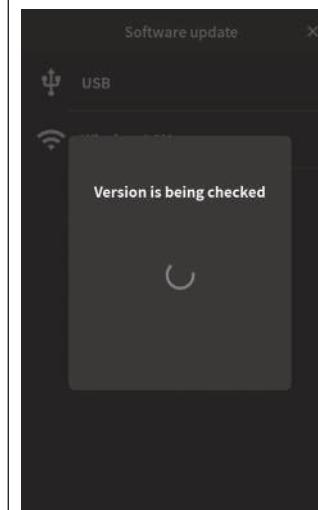
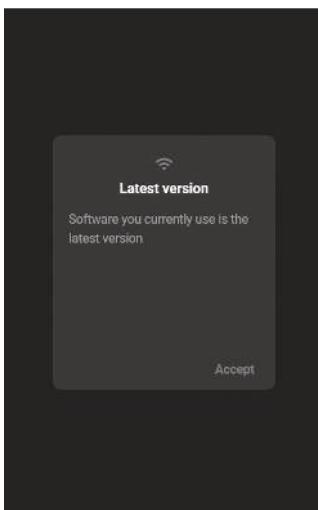
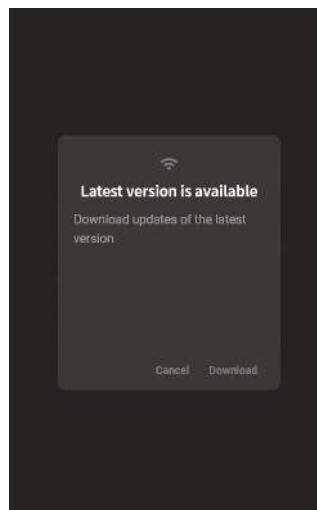
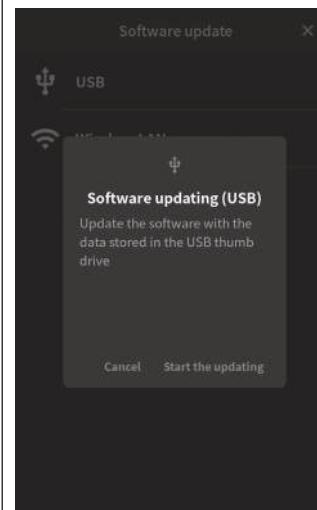
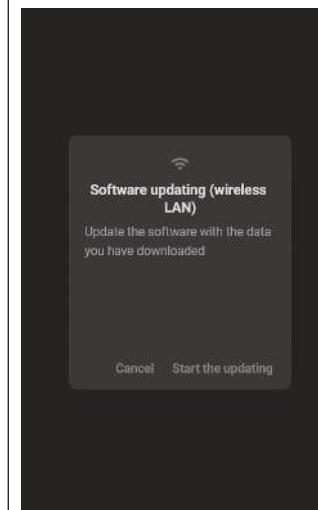
## 8. Message catalog

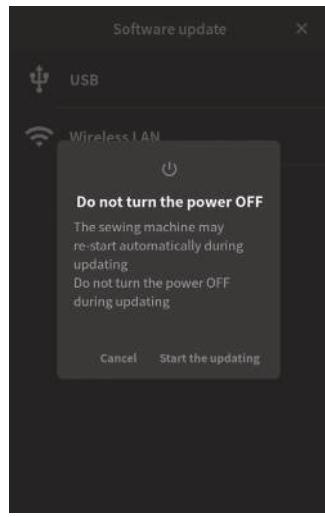
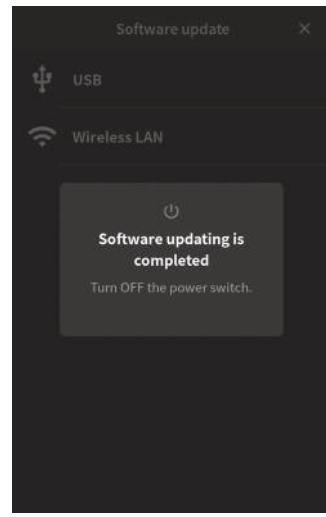
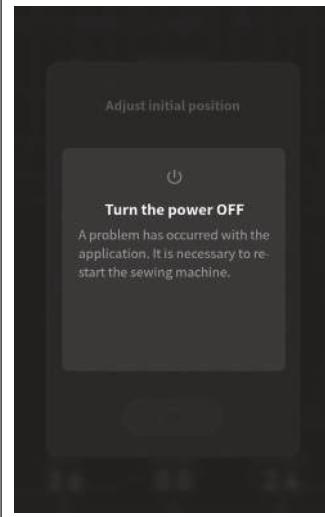
\* The message is erased by carrying out the relevant operation indicated by the message or pressing the button on the screen.

 <p>Adjust initial position</p>  <p>Press OK to adjust the initial position of needle</p> <p>OK</p>	 <p>Insert the sensor pin</p> 	 <p>Remove the sensor pin</p> 	 <p>Lower the presser foot</p> 
<p>When the sewing machine starts up, or when the needle moves. The needle is moved by pressing [OK]. Then, the initial screen is displayed.</p>	<p>When one of the buttonhole stitches is selected and the buttonhole sensor pin is not connected, the machine starts to sew.</p>	<p>When a stitch pattern other than buttonholes is selected but the buttonhole sensor pin is connected, the machine starts to sew.</p>	<p>This pictograph is displayed when the safety device is activated while the presser foot goes up.</p>
 <p>Return the Smart Feed to its original position</p> 	 <p>Change the bobbin thread</p> <p>Bobbin thread amount has decreased</p> <p>Accept</p>	 <p>Operate with the foot controller</p> <p>Start/stop button cannot be used when the sewing machine is provided with the foot controller.</p>	 <p>Check the presser foot</p> <p>Change the presser foot to the standard stitch set.</p> <p>Accept</p>
<p>This pictograph is displayed when "JUKI Smart Feed" detection sensor detects while the pattern which cannot be sewn with "JUKI Smart Feed".</p>	<p>When the bobbin thread amount has reduced.</p>	<p>When you have tried to start the sewing machine by pressing the start/stop button while the foot controller is connected to the sewing machine.</p>	<p>When changing from the stitch type from the 1-needle straight stitch to the standard stitch.</p>

			
When changing the stitch type from the standard stitch to the 1-needle straight stitch.	In the case the straight throat plate is installed though the stitch type is set to the twin-needle stitch with the standard throat plate.	In the case the straight throat plate is installed though the stitch type is set to the 1-needle stitch with the standard throat plate.	When changing the twin needle setting.
			
When [Delete all] is selected on the history page.	When this sewing machine data is initialized.	In the case the combination of stitch patterns cannot be saved any more.	When [Delete all] is selected on the combination page.

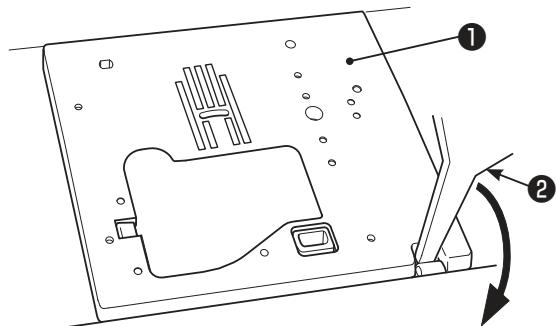
			
<p>In the case of the lock mode that cannot be used when the stitch type is set to the straight stitch.</p> <p>When a pattern or function is selected.</p>	<p>When a pattern or function that cannot be used for the twin needle type is selected.</p>	<p>In the state of the lock mode.</p>	<p>When the throat plate has come off.</p> <p>In the state that the throat plate has been detached.</p>
			
<p>While the preparation for shutdown of the sewing machine with the data saved is in progress.</p>	<p>When the preparation for shutdown of the sewing machine with the data has been completed.</p>	<p>No USB thumb drive is inserted into the USB slot when you try to use the function of accessing the USB thumb drive.</p>	<p>Data you need is not present in the USB thumb drive.</p>

			
The sewing machine is not connected to the wireless LAN when you try to use the function that requires connection to the wireless LAN.	In the case saving of data is in progress.	The data you have selected cannot be used due to the lack of interchangeability.	While the current software version is being confirmed.
			
In the case you have confirmed the software version to find it is the latest version.	In the case you have confirmed the software version to find the later version exists.	In the case of updating the software using the data stored in the USB thumb drive.	In the case of updating the software using the data that is downloaded via the wireless LAN.

		
When starting updating of the software.	When updating of the software is completed.	In the case some problem has occurred with the application and re-starting of the sewing machine is required to reset the problem.

# 9. Machine Maintenance

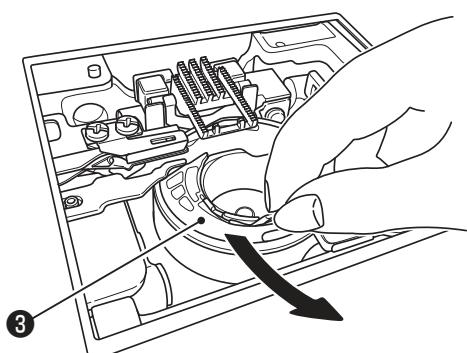
When lint and/or dirt has built up, it may cause machine failures. Therefore, clean the machine frequently.



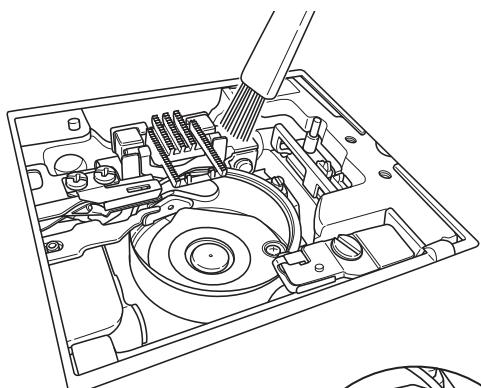
## **A** Turn off the machine or leave the Machine in Lock Mode

### **1** Remove needle and presser foot. Remove the throat plate.

Push the exclusive screw-driver ② into the groove in front of the throat plate ① and press the screw-driver downward to remove the throat plate.

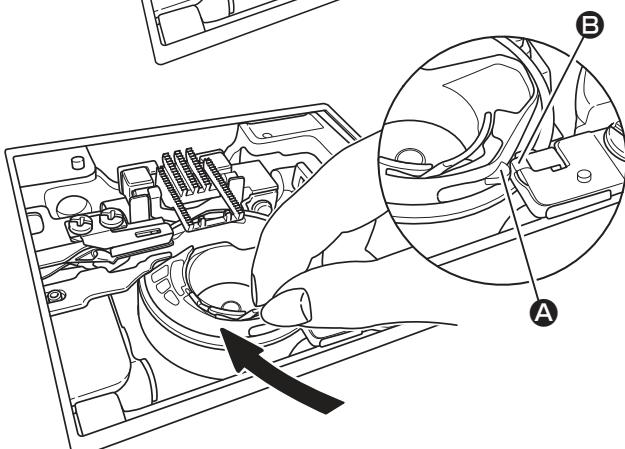


### **2** Remove the bobbin case holder ③ .



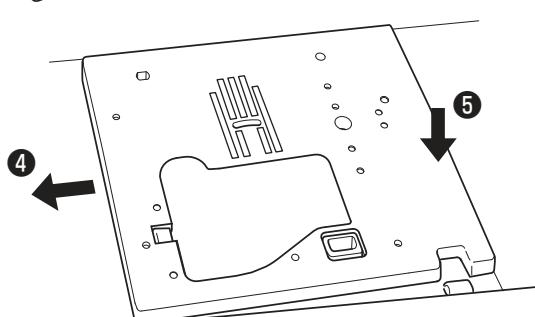
### **3** Remove lint and dirt.

Remove lint and dirt around the feed dog and bobbin case holder with the cleaning brush.



### **4** Install the bobbin case holder.

Install the bobbin case holder so that points **A** and **B** touch each other.



### **5** Fit the throat plate in position.

Place the area ( ④ ) first and then push center to right hand part of the throat plate to assemble ( ⑤ ) .

# 10. Introduction of optional accessory parts

Make your home sewing more pleasant!

Please purchase the following items in the shop where you buy our products.

## ● Rolled hemming presser foot

Fabric edge is hemmed while rolling it under. Used for bottom of shirts, blouses, frills and the edge of handkerchiefs.

## ● Button attaching presser foot

This presser foot is used to attach buttons on garments.

## ● Pearl attaching presser foot

With this presser foot it is possible to attach pearls, beads and thick cord.

## ● Presser foot with guide

As the presser foot has markings, which show 2 mm distance, these markings will serve as a guide.

## ● Binder presser foot

It is possible to attach tapes such as bias tape into four folds.

## ● Twin needle

By using two needles beautiful decorative stitches can be sewn. (Twin needle with size: 2.0 mm)

requires the adapter shank.

## ● Cording and Embroidery presser foot

It is used in free motion quilting and a cord can be sewn together with this presser foot.

## ● Hemming presser foot for zigzag

Fabric edge is hemmed by zigzag while rolling it under. Used for bottom of shirts, blouses, frills and the edge of handkerchiefs.

## ● Appliqué presser foot

Since the front and back of the presser foot is short, it is easy to move the materials at curve points. Also fabrics can be seen easily because it is transparent.

## ● Cording presser foot

It is possible to attach 1 - 3 cords by three-point zigzag or decorative stitch.

## ● Invisible zipper foot

As a seam does not appear on the right side of the fabric, an opening can be finished with fabric edges neatly butted.

## ● Smooth presser foot

This presser foot is used for non-slippery materials like vinyl and satin stitches.

## ● Adapter shank

The presser foot joint is necessary when the separately-available presser foot that is to be attached after removing the presser foot holder.

## ● Quilt presser foot (open type)

It is used in free motion sewing. As the front portion is open, it is easy to see the needle entry point.

## ● Quilt presser foot (zigzag type)

It is used for free-motion quilting. Zigzag stitch is also possible with this presser foot.

### ● Magnifier

Creates additional magnification to the stitch area.

When you do not use the magnifier during sewing, it can be moved to the position where it does not interfere with the operator's hand.

### ● Spool holder

A spool on which thread is thickly wound can be set. This spool is useful when sewing many stitches at a time such as quilting.

The thread stand comes in the different types; i.e., 1-piece type and 2-pieces type.

### ● LED pointer

Crisscross light guide is displayed by the vertical and horizontal light beams by attaching the LED pointer to the separately-available holder. This light guide is helpful when you align the sewing starting positions and stitch position of the pattern during sewing.

# 11. Performance check list

If sewing difficulties occur, make sure the instructions are correctly followed.

If a problem still exists, the reminders below may help solve it.

Case	Cause (Reason)	Solution	Reference page
• The machine stops sewing suddenly. (This is in case you can turn hand wheel by hand.)	• The machine sews at slow speed continuously. (The machine has a mechanism to automatically cut off the power to prevent the motor from overheating.)	• Turn off the power and wait for a while (about 10 minutes). The safety mechanism will be reset and the machine will return to normal.	3
• The machine will not work even when start/stop button is pressed. (This is in case sewing light is still on.)	• The needle hits presser foot due to an installation of incorrect presser foot. • The needle fell into the hook area and tried to start.	• Use the appropriate presser foot to the selected stitch pattern.  • Remove the needle from the hook area.	- -
• Needle breaks.	• Thick material is sewn with a thin needle. • The needle is not inserted fully. • The needle setscrew is not securely tightened. • The wrong presser foot is used for a certain pattern. • Needle is bent.	• Check the combination of fabric, thread and needle. • Check the installation of needle. • Securely tighten the needle setscrew. • Check the combination of stitch pattern and presser foot to be used. • Change needle.	26 25 25 - 25
• Loud noise and/or keen noise while sewing.	• Lint or dust has accumulated in the feed dog. • Lint or dust has accumulated in the hook.	• Clean the feed dog area.  • Clean the hook area.	123 123
• Machine fails to feed fabrics.	• The stitch length is set at "0".  • Soft fabrics such as towels are being sewn. • The machine is set in drop feed condition. • The height of the micro-lifter is too high.	• When the stitch pattern is reselected, the machine goes back to the default setting.  • Set the stitch length to 3 to 5.  • Lift the feed dog.  • Adjust the height of the micro-lifter.	42 - 9 38
• Needle can not be threaded. (This is in case needle threader will not turn.)  • The hook of needle threader does not go through the needle eye.	• The needle is not in the up position. (When needle is not in the up position, needle threader will not turn. This is to avoid damages to the hook.)  • The needle is not inserted fully.	• Rotate the hand wheel and lift the needle upwards.  • Check the installation of the needle.	31 25

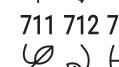
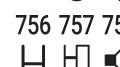
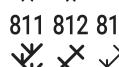
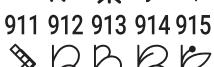
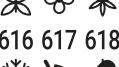
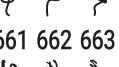
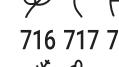
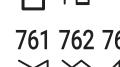
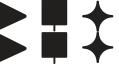
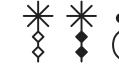
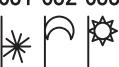
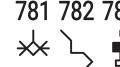
Case	Cause (Reason)	Solution	Reference page
<ul style="list-style-type: none"> <li>The needle threading lever will not return to the original position and the machine can not turn properly. (This is in case the hook of needle threader remains in the needles eye.)</li> </ul>	<ul style="list-style-type: none"> <li>Hand wheel is turned by mistake while the needle threading lever is in down position. (in the process of threading to the needle.)</li> </ul>	<ul style="list-style-type: none"> <li>Turn hand wheel slightly away from you. (to the opposite side when sewing).</li> </ul>	-
<ul style="list-style-type: none"> <li>The machine will not start even when start/stop button is pressed.</li> </ul>	<ul style="list-style-type: none"> <li>The foot controller is plugged in.</li> </ul>	<ul style="list-style-type: none"> <li>Start/stop button can function when foot controller is removed.</li> </ul>	16
<ul style="list-style-type: none"> <li>Thread breaks.</li> <li>Stitch is skipped.</li> </ul>	<ul style="list-style-type: none"> <li>The machine is incorrectly threaded.</li> <li>There is knot or knurl on the thread.</li> <li>Thread tension is not adjusted appropriately.</li> <li>The needle is bent or the tip of needle is broken.</li> <li>The needle is installed incorrectly.</li> <li>Threading of bobbin thread is not correct.</li> <li>The bobbin can not turn smoothly inside the hook holder.</li> <li>The needle size does not match the thread.</li> <li>Thread take-up is not threaded.</li> </ul>	<ul style="list-style-type: none"> <li>Rethread the machine correctly.</li> <li>Remove knot or knurl from thread.</li> <li>Adjust thread tension manually according to fabrics and thread to be used.</li> <li>Change needle.</li> <li>Install needle correctly.</li> <li>Check the correct way of setting bobbin thread.</li> <li>Check the correct way of winding bobbin thread.</li> <li>Check the combination of thread and needle.</li> <li>Rethread the machine correctly.</li> </ul>	32 - 36 25 25 29 - 26 33
<ul style="list-style-type: none"> <li>Thread tension is not good.</li> </ul>	<ul style="list-style-type: none"> <li>The needle thread is threaded incorrectly.</li> <li>The bobbin thread is threaded incorrectly.</li> <li>The direction of spool cap doesn't match the spool.</li> </ul>	<ul style="list-style-type: none"> <li>Rethread the machine correctly.</li> <li>Check the correct way of setting bobbin thread.</li> <li>Attach the spool cap in a correct direction.</li> </ul>	32 29 32
<ul style="list-style-type: none"> <li>Puckering occurs.</li> </ul>	<ul style="list-style-type: none"> <li>The stitch length is too large on lightweight fabrics.</li> <li>The needle tip is broken.</li> </ul>	<ul style="list-style-type: none"> <li>Make the stitch length smaller (shorter).</li> <li>Change needle.</li> </ul>	40 25
<ul style="list-style-type: none"> <li>The needle thread is caught in the bobbin winding thread guide during sewing.</li> </ul>	<ul style="list-style-type: none"> <li>The needle thread may be caught in the bobbin winding thread guide depending on the size of the spool cap.</li> </ul>	<ul style="list-style-type: none"> <li>Put the separately available net on the spool cap to prevent this problem.</li> </ul>	-
<ul style="list-style-type: none"> <li> sign is shown on the LCD display.</li> </ul>	<ul style="list-style-type: none"> <li>Safety mechanism works when machine stops due to motor lock. Or, when the voltage fault has occurred.</li> </ul>	<ul style="list-style-type: none"> <li>The safety mechanism will be reset in a short while and the machine will return to normal. (At this time, the start/stop button will not light up.)</li> </ul>	-

## 12. List of stitch patterns

: Types of patterns that can be selected under the single mode  
 : Types of patterns that can be selected under the combination mode  
 : Patterns that can be sewn with the "JUKI Smart Feed"

Practical	Buttonhole	Appliqué	Tapering	Quilt line	Scallop
		Appliqué			Scallop
001 002 003 004 005	101 102 103 104 105	201 202 203 204 205	301 302 303 304 305	401 402 403 404 405	501 502 503 504 505
006 007 008 009 010	106 107 108 109 110	206 207 208 209 210	306	406 407 408 409 410	506 507 508 509 510
011 012 013 014 015	111 112 113 114 115	211 212 213 214 215	411 412 413 414 415	511 512	
016 017 018 019 020	116 117 118 119 120	216 217 218 219 220	416 417 418 419 420	421 422	
021 022 023 024 025	121 122	221 222 223 224 225	226 227 228 229 230		
026 027 028 029 030			231 232 233 234 235		
031 032 033 034 035			236 237 238 239 240		
036 037 038 039 040					
041 042 043 044					

\* The listing can be found inside the top cover of the sewing machine.

One-point	Decorative	Vintage	Feather / Lace
One-point	Decorative	Vintage	Feather / Lace
601 602 603 604 605 646 647 648 649 650	701 702 703 704 705 746 747 748 749 750	801 802 803 804 805	901 902 903 904 905
 	 		
606 607 608 609 610 651 652 653 654 655	706 707 708 709 710 751 752 753 754 755	806 807 808 809 810	906 907 908 909 910
 	 		
611 612 613 614 615 656 657 658 659 660	711 712 713 714 715 756 757 758 759 760	811 812 813 814 815	911 912 913 914 915
 	 		
616 617 618 619 620 661 662 663 664 665	716 717 718 719 720 761 762 763 764 765	816 817 818 819 820	
 	 		
621 622 623 624 625 666 667 668 669 670	721 722 723 724 725 766 767 768 769 770	821 822 823 824 825	
 	 		
626 627 628 629 630 671 672 673 674 675	726 727 728 729 730 771 772 773 774 775	826 827 828 829 830	
 	 		
631 632 633 634 635 676 677 678 679 680	731 732 733 734 735 776 777 778 779 780	831 832 833 834 835	
 	 		
636 637 638 639 640 681 682 683 684	736 737 738 739 740 781 782 783 784 785	836 837	
 	 		
641 642 643 644 645	741 742 743 744 745 786		
 	 		

### Letters / numbers / signs

A B C D E	A B C D E	A B C D E	あいうえお
F G H I J	F G H I J	F G H I J	かきくけこ
K L M N O	K L M N O	K L M N O	さしすせそ
P Q R S T	P Q R S T	P Q R S T	アイウエオ
U V W X Y	U V W X Y	U V W X Y	カキクケコ
a b c d e	a b c d e	a b c d e	サシスセソ
f g h i j	f g h i j	f g h i j	一一三四五
k l m n o	k l m n o	k l m n o	六七八九十
p q r s t	p q r s t	p q r s t	幼稚園保育
u v w x y	u v w x y	u v w x y	小学校年組
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	一～。！？
6 7 8 9 0	6 7 8 9 0	6 7 8 9 0	
Ä Å ÄE à ä	Ä Å ÄE à ä	Ä Å ÄE à ä	
å è é ê ë	å è é ê ë	å è é ê ë	
ç œ ç ï ñ	ç œ ç ï ñ	ç œ ç ï ñ	
ñ ö ø ò ö	ñ ö ø ò ö	ñ ö ø ò ö	
ø ü ù ü	ø ü ù ü	ø ü ù ü	
., : ; ?	, . : ; ?	, . : ; ?	

## ■ Specification list

Item	Specification
Body size	602 (W) × 310 (H) × 264 (D) mm
Weight	14.9 KGS
Volts	220 V - 240 V ∼, 120V ∼ (USA/Canada only)
Watts	85 W
Hertz	50/60 Hz
Foot control model No.	JC-002
Frequency Range	2.400 GHz - 2.4835 GHz

**JUKI®**

**JUKI CORPORATION**

2-11-1, TSURUMAKI, TAMA-SHI,  
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