

# JANOME

## Quilt Maker

Memory Craft 15000



  
HORIZON®

# INSTRUCTION MANUAL



# IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety precautions should always be followed, including the following:

This sewing machine is designed and manufactured for household use only.

Read all instructions before using this sewing machine.

## **DANGER** — To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in. Always unplug this sewing machine from the electric outlet immediately after using and before cleaning.

## **WARNING** — To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Do not allow to be used as a toy. Close attention is necessary when this sewing machine is used by or near children.
2. Use this appliance only for its intended use as described in this owner's manual. Use only attachments recommended by the manufacturer as contained in this owner's manual.
3. Never operate this sewing machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return this sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air opening blocked. Keep ventilation openings of this sewing machine and foot controller free from accumulation of lint, dust and loose cloth.
5. Never drop or insert any object into any opening.
6. Do not use outdoors.
7. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
8. To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.
9. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
10. Keep fingers away from all moving parts. Special care is required around the sewing machine needle and/or cutting blade.
11. Always use the proper needle plate. The wrong plate can cause the needle to break.
12. Do not use bent needles.
13. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
14. Switch this sewing machine off ("O") when making any adjustment in the needle area, such as threading the needle, changing the needle, threading the bobbin or changing the presser foot, and the like.
15. Always unplug this sewing machine from the electrical outlet when removing covers, lubricating, or when making any other adjustments mentioned in this owner's manual.

## SAVE THESE INSTRUCTIONS

### **For Europe only:**

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

### **For outside Europe (except U.S.A and Canada):**

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.



Please note that on disposal, this product must be safely recycled in accordance with relevant National legislation relating to electrical/electronic products. If in doubt please contact your retailer for guidance. (European Union only)

## **FCC Caution**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

## **IC (Industry Canada) Notice**

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

## **Directive 1999/5/EC**

Hereby, Janome Sewing Machine Co., Ltd., declares that this MC15000 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.



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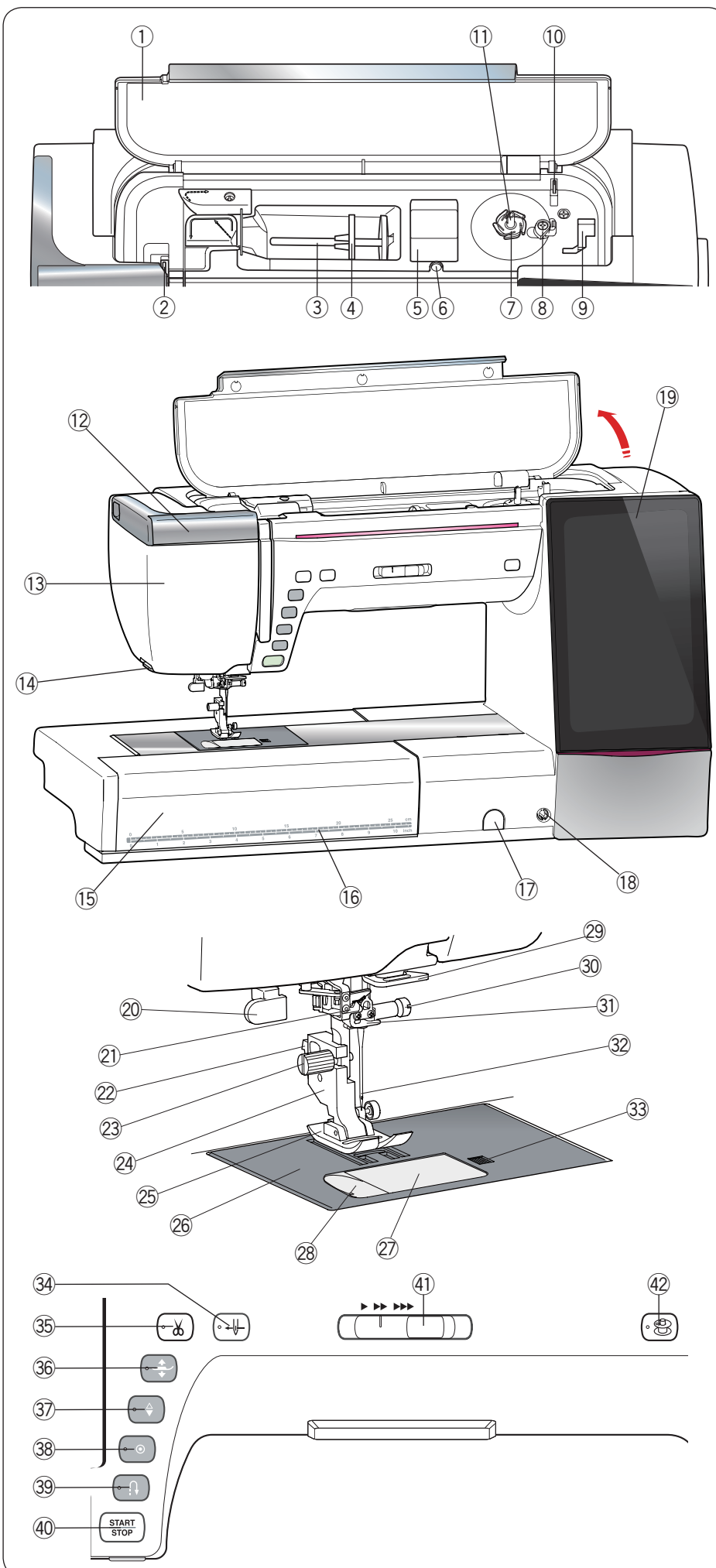
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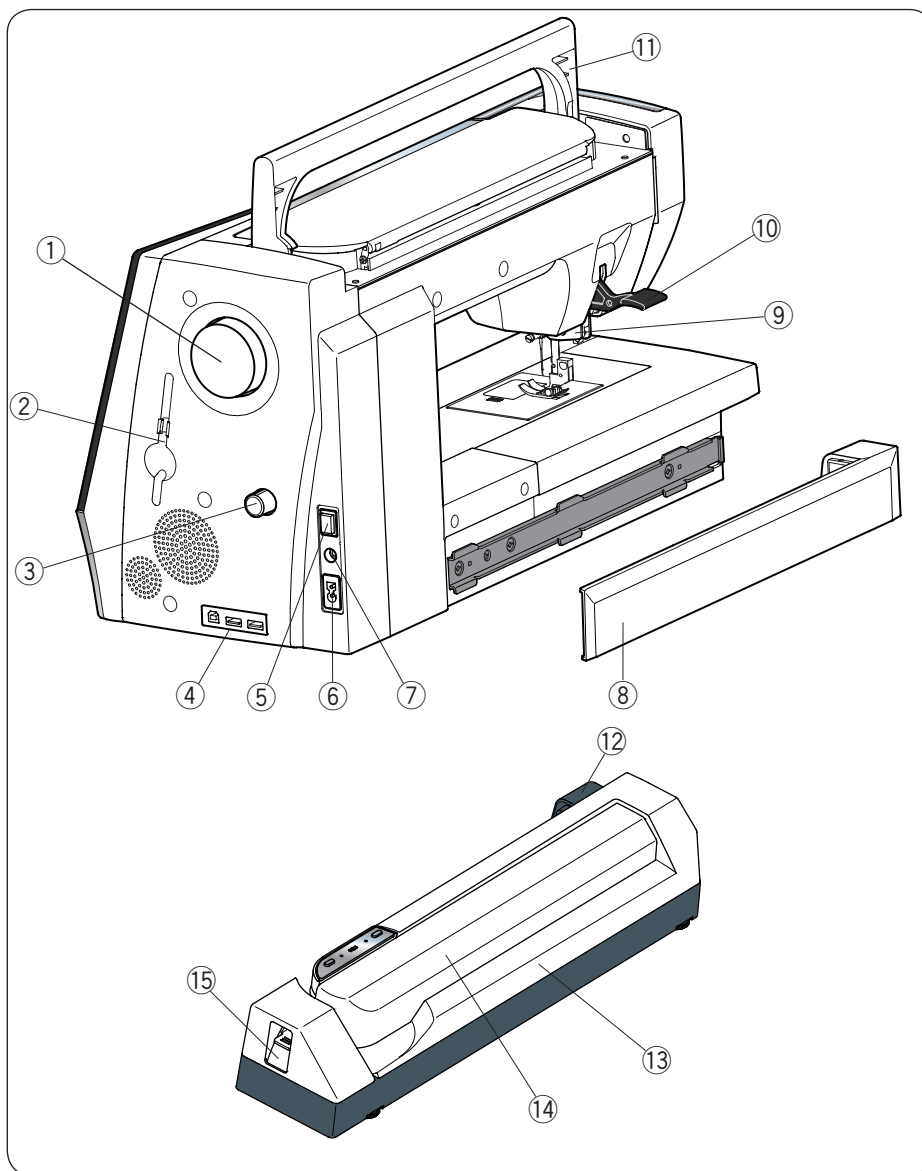
## GETTING READY TO SEW

### Names of Parts

- ① Top cover
- ② Thread take-up lever
- ③ Spool pin
- ④ Spool holder (large)
- ⑤ Foot compartment
- ⑥ Hole for additional spool pin
- ⑦ Bobbin thread cutter A
- ⑧ Bobbin winder stopper
- ⑨ Foot compartment (for P foot)
- ⑩ Bobbin thread cutter B
- ⑪ Bobbin winder spindle
- ⑫ Retractable light
- ⑬ Face plate
- ⑭ Thread cutter/holder
- ⑮ Extension table
- ⑯ Centimeter/inch measurements
- ⑰ Feed balancing dial cap
- ⑱ Knee lifter socket
- ⑲ Visual touch screen
- ⑳ Buttonhole lever
- ㉑ Automatic needle threader
- ㉒ Lever
- ㉓ Thumbscrew
- ㉔ Presser foot holder
- ㉕ Presser foot
- ㉖ Needle plate
- ㉗ Hook cover plate
- ㉘ Thread cutter
- ㉙ Lower thread guide
- ㉚ Needle clamp screw
- ㉛ Needle bar thread guide
- ㉜ Needle
- ㉝ Hook cover release button
- ㉞ Needle threader button
- ㉟ Thread cutter button
- ㊱ Presser foot lifter button
- ㊲ Needle up/down button
- ㊳ Auto-lock button
- ㊴ Reverse button
- ㊵ Start/stop button
- ㊶ Speed control slider
- ㊷ Bobbin winding button



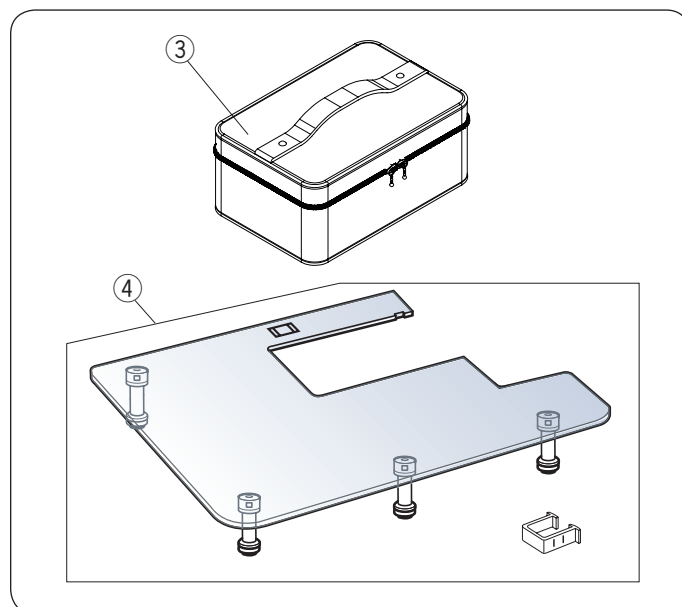
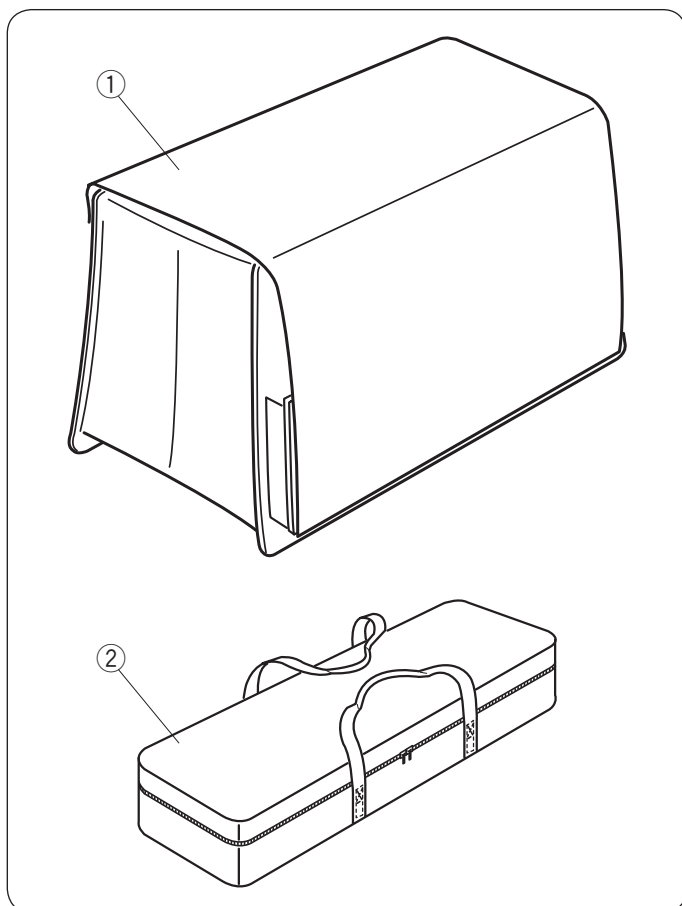
\* Design and specifications are subject to change without prior notice.



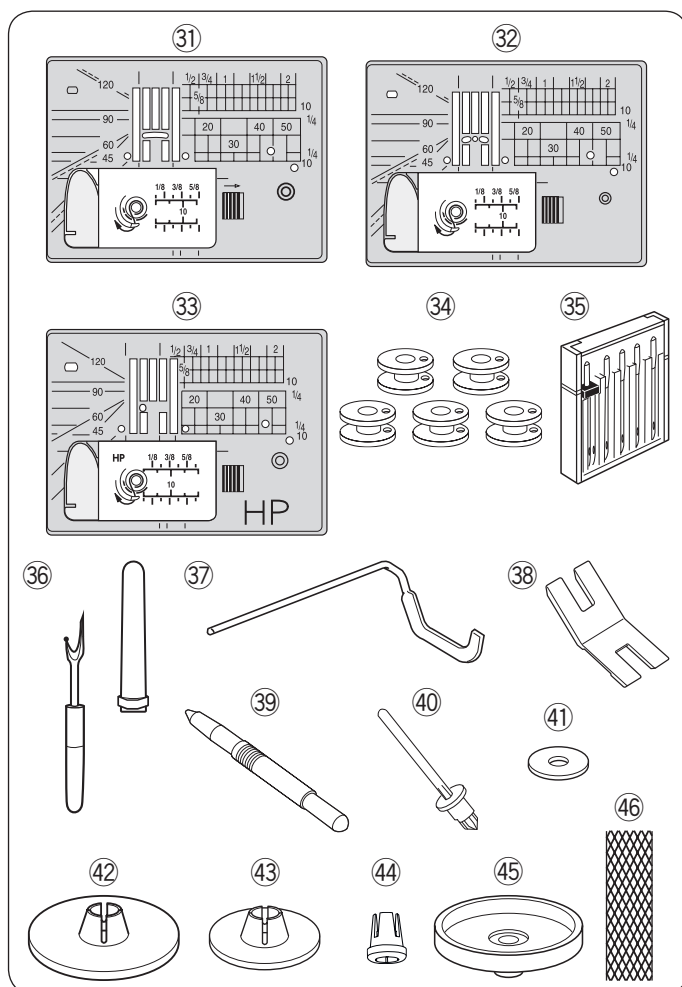
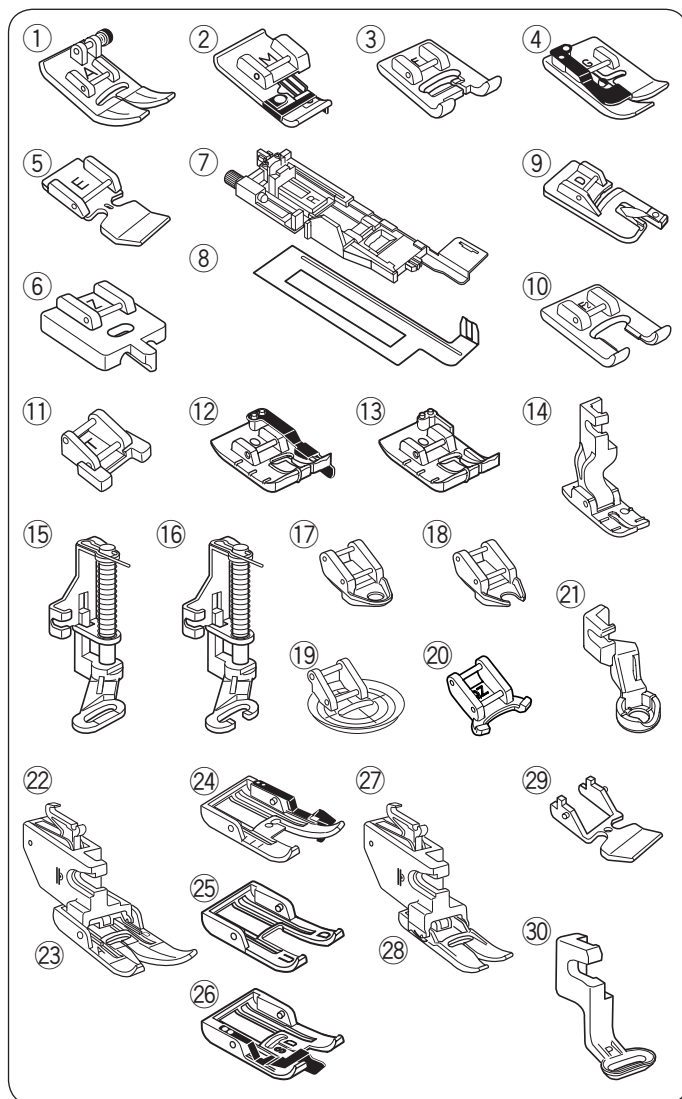
- ① Hand wheel
- ② Touch panel stylus holder
- ③ Dual feed balancing dial
- ④ USB ports
- ⑤ Power switch
- ⑥ Power inlet
- ⑦ Foot control jack
- ⑧ Cover
- ⑨ Dual feed drive
- ⑩ Presser foot lifter
- ⑪ Carrying handle
- ⑫ Embroidery unit socket
- ⑬ Embroidery unit
- ⑭ Carriage arm
- ⑮ Carriage arm release lever

### Standard Accessories

No.	Part Name		Part No.
1	Semi-hard fabric cover		859848004
2	Embroidery unit case		859849005
3	Accessory case		862823025
4	Extra wide table	Table top	859826110
		Other parts	859867010



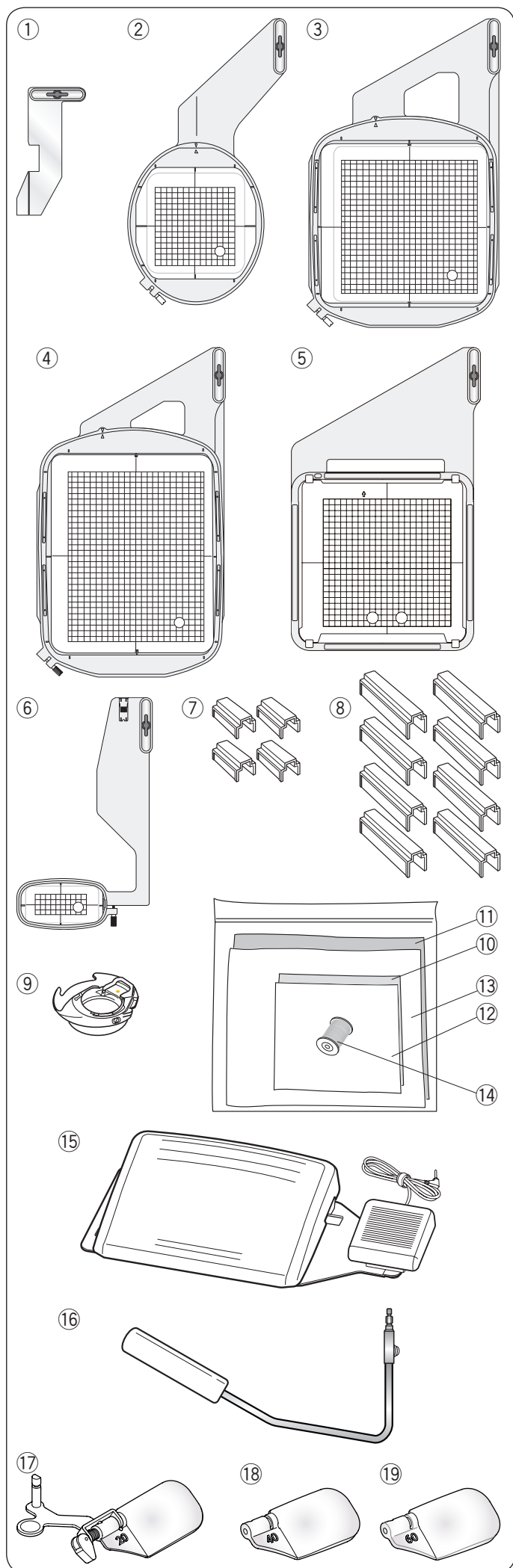




## Standard Accessories

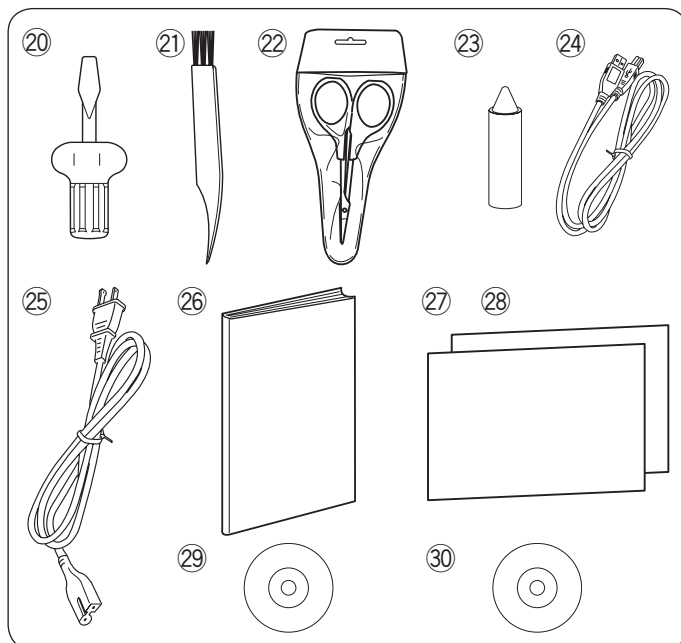
No.	Part Name	Part No.
1	Zigzag foot A (set on the machine)	859802006
2	Overedge foot M	859810007
3	Satin stitch foot F	859806011
4	Blind hemming foot G	859807001
5	Zipper foot E	859805009
6	Concealed zipper foot Z	859815002
7	Automatic buttonhole foot R	862822013
8	Stabilizer plate	859832016
9	Rolled hem foot D	859804008
10	Open toe satin stitch foot F2	859813000
11	Button sewing foot T	859811008
12	1/4" seam foot O	859814012
13	1/4" seam foot O (without guide)	202313104
14	Professional grade foot HP	865803006
15	Darning foot PD-H	859839002
16	Darning foot (open-toe) PD-H	859839013
17	Free motion quilting closed-toe foot QC	859836009
18	Free motion quilting open-toe foot QO	859837000
19	Free motion quilting zigzag foot QV	859812009
20	Variable zigzag open-toe foot QZ	862895006
21	Ruler work foot QR	862896007
22	Dual feed holder (twin)	859817015
23	Dual feed foot AD (twin)	859819109
24	Dual feed quilt piecing foot OD (twin)	859829009
25	AcuFeed open toe foot UD (twin)	202150019
26	AcuFeed ditch quilting foot SD (twin)	859404004
27	Dual feed holder (single)	859833017
28	Dual feed foot VD (single)	859835101
29	Dual feed zipper foot ED (single)	859838001
30	Embroidery foot P	859816025

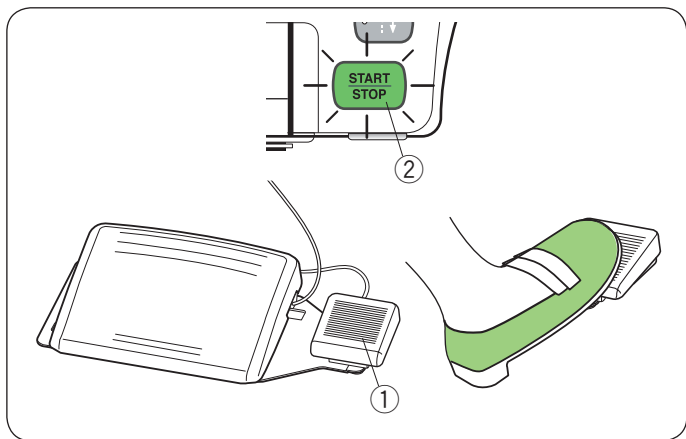
31	Needle plate (set on the machine)	861606119
32	Straight stitch needle plate	862817015
33	Professional grade needle plate	865805112
34	Bobbin x 5 (1 set on the machine)	102261103
35	Needle set	859856005
36	Seam ripper (Buttonhole opener)	560406104
37	Quilting guide bar	755802001
38	Button shank plate	832820007
39	Touch panel stylus	860194002
40	Additional spool pin	625031706
41	Felt	102403109
42	Spool holder (large) (Set on the machine)	822020503
43	Spool holder (small)	822019509
44	Spool holder (special)	862408008
45	Spool stand	829803004
46	Net	624806006



No.	Part Name		Part No.
1	Cloth guide		859825016
2	Embroidery hoop SQ14 (with template)		862670003
3	Embroidery hoop SQ23 (with template)		862669009
4	Embroidery hoop GR (with template)		862668008
5	Embroidery hoop ASQ22 (with template)		859428060
6	Embroidery hoop FA10 (with template)		862671004
7	Magnetic clamps (for SQ23 and GR)		859821403
8	Magnetic clamps (for ASQ22)		860440202
9	Special bobbin holder for embroidery		846652607
10	Felt (320 x 320)		850826009
11	Felt (450 x 500)		850826205
12	Stabilizers (320 x 320)		850826102
13	Stabilizers (450 x 500)		850826308
14	Bobbin thread for embroidery		200921792
15	Foot control (with thread cutter switch)		862821001
16	Knee lifter		846417022
17	Optic magnifier 20		858415005
18	Optic magnifier 40		858415500
19	Optic magnifier 60		858415603
20	Screwdriver		820832005
21	Lint brush		802424004
22	Scissors		803813203
23	Bobbin holder cleaner		859858007
24	USB cable		850403006
25	Power supply cable*	U.S.A. and Canada	856519004
		U.K.	830377008
		Australia	830314018
26	Instruction book		862898009
27	Quick reference chart		862430009
28	Quick reference chart (Embroidery)		862431000
29	Instructional video DVD		862811101
30	Horizon Link Suite CD-ROM		862819039

\*The power supply cable included may differ from the illustration.





## Thread Cutter Switch

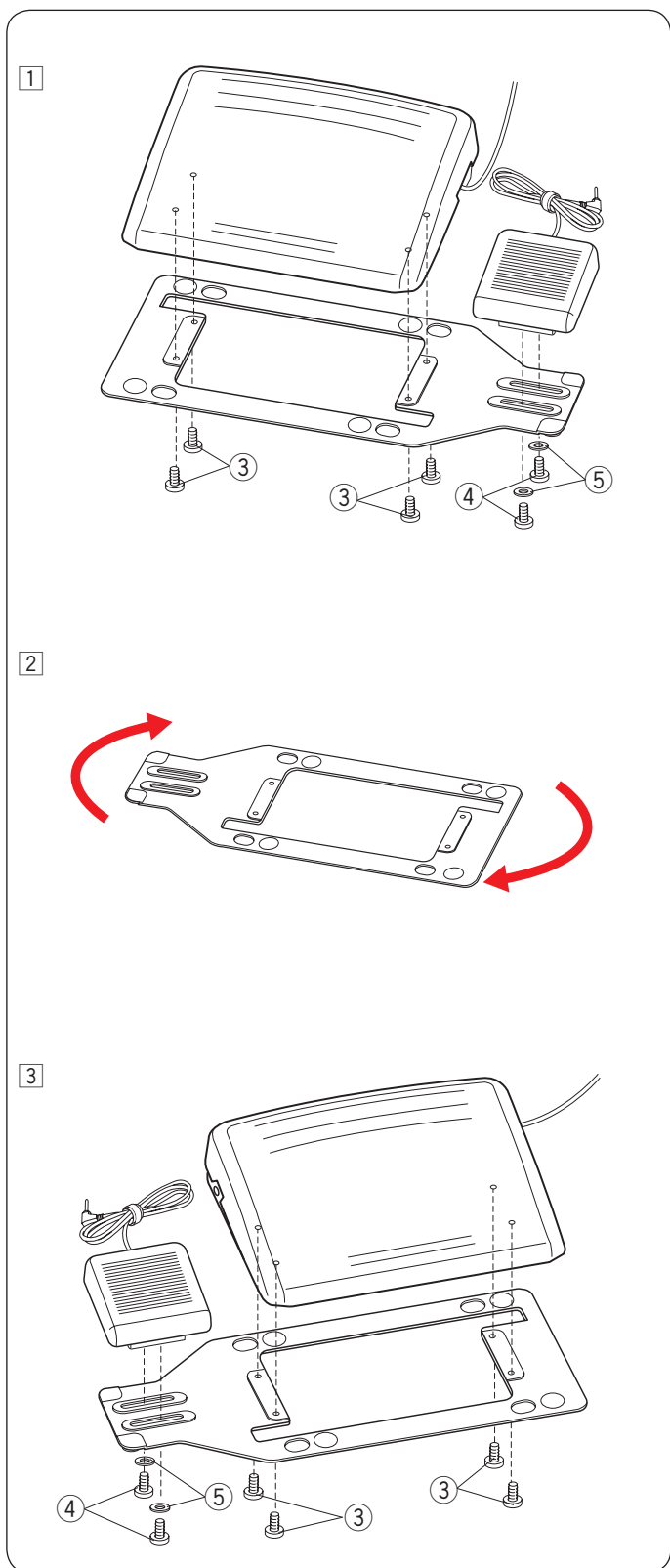
After sewing, depress the thread cutter switch ① on the right side of the foot control to trim the both needle and bobbin threads.

Do not depress the thread cutter switch until the start/stop button turns green ②.

① Thread cutter switch

### NOTE:

- Threads are trimmed when the thread cutter switch is depressed for more than 0.5 seconds.
- The thread cutter switch does not work without the foot control being depressed first.



## Placing the thread cutter switch to the left

The thread cutter switch position can be adjusted for your convenience.

If you wish to attach the thread cutter switch to the left side of the foot control, follow the procedure below.

### NOTE:

Phillips head screwdriver is not included with this machine.

- 1 Remove the setscrews A ③, B ④ and washers ⑤ with a Phillips head screwdriver.

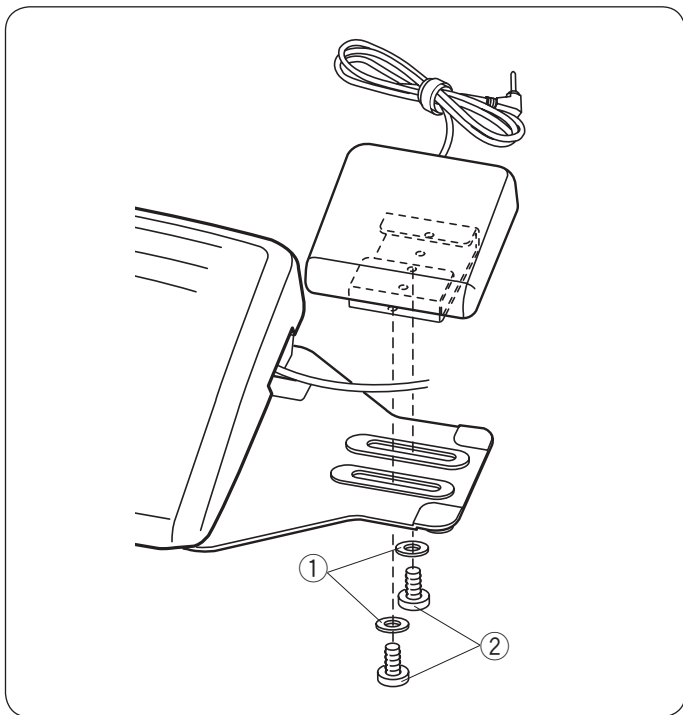
③ Setscrew A

④ Setscrew B

⑤ Washer

- 2 Turn the base plate 180 degrees.

- 3 Attach the foot control and thread cutter switch with the setscrews and the washers ⑤. Tighten the setscrews A ③ and B ④. Be sure that the cable is not caught between the foot control and the base plate.

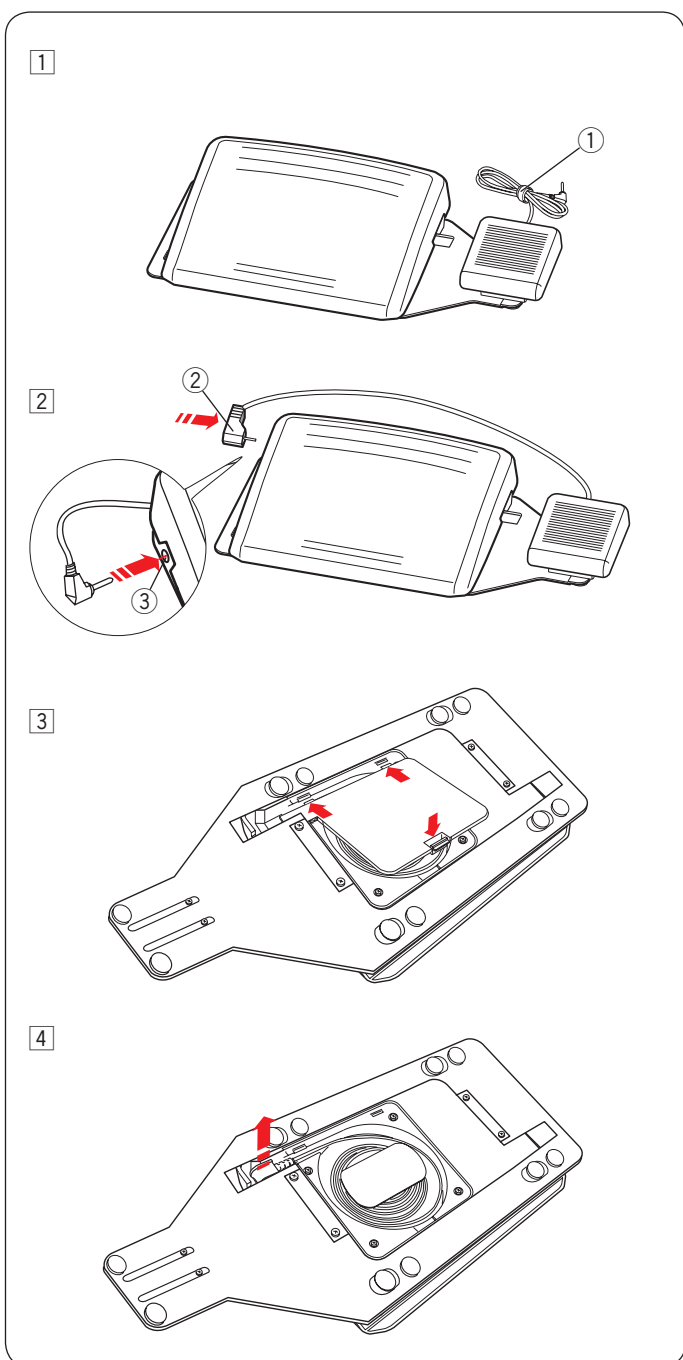


### Adjusting the lateral position

- 1 Loosen the setscrews ② under the switch.
- 2 Slide the switch to left or right, and fix it at the desired position by tightening the setscrews using a Phillips head screwdriver.

### Adjusting the longitudinal position

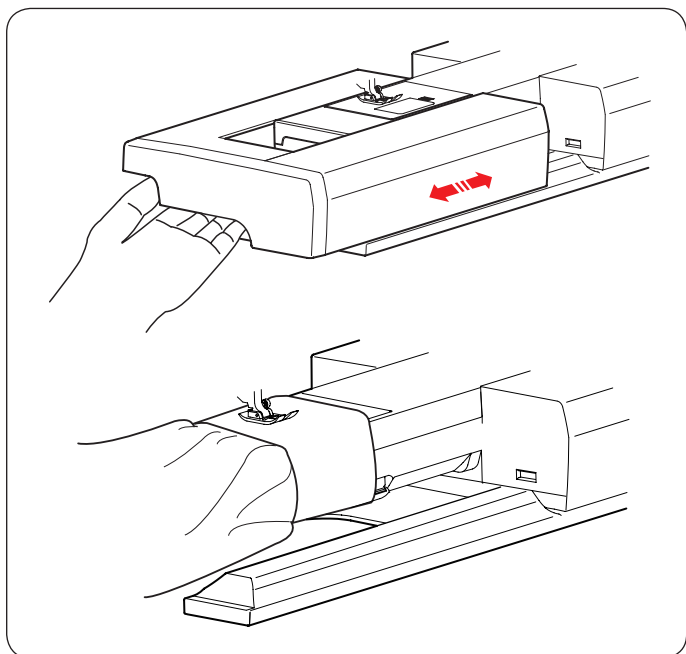
- 1 Remove the setscrews ② and washers ①.
- 2 Attach the switch to the desired position and fix it with the setscrews and washers.  
Tighten the setscrews securely using a Phillips head screwdriver.



### Foot Control Preparation

- 1 Remove the cable tie ① from the cable.
- 2 If you wish to use the thread cutter switch, you need to connect it with the foot control.  
Insert the pin connector ② into the jack ③ on the foot control.
- 3 Turn the foot control upside down.  
Open the cover of the foot control.
- 4 Draw out the cable from the foot control.





## Extension Table

The extension table provides an extended sewing area and can be removed for free arm sewing.

### To remove:

Draw the table to the left.

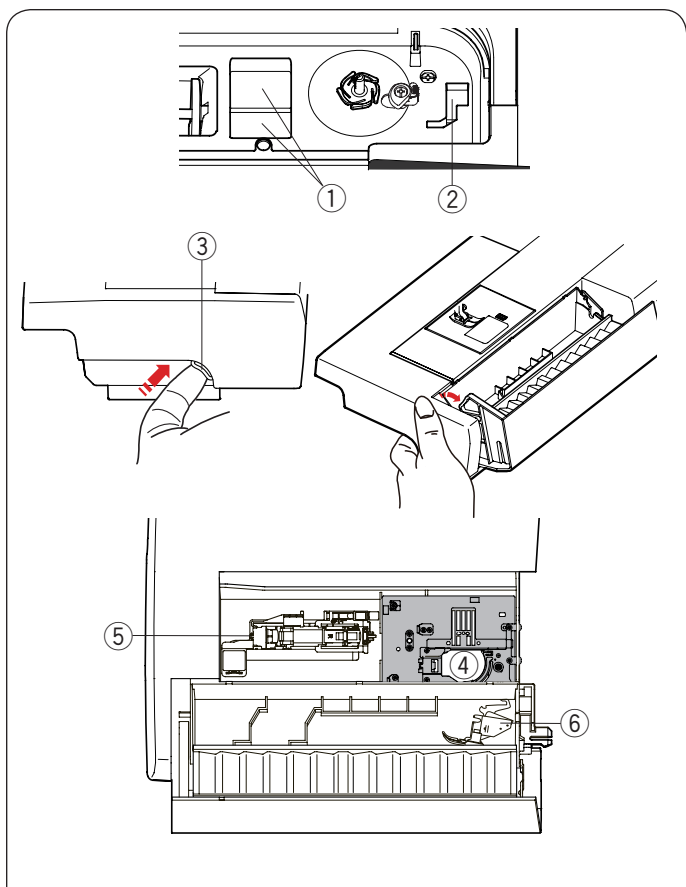
### To attach:

Slide the table on the base and push it to the right.

## Free arm sewing

The free arm is used for stitching sleeves, waistbands, pant legs or any other tubular garments.

It is also useful for darning socks or elbows.



## Accessory Storage

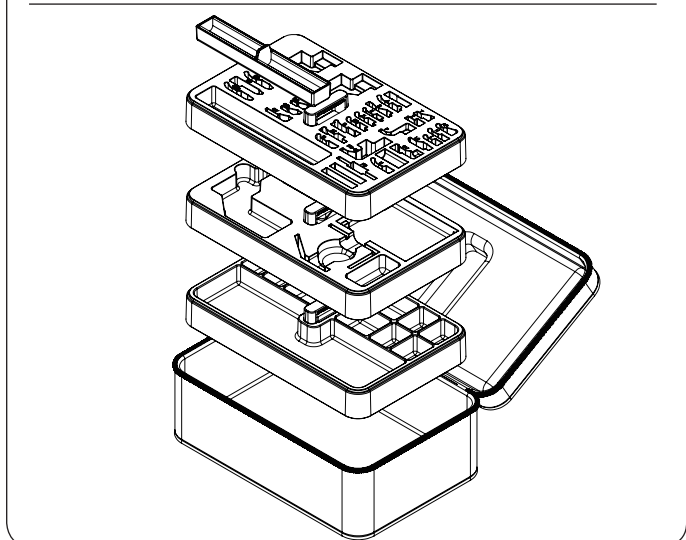
The accessories can be conveniently stored in the accessory case, the compartment in the extension table and the compartment under the top cover.

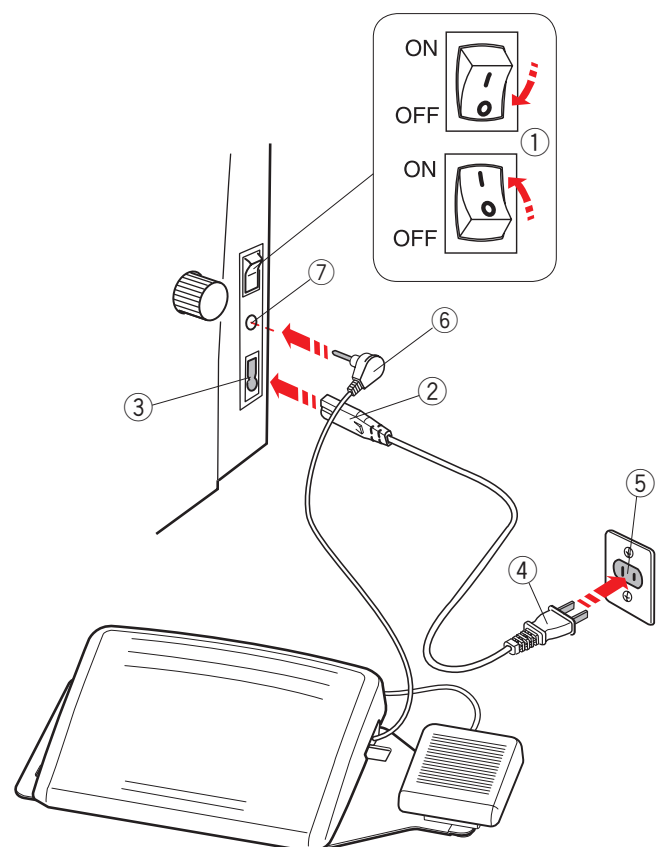
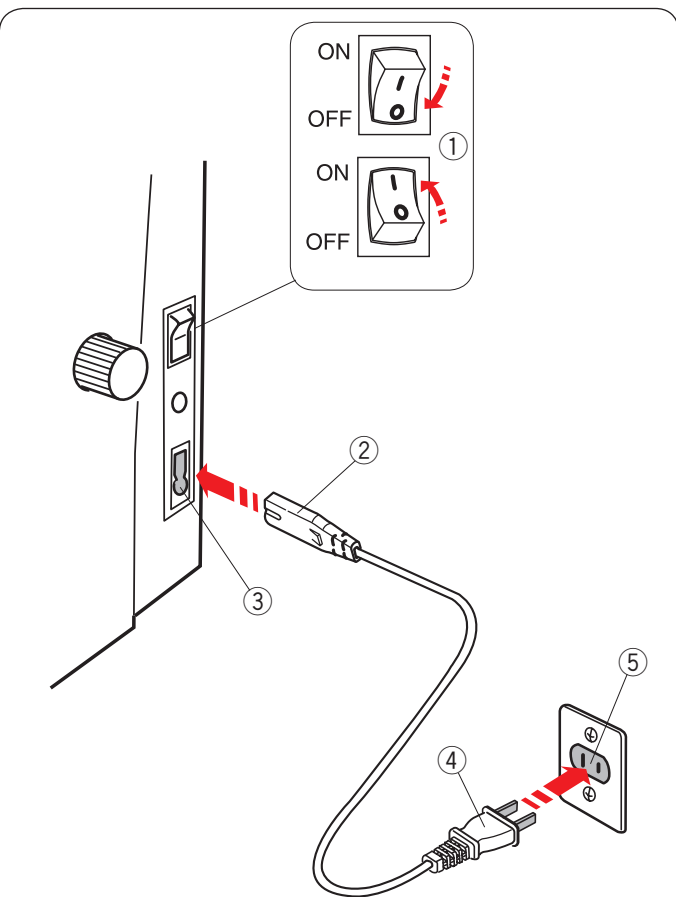
To store the accessories in the compartment of the extension table, push up the lever towards you to open the accessory storage.

- ① Foot compartment
- ② Foot compartment for P foot
- ③ Lever
- ④ Straight stitch needle plate (Place it upside down as shown.)
- ⑤ Automatic buttonhole foot and stabilizer plate
- ⑥ Dual feed holder (twin)

## Accessory Case

To store the other accessories, open the accessory case and store in the appropriate places. Optional accessories can also be stored in this case.





## Connecting the Power Supply

- 1 First make sure the power switch ① is off.
- 2 Insert the machine plug ② of the power supply cord into the power inlet ③.
- 3 Insert the power supply plug ④ into the wall outlet ⑤, and turn the power switch ① on.
  - ① Power switch
  - ② Machine plug
  - ③ Power inlet
  - ④ Power supply plug
  - ⑤ Wall outlet

### NOTE:

Make sure to use the power cable that came with the machine.

If you turn off the power switch, wait for 5 seconds before turning it on again.



### WARNING:

While in operation, always keep your eyes on the sewing area, and do not touch any moving parts such as the thread take-up lever, handwheel or needle.

Always turn off the power switch and unplug the machine from the power supply:

- when leaving the machine unattended.
- when attaching or removing parts.
- when cleaning the machine.

Do not place anything on the foot control.

If you wish to use the foot control, pull out the cord from the foot control and insert the pin connector into the jack on the machine (see page 6).

- 1 First make sure the power switch ① is off.
- 2 Insert the machine plug ② of the power supply cord into the power inlet ③.
- 3 Draw out the cord from the foot control and insert the pin connector ⑥ into the jack ⑦ on the machine.
- 4 Insert the power supply plug ④ into the wall outlet ⑤, and turn the power switch on.

- ① Power switch
- ② Machine plug
- ③ Power inlet
- ④ Power supply plug
- ⑤ Wall outlet
- ⑥ Pin connector
- ⑦ Jack

### NOTE:

- The start/stop button does not work when the foot control is connected.
- The foot control cannot be used in the embroidery mode.
- Do not depress the thread cutter switch when inserting the pin connector ⑥ into the jack ⑦.

### Operating Instructions:

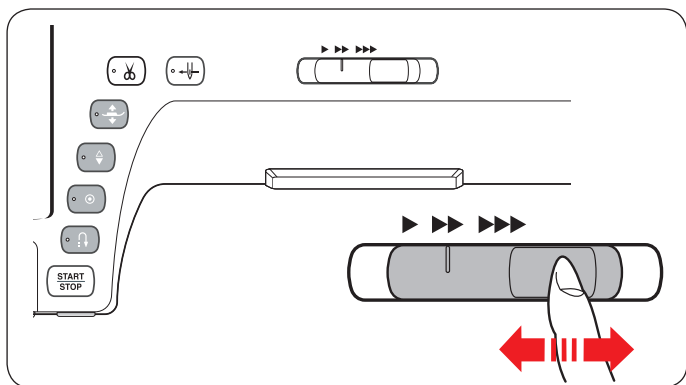
The symbol "O" on a switch indicates the "off" position of the switch.

Foot controller Model 21390 is for use with sewing machine MC15000.

### For the U.S.A. and Canada only

Polarized plug (one blade wider than the other):

To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If it does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.



## Controlling Sewing Speed

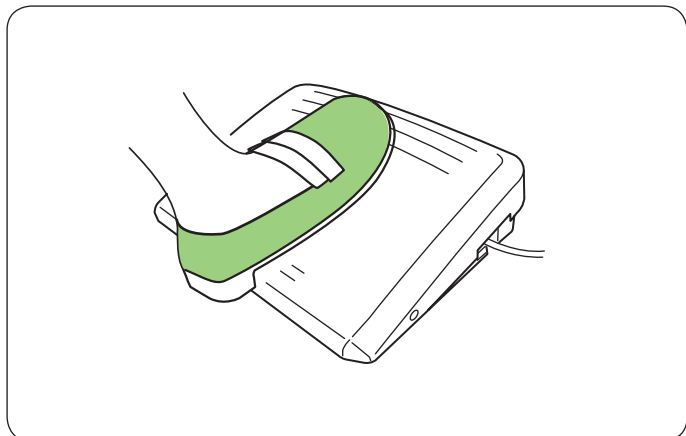
### Speed control slider

You can limit the maximum sewing speed in both the ordinary sewing mode and embroidery mode with the speed control slider according to your sewing needs.

To increase the sewing speed, move the slider to the right.

To decrease the sewing speed, move the slider to the left.

The sewing speed can be changed while stitching.



### Foot Control

Pressing on the foot control can vary sewing speed.

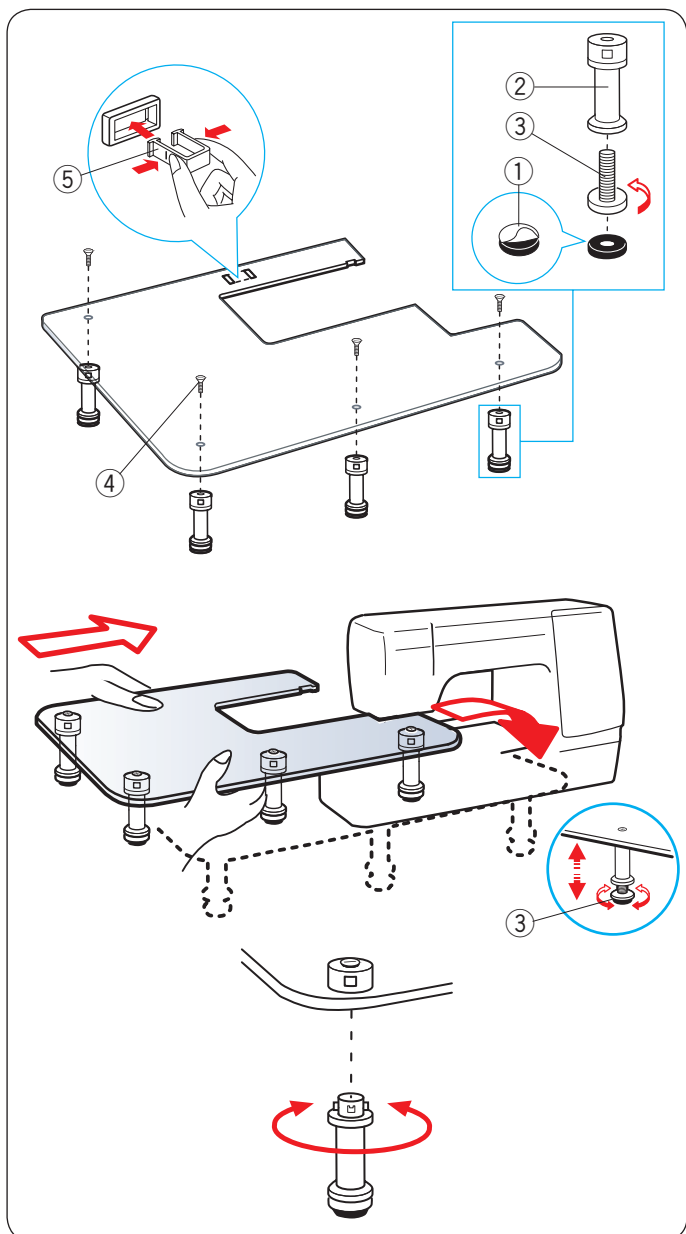
The harder you depress the foot control, the faster the machine runs.

#### NOTE:

The machine runs at the maximum speed set by the speed control slider when the foot control is fully depressed.

#### NOTE:

This machine is equipped with an automatic shutdown safety feature to prevent overheating whenever the machine is running overloaded. Follow the safety instructions that appear on the visual touch screen.



### Extra Wide Table

Peel off the backing paper from the rubber soles and attach them to the bottom of adjusting screws as shown. Screw the adjusting screws into the legs.

- ① Rubber sole
- ② Leg
- ③ Adjusting screw

Attach the 4 legs to the table top with the setscrew.

Attach the table support to the underside of the table by inserting the hooks into the slots.

- ④ Setscrew
- ⑤ Table support

Remove the extension table.

Place the assembled table on the machine.

Adjust the table height by turning the adjusting screws.

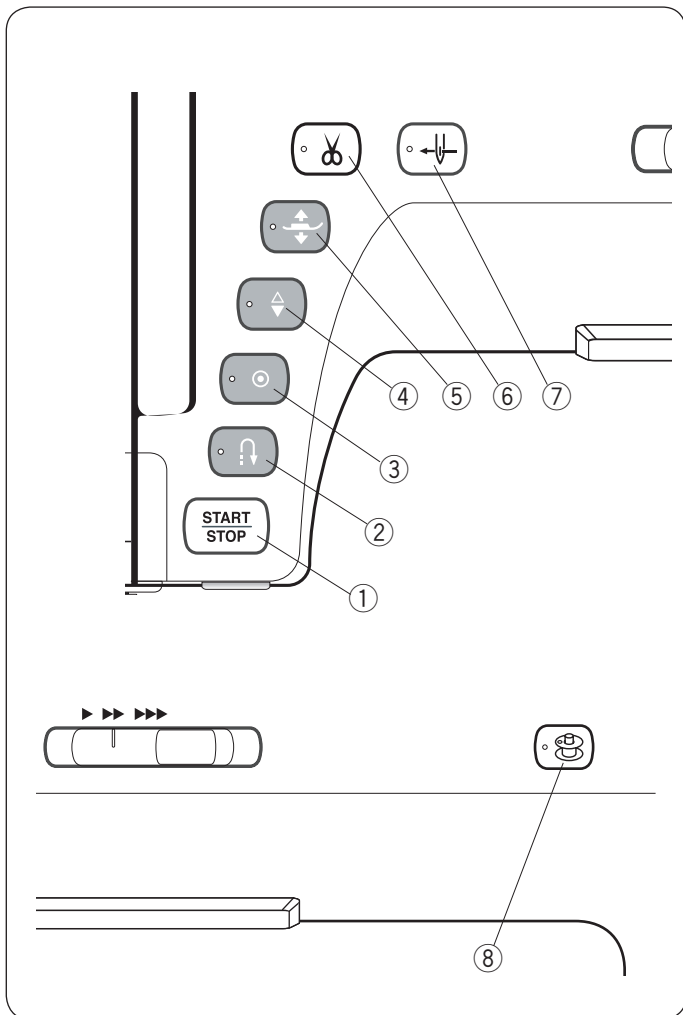
- ③ Adjusting screw

### To remove:

To remove the legs from the table top, you do not have to loosen the setscrews.

Turn the leg clockwise to remove the leg from the table top.

To attach the leg to the table top again, insert the leg into the attachment of the leg, then turn the leg counterclockwise until it stops.



## Machine Operating Buttons

### ① Start/stop button

Press this button to start or stop the machine. This button can be used either in the ordinary sewing mode or embroidery mode.

In the ordinary sewing mode, the machine starts running slowly for the first few stitches. It then runs at the speed set by the speed control slider.

The machine runs slowly as long as this button is being pressed.

The button turns red when the machine is running, and green when it stops.

#### NOTE:

The start/stop button cannot be used in the ordinary sewing mode when the foot control is connected.

### ② Reverse button

When sewing stitch pattern U1, U4, U9-12, Q1-3 or BR1-10, the machine will sew in reverse as long as the reverse button is pressed.

If stitch pattern U1, U4, U9-12, Q1-3 or BR1-10 has been selected and the foot control is not connected, the machine will start sewing in reverse as long as the reverse button is pressed.

If you press the reverse button when sewing any other patterns, the machine will immediately sew locking stitches and automatically stop.

### ③ Auto-lock button

When sewing stitch pattern U1, U4, U9-12, Q1-3 or BR1-10, the machine will immediately sew locking stitches and automatically stop when the auto-lock button is pressed.

When sewing all other patterns, the machine will sew to the end of the current pattern, sew locking stitches and stop automatically.

The machine will trim the threads automatically after locking the stitch when the thread cut after auto-lock option is turned on (refer to page 106).

### ④ Needle up/down button

The machine will always stop with the needle down except when buttonholes, darning, tacking, eyelets or monograms are selected.

Press this button to bring the needle bar up or down.

### ⑤ Presser foot lifter button

The presser foot will go up or go down by pressing this button.

You can also use the presser foot lifter and knee lifter to raise and lower the presser foot.

### ⑥ Thread cutter button

Press this button when you finish sewing to trim the threads. The needle bar and presser foot automatically rise after trimming the threads.

Refer to page 31.

#### NOTE:

The thread cutter button does not function:

- directly after turning on the power.
- when the presser foot is raised with the foot lifter.
- after being pressed 3 times in a row.

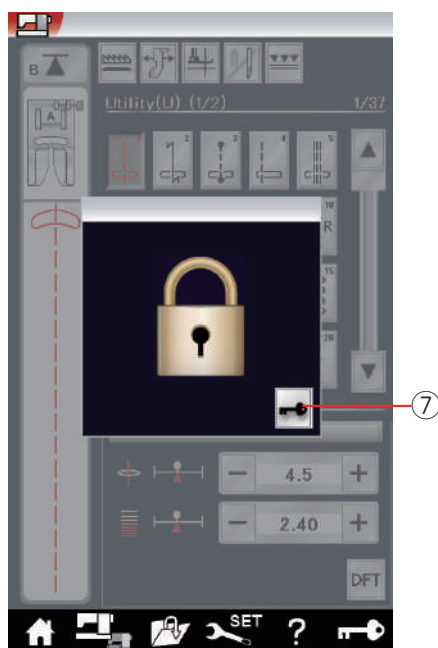
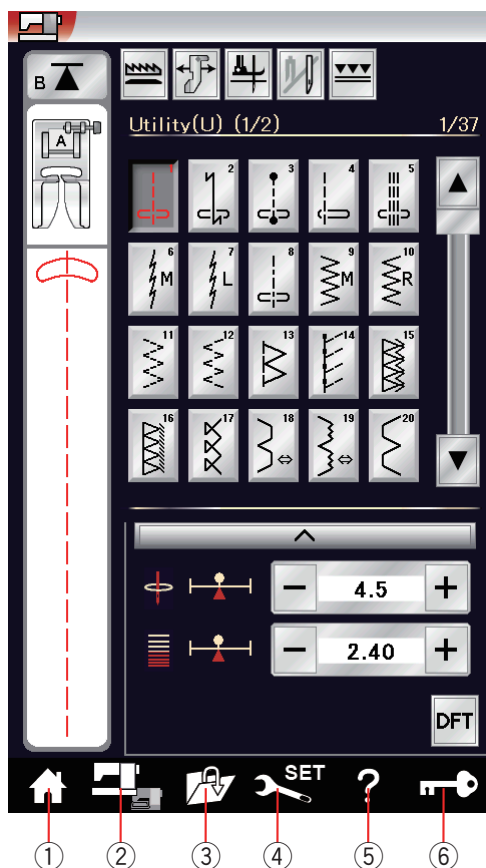
### ⑦ Needle threader button

Press this button to thread the needle thread through the needle eye (refer to page 16).

### ⑧ Bobbin winding button

Press this button to wind the bobbin (refer to page 13).





## Common Keys



### CAUTION:

Do not press the visual touch screen with hard or sharp objects like pencils, screwdrivers or the like. Use the touch panel stylus included in the standard accessories.

#### ① Home key

Press this key to enter the category selection of the ordinary sewing mode or embroidery mode.

#### ② Mode switch key

Press this key to enter into embroidery mode or to return to ordinary sewing mode.

#### ③ Open file key

Press this key and the open file window will open. You can open pattern combinations, monograms and embroidery designs saved in the machine's internal memory or on a USB flash drive.

#### ④ Set mode key

Press this key to enter the setting mode. You can customize the machine settings to your preference. The machine settings for common settings, ordinary sewing, embroidery, Wi-Fi® \* and language selection are available in this mode.

#### ⑤ Help movie key

Press this key to view the on-screen movie about the essential operations.

#### ⑥ Lockout key

Press this key to lockout the machine when threading the machine, replacing the accessories etc.

To reduce the risk of injury, all the buttons and keys except for the presser foot lifter and needle threader button are deactivated.

To unlock the machine, press the unlock key ⑦ on the window.

\* Wi-Fi® is a registered trademark of Wi-Fi Alliance®.

## Setting the Spool of Thread

Open the top cover.

Lift up the spool pin. Place the spool of thread on the spool pin.

Attach the large spool holder, and press it firmly against the spool of thread.

### NOTE:

Use the small spool holder to hold narrow or small spools of thread.

If you use a slippery thread such as monofilament transparent thread, put the net on the spool of thread to prevent the thread from slipping off the spool and jamming around the spool pin.

Use the spool holder (special) to hold the specific size of the spool of threads as shown.

The sizes of the spools of thread are as follows;

The hole diameter of the spool has a range of 3/8" to 7/16" (9.5 to 10.5 mm), and the spool length has a range of 2 3/4" to 3" (70 to 75 mm).

- ① Spool holder (special)
- ② Hole diameter (3/8" to 7/16")
- ③ Spool length (2 3/4" to 3")

Firmly insert the spool holder (special) into the hole and hold the spool as illustrated.

## Additional spool pin

Use the additional spool pin when you need to wind a bobbin without unthreading the machine while working on a sewing project (refer to page 116).

Set the spool stand ① under the additional spool pin ②.

Insert the additional spool pin ② into the hole ③.

Place the felt ④ and a spool on the pin.

- ① Spool stand
- ② Additional spool pin
- ③ Hole for additional spool pin
- ④ Felt

### NOTE:

The additional spool pin is also used for twin needle sewing.

## Winding the Bobbin

### Removing the bobbin



### CAUTION:

Press the lockout key or turn the power switch off.

- ① Slide the hook cover release button ① to the right, and remove the hook cover plate ②.

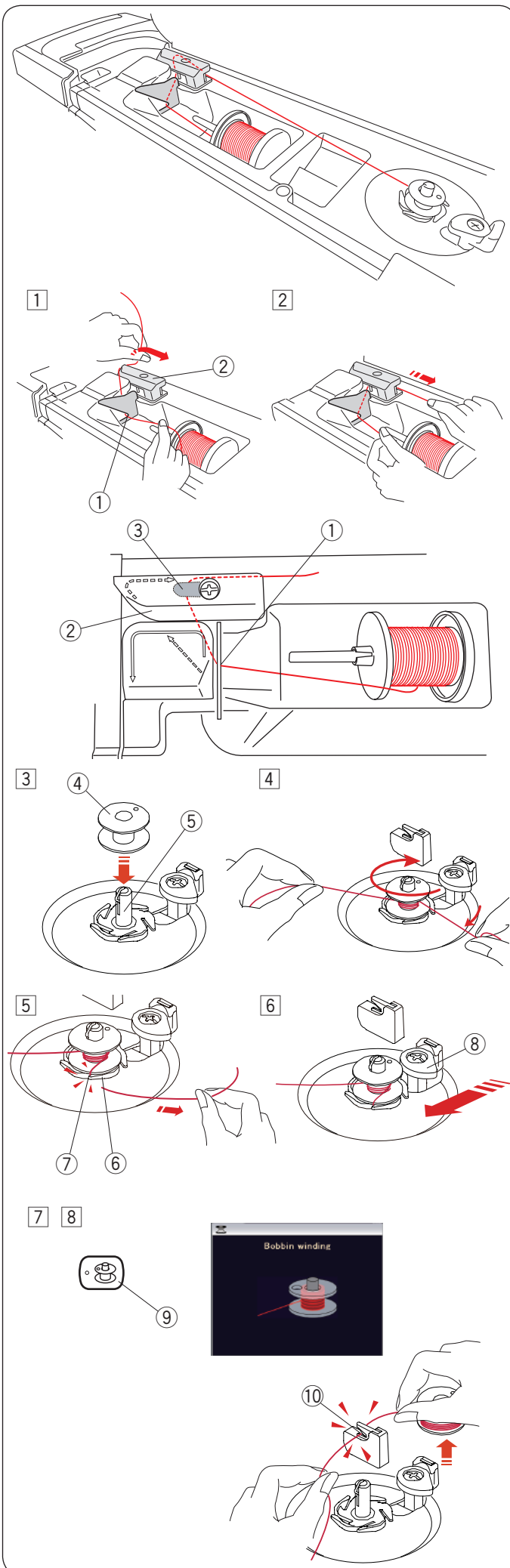
- ① Hook cover release button
- ② Hook cover plate

- ② Remove the bobbin from the bobbin holder.

### NOTE:

Use the plastic bobbins for horizontal hook marked with a "J". Using other bobbins, such as pre-wound paper bobbins, may cause stitching problems and/or damage to the bobbin holder.

## Winding the bobbin



- 1 Pull the thread from the spool.  
Hold the thread with both hands and pass the thread into the guide slot ①.  
Draw the thread to the left and forward around the thread guide ②.  
Draw the thread to the rear and to the right around and under the guide plate ③.
- ① Guide slot  
② Thread guide  
③ Guide plate

- 2 Firmly pull the thread to the right while holding it with both hands.

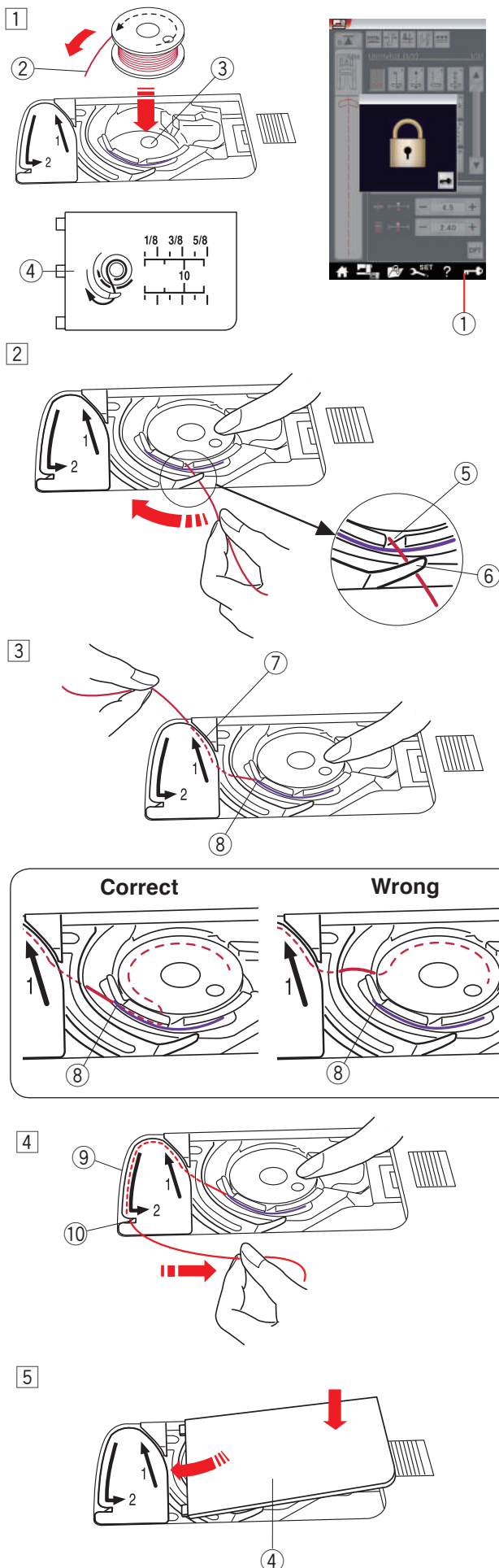
### NOTE:

You can adjust the bobbin winding speed in the setting mode (refer to page 103).

- 3 Put the bobbin on the bobbin winder spindle.
- ④ Bobbin  
⑤ Bobbin winder spindle
- 4 Pass the thread to the bobbin.  
Hold the thread with both hands and wind it around the bobbin clockwise several times.
- 5 Insert the thread into one of the slits ⑦ of the flange plate ⑥ and pull the thread to cut.
- ⑥ Flange plate  
⑦ Slit
- 6 Push the bobbin stopper ⑧ to the left.
- ⑧ Bobbin stopper
- 7 Press the bobbin winding button ⑨. The visual touch screen will show the bobbin winding sign.
- ⑨ Bobbin winding button
- When the bobbin is fully wound, it will stop spinning and the bobbin stopper returns to its original position automatically.
- 8 Remove the bobbin. Cut the thread with bobbin thread cutter B ⑩.
- ⑩ Bobbin thread cutter B

### NOTE:

For safety purposes, the machine will automatically stop 1.5 minutes after starting bobbin winding.



## Inserting the bobbin

- 1 Press the lockout key.  
Place a bobbin in the bobbin holder with the thread running off counterclockwise as shown on the hook cover plate.
  - 1 Lockout key
  - 2 End of thread
  - 3 Bobbin holder
  - 4 Hook cover plate

- 2 Hold the bobbin with your fingertip so it does not rotate.  
Guide the thread into the front notch of the bobbin holder.  
Pull the thread to the left to pass it under the guide.
  - 5 Front notch
  - 6 Guide

- 3 Draw the thread to the left to pass it into the guide path marked "1".  
Make sure that the thread comes out from the side notch of the bobbin holder.
  - 7 Guide path 1
  - 8 Side notch

### NOTE:

If the thread does not come out from the side notch, rethread from step 1.

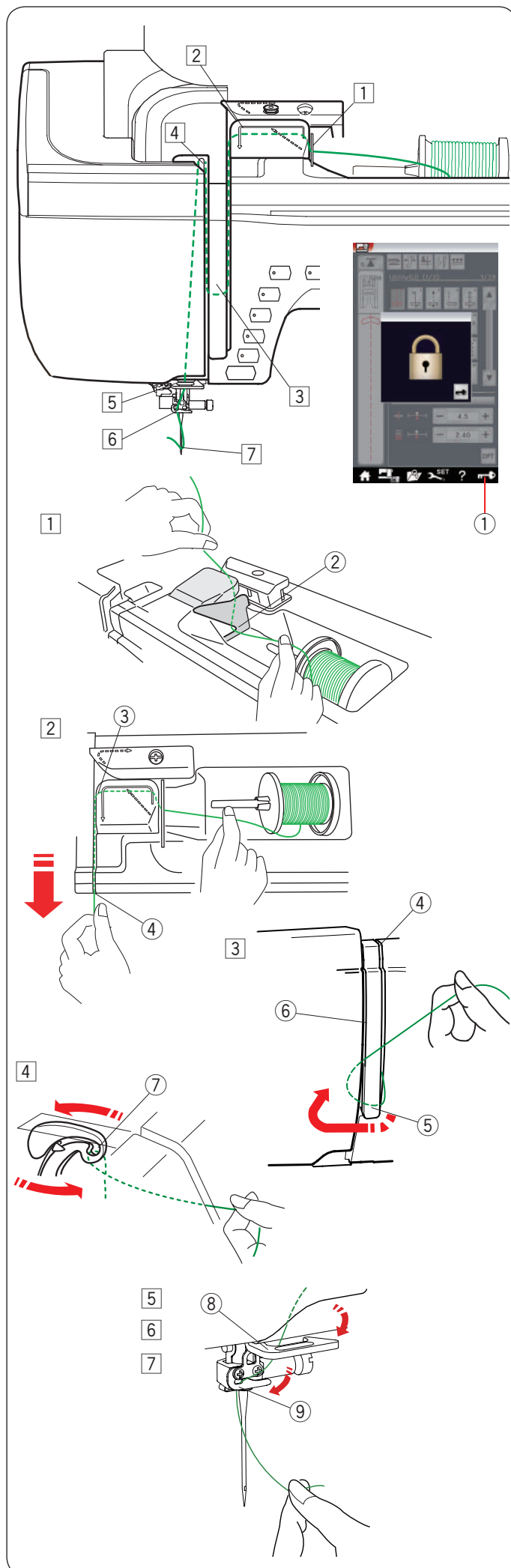
- 4 Continue to draw the thread along the guide path marked "2" and pull the thread to the right through the slit. The thread will be cut to a proper length and held in place.
  - 9 Guide path 2
  - 10 Slit (Thread cutter)

- 5 Set the left edge of the hook cover plate into opening.  
Push down the hook cover plate to fit in place.

### NOTE:

Unless otherwise noted, you can start sewing without drawing up the bobbin thread.  
Refer to page 17 for how to draw up the bobbin thread.





## Threading the Machine

Press the needle up/down button to raise the take-up lever to the highest position.

Press the lockout key to lockout the machine. The presser foot will go down and the upper thread tension disks will open.

① Lockout key

Pass the thread in order from ① to ⑦.

① Hold the thread with both hands and pass the thread into the guide slot.

② Guide slot

② Hold the thread with both hands and draw the thread around the corner of the guide.

Firmly pull the thread toward you along the right channel until the thread snaps.

③ Corner of the guide

④ Right channel

③ Draw the thread down along the right channel and around the bottom of the thread guide plate.

Pull the thread up along the left channel.

④ Right channel

⑤ Thread guide plate

⑥ Left channel

④ While holding the thread at the spool, firmly draw the thread up and to the back of the take-up lever. Draw the thread forward to draw it into the eye of the take-up lever.

⑦ Eye of the take-up lever

⑤ Then pull the thread down along the left channel and through the lower thread guide.

⑧ Lower thread guide

⑥ Slide the thread from the right of the needle bar thread guide to the left.

⑨ Needle bar thread guide

⑦ Thread the needle with the needle threader (refer to the next page).

## Automatic Needle Threader

### NOTE:

The needle threader can be used with a #11 to #16 needle.

Thread size 50 to 90 is recommended.

Do not use thread size 30 or thicker.

Make sure the machine is locked out.

- 1 Draw the thread through the slit ① of the needle threader. The thread should pass under the hook ②.

① Slit  
② Hook

- 2 Pull the thread up and slip it between the thread cutter and face plate from behind. Pull the thread toward you to cut.

- 3 Press the needle threader button ③. The needle threader will be automatically threaded through the needle eye.

③ Needle threader button

- 4 Pull the thread loop ④ to take the thread end out through the needle eye to the rear.

④ Thread loop

### NOTE:

- The automatic needle threader cannot be used with the twin needle.
- If the thread is caught in the hook and the thread loop is not formed, remove the thread from the hook and pull it to take the thread end out through the needle eye.

## Drawing up the Bobbin Thread

After using auto thread cutting or threading the bobbin holder, you can start sewing without drawing up the bobbin thread.

However, you need to draw up the bobbin thread when sewing gathering stitches etc.

- 1 Remove the bobbin. Insert the bobbin into the bobbin holder again and rethread the bobbin holder according to the instructions on page 14, but leave a 10 cm (4") tail of bobbin thread as shown.

① Bobbin thread

### NOTE:

Do not cut the bobbin thread with the thread cutter.

② Thread cutter

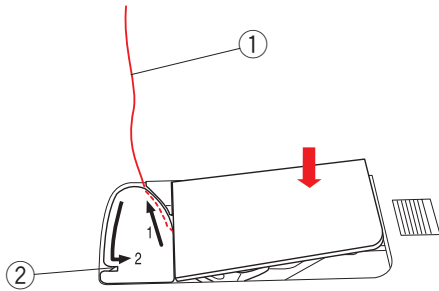
- 2 Raise the presser foot. Hold the needle thread lightly with your left hand.

③ Needle thread

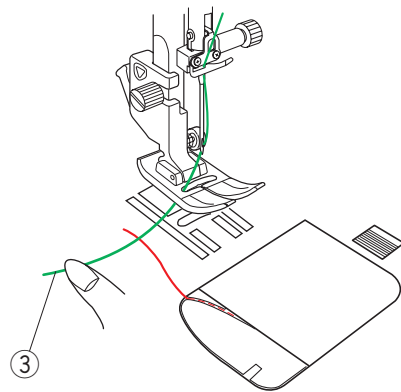
- 3 Press the needle up/down button twice to lower and raise the needle and pick up the bobbin thread.

④ Needle up/down button

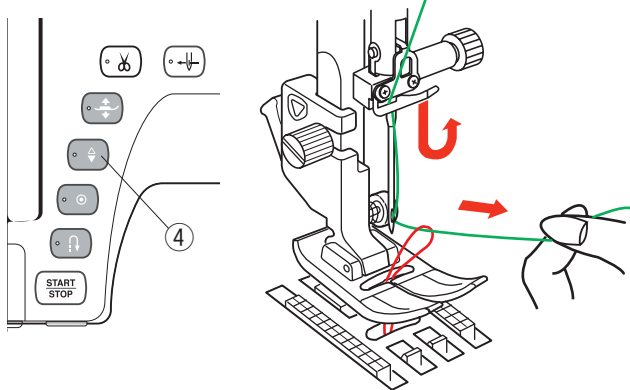
1



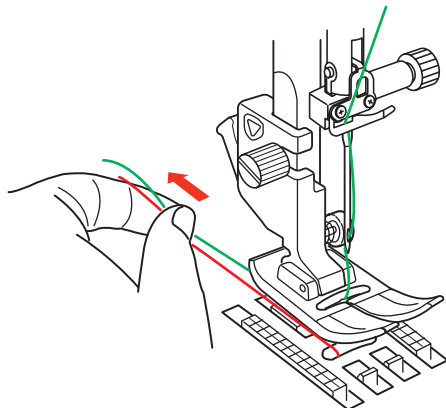
2



3

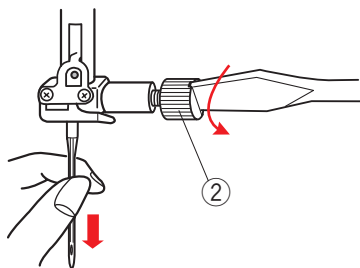


4

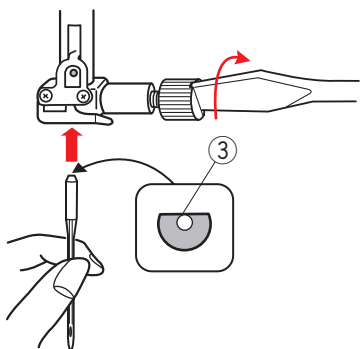




①

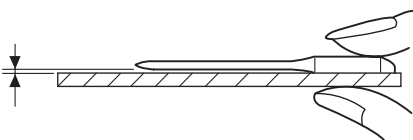


②



③

④



## Replacing Needles



### CAUTION:

Always make sure to press the lockout key to lockout the machine or turn the power switch off before replacing the needle.

Raise the needle by pressing the needle up/down button. Press the lockout key.

① Lockout key

Loosen the needle clamp screw by turning it counterclockwise.

Remove the needle from the clamp.

② Needle clamp screw

Insert a new needle into the needle clamp with the flat side of the needle to the rear.

③ Flat side

When inserting the needle into the needle clamp, push it up against the stopper pin and tighten the needle clamp screw firmly with a screwdriver.

To check needle straightness, place the flat side of the needle onto something flat (a needle plate, glass etc.). The gap between the needle and the flat surface should be consistent.

④ Gap

Never use a blunt needle.

Fabric		Thread	Needle
Fine	Lawn	Silk #80-100 Cotton #80-100 Synthetic #80-100	Blue tip needle Universal needle #9/65-11/75
	Georgette		
	Tricot		
	Organza		
	Crepe		
Medium	Sheeting	Silk #50 Cotton #50-80 Synthetic #50-80	Red tip needle Purple tip needle Universal needle #11/75-14/90
	Jersey		
	Broadcloth		
	Fleece		
Heavy weight	Denim	Silk #30-50 Cotton #40-50 Synthetic #40-50	Red tip needle Purple tip needle Universal needle #14/90-16/100
	Tweed		
	Coating		
	Quilting		

### NOTE:

1 x twin needle, 2 x blue tip needle (#11/75), 1 x red tip needle (#14/90) and 1 x purple tip needle (#14/90) are included in the needle case (Part No. 859856005).

## Fabric, Thread and Needle Chart

- For general sewing, use red tip needle.
- Fine threads and needles should be used for sewing fine fabrics.
- In general, use the same thread for both needle and bobbin.
- Use a blue tip needle for sewing fine fabrics, stretch fabrics, tricot and buttonholes to prevent skipped stitches.
- Use a purple tip needle for sewing knits, free quilting and across the hem to prevent skipped stitches.
- Use a stabilizer or interface to stretch or fine fabrics to prevent seam puckering.
- Always test the thread and needle size on a small piece of the same fabric you will use for actual sewing.

### For embroidery:

- In general, use a blue tip needle.
- Use a red tip needle or purple tip needle for thicker fabrics.
- Use a purple tip needle for dense stitch embroidery and Quilting designs.
- Janome bobbin thread for embroidery is recommended for bobbin.



## Replacing the Presser Foot

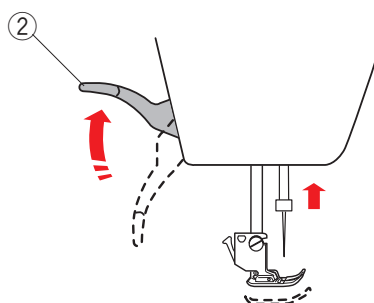


### CAUTION:

Always make sure to press the lockout key to lock out the machine.

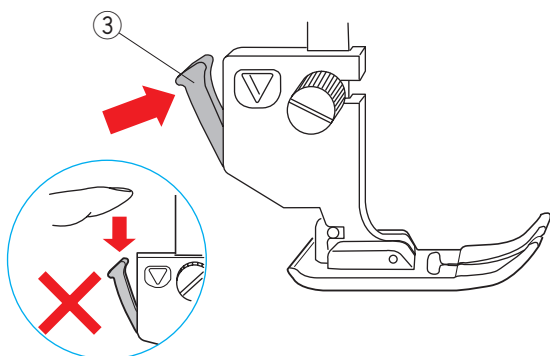
Raise the needle by pressing the needle up/down button.  
Press the lockout key.

① Lockout key



Raise the presser foot lifter.

② Presser foot lifter



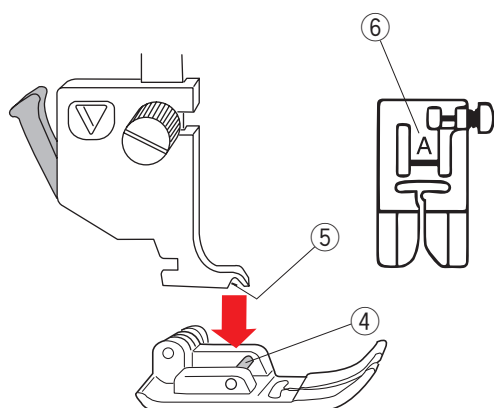
Press the black lever on the backside of the foot holder.  
The presser foot will snap off.

③ Lever



### CAUTION

To avoid damaging the lever, do not push it down.



Place the desired foot under the foot holder so that the pin of the foot lies just under the groove of the foot holder.  
Lower the presser foot lifter to lock the foot in place.

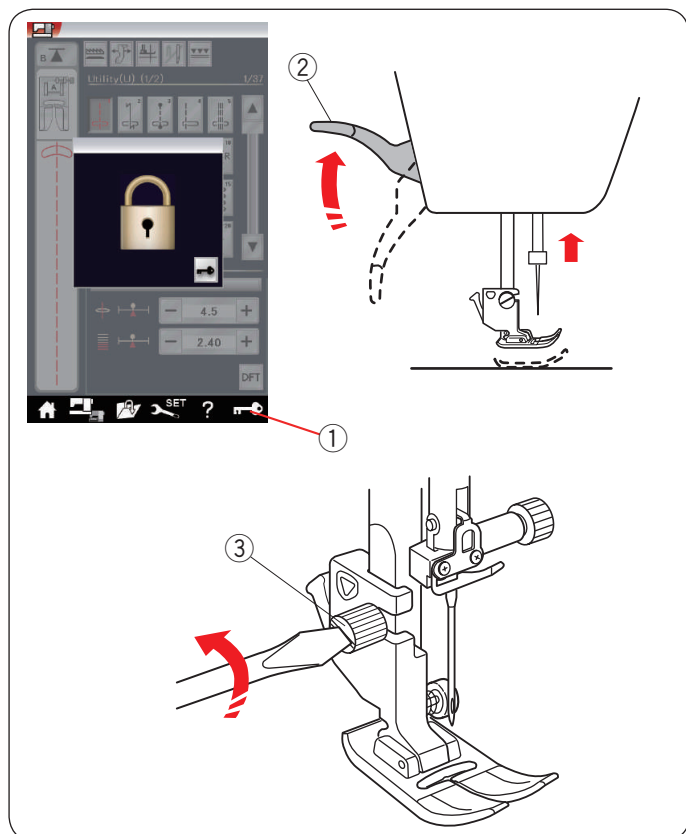
④ Pin

⑤ Groove

Each foot is marked with an identification letter.

⑥ Identification letter





## Replacing the Foot Holder

Replace the foot holder, if you use the dual feed feet, darning foot or embroidery foot.



### CAUTION:

Press the lockout key to lockout the machine before replacing the foot holder.

## Removing the presser foot holder

Raise the needle by pressing the needle up/down button. Press the lockout key and raise the presser foot with the presser foot lifter.

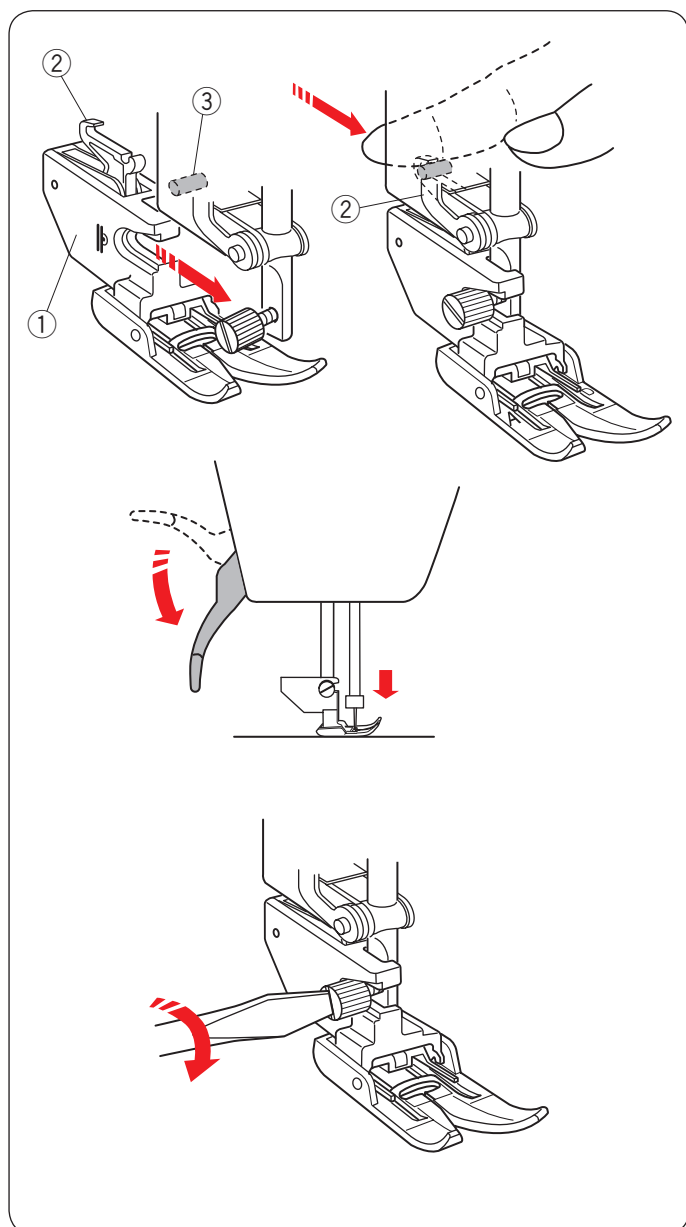
- ① Lockout key
- ② Presser foot lifter

Loosen the thumbscrew and remove the presser foot holder.

- ③ Thumbscrew

### NOTE:

Use the foot holders included in the standard accessories only.



## Attaching the dual feed holder

Attach the dual feed holder to the presser bar.

- ① Dual feed holder

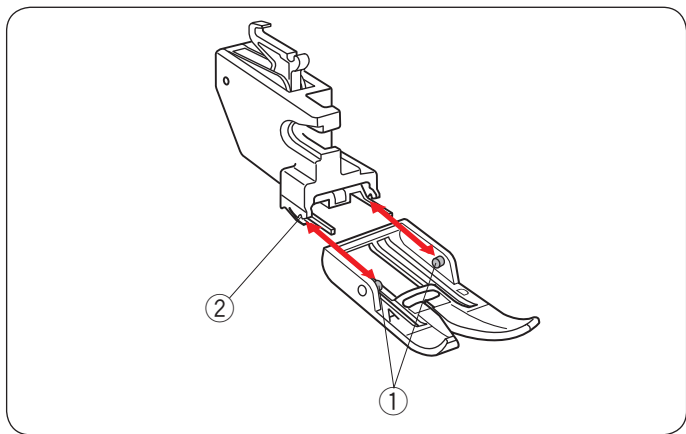
Tighten the thumbscrew with your fingers.

Push the dual feed link to engage it with upper feed drive.

- ② Dual feed link
- ③ Upper feed drive

Lower the presser foot lifter. Lower the needle to the lowest position by turning the hand wheel.

Tighten the thumbscrew securely with the screwdriver.

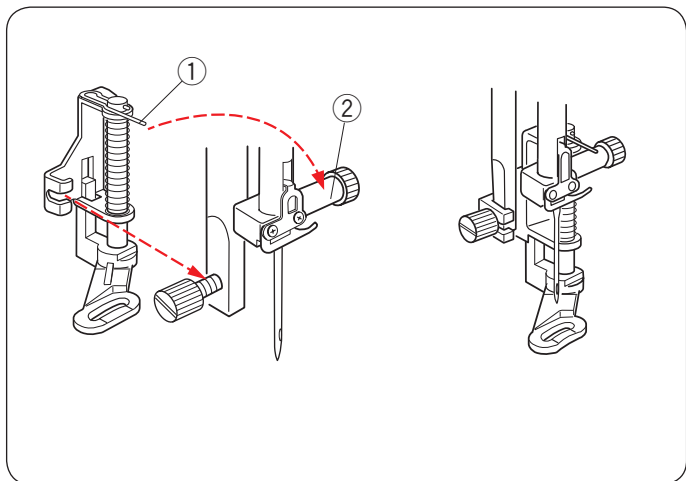


### Detaching and attaching the dual feed foot

Pull the foot toward you to remove it.

Insert the pins of the foot into the slits of the foot holder and gently push the foot until it snaps into place.

- ① Pin
- ② Slit

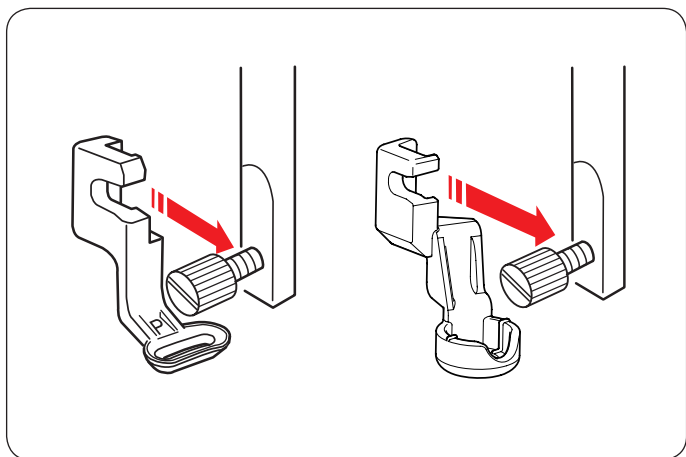


### Attaching the darning foot PD-H or darning foot (open-toe) PD-H

Attach the darning foot PD-H (or darning foot (open-toe) PD-H) to the presser bar by putting the pin on the needle clamp screw.

- ① Pin
- ② Needle clamp screw

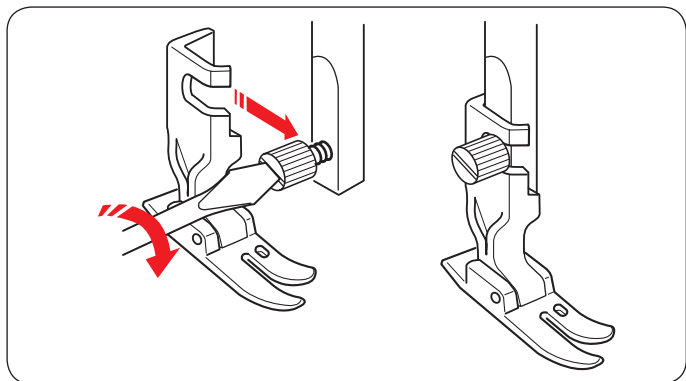
Tighten the thumbscrew firmly with the screwdriver.



### Attaching the embroidery foot P or ruler work foot QR

Attach the embroidery foot P or ruler work foot QR to the presser bar from behind.

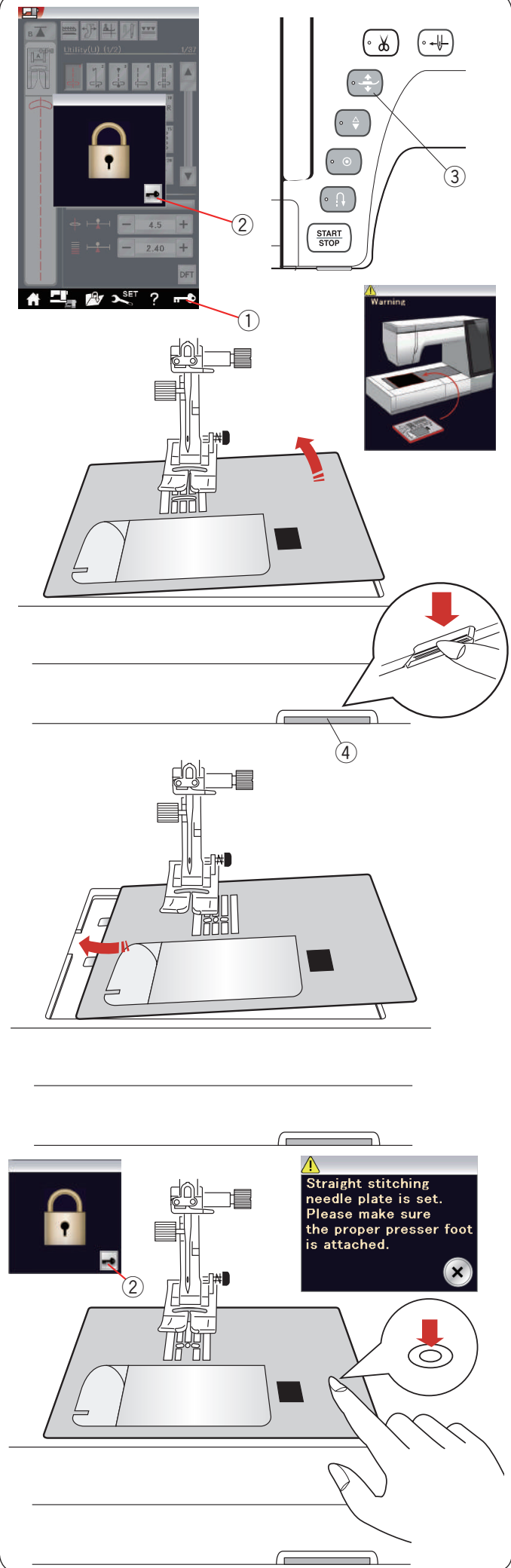
Tighten the setscrew firmly with the screwdriver.



### Attaching the professional grade foot HP

Attach the professional grade foot HP to the presser bar.

Tighten the setscrew firmly with the screwdriver.



## Replacing the Needle Plate

Use the straight stitch needle plate when embroidering. The straight stitch needle plate can be also used for straight stitches with the left, center or right needle drop positions.

Use the professional grade needle plate HP for the straight stitch with the left needle drop position. Attach the professional grade foot when sewing with the professional grade needle plate HP.



### CAUTION:

Always make sure to press the lockout key to lockout the machine before replacing the needle plate.

### NOTE:

When the straight stitch needle plate or professional grade needle plate is attached to the machine, the patterns not suitable for the straight stitch needle plate cannot be selected.

Raise the needle and press the lockout key. Press the presser foot lifter button to raise the presser foot.

- ① Lockout key
- ② Unlock key
- ③ Presser foot lifter button

Slide the extension table to the left to remove it. Push down the needle plate release lever and the needle plate will snap off.

- ④ Needle plate release lever

A message will appear warning that the needle plate is not secured.

Remove the needle plate to the right.

Place the straight stitch needle plate on the machine. Set the left edge of the needle plate into the opening.

Push down on the mark of the needle plate until it locks in place.

Make sure the warning message disappears and the straight stitch is automatically selected.

Turn the hand wheel slowly and make sure that the needle does not hit the needle plate.

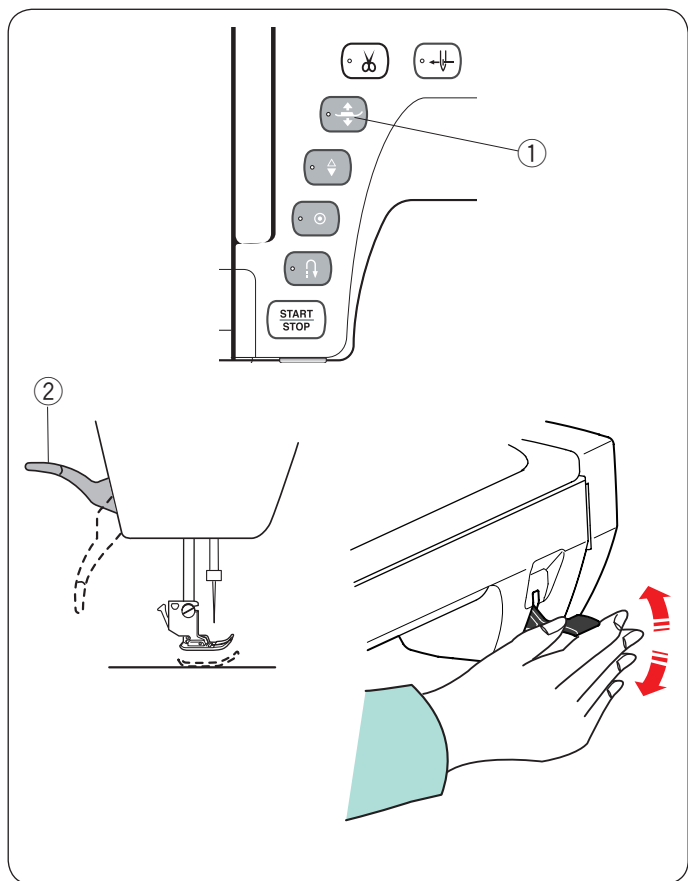
Press the unlock key to unlock.

- ② Unlock key



### CAUTION:

Never press the needle plate release lever while running the machine.



## Raising and Lowering the Presser Foot

You can raise and lower the presser foot with the presser foot lifter button, the presser foot lifter or the knee lifter.

- ① Presser foot lifter button
- ② Presser foot lifter

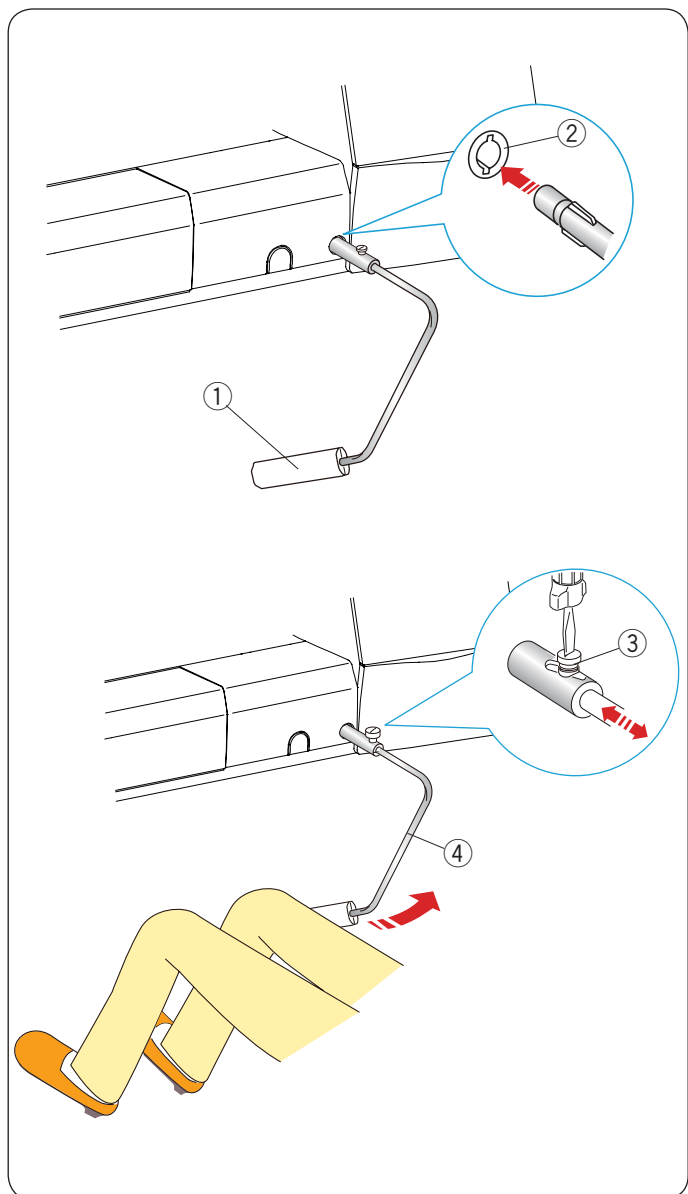
You can raise the presser foot about 6 mm (1/4") higher than the normal up position by exerting more pressure when lifting the presser foot lifter or knee lifter.

This helps you to place layers of thick fabrics or embroidery hoops under the foot.

### NOTE:

The presser foot cannot be lowered with the presser foot lifter if the foot was raised with the presser foot lifter button.

The knee lifter cannot be used in the embroidery mode.



## Knee Lifter

The knee lifter is extremely helpful when sewing patchwork, quilting etc., since it allows you to handle the fabric while your knee controls the presser foot.

### Attaching the knee lifter

Match the ribs on the knee lifter with the notches in the knee lifter socket and insert the knee lifter.

- ① Knee lifter
- ② Knee lifter socket

### Adjusting the knee lifter

The angle of knee lifter can be adjusted to fit your knee. Loosen the setscrew and slide the angle bar in or out to adjust the angle of the knee lifter.

Tighten the setscrew to secure the angle bar.

- ③ Setscrew
- ④ Angle bar

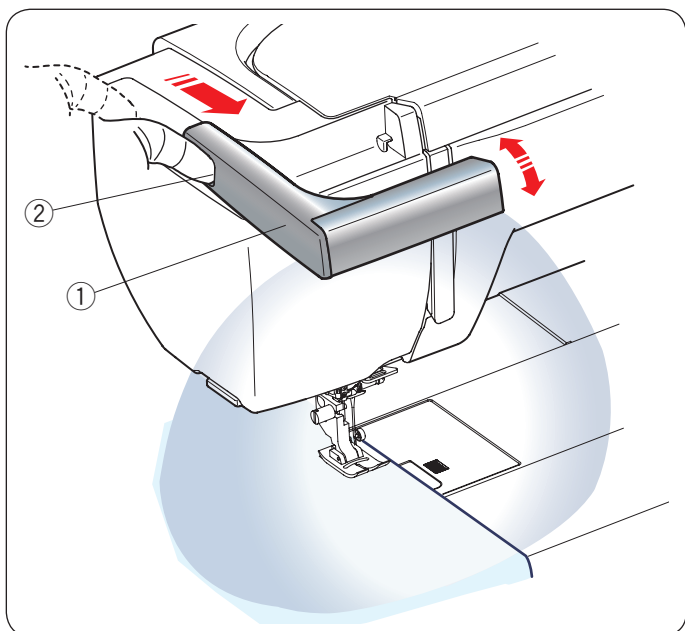
### Using the knee lifter

Push the knee lifter with your knee to move the presser foot up and down.

The knee lifter controls zigzag width of the variable zigzag (refer to page 98).

### NOTE:

Do not touch the knee lifter while stitching, otherwise the fabric will not be fed smoothly.



### Retractable Sewing Light

In addition to the twin LED lights, the machine is equipped with a retractable light.

Place your finger in the groove and slide the arm towards you. The light will turn on automatically. Adjust the angle of the light to illuminate the working area.

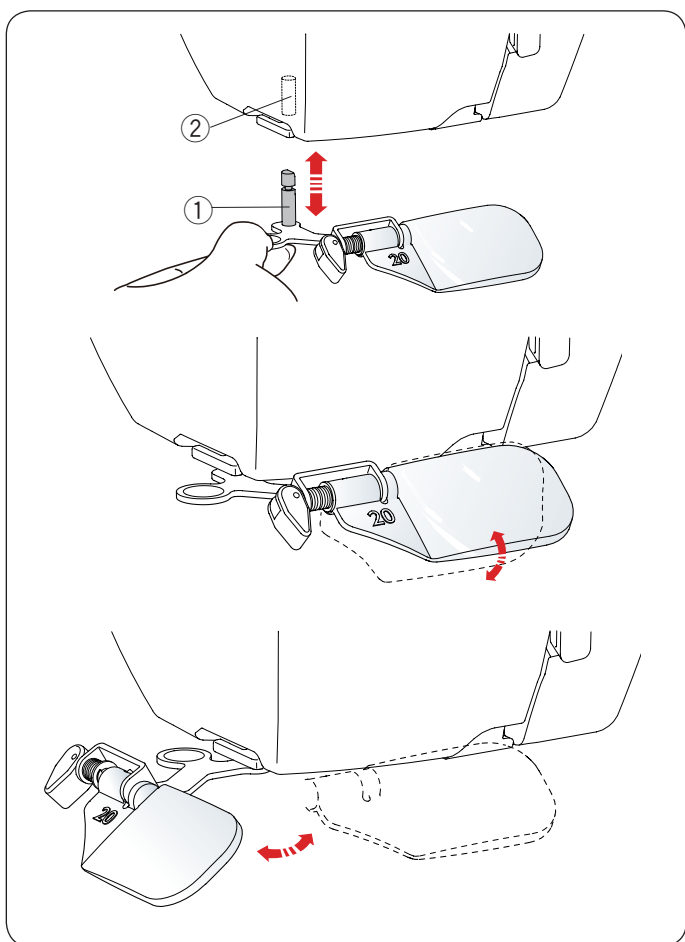
- ① Arm
- ② Groove

Push back the arm to turn the light off and store it.



### CAUTION:

Do not hit or exert excessive force on the arm of the retractable sewing light as this may cause damage when it is extended.



### Optic Magnifier

Use the magnifier to get a larger view of the needle area.

#### Attaching the magnifier

Hold the knob with your fingers and insert the pin into the hole in the bottom of the face plate.

Push the magnifier up until it snaps to fit.

Adjust the angle to get the best view.

- ① Pin
- ② Hole

#### Removing the magnifier

If the magnifier is not in use, turn it to the left out of sight or pull it down to remove.

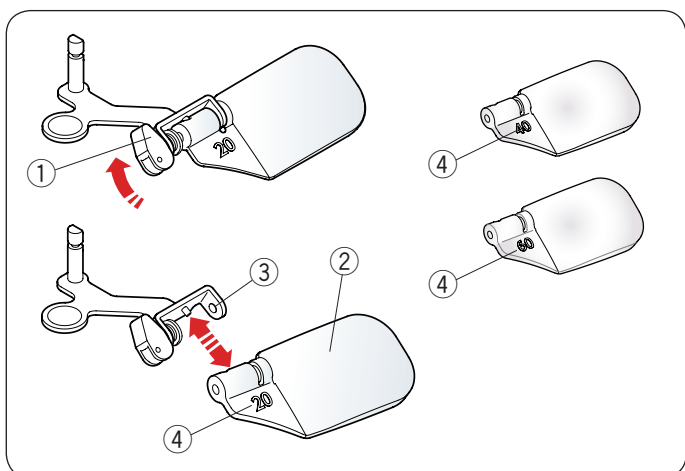


### CAUTION:

Do not use or leave the magnifier in the direct sunlight, otherwise it may cause a fire or burn.

Do not look at the sun through the magnifier as it can damage your eyes.

Do not hit or exert excessive force on the optic magnifier as this may cause damage when it is attached.



### Replacing the magnifier

To remove the lens, push or pull the lever ① to the opposite side to draw the pin out of the lens. Remove the lens from the metal.

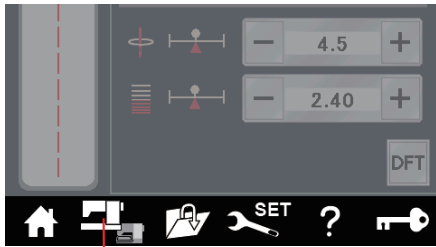
To attach the lens, insert it into the metal part ③ as illustrated.

Push or pull the lever ① to the opposite side to fix the lens.

Higher numbers ④ indicates stronger magnification.

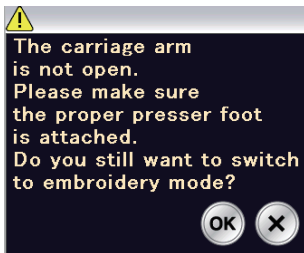
- ① Lever
- ② Lens
- ③ Metal part
- ④ Number



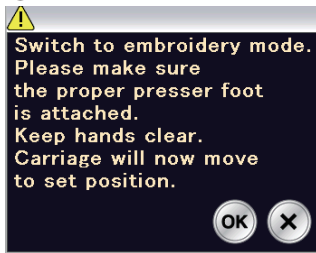


①

②



③



## Mode Selection

When you turn the power switch on, the visual touch screen will show the ordinary sewing mode after a few seconds.

The machine is set for straight stitch sewing.

### NOTE:

After turning on the power, it takes several seconds to display the opening window.  
(This is the required boot up procedure.)

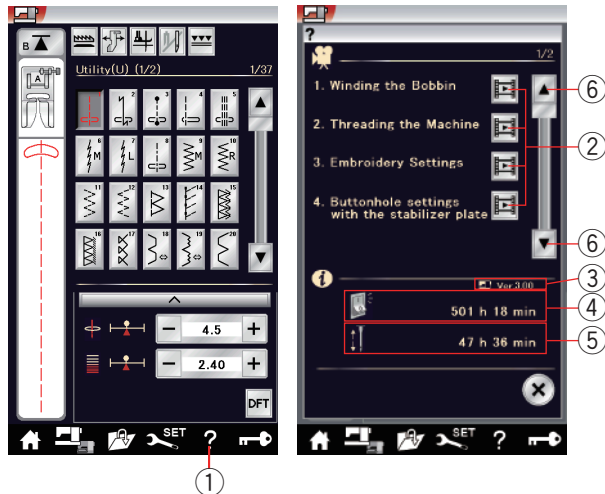
To switch to the embroidery mode, first turn the power switch off then attach the embroidery unit (refer to pages 111-112).

Turn the power switch on and press the mode switch key.

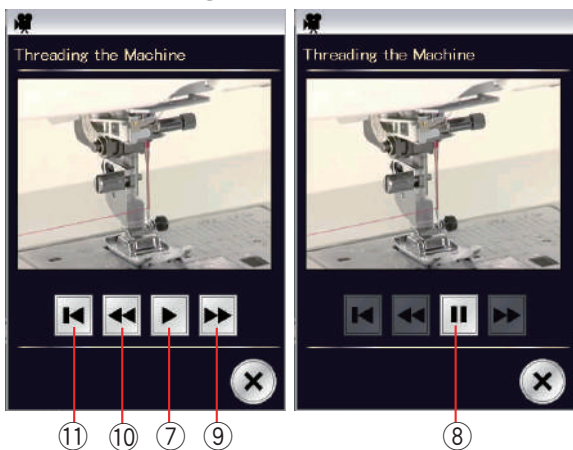
① Mode switch key

A confirmation message ② will appear. Do not press the OK key or X key. Open the carriage arm and a warning message ③ will appear. Press the OK key to switch to the embroidery mode and the carriage will move to the starting position.

To switch back to the ordinary sewing mode, press the mode switch key and follow the instructions in the confirmation message.



①



⑪

⑩

⑦

⑨

⑧

## On-screen Help

Press the help key to open the help menu.

You can view movies on 7 topics of essential operations of the machine, total power-on time of the machine and total operating time of the machine.

Press the page key to display the next page or previous page.

Select the help topic by pressing the movie key and the movie window will open.

① Help key

② Movie key

③ Software version

④ Total power-on time

⑤ Total operating time

⑥ Page keys

Press the play key to start the movie and press the pause key to stop playing.

You can search through the movie in forward or reverse direction by pressing the fast forward key or rewind key.

⑦ Play key

⑧ Pause key

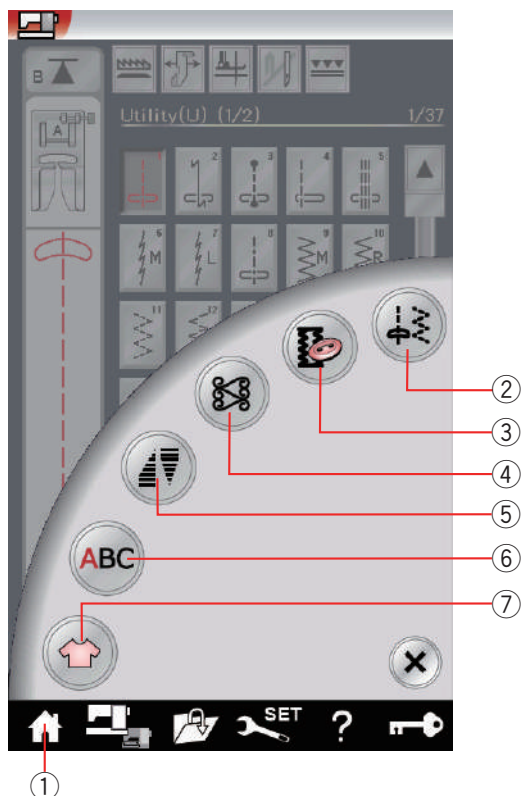
⑨ Fast forward key

⑩ Rewind key

Press the return key to return to the beginning of the movie.

⑪ Return key

Press the X key to close the current window.



## ORDINARY SEWING MODE

### Ordinary Stitch Patterns

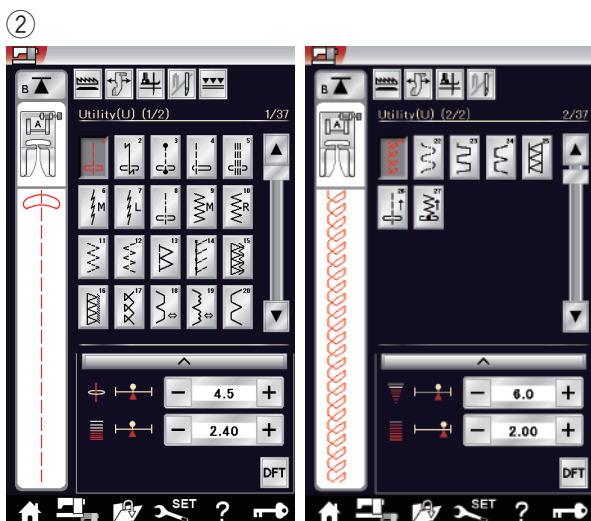
In the ordinary sewing mode, there are 6 categories available. Press the home key ① to enter the category selection.

- ① Home key
  - ② Utility stitches (U)
  - ③ Buttonhole and specialty stitches (B)
  - ④ Decorative and quilting stitches
  - ⑤ Tapering
  - ⑥ Monogramming
  - ⑦ Sewing applications
- Press one of the icon keys to select the category.

#### NOTE:

In this manual, the pattern number refers to the initial for each group or category.

For example pattern #15 in the buttonholes and specialty stitches is referred to as pattern B15.



### ② Utility stitches (U)

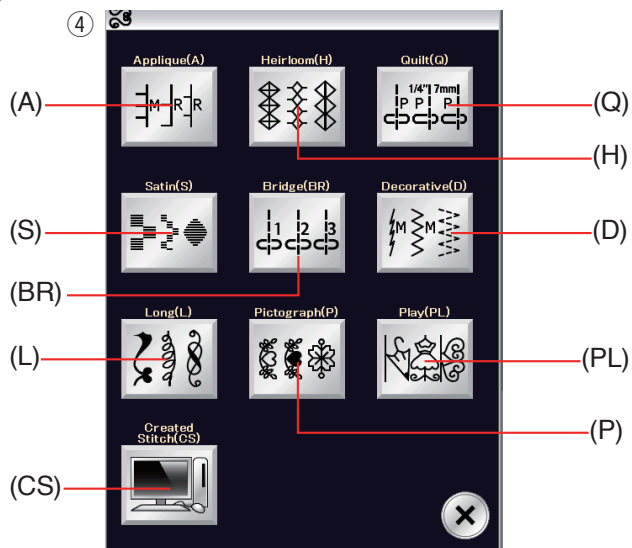
You can select utility stitches for seaming, overcasting, blind hemming, basting and shell tucking.



### ③ Buttonholes and specialty stitches (B)

There are various styles of buttonholes, button sewing stitches, darning, tacking, fly stitches and eyelets available in this category.

④

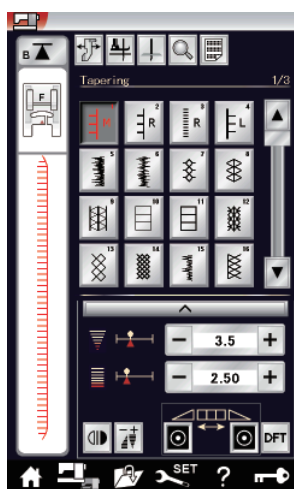


#### ④ Decorative and quilting stitches

This category consists of the following 10 groups.

- Applique stitches (A)
- Heirloom stitches (H)
- Quilting stitches (Q)
- Satin stitches (S)
- Bridge stitches (BR)
- Decorative stitches (D)
- Long stitches (L)
- Pictograph stitches (P)
- Play stitches (PL)
- Created stitches (CS)

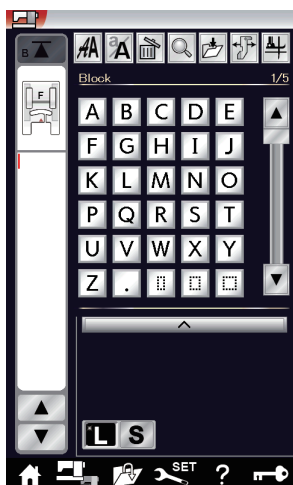
⑤



#### ⑤ Tapering

You can taper the beginning and end of the decorative stitch patterns to create tapered corners and points.

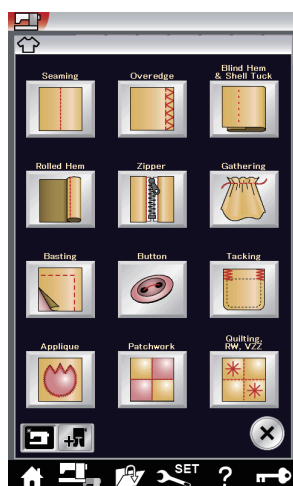
⑥



#### ⑥ Monogramming

You can program lettering as well as a combination of characters and symbol patterns.

⑦



#### ⑦ Sewing applications

You can select the appropriate stitch for a specific sewing project and fabric type from the designated applications in this category.

## Function Keys in Ordinary Sewing Mode

### ① Drop feed key

This key is available only with the utility stitch group. Press this key to drop or raise the feed dog.

### ② Cloth guide key

Press this key for cloth guide sewing (refer to page 41).

### ③ Foot-up key

If this option is turned on, the needle stops at the down position and the presser foot will automatically go up when the machine stops.

Press this key to turn this option on or off (refer to page 38).

### ④ Twin needle key

Press this key to set the stitch width for twin needle sewing (refer to page 64).

### ⑤ Dual feed key

Press this key for dual feed sewing (refer to page 33).

### ⑥ Page keys

Press the page key to display the next page or previous page. Press and hold the page key to turn the pages continuously.

### ⑦ Touch bar

Press on the touch bar to display the next page or previous page.

### ⑧ Startover key

If you stop sewing in the middle of a stitch pattern and wish to sew the pattern again from the beginning, press this key before you start sewing.

Press this key once to startover from the beginning of the current pattern, or press this key twice to startover from the beginning of the first pattern of the combination (refer to page 67).

### ⑨ Program key

Press this key to program a pattern combination.

When this key is pressed, the delete key, memory check key, save file key and cursor keys will appear.

### ⑩ Delete key

Press this key to delete the pattern from the pattern combination.

### ⑪ Memory check key

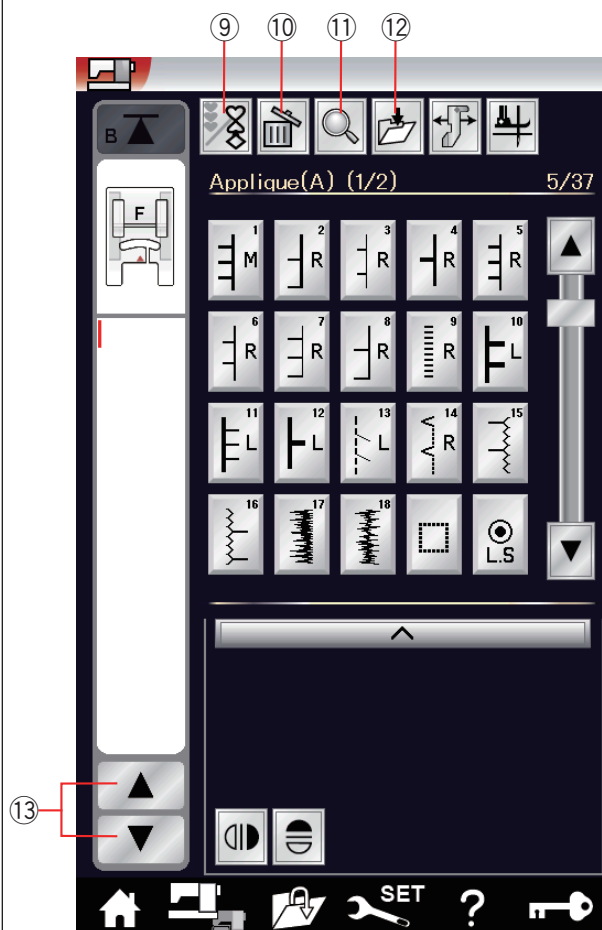
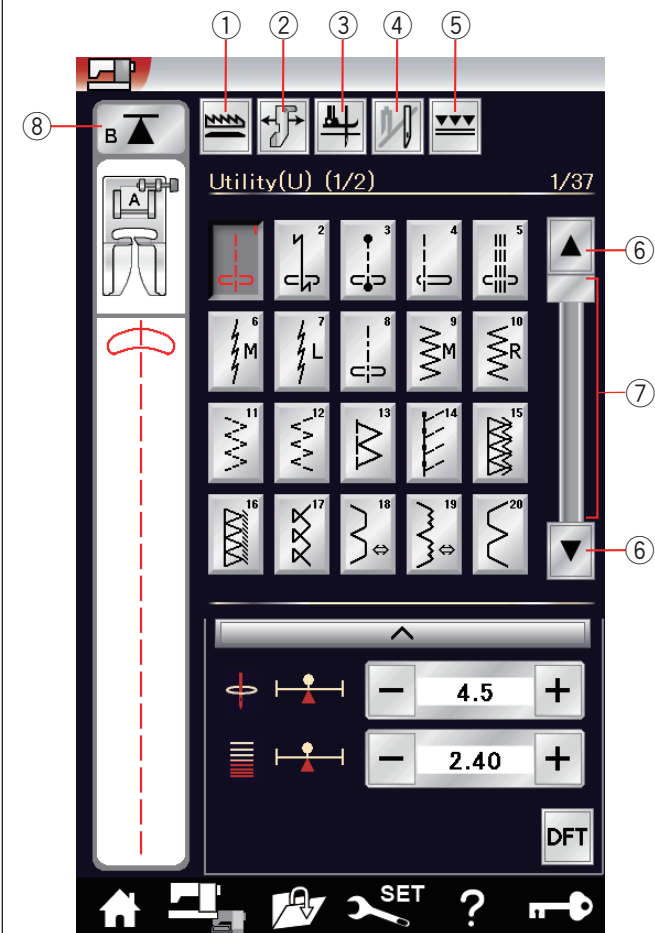
Press this key to view the stitch image of the entire pattern combination.

### ⑫ Save file key

Press this key to save the pattern combination as a file.

### ⑬ Cursor keys

Press one of the cursor keys to move the cursor up or down.





**⑭ Font selection key**

You can select one of 5 fonts (refer to page 74).

Select the desired font by pressing the corresponding key.

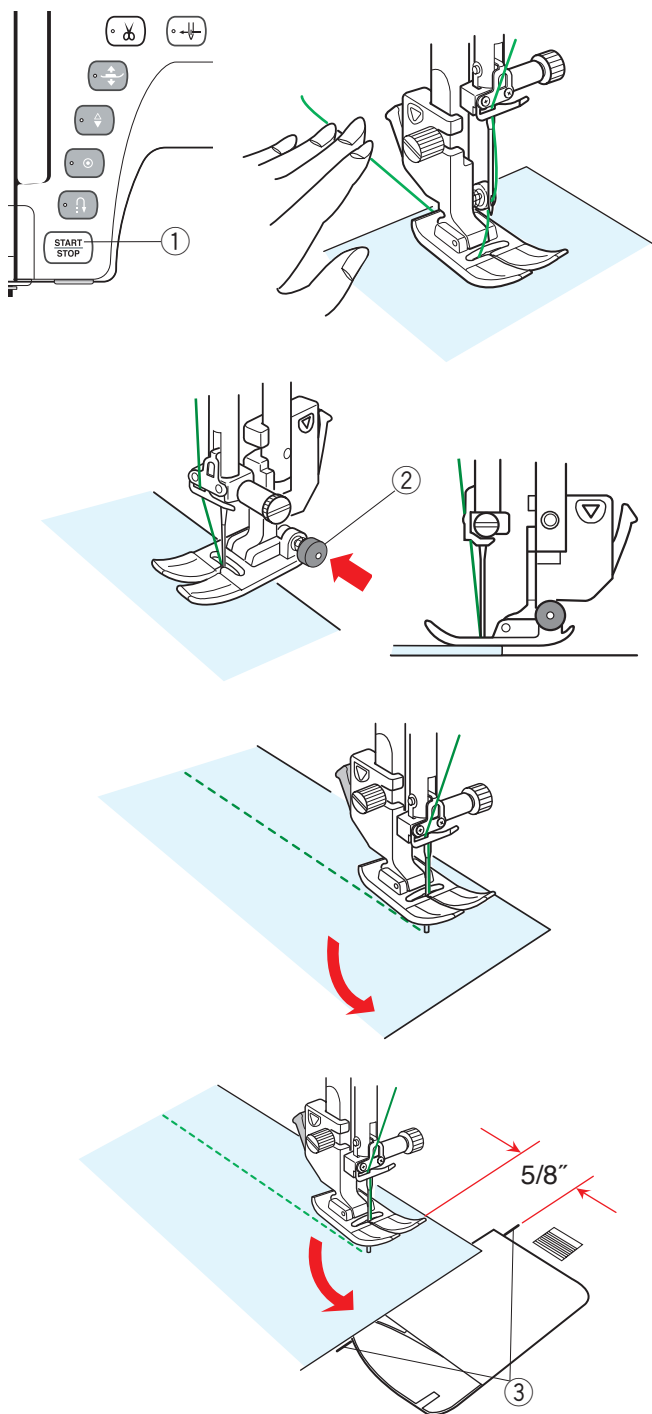
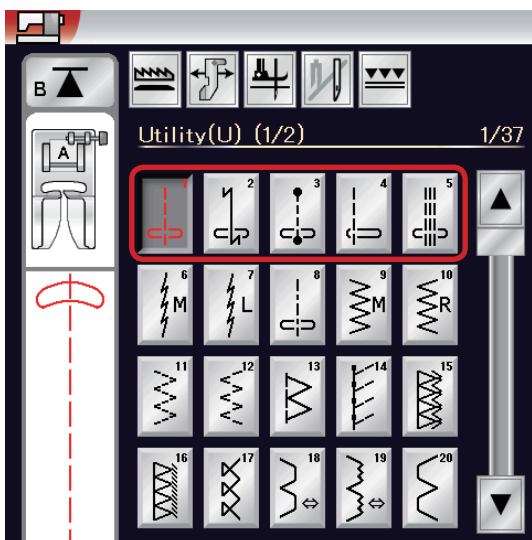
**⑮ Letter case key**

Press this key to select upper case or lower case for monograms.

**⑯ Letter size key**

Press this key to select the full size (L) or small size (S).





## Utility Stitches

### Straight stitches

Patterns U1 to U5 are straight stitches for seaming. Press the pattern selection key for the desired stitch.

### Starting to sew

Place the fabric next to the seam guide line on the needle plate. Lower the needle to the point where you want to start.

Pull the needle thread towards the rear and lower the foot.

#### NOTE:

Pull the needle thread to the left when using satin stitch foot F, open-toe satin stitch foot F2, dual feed foot or automatic buttonhole foot R.

Press the start/stop button or foot control to start sewing. Gently guide the fabric along the seam guide line letting the fabric go naturally.

① Start/stop button

### Sewing from the edge of thick fabric

The black button on the zigzag foot locks the foot in the horizontal position.

This is helpful when you start sewing at the extreme edge of thick fabrics or for sewing across a hem.

Lower the needle into the fabric at the point where you wish to start sewing.

Lower the foot while pushing in the black button. The foot is locked in the horizontal position to avoid slipping.

After a few stitches, the black button is released automatically.

② Black button

### Changing sewing direction

Stop the machine and press the presser foot lifter button to raise the presser foot.

Pivot the fabric around the needle to change the sewing direction as desired.

Start sewing in a new direction.

#### NOTE:

If you turn on the foot up option, the presser foot will automatically go up when the machine stops (refer to page 38).

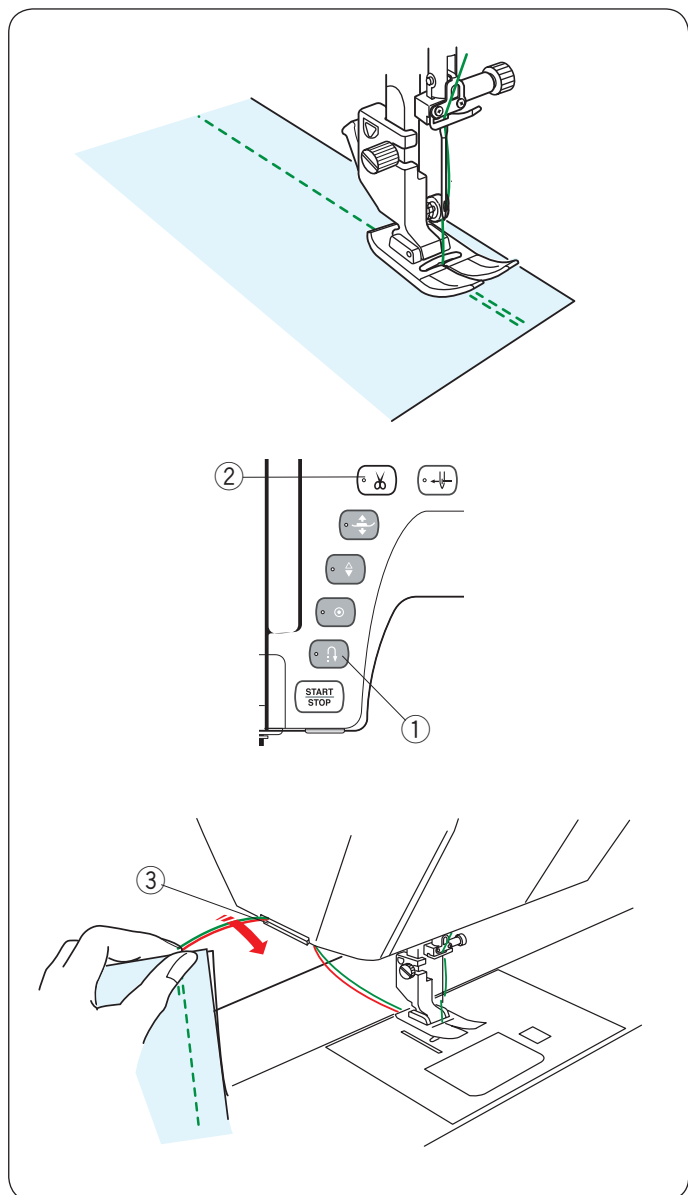
### Turning a square corner

To maintain a 5/8" seam allowance after turning a square corner, use the cornering guide on the needle plate.

Stop sewing when the front edge of fabric reaches the cornering guide lines.

Press the foot lifter button and turn the fabric 90 degrees. Start sewing in the new direction.

③ Cornering guide



### Securing seams

For fastening the ends of seams, press the reverse button and sew several reverse stitches.

The machine sews in reverse as long as you press and hold the reverse button.

#### ① Reverse button

Press the reverse button once when sewing the lock-a-matic stitch (pattern U2) or locking stitch (pattern U3) and the machine will lock the stitches off and stop automatically.

### Cutting threads

To cut the threads after finishing sewing, press the thread cutter button. The needle bar and presser foot will automatically go up after trimming the threads.

#### ② Thread cutter button

#### NOTE:

The thread cutter button does not function when the presser foot is up.

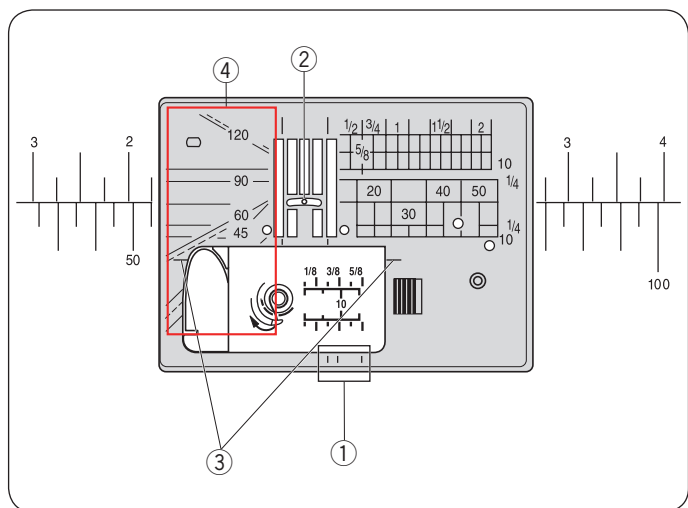
Use the thread cutter on the face plate to cut specialized or thick threads if the auto thread cutter does not work well.

To use the thread cutter on the face plate, remove the fabric and draw it to the back.

Pull the threads up and slip them between the thread cutter and face plate from behind.

Pull the threads toward you to cut.

#### ③ Thread cutter



### Needle plate guides

The seam guides are marked on the needle plate, free arm and hook cover.

The seam guides for 1/4", 3/8" and 5/8" are also marked on the front of the needle plate.

#### ① Seam guides on the front of the needle plate

The numbers on the needle plate indicate the distance from the center needle position in millimeters and inches.

#### ② Center needle position

The cornering guides are very useful when turning a square corner.

#### ③ Cornering guide

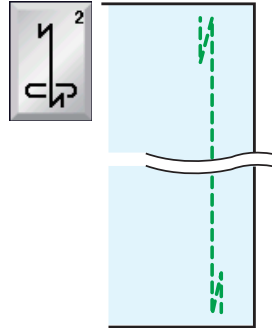
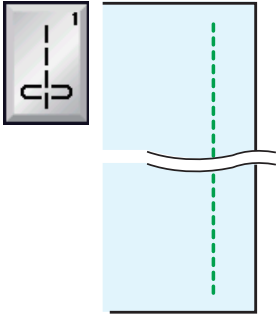
The angle scales on the needle plate are useful for patchwork piecing (refer to page 61).

#### ④ Angle scales

## Variety of Straight Stitches

### U1 Straight stitch in center needle position

Use this stitch for seaming, rolled hemming etc.

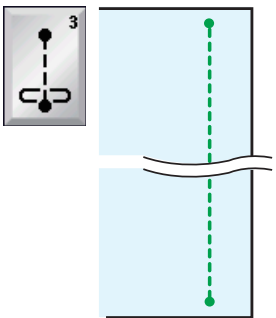


### U2 Lock-a-matic stitch

Use this stitch to secure the beginning and the end of a seam with backstitching.

When you reach the end of the seam, press the reverse button once.

The machine will sew four reverse stitches, four forward stitches, and then stop sewing automatically.

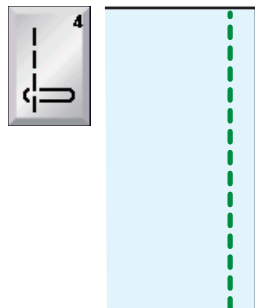


### U3 Locking stitch

This unique stitch is used where an invisible locking stitch is needed.

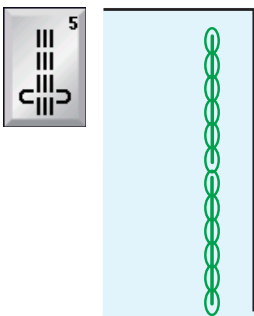
The machine will sew several locking stitches at the beginning and continue sewing forward.

When you press the reverse button at the end of the seam, the machine will sew several locking stitches in place, then stop sewing automatically.



### U4 Straight stitch in left needle position

Use this stitch to seam fabrics close to the edge.

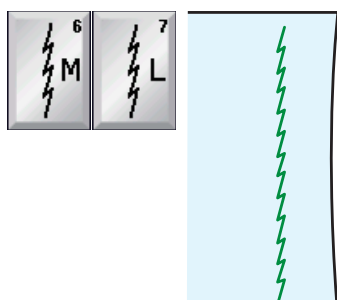


### U5 Triple stretch stitch

This strong, durable stitch is recommended for areas where both elasticity and strength are needed to ensure comfort and durability.

Use it to reinforce areas such as crotch and armhole seams.

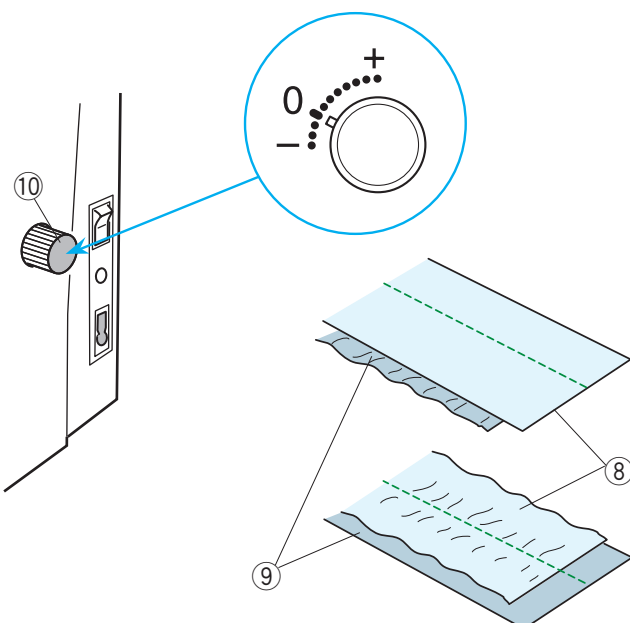
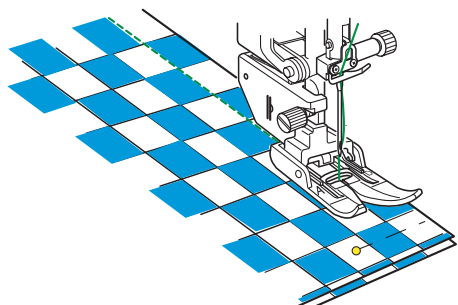
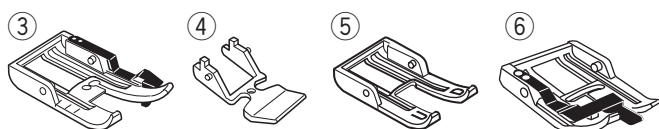
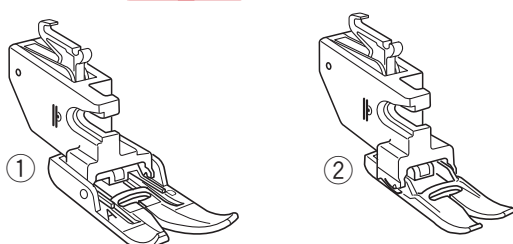
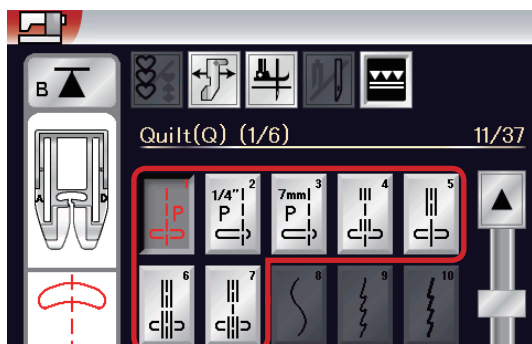
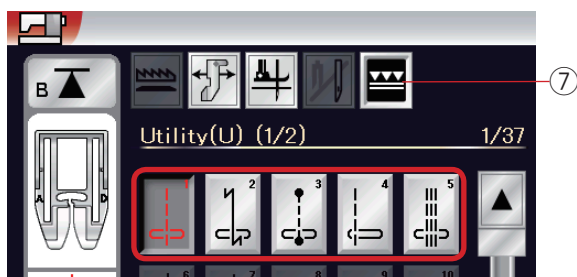
Also use it when constructing items such as backpacks for extra strength.



### U6, U7 Stretch stitches

These are narrow stretch stitches designed to eliminate puckering on knit fabrics and bias seams, while permitting the seam to be pressed completely open flat.

Use U7 for seaming fine fabrics or stretch fabrics.



## Sewing with the Dual Feed Device

Patterns U1 to U5 and Q1 to Q7 can be sewn with the dual feed device.

The dual feed device is extremely effective when sewing hard to feed materials such as PVC coated fabric or leather.

It also eliminates layer slippage.

The following 6 types of dual feed feet are available in the standard accessories.

- ① Dual feed foot AD (twin):  
For regular sewing with dual feed
- ② Dual feed foot VD (single):  
For sewing narrow areas with dual feed
- ③ Dual feed quilt piecing foot OD (twin):  
For 1/4" seam piecing with dual feed
- ④ Dual feed zipper foot ED (single):  
For zipper application with dual feed
- ⑤ AcuFeed open toe foot UD (twin):  
For open toe better view sewing with dual feed
- ⑥ AcuFeed ditch quilting foot SD (twin):  
For ditch quilting with dual feed

Attach the desired dual feed foot to the respective dual feed holder and attach to the machine (refer to page 20). Press the dual feed key ⑦ and select the desired pattern.

### NOTE:

The patterns not suitable for dual feed sewing are grayed out.

The dual feed key will gray out or not be indicated if you selected a pattern not suitable for dual feed sewing.

Place the fabric under the foot and lower the needle at the point where you wish to start.  
Start sewing at medium speed.

When seaming plaid fabrics, match the plaids of the upper and lower layers and pin them together.  
Remove the pins as you sew.

### Dual feed balancing dial

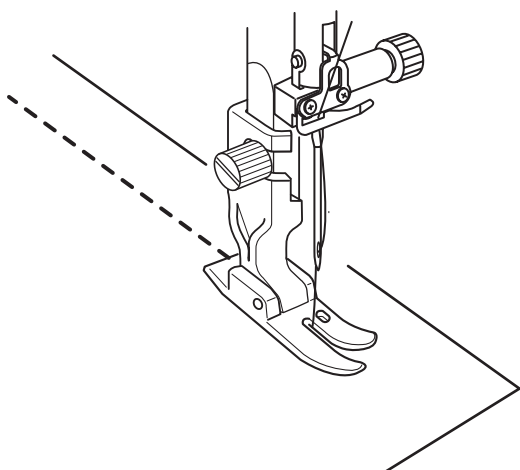
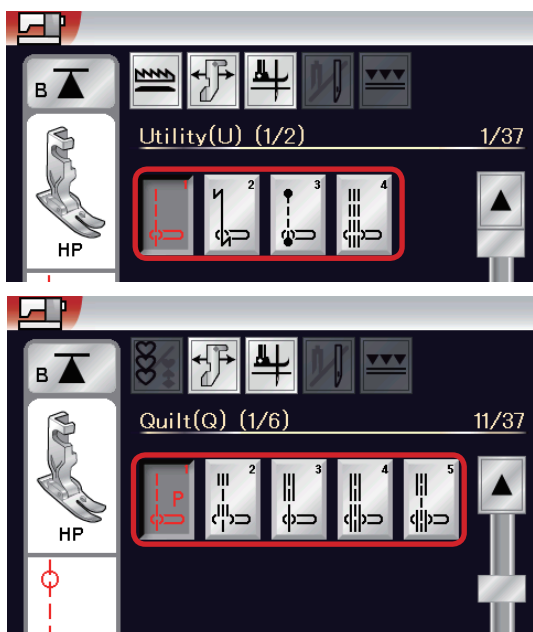
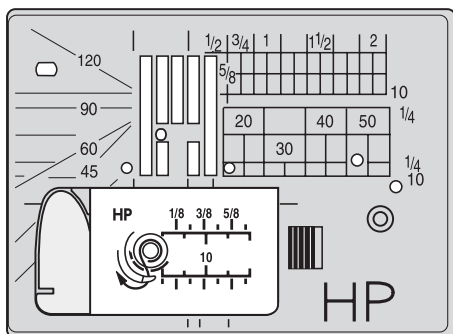
The dual feed balancing dial should be set at "0", however you may need to adjust the dual feed balance depending on the type of fabric.

Check the feed balance by test sewing on a scrap piece of the fabric you intend to use.

(A): If the lower layer puckers, turn the dual feed balancing dial toward "+".

(B): If the upper layer puckers, turn the dual feed balancing dial toward "-".

- ⑧ Upper layer
- ⑨ Lower layer
- ⑩ Dual feed balancing dial



## Sewing with the Professional grade foot HP

Patterns U1 to U4 and Q1 to Q5 can be sewn with the professional grade foot.

Use the professional grade needle plate HP for the straight stitch with the left needle drop position.

Attach the professional grade foot to the machine (refer to page 21).

Replace the needle plate with the professional grade needle plate (refer to page 22).

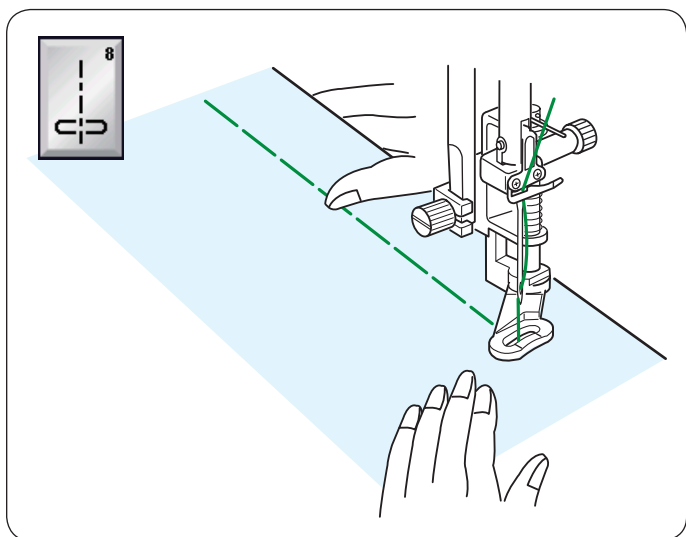
### NOTE:

The patterns not suitable for the professional grade foot will not appear when the professional grade needle plate is attached.

Select the desired pattern.

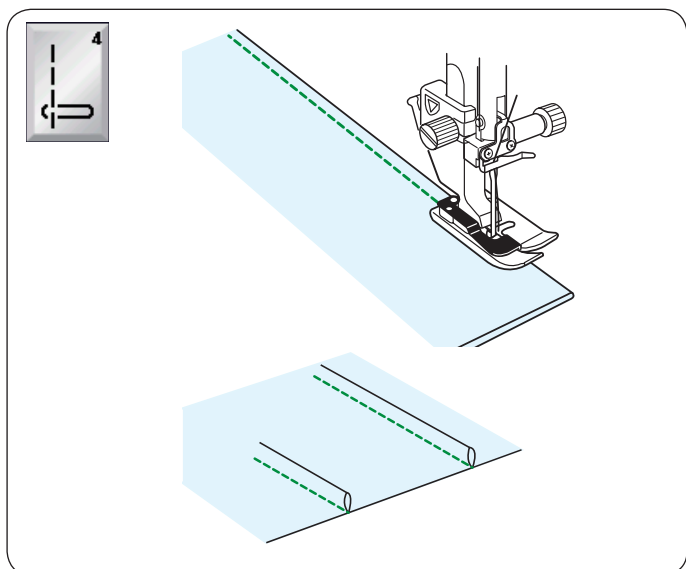
Place the fabric under the foot and lower the needle at the point where you want to start and sew.





#### U8 Basting

See page 90 for sewing instructions.



#### U4 Pintucking

Attach the blind hem foot G.

Fold the fabric with the wrong sides together.

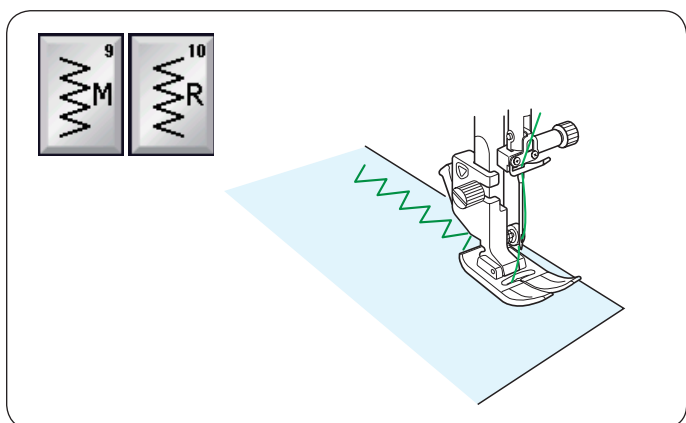
Place the folded fabric under the blind hem foot.

Align the edge of the fold with the guide on the foot, and lower the foot.

You may adjust the needle drop position to 0.5-1.5 if necessary.

Sew while guiding the edge of the fold along the guide.

Open the fabric and press the tuck to one side.

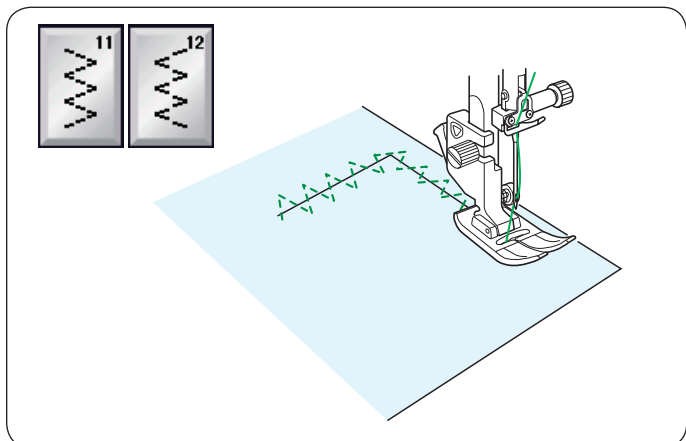


#### Zigzag Stitches

##### U9, U10 Zigzag stitches

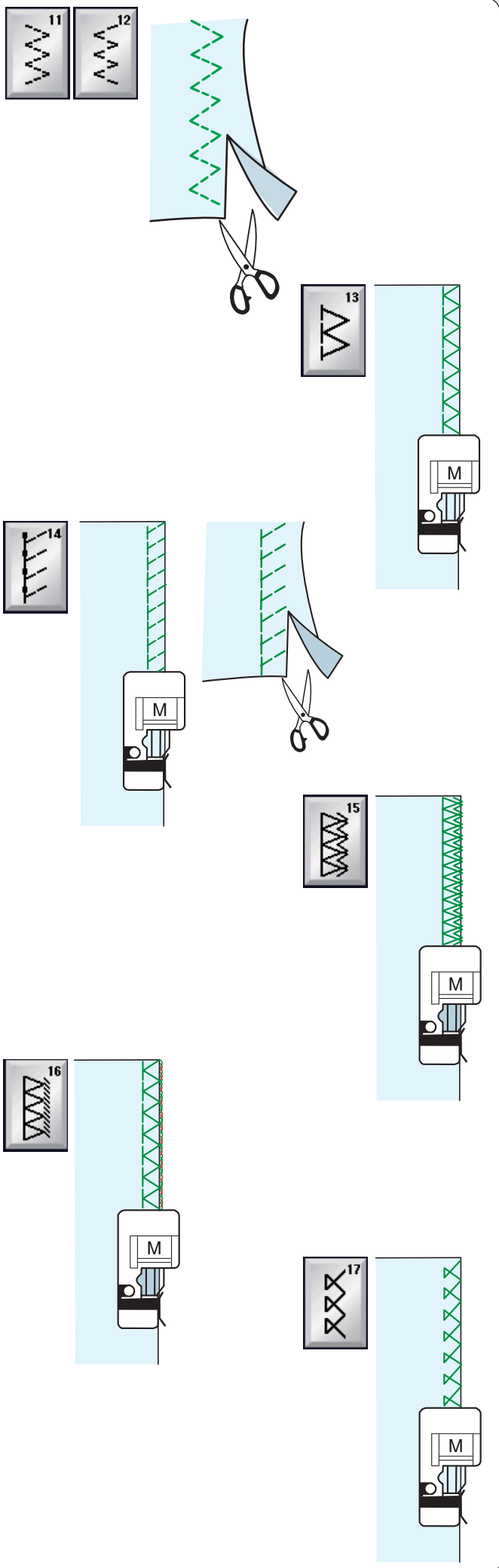
Zigzag stitches are used for various sewing needs including overcasting. These stitches can be used on most woven fabrics.

A dense zigzag stitch can also be used for applique.



##### U11, U12 Multiple zigzag stitches

These stitches are used for mending tears.



## Variety of Overcasting Stitches

### U11, U12 Multiple zigzag stitch: Zigzag foot A

This stitch is used to finish a raw edge of synthetics and other stretch fabrics that tend to pucker.

Sew along the fabric edge leaving an adequate seam allowance. After sewing, trim off the seam allowance closer to the stitches.

### U13 Overcasting stitch: Overedge foot M

This stitch can be used to simultaneously seam and overcast edges of fabrics.

Use this stitch when you do not need to open seams flat. Place the fabric edge next to the guide of the foot and sew.

### U14 Knit stitch: Overedge foot M

This stitch is recommended for sewing such fabrics as synthetic knits and stretch velour as it provides the greatest amount of elasticity and strength.

Place the fabric edge next to the guide of the foot and sew.

For better results, use the zigzag foot A and sew leaving an adequate seam allowance.

After sewing, trim the seam allowance close to the stitches.

### U15 Double overedge stitch: Overedge foot M

This stitch is excellent for fabrics that tend to fray extensively such as linens and gabardines.

Place the fabric edge next to the guide of the foot and sew.

Two rows of zigzag stitches are simultaneously sewn over the edge to insure that the fabric will not ravel.

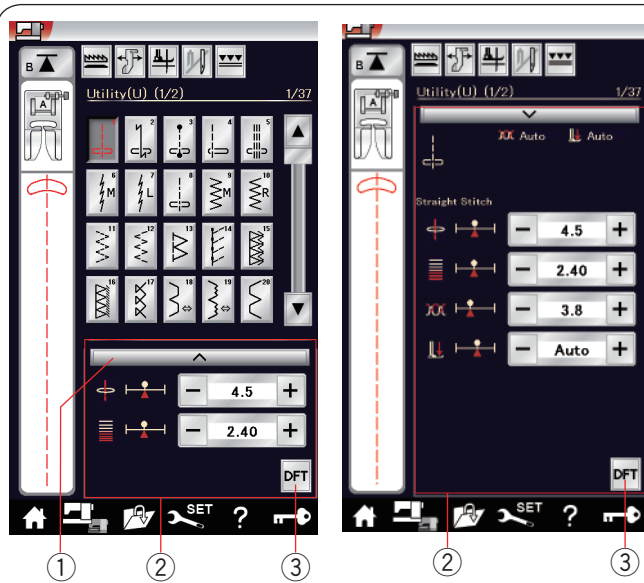
### U16 Overlock stitch: Overedge foot M

This stitch finishes the edges of fabric in a way similar to a commercial overlocking machine for a professional look.

Place the fabric edge next to the guide of the foot and sew.

### U17 Overlock stitch: Overedge foot M

This stitch is used for overcasting knits and stretch fabrics. Place the fabric edge next to the guide of the foot and sew.



## Manual Stitch Settings

You can alter the stitch width (or needle drop position of the straight stitches) and stitch length.

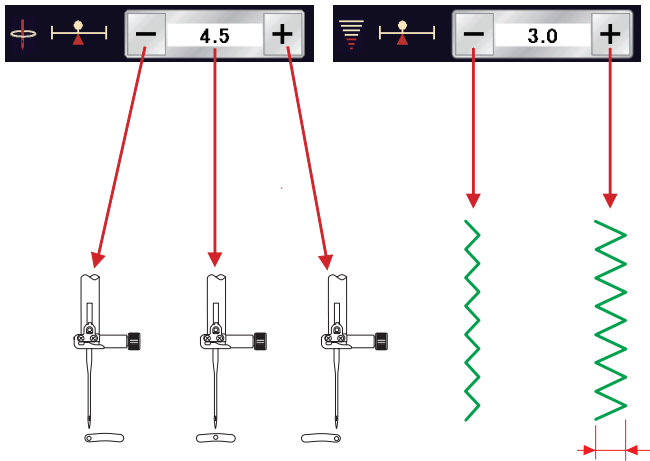
Press the “+” or “-” key beside the setting you wish to change. Press default key ③ to recover the original stitch setting.

When you press the setting bar, the manual setting window expands to show more options.

You can alter other settings such as needle thread tension and presser foot pressure value, depending on the selected stitch pattern.

Press the setting bar again to shrink the manual setting window.

- ① Setting bar
- ② Manual setting window
- ③ Default key



## Altering needle drop position (straight stitches)

Press the “+” key to move the needle drop position to the right.

Press the “-” key to move the needle drop position to the left.

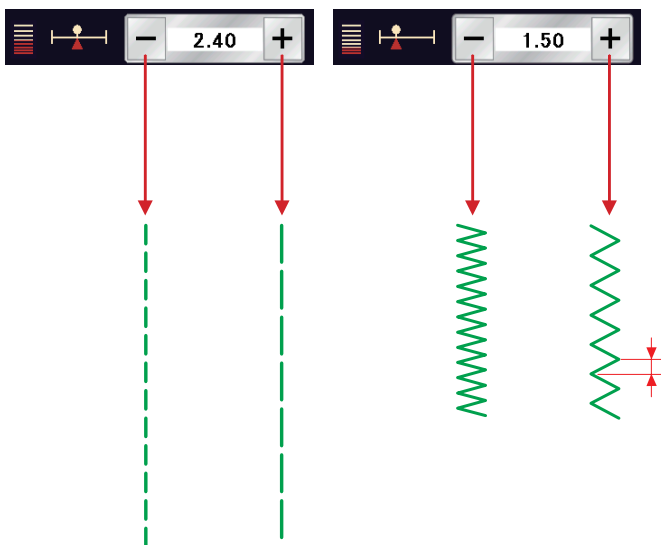
## Altering stitch width

Press the “+” key to increase the stitch width.

Press the “-” key to decrease the stitch width.

### NOTE:

The adjustable range of patterns U6, U7, U9-U12 and U27 is 0.0 to 7.0.



## Altering stitch length

Press the “+” key to increase the stitch length.

Press the “-” key to decrease the stitch length.

### NOTE:

The adjustable range of patterns U6 is 0.0 to 5.0, U7 is 1.0 to 5.0, U9-U12 and U27 is 0.0 to 5.0.

### Adjusting thread tension

This machine is equipped with automatic thread tension control, which optimizes the tension balance for the selected stitch pattern.

### Balanced thread tension

**Straight stitch:** Both needle and bobbin threads interlock between the layers.

**Zigzag stitch:** The needle thread appears slightly on the wrong side of the fabric.

However you may need to manually adjust the tension balance depending on the sewing conditions, or you can fine-tune the thread tension to suit your preference.

- ① Press the “+” key if the tension is too loose.
- ② Press the “-” key if the tension is too tight.

### Adjusting foot pressure control

The presser foot pressure is automatically optimized for each stitch pattern.

However, you can adjust the foot pressure manually by pressing the “+” key or “-” key to suit your specific sewing needs.

### Number of locking stitches

The machine sews 5 times at the beginning and 3 times at the end of locking stitches.

However, you can change the number of lock stitches at the beginning ① and the end ② with this option.

To change the number of lock stitches at the beginning, press the “+” or “-” key in section ③.

To change the number of lock stitches at the end, press the “+” or “-” key in section ④.

This option is available only for the locking stitch (U3) or any other applicable sewing applications where locking stitches are required.

### Foot up for pivoting

If this option is turned on, the presser foot will automatically go up when the machine stops.

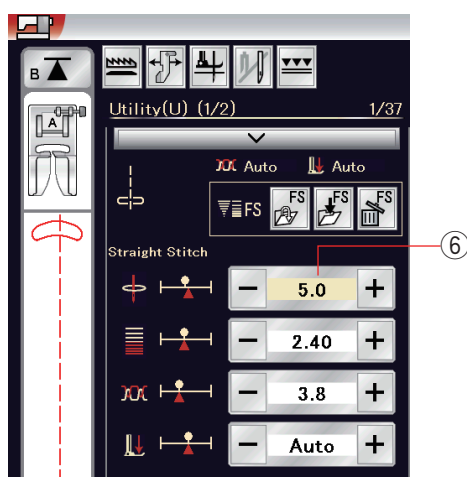
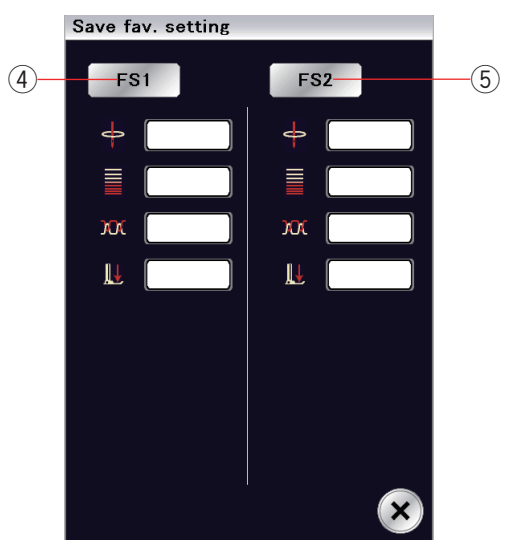
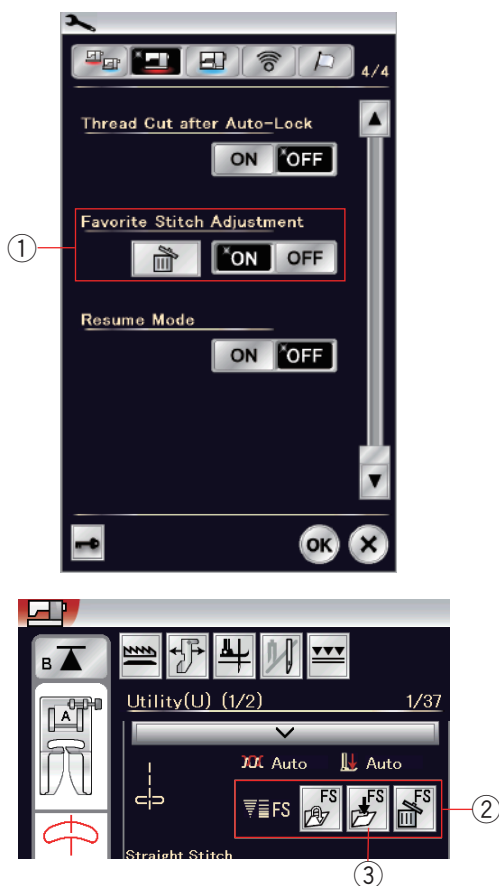
This feature is very useful when turning corners.

Press the foot-up key to turn this option on or off.

- ① Foot-up key

### NOTE:

Height of the foot can be altered in the ordinary sewing setting mode (refer to page 104).



## Favorite Stitch Adjustment

You can save customized stitch settings (stitch length, stitch width, thread tension and presser foot pressure, depending on the selected stitch patterns) as Favorite Stitch Adjustment. When the favorite stitch adjustment option is turned ON ① (refer to page 106), the last-used customized stitch settings are automatically assigned when the stitch pattern is selected.

### NOTE:

Favorite stitch option cannot be assigned for created stitch (CS).  
Favorite stitch option cannot be used in monogram mode.

**Example:** To change the preset value of the needle drop position from “4.5” to “5.0”.

Turn the Favorite Stitch Adjustment option ON (refer to page 106).

Select stitch pattern U1.

Press the setting bar. The manual setting window expands to show more options.

The favorite stitch setting option ② appears on the manual setting window.

Change the needle drop position from “4.5” to “5.0” by pressing “+” key.

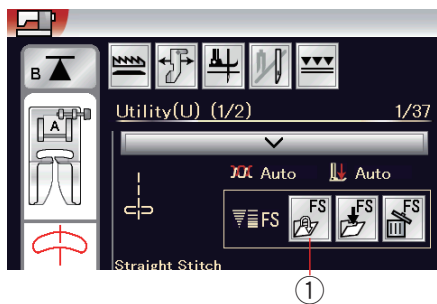
Press the save favorite key ③.

Save fav. setting dialog box will open.

You can store 2 sets of favorite stitch settings (FS1 and FS2). Press FS1 ④ or FS2 ⑤ to register the favorite stitch settings.

The cream-colored box ⑥ indicates that the customized preset stitch value is applied to the setting.



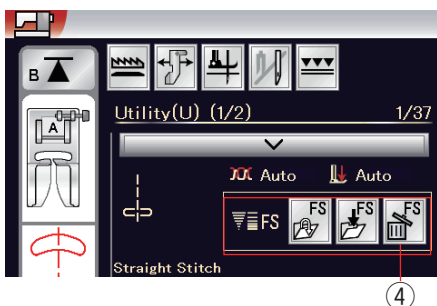


To select the favorite stitch settings, press the open favorite key ①.



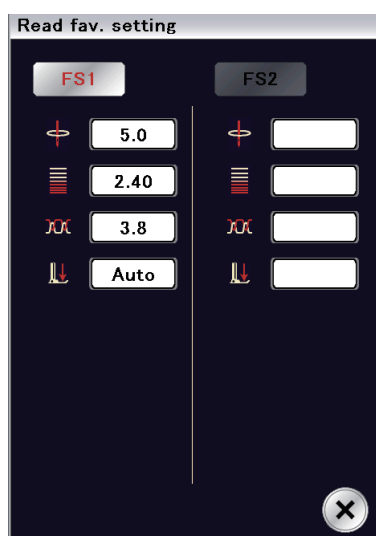
The selected set of favorite stitch settings is indicated in red ②.

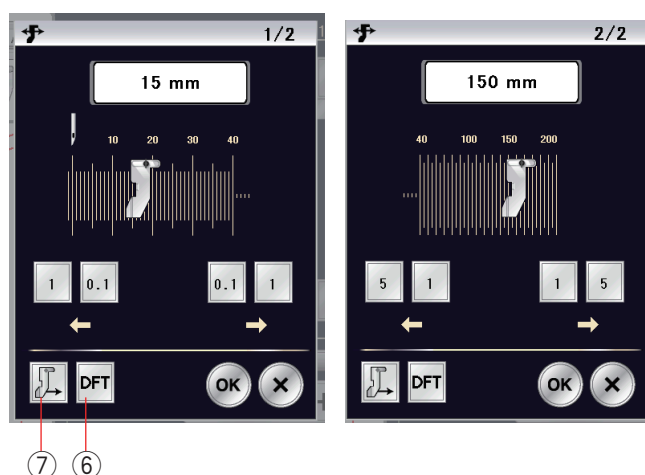
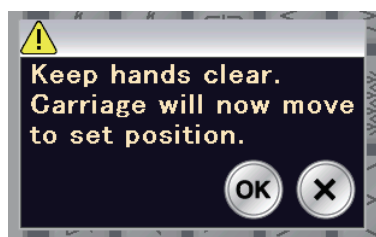
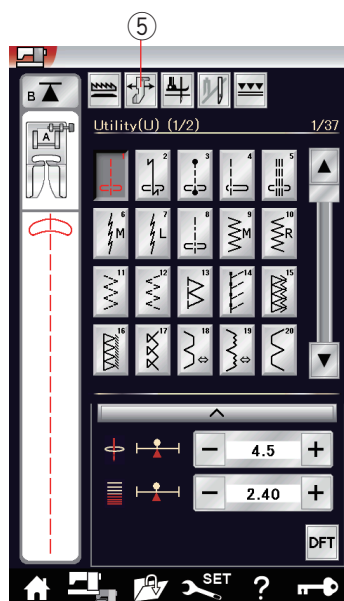
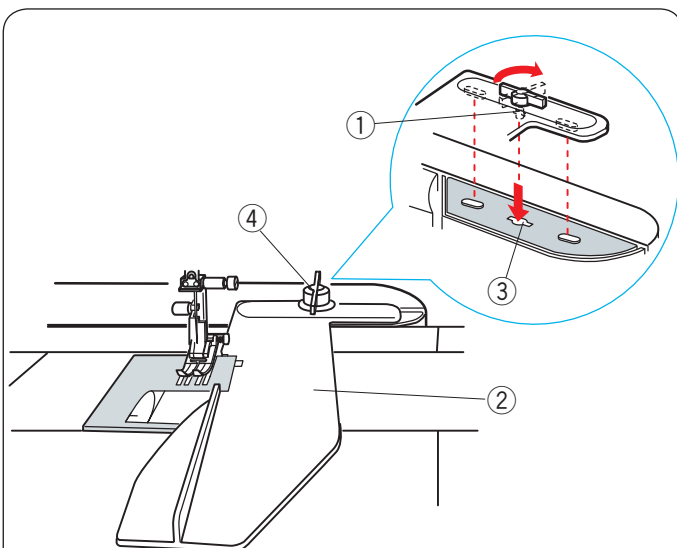
Select the desired set of customized stitch settings by pressing FS1 ② or FS2 ③.



To delete favorite stitch settings, press the delete key ④.

Select the desired set of favorite stitch settings by pressing FS1 ② or FS2 ③.





## Cloth Guide



### CAUTION:

- Always leave sufficient space to the left of the machine when using the cloth guide.
- Do not use the cloth guide when the buttonhole foot R is attached.
- The extension table cannot be opened when the cloth guide is in use.

### Attaching the cloth guide

Attach the embroidery unit (see page 111). Insert the pin on the cloth guide into the carriage hole. Turn the attaching knob clockwise to secure the cloth guide.

- ① Pin
- ② Cloth guide
- ③ Carriage hole
- ④ Attaching knob

### Setting the cloth guide position

Press the cloth guide key.

- ⑤ Cloth guide key

The visual touch screen will show a warning message. Press the OK key.

The cloth guide adjustment window will open.

Press the   or   key to move the cloth guide to the desired position.

The cloth guide will move the distance indicated on the key.

The cloth guide position is indicated on the scale bar and the distance from the center needle drop position is indicated in millimeters or inches.

Press the OK key to register the setting and close the cloth guide adjustment window.

### NOTE:

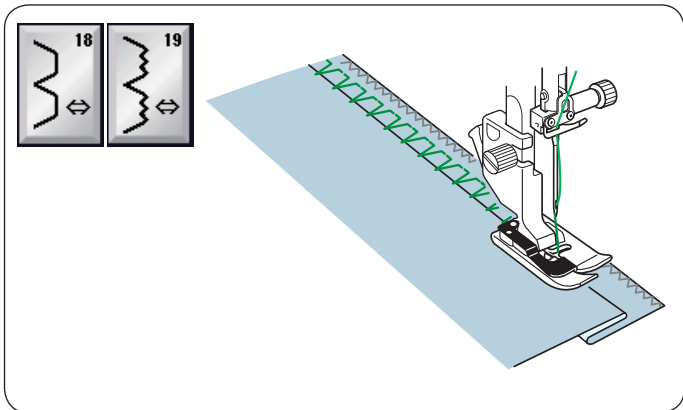
The machine will not run if the cloth guide adjustment window is open.

Press the default key to return the cloth guide to the default position (15 mm or 5/8").

- ⑥ Default key

Make sure to return the carriage to the stored position by pressing the cloth guide storage key and remove the cloth guide after you finish sewing.

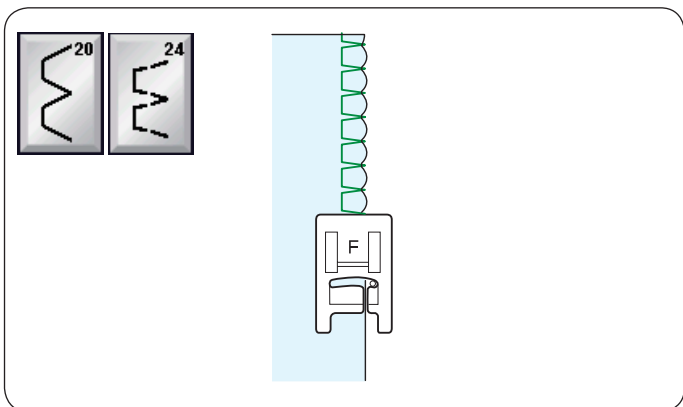
- ⑦ Cloth guide storage key



## Other Utility Stitches

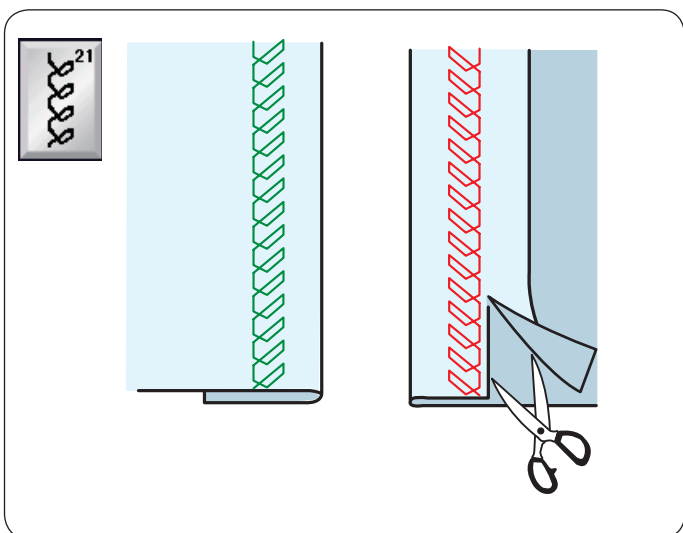
### U18, U19 Blind hemming

Refer to page 82 for sewing instructions.



### U20, U24 Shell tuck

Refer to page 83 for sewing instructions.



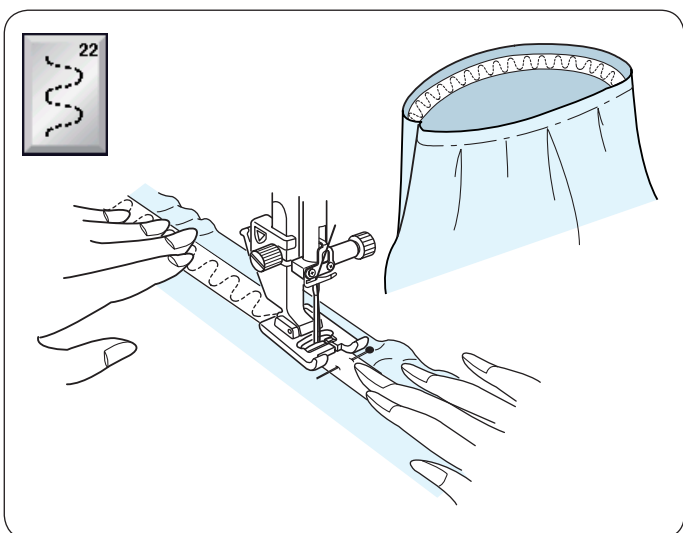
### U21 Visible hemming

Select pattern U21.

Fold and press a single hem. Place the fabric with the right side up.

Sew along the fold at the desired depth.

Trim the excess on the wrong side.

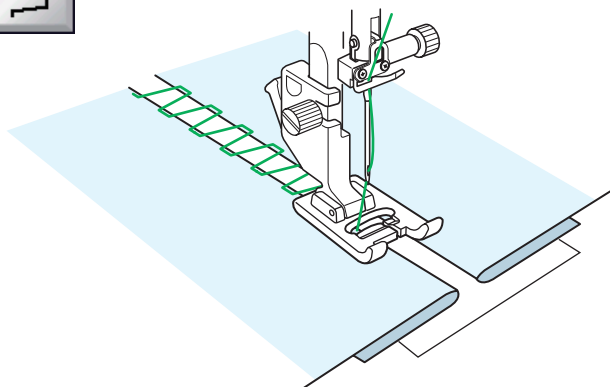


### U22 Attaching elastic

Select pattern U22.

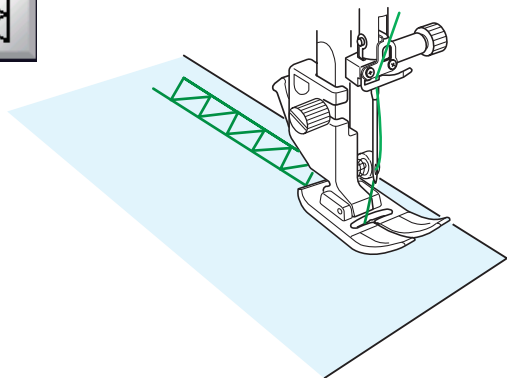
Mark the elastic into quarters. Match those to the center front, center back and side seams, and pin the elastic to the fabric.

Place the elastic under the foot and stitch into place while stretching the elastic evenly.



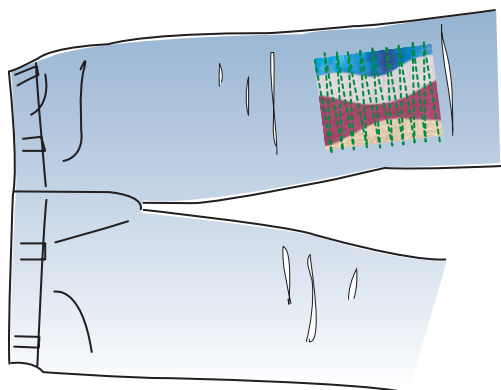
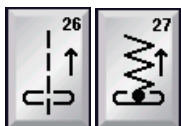
### U23 Fagotting

Use this stitch to join two pieces of fabric to create an open work appearance and add stitch interest.



### U25 Hemstitch

Use this stitch for fagoting or decorative stitch.



### U26, U27 Backward stitches

U26 and U27 are backward stitches.

Use these stitches if it is hard to guide the fabric while pressing the reverse button.

The machine sews in reverse without pressing the reverse button so that you can guide the fabric with both hands.

## Buttonholes and Specialty Stitches

### Variety of Buttonholes



#### B1 Sensor (Square) buttonhole

This square buttonhole is widely used on medium to heavy weight fabrics. The buttonhole size is automatically determined by placing a button in the foot.

#### B2 Auto (Square) buttonhole

This is also a square buttonhole similar to the sensor square buttonhole, but you can manually set the buttonhole size and the machine memorizes it to sew buttonholes of the same size.

#### B3 Round end buttonhole

This buttonhole is used on fine to medium weight fabrics especially for blouses and children's clothes.

#### B4 Fine fabric buttonhole

This buttonhole is rounded at both ends and is used on fine, delicate fabrics such as fine silk.

#### B5 Keyhole buttonhole

The keyhole buttonhole is widely used on medium to heavy weight fabrics. It is also suitable for larger and thicker buttons.

#### B6 Rounded keyhole buttonhole

This buttonhole is used for thicker buttons on medium weight fabrics.

#### B7 Tailored buttonhole

This durable buttonhole is used with thick buttons and heavy fabrics.

#### B8 Keyhole buttonhole (tapered reinforced end)

This buttonhole is used for tailored clothing, woven cloth etc.

#### B9 Keyhole buttonhole (heavy reinforced end)

This buttonhole is used for tailored clothing, jackets, particularly men's wear, woven cloth etc.

#### B10 Stretch buttonhole

This buttonhole is suitable for stretch fabrics. It can also be used as a decorative buttonhole.

#### B11 Knit buttonhole

This buttonhole is suitable for knit fabrics. It can also be used as a decorative buttonhole.

#### B12 Antique buttonhole

This buttonhole looks like the heirloom stitch. It has an attractive handmade appearance and makes a nice decorative buttonhole.

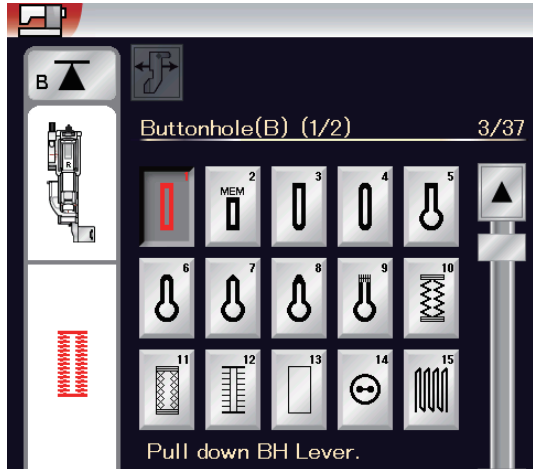
#### B13 Welted buttonhole

This is a template pattern for the hand sewn welted (bound) buttonhole.

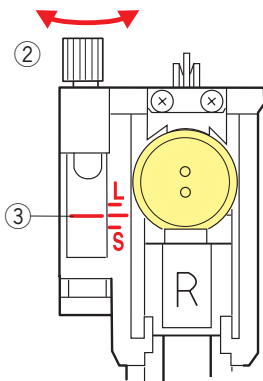
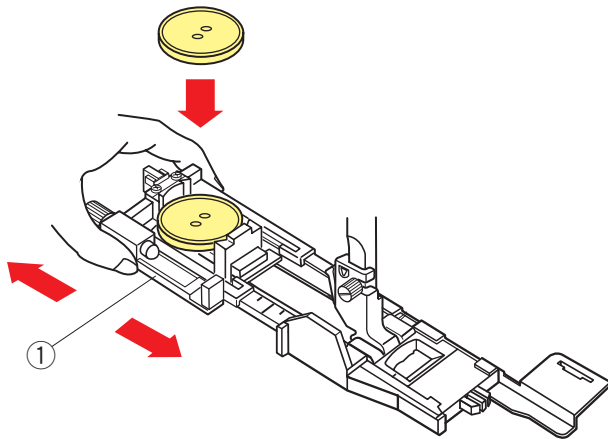
#### NOTE:

B3-B13 are sensor buttonholes and the sewing procedure is the same as for B1.

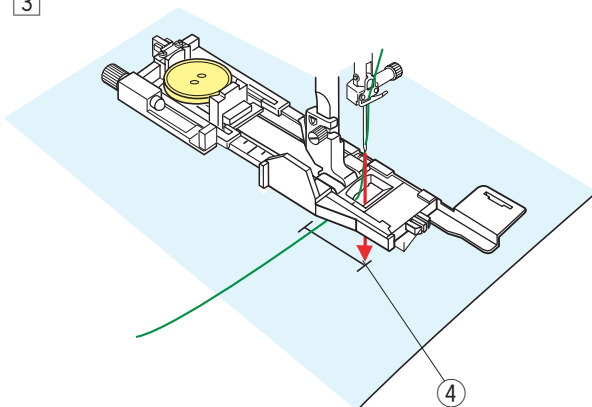
## B1 Sensor (Square) Buttonhole



- 1
- 2



- 3



- 1 Pull open the button holder of the automatic buttonhole foot R, and place the button in the button holder. Push it tightly against the button holder.  
① Button holder

### NOTE:

Use the blue needle for sewing buttonholes on fine to medium fabrics.

- 2 Attach the buttonhole foot. Raise the presser foot.

### NOTE:

The buttonhole size is automatically set by placing a button into the button holder on the foot.

The button holder of the foot takes button sizes up to 2.5 cm (1") in diameter.

Make a test buttonhole on an extra piece of the fabric. Check the length of the test buttonhole, and adjust the buttonhole length if necessary by turning the adjusting screw on the buttonhole foot.

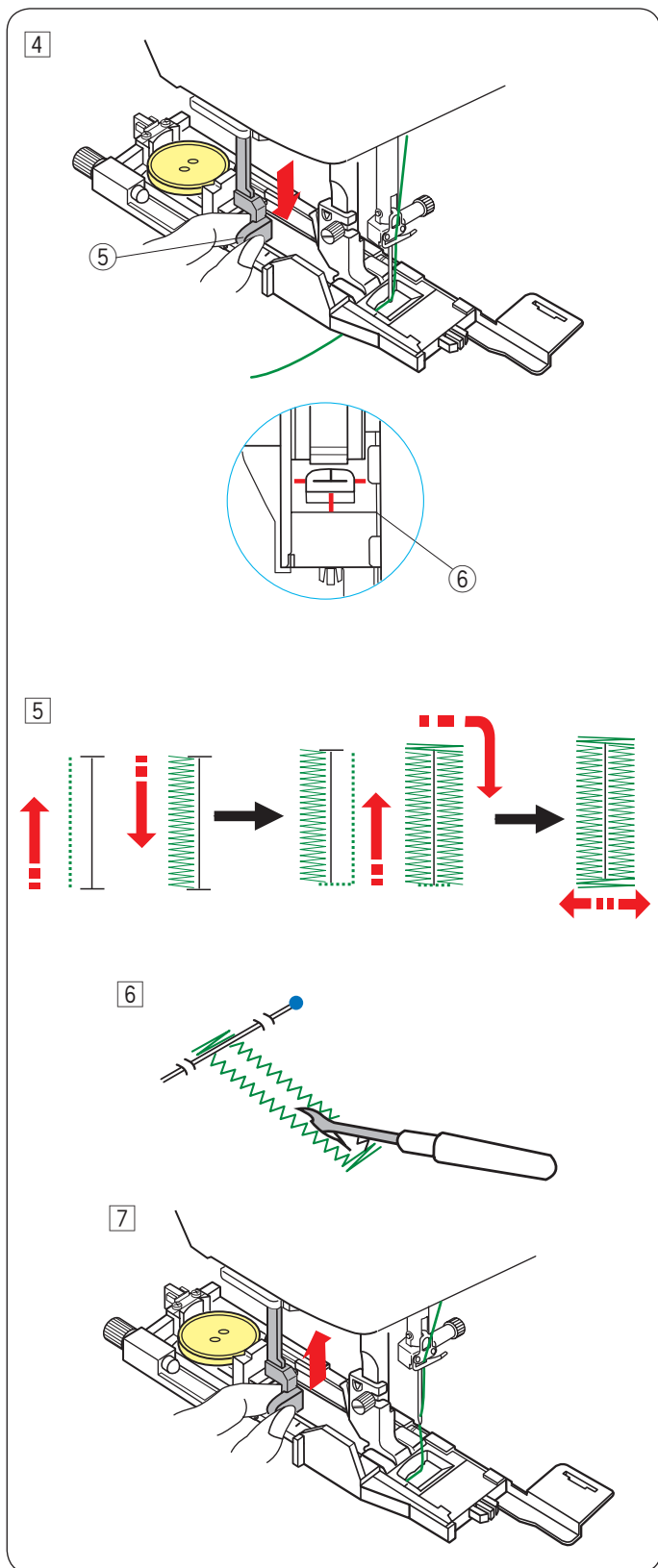
To increase the buttonhole length, turn the adjusting screw to move the marker toward "L".

To decrease the buttonhole length, turn the adjusting screw to move the marker toward "S".

- ② Adjusting screw
- ③ Marker

- 3 Draw the needle thread to the left through the hole of the foot.  
Mark the buttonhole position on the fabric and place it under the buttonhole foot. Lower the needle at the starting point by turning the hand wheel.  
④ Starting point





- 4 Lower the buttonhole foot and pull down the buttonhole lever as far as it will go. Start sewing while pulling the needle thread lightly to the left. After sewing a few stitches, free the thread and continue sewing.
- 5 Buttonhole lever

**NOTE:**

A warning message will appear and the machine will stop automatically if you start the machine without pulling down the buttonhole lever. Press the X key, pull down the buttonhole lever and start again. Make sure there is no gap between the slider and front stopper, otherwise the buttonhole will be out of position or the left and right lengths will be different.

- 6 No gap

**NOTE:**

Use the stabilizer plate when sewing thick fabrics or sewing across hems (refer to page 48).

- 5 The buttonhole is sewn automatically in the sequence shown. When the buttonhole is finished, the machine will stop automatically with the needle in the up position. Press the thread cutter button and remove the fabric.
- 6 Place a pin just below the bartack at each end to prevent accidentally cutting the threads. Cut the opening with the seam ripper. Use an eyelet puncher to open a keyhole buttonhole.
- 7 After you finish buttonhole sewing, push the buttonhole lever up as far as it will go.

Patterns B3 to B13 are sensor buttonholes and the sewing procedure is the same as for buttonhole B1.

However, the sewing sequence varies depending on the type of the buttonhole.

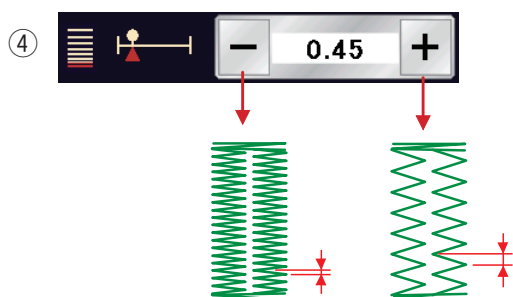
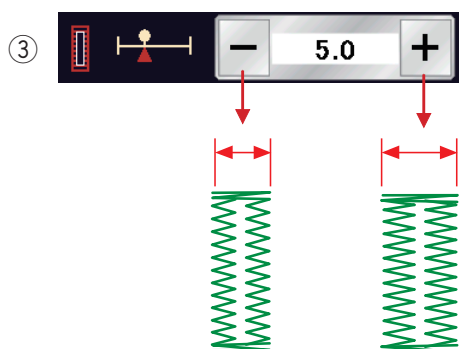
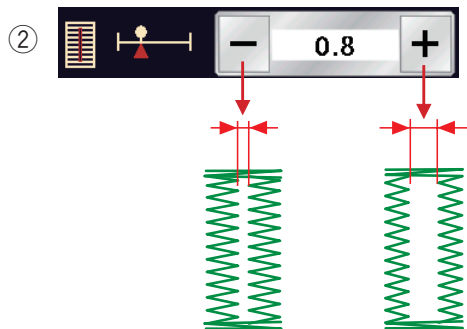
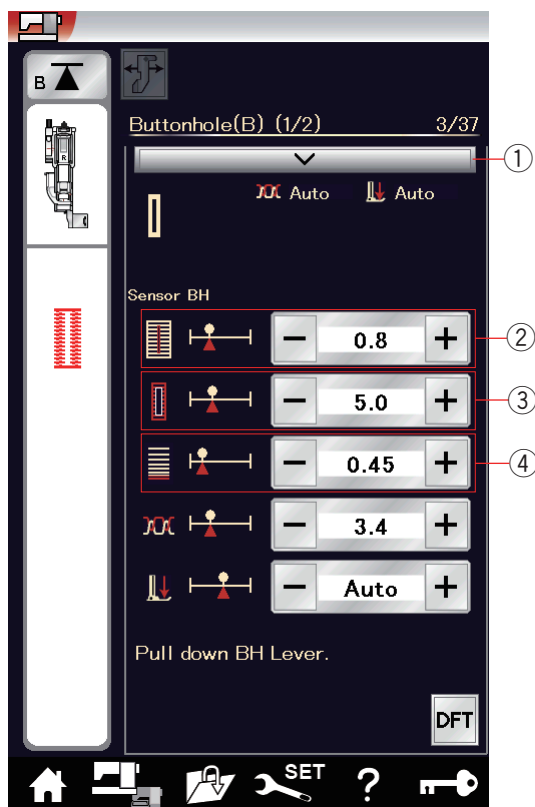
**Double layer buttonhole**

To make a sturdy buttonhole, sew another layer of buttonhole stitches over the previous stitches. After the buttonhole is finished, simply start the machine again. Do not raise the foot or buttonhole lever.

**NOTE:**

This function is disabled if Thread Cut after Auto-Lock option is turned on in the ordinary sewing setting mode (refer to page 106).





## Manual settings

When you press the setting bar, the manual setting window expands to show more options.

### ① Setting bar

### ② Altering buttonhole opening width

Press the “+” key to make the buttonhole opening wider.  
Press the “-” key to make the buttonhole opening narrower.

### ③ Altering buttonhole width

Press the “+” key to increase the buttonhole width.  
Press the “-” key to decrease the buttonhole width.

### ④ Altering buttonhole stitch density

Press the “+” key to make the buttonhole stitches less dense.  
Press the “-” key to make the buttonhole stitches denser.

#### NOTE:

The opening width can be adjusted from 0.2 to 2.0.  
The buttonhole width can be adjusted from 2.6 to 9.0.  
The stitch density can be adjusted from 0.2 to 1.0.

## Using the stabilizer plate

The stabilizer plate holds and supports the fabric so it is helpful when sewing buttonholes over the hem of thick fabrics.

- 1 Insert the tab of the stabilizer plate ① into the slot ② of the buttonhole foot.

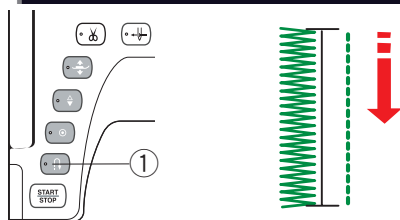
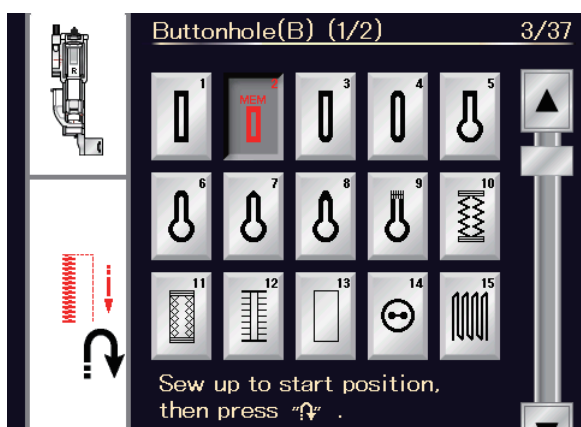
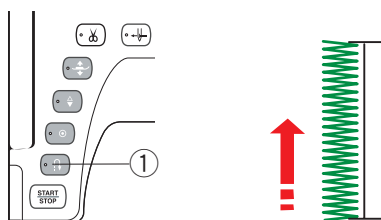
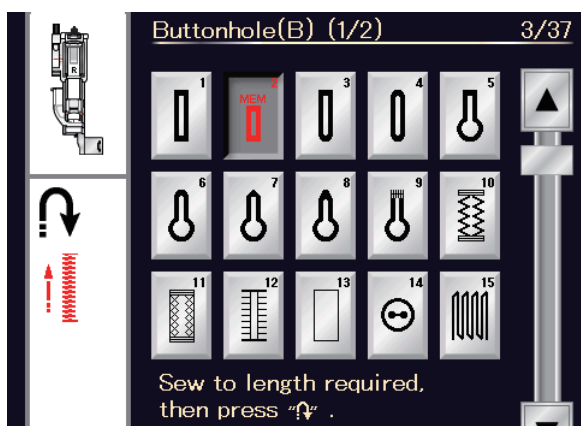
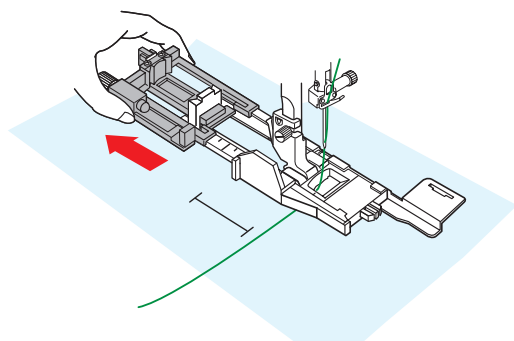
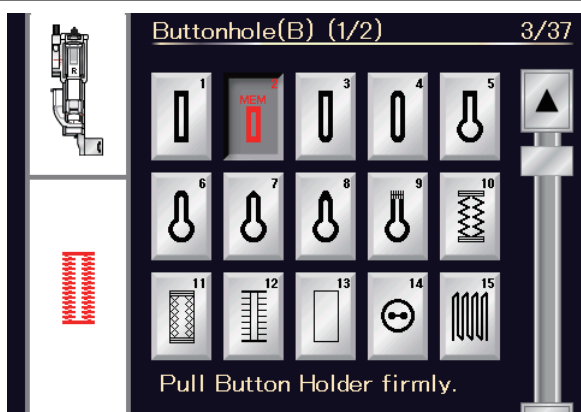
- ① Stabilizer plate
- ② Slot

- 2 Place the button on the button holder of the foot. Attach the buttonhole foot to the machine. Insert the fabric between buttonhole foot and stabilizer plate. Draw the needle thread to the left between the foot and stabilizer plate.

- 3 Place the fabric between the buttonhole foot and stabilizer plate. Lower the needle into the starting point by turning the hand wheel. Lower the foot and buttonhole lever. Start the machine while pulling the needle thread lightly to the left. After sewing a few stitches, free the thread and continue sewing.

### NOTE:

The sewing procedure is exactly the same as that for B1 sensor (square) buttonholes.



## B2 Automatic (square) buttonhole

Pull the button holder all the way out.  
Mark the buttonhole position on the fabric.  
Place the fabric under the foot, and lower the needle at the starting point.  
Lower the foot and start sewing while pulling the needle thread lightly to the left. After sewing a few stitches, free the thread and continue sewing.

### NOTE:

You do not need to pull down the buttonhole lever.  
If you wish to sew a buttonhole longer than the size permitted by the automatic buttonhole foot R, use satin stitch foot F.

### NOTE:

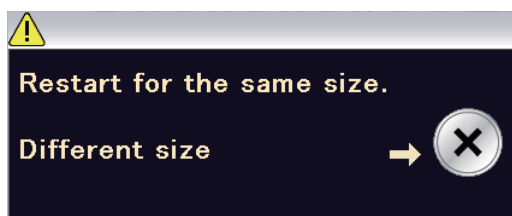
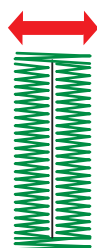
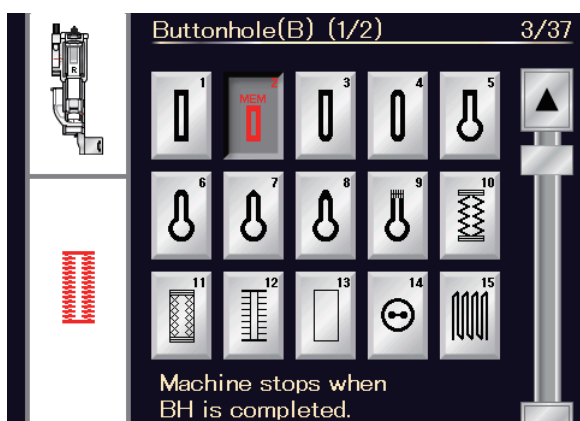
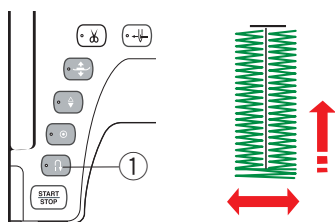
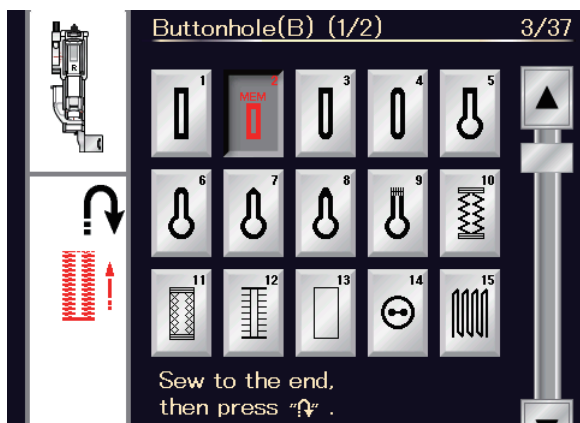
The opening width can be adjusted from 0.2 to 2.0.  
The buttonhole width can be adjusted from 2.6 to 9.0.  
The stitch density can be adjusted from 0.2 to 1.0.

### Step-1

Sew the left side up to the required buttonhole length and stop the machine. Then press the reverse button ①.

### Step-2

Start sewing again, and the machine sews back with a straight stitch.  
Stop the machine when you reach the starting point.  
Then press the reverse button ①.



### Step-3

Start sewing again, and the machine sews the front bartack and right side of the buttonhole. Stop the machine when you reach the ending point. Then press the reverse button ①.

### Step-4

Start sewing again, and machine sews the back bartack and locking stitches then stops automatically with the needle in the up position.

When the buttonhole is finished, a message will appear.

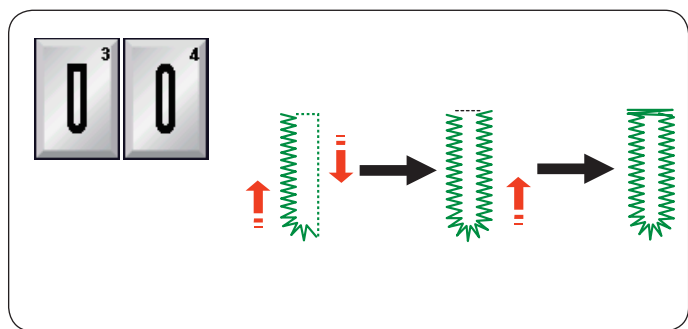
To make the next buttonhole, position the fabric and start sewing again. The message disappears and the machine sews another buttonhole identical to the first one then stops automatically.

To sew another buttonhole in a different size press the X key.

#### NOTE:

To cut the buttonhole opening, refer to the instructions on page 46.

The memorized length will be cancelled if the presser foot is raised or the startover key is pressed before buttonhole is completed.



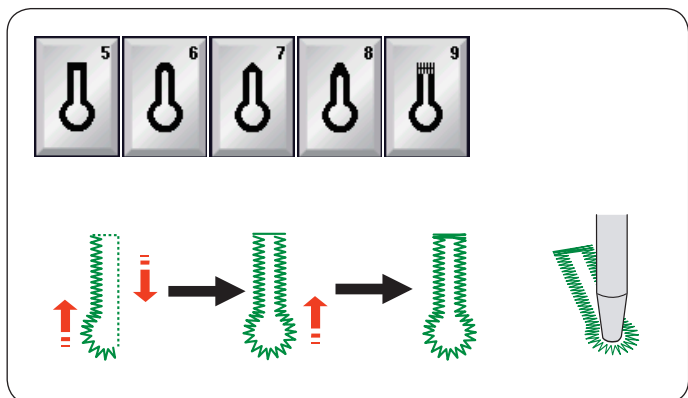
## Other Buttonholes

### B3, B4 Round end and fine fabric buttonholes

The sewing procedure is the same as that of B1 square (sensor) buttonhole (refer to page 45).

#### NOTE:

The opening width can be adjusted from 0.2 to 2.0.  
The buttonhole width can be adjusted from 2.6 to 9.0.  
The stitch density can be adjusted from 0.2 to 1.0.



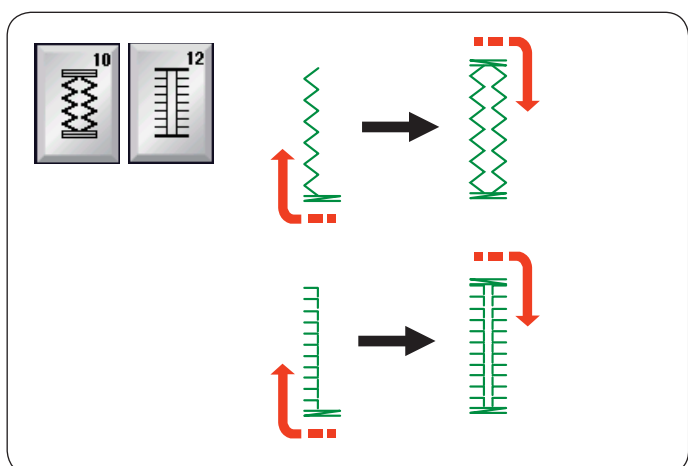
### B5-B9 Keyhole buttonholes

The sewing procedure is the same as B1 square (sensor) buttonhole (refer to page 45).

Use an eyelet punch to open the keyhole buttonhole.

#### NOTE:

The opening width can be adjusted from 0.2 to 2.0.  
The buttonhole width can be adjusted from 5.6 to 9.0.  
The stitch density can be adjusted from 0.2 to 1.0.



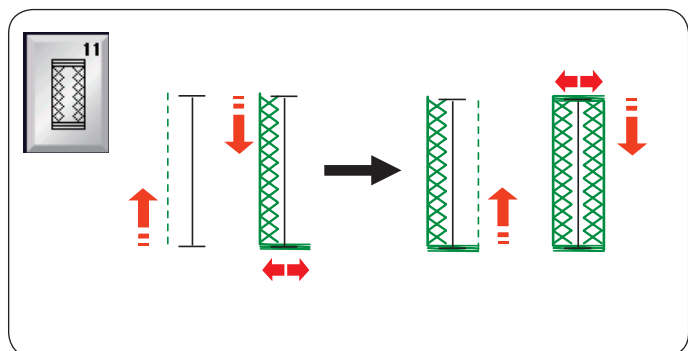
### B10, B12 Stretch and Antique buttonholes

The sewing procedure is the same as B1 square (sensor) buttonhole (refer to page 45).

The sewing steps are as shown.

#### NOTE:

The opening width can be adjusted from 0.2 to 2.0.  
The buttonhole width can be adjusted from 2.6 to 9.0.  
The stitch density can be adjusted from 0.5 to 1.0 (B10),  
from 0.5 to 2.5 (B12).



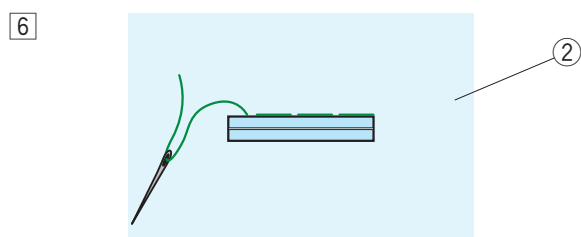
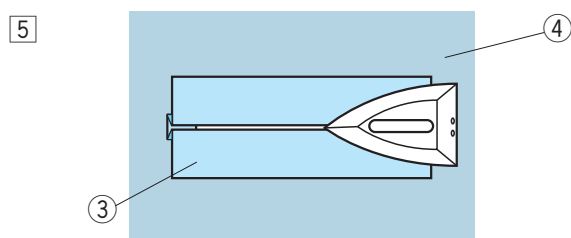
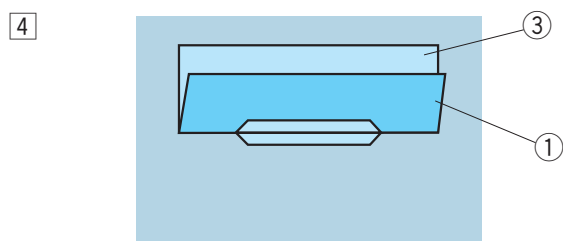
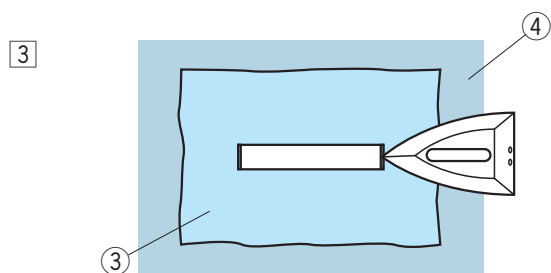
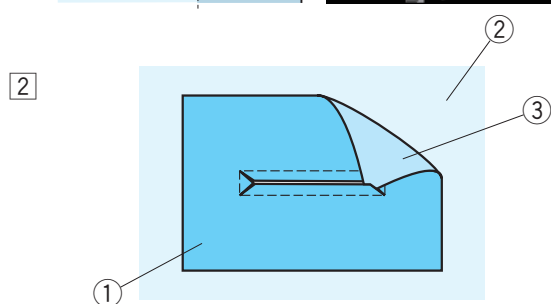
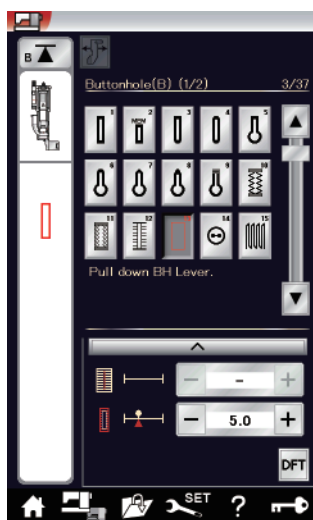
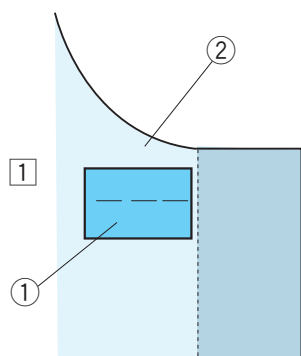
### B11 Knit buttonhole

The sewing procedure is the same as B1 square (sensor) buttonhole (refer to page 45).

#### NOTE:

The opening width can be adjusted from 0.2 to 2.0.  
The buttonhole width can be adjusted from 2.6 to 9.0.  
The stitch density can be adjusted from 0.7 to 1.2.





### B13 Welted Buttonhole (Bound buttonhole)

A welted buttonhole is made by stitching a strip or patch of fabric to the buttonhole.

Welted buttonholes are particularly suitable for tailored garments, but are not recommended for sheer or delicate fabrics where the patch might show through or add bulk.

- 1 Baste a patch to the garment fabric with the right sides together.

- ① Wrong side of patch
- ② Right side of garment fabric

- 2 Select pattern B13.  
Sew the welted buttonhole on both fabrics together. Cut the buttonhole opening as illustrated then pull the patch out through the slit to the other side.

- ① Wrong side of patch
- ② Right side of garment fabric
- ③ Right side of patch

- 3 Pull out the patch until the right side of the patch is showing. Use an iron to press both corner ends until they are squared off.

- ③ Right side of patch
- ④ Wrong side of garment fabric

- 4 Fold back each side of the patch to form buttonhole lips.

- ① Wrong side of patch
- ③ Right side of patch

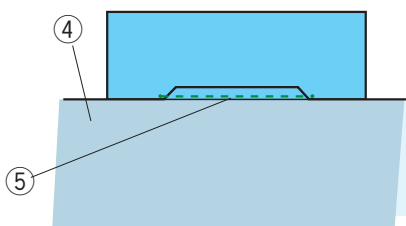
- 5 Press both folds with an iron.

- ③ Right side of patch
- ④ Wrong side of garment fabric

- 6 Baste both edges of the seam with a needle and thread by hand.

- ② Right side of garment fabric

7

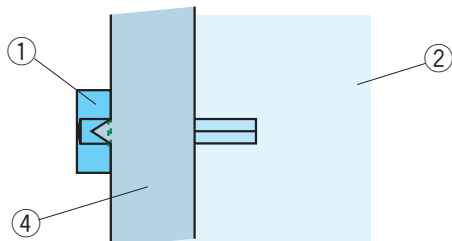


7 Fold over the length of the garment fabric, sew back and forth beside the original seam to secure flaps of the patch.

④ Wrong side of garment fabric

⑤ Sew back and forth

8



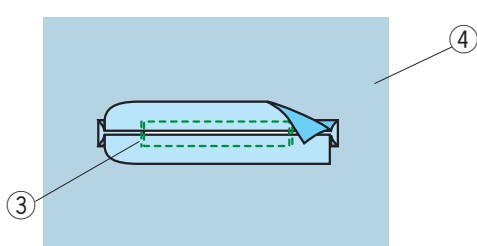
8 Fold over the end of fabric and sew back and forth three times over the triangular end.

① Wrong side of patch

② Right side of garment fabric

④ Wrong side of garment fabric

9

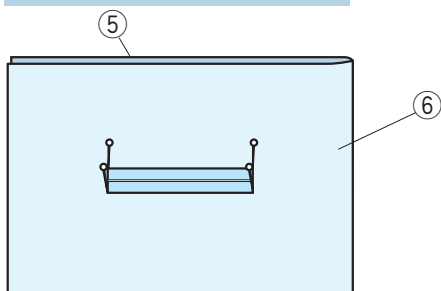


9 The patch should be cut 1 to 1.5 cm (7/16" – 5/8") away from the hole. The corners should be cut rounded off as shown.

③ Right side of patch

④ Wrong side of garment fabric

10

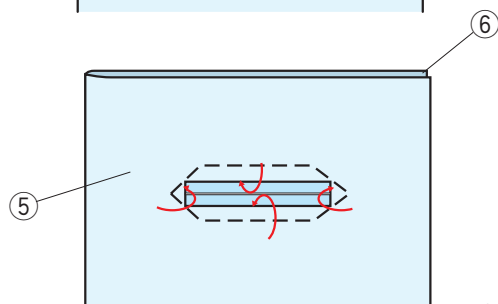


10 Place the facing on the wrong side of the garment fabric. Mark the 4 corners with pins as shown.

⑤ Facing

⑥ Garment fabric

11

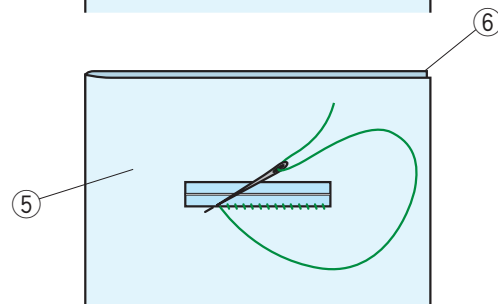


11 Turn all the layers over and cut the buttonhole opening on the facing in the same way as step 2. Four marker pins show you the corner points on the facing. Fold back each flap between the facing and patch.

⑤ Facing

⑥ Garment fabric

12

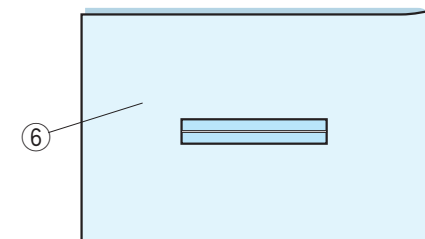


12 Stitch around the opening with a needle and thread as shown.

⑤ Facing

⑥ Garment fabric

13



13 The welted buttonhole is complete.

⑥ Garment fabric

## Corded Buttonhole

To sew a corded buttonhole, follow the same procedure as for B1 square (sensor) buttonhole.

Select pattern B1.

Place the button on the button holder on the buttonhole foot.

Hook a filler cord on the spur on the front of the foot. Bring the ends of cord toward the back and under the foot.

Bring up the ends of the cord and insert both ends between the ribs and metal plate.

- ① Spur
- ② Metal plate

Set the stabilizer plate as necessary and attach the buttonhole foot.

Lower the needle into the fabric where the buttonhole will start.

Lower the foot and buttonhole lever.

Pull the needle thread lightly to the left.

Start the machine to sew the buttonhole over the cord.

The machine stops automatically when finished.

Remove the fabric from the machine and cut the sewing threads only.

Cut the filler cord at both ends as close to the buttonhole as possible.

### NOTE:

Do not adjust the opening width wider than 0.8.

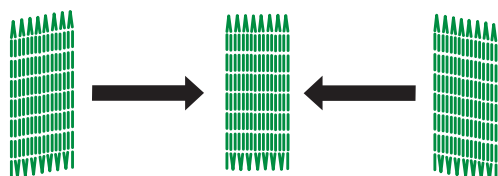
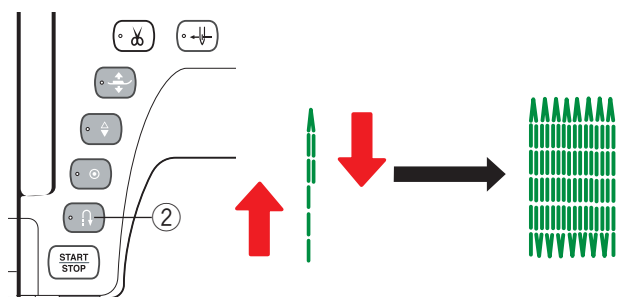
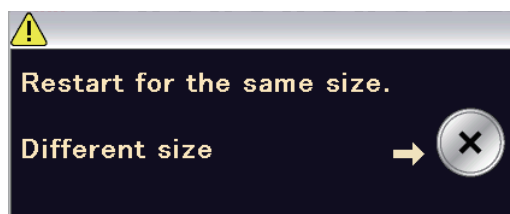
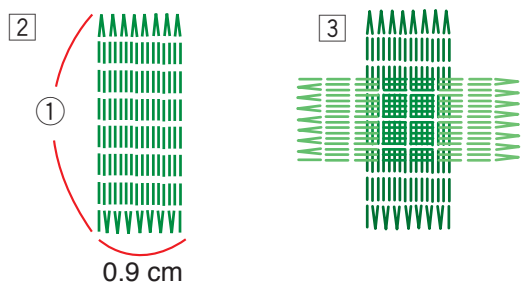
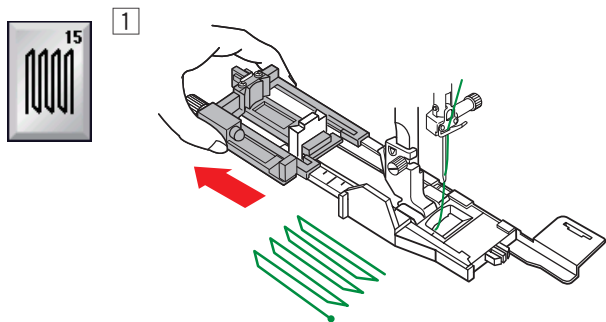
Set the stitch width in accordance with the thickness of the cord used.

To cut the buttonhole opening, refer to the instructions on page 46.

## Specialty Stitches

### B14 Button Sewing

See page 91 for sewing instructions.



## B15 Darning

- 1 Attach the automatic buttonhole foot R and pull the button holder all the way out.

- 2 Start the machine and sew to the required length, then press the reverse button. This sets the darning length. Continue sewing until the machine stops automatically.

① Required length

- 3 Sew another layer of darning over the first layer, at a right angle to it.

### NOTE:

The maximum darning length is 2 cm (3/4") and the maximum width is 0.9 cm (3/8").

### To sew the same size darning

When finished sewing, a confirmation message will appear.

Simply start the machine to sew another layer of darning stitches in the same size.

To sew the next layer of darning stitches in a different size, press the X key.

### To sew a shorter layer of darning stitches

Sew the first line to the desired length and stop the machine.

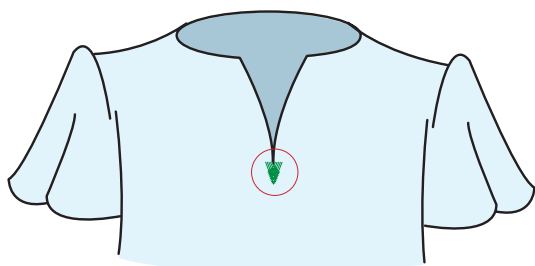
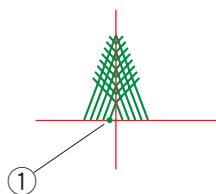
Press the reverse button ② and start the machine again. The machine will sew the rest of the darning and stop automatically.

### To adjust the evenness of darning stitches:

You can correct unevenness of darning stitches by pressing the “-” or “+” key in the adjusting window.

If the left corner is lower than the right side, press the “-” key to correct it.

If the right corner is lower than the left side, press the “+” key to correct it.



## Fly Stitches (B17 to B20)

The fly stitch is a triangle tacking stitch for use on a zip-per fly bottom and on the side pockets of men's pants.

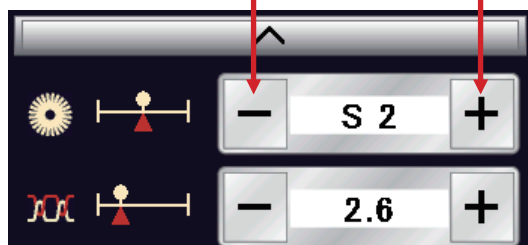
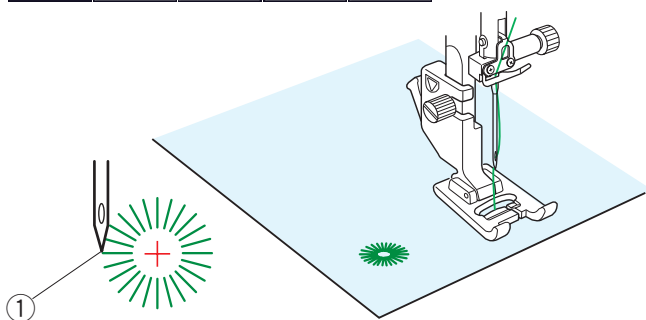
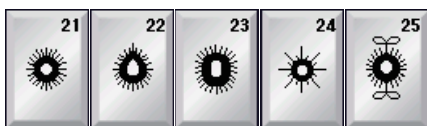
Attach the satin stitch foot F.

### To sew:

Place the garment under the foot and lower the needle at the starting point.

Sew the stitch until the machine stops automatically.

- ① Starting point



## Eyelets (B21 to B25)

The eyelet is used for belt holes, etc.

Attach the satin stitch foot F.

### To sew:

Place the garment under the foot and lower the needle to the starting point.

Sew until the machine stops automatically.

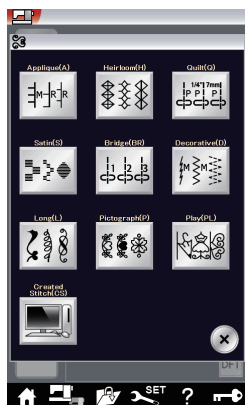
- ① Starting point

Open the eyelet with an awl, puncher or pointed scissors.

To correct the shape of an eyelet:

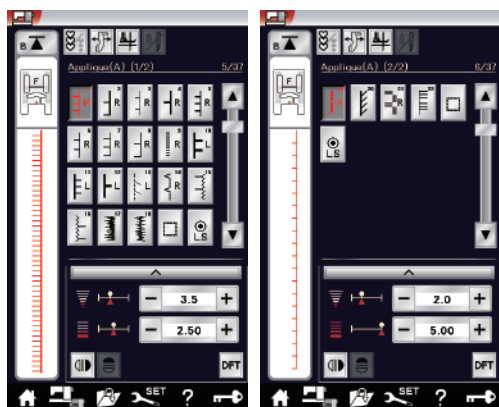
If the eyelet is open, press the “-” key.

If the eyelet overlaps, press the “+” key.



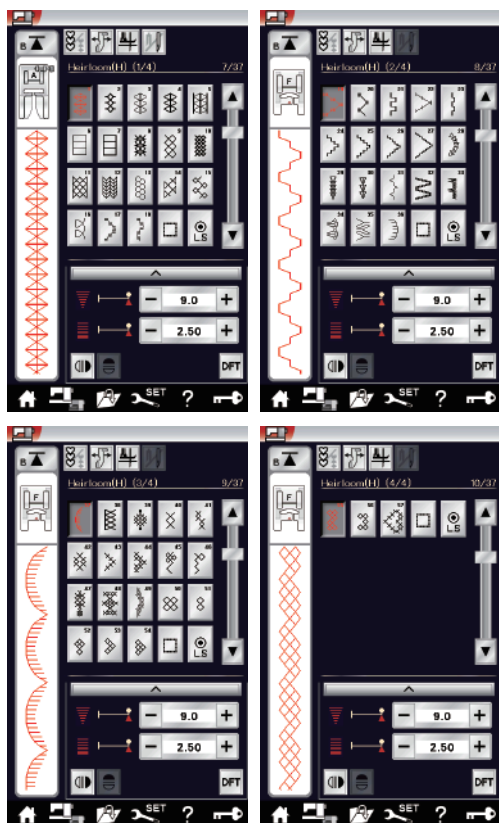
## Decorative Stitches

The patterns in this section are classified into 10 groups. These patterns are programmable and you can make a pattern combination.



### Applique stitches (A): 2 pages

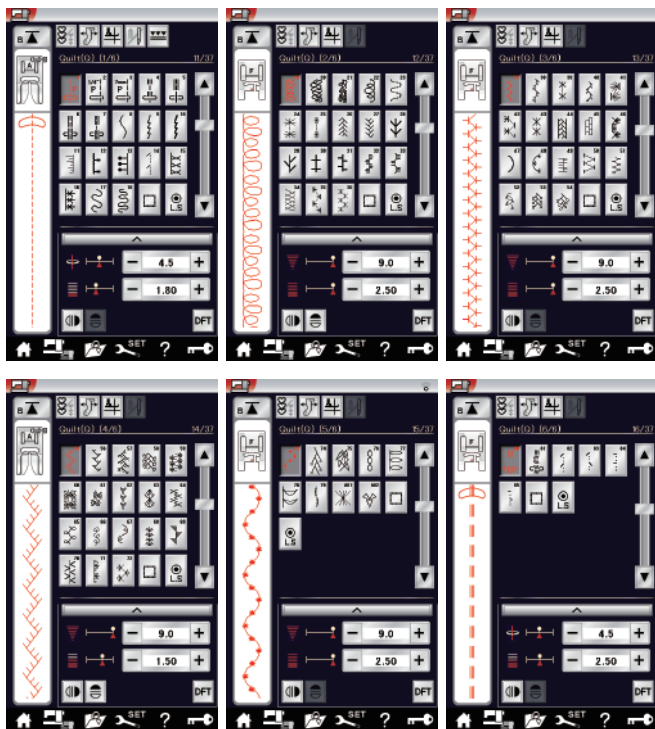
Stitches in this group are for applique. (Refer to page 93.)



### Heirloom stitches (H): 4 pages

This group provides heirloom stitches and cross stitches for craft sewing and home décor.





### Quilting stitches (Q): 6 pages

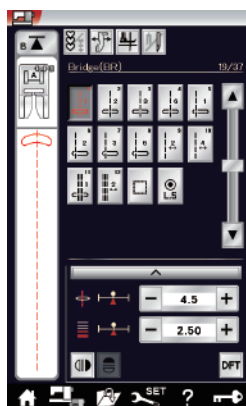
Stitches in this group are for patchwork and quilting. (Refer to pages 94-98.)



### Satin stitches (S): 2 pages

The stitches in this group can be elongated up to 5 times their original length while the stitch density remains the same.

(Refer to page 62.)



### Bridge stitches (BR): 1 page

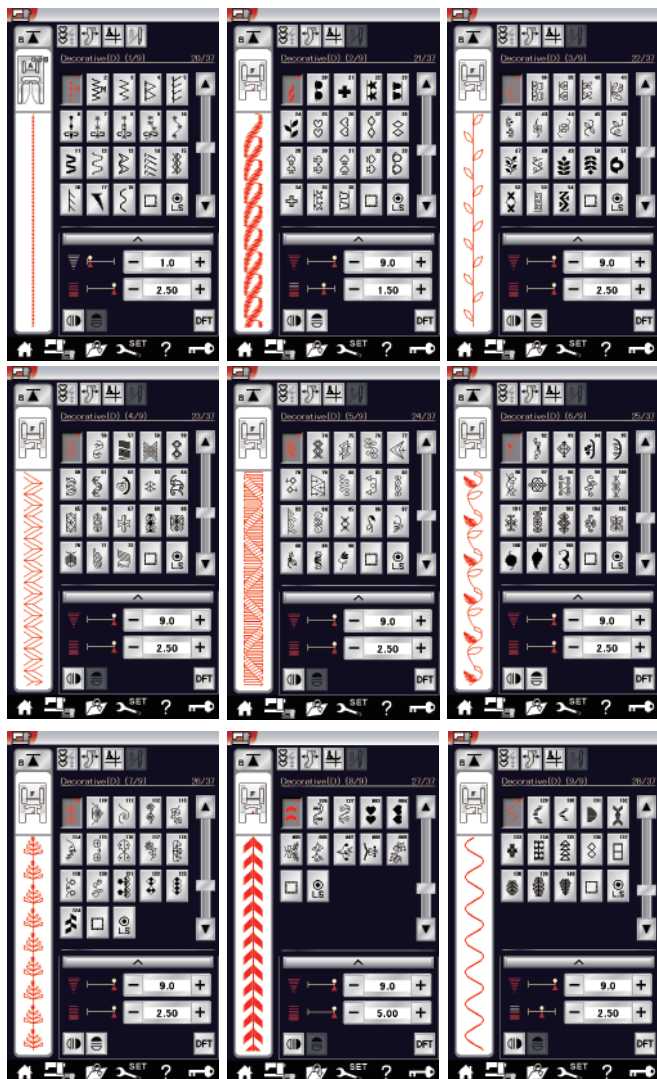
Bridge stitches are used for inserting straight stitches after a stitch pattern.

The number beside the stitch image on the straight stitch key indicates the stitch count of a programmable unit. Patterns BR9, BR10 and BR12 will inherit the needle drop position and stitch length of the previous pattern in the programmed pattern combination.

(Refer to page 65.)

### Decorative stitches (D): 9 pages

147 attractive patterns are available in this group.



### Long stitches (L): 2 pages

Patterns in this group are ideal for decorating garments and for adding border trims.



**Pictograph stitches (P): 4 pages**

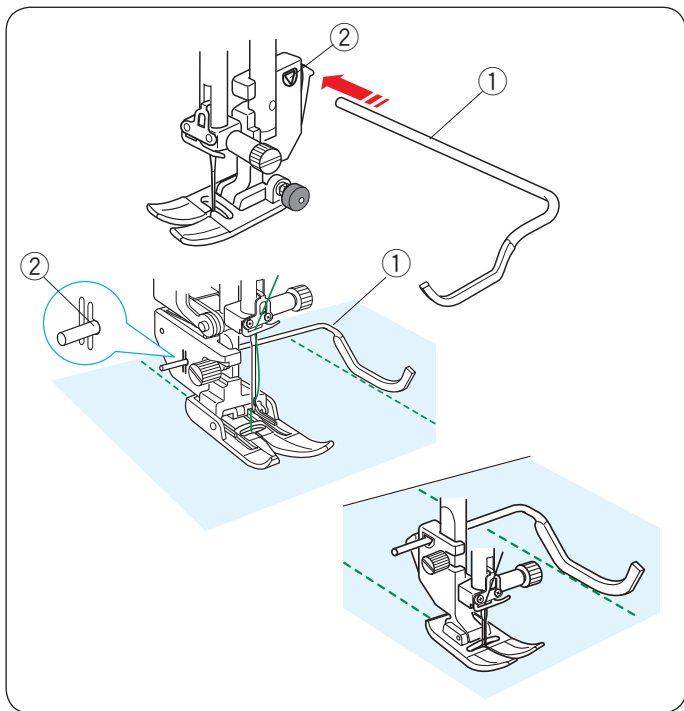
**Play stitches (PL): 2 page**

There are many cute designs, fancy motifs and calligraphy available in these groups.

### **Created stitches (CS)**

In this section, you can select original stitch patterns created with Stitch Composer.

Refer to page 63 for how to transfer created stitch patterns from the PC to the machine.



## Quilting(Q)

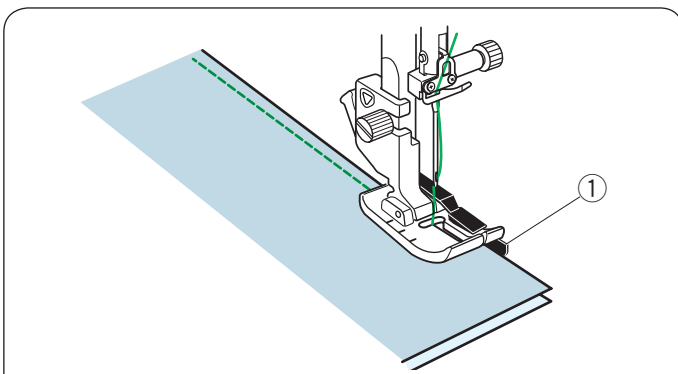
### Using the quilting guide bar

The quilting guide bar is helpful when sewing parallel, evenly spaced rows of stitches.

Insert the quilting guide bar into the hole in the back of the foot holder. Slide the quilting guide bar and set it to the desired spacing.

- ① Quilting guide bar
- ② Hole

Sew rows of stitches while tracing the previous row of stitches with the quilting guide bar.



### Q1-Q3 Patchwork piecing

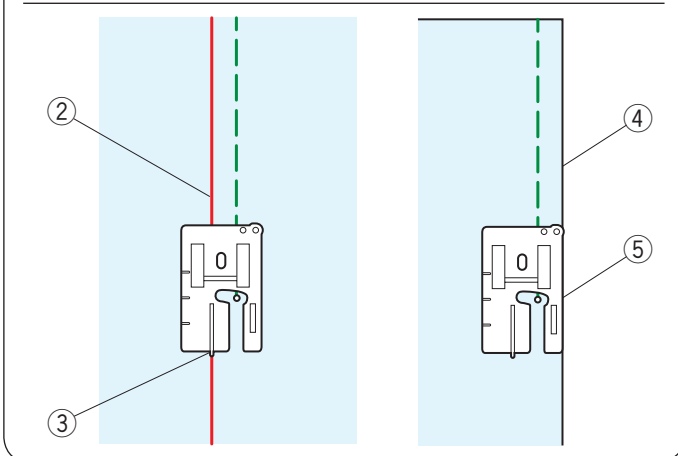
Patterns Q1 to Q3 are special stitches for seaming patchwork pieces.

Patterns Q2 and Q3 are for patchwork piecing with 1/4" and 7 mm seam allowances respectively.

Use the 1/4" seam foot O, 1/4" seam foot O (without guide) or dual feed quilt piecing foot OD.

Place the patchwork pieces right sides together. Sew while guiding the edge of fabric along the guide.

- ① Guide



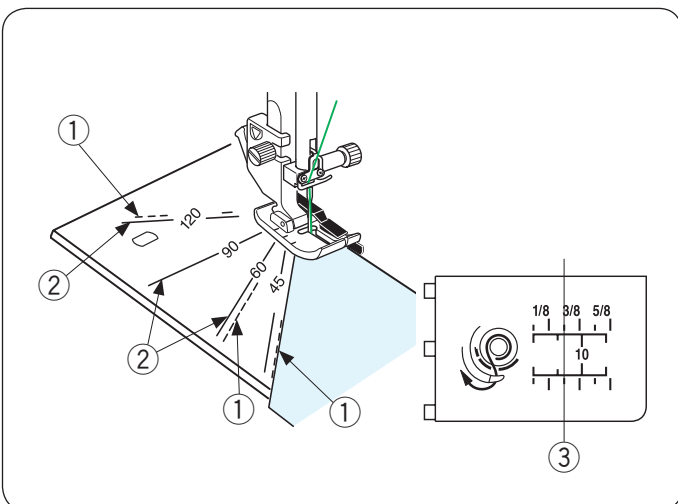
You can sew 1/4" allowance from the guide line with the 1/4" seam foot O (without guide) as shown.

Align the guide line with the 1/4" guide of the foot and sew.

- ② Guide line
- ③ 1/4" guide

To sew 1/4" seam allowance from the right fabric edge, align the right edge of the foot and the edge of the fabric and sew.

- ④ Right fabric edge
- ⑤ Right edge of the foot



### Angle scales on the needle plate

You can easily seam patchwork pieces at the desired angle without marking, by using the angle scales on the needle plate.

The angle scales are marked at 45, 60, 90 and 120 degrees.

Use the broken lines when piecing the patchwork pieces with the 1/4" seam foot O as illustrated.

- ① Broken line

#### NOTE:

Use the solid lines when piecing the patchwork pieces with the zigzag foot A. Align the edge of the fabric to the 1/4" seam guide line.

- ② Solid line
- ③ 1/4" seam guide line



### Q80-Q85 Hand-look quilt stitches

Patterns Q80 to Q85 are special stitches for quilting which look like hand sewn stitches.

Use a transparent nylon thread for the needle and ordinary sewing thread for the bobbin.

The bobbin thread is pulled up on the right side of the fabric and the stitches look as if they were sewn by hand.

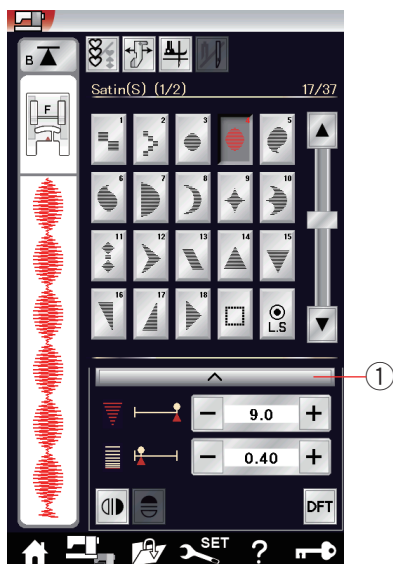
### S1-S31 Decorative satin stitches

#### Elongation ratio

Patterns S1 to S31 are decorative satin stitches for which the pattern length can be elongated without changing the stitch density.

Press the setting bar ① to expand the manual setting window.

① Setting bar



Press the “+” key to elongate the stitch pattern.

② “+” key (elongation)

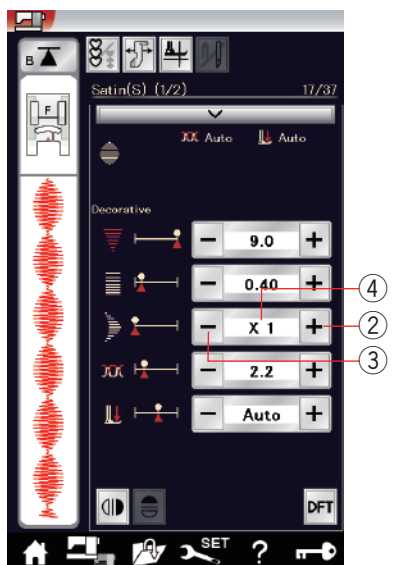
To reduce the elongation ratio, press the “-” key.

③ “-” key (elongation)

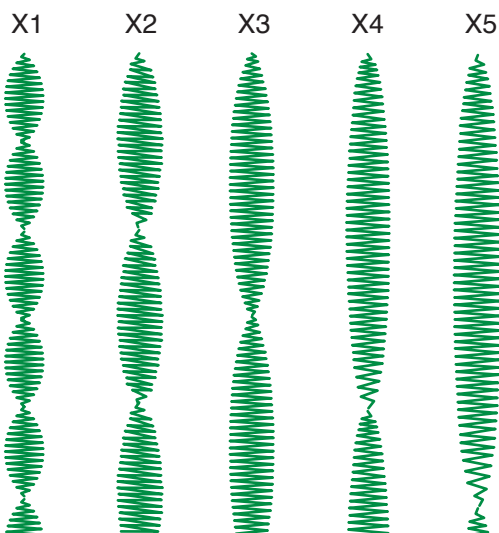
The pattern can be elongated up to 5 times the original length.

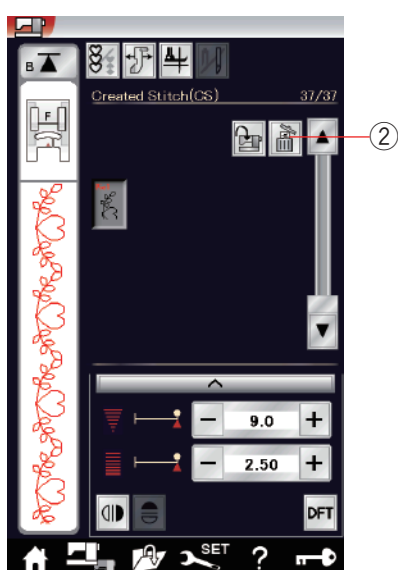
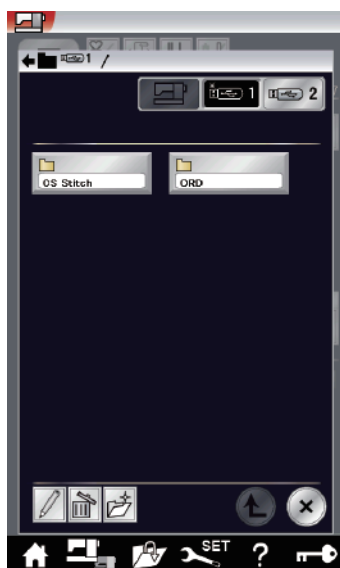
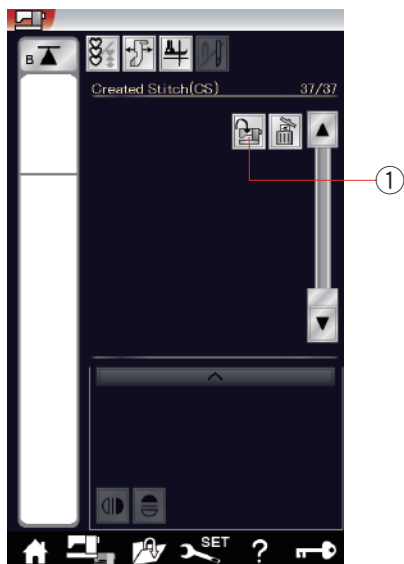
The elongation ratio is indicated in the box.

④ Elongation ratio



You can also alter stitch density and stitch width.





## Created Stitches (CS)

Original stitch patterns created with Stitch Composer are saved in this group.

Insert the USB flash drive containing the original stitch patterns and press the import key, or import them from Stitch Composer using a USB cable.

① Import key

Select “USB1” or “USB2” and the folder list will appear. Select the desired folder to open and the file list will appear.

Select the desired file and the original stitch pattern is saved and the pattern selection key is created.

You can select, program and sew these patterns the same way as with the built-in stitch patterns.

To delete the pattern, press the delete key and select the pattern to delete.

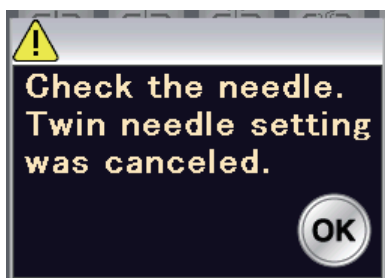
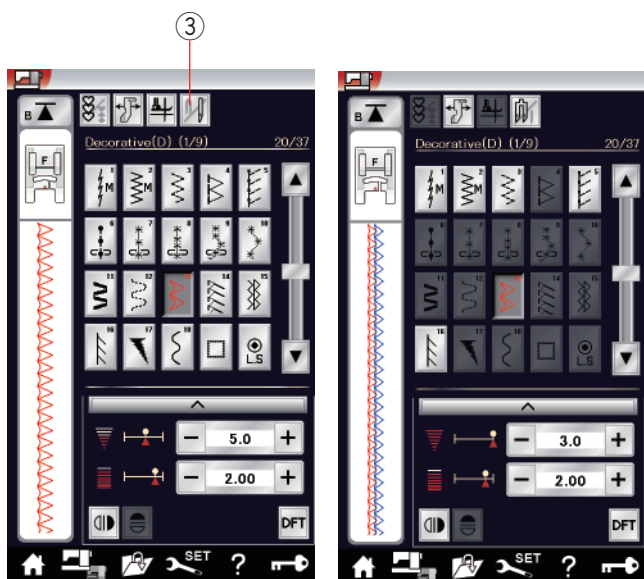
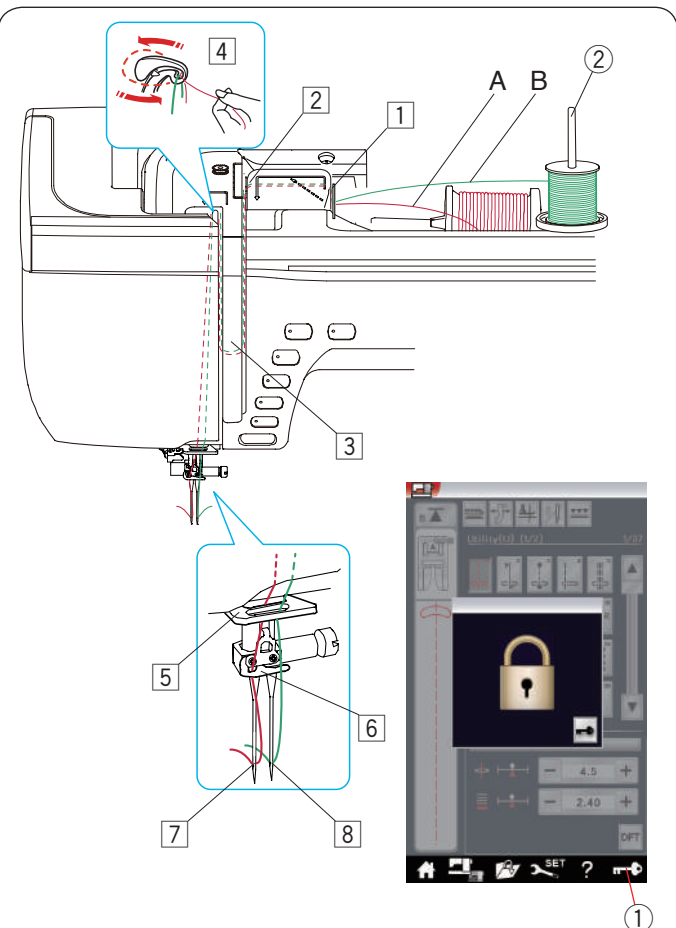
A confirmation message will appear. Press the OK key to delete the pattern.

② Delete key

### NOTE:

- Up to 30 patterns can be saved in this group.
- Twin needle sewing is not available for the created stitches.





## Twin Needle Sewing

Some of the utility stitches and decorative stitches can be sewn with a twin needle.

Replace the needle with the twin needle supplied with the standard accessories.

### ⚠ CAUTION:

Turn the power switch off or press the lockout key before changing the needle.

Do not use twin needles other than the one included in the standard accessories, otherwise the needle may hit the needle plate, foot or hook and break.

① Lockout key

Insert the additional spool pin into the hole under the top cover.

Place a spool of thread and the felt on the additional spool pin and the spool stand (refer to page 12).

② Additional spool pin

Draw both threads from the spools and pass them through the threading points from ① to ④.

Slip the thread A through the needle bar thread guide ⑤, then pass through points ⑥ and ⑦ as illustrated.

Thread the thread B through the front hole of needle bar thread guide ⑤, then pass it through the needle hole ⑧.

Make sure that the two strands of thread from the spools do not get tangled.

### NOTE:

- Threading from points ① to ④ is the same as for a single needle (refer to page 15).
- The needle threader cannot be used with the twin needle.

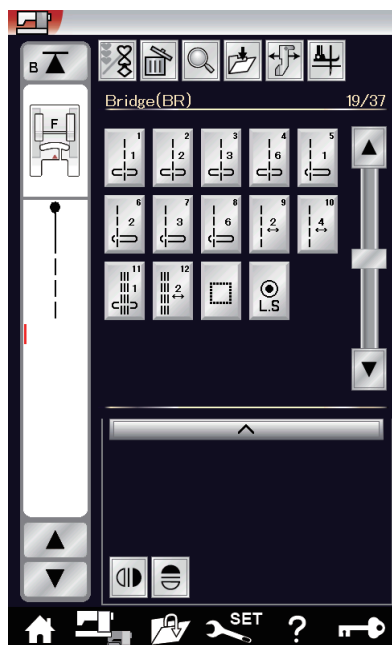
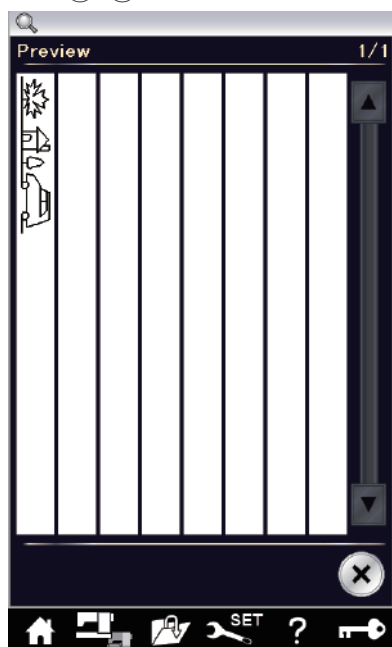
Press the twin needle key and select the desired pattern. Patterns not suitable for twin needle sewing cannot be selected (pattern selection keys are grayed out). Buttonholes, specialty stitches and monogram cannot be selected.

③ Twin needle key

### NOTE:

- When you sew patterns with the twin needle, test the stitches first before you sew on the garment.
- Use the zigzag foot A or satin stitch foot F for twin needle sewing.
- Use the threads #60 or finer.
- When changing the sewing direction, raise the needle and presser foot then turn the fabric (foot up for pivoting option is not available when the twin needle is selected).
- Use the thread cutter on the face plate when cutting threads.

After twin needle sewing is finished, press the twin needle key and the warning message will appear. Press the OK key and replace the twin needle with a single needle.



## Programming a Pattern Combination

The patterns in the decorative stitch category and monograms can be programmed to make a pattern combination.

Press the program key and select as many patterns as you wish to program.

You can program up to 100 patterns in each combination. The images of programmed patterns are shown on the left side of the visual touch screen.

- ① Program key

## Mirror image of patterns

To sew or program the pattern as a mirror image, press the vertical mirror key or horizontal mirror key.

Mirror image icon appears on the screen and mirror image function is enabled

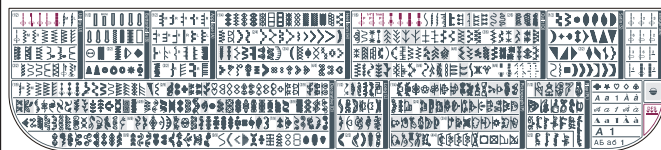
Select the desired patterns to create the mirror image.

Press the vertical or horizontal mirror key again to cancel the mirror image function.

- ② Vertical mirror key
- ③ Horizontal mirror key
- ④ Vertical mirror icon
- ⑤ Horizontal mirror icon
- ⑥ Vertical and horizontal mirror icon

### NOTE:

Horizontal mirror image is available only for the specific patterns. For pattern identification, these patterns are shaded in light grey on the reference chart inside the top cover.



Mirror image function will be canceled and mirror image icon will disappear if the selected pattern is not suitable for the mirror image.

To view the entire pattern combination, press the cursor key to scroll over the pattern combination or press the memory check key to show the entire pattern combination at a glance.

- ⑦ Cursor keys
- ⑧ Memory check key

### NOTE:

Presser foot pressure cannot be adjusted to the stitch patterns of a pattern combination individually.

If you attempt to do so, only the last pattern's presser foot pressure settings are applied to all the programmed patterns.

## Bridge stitches

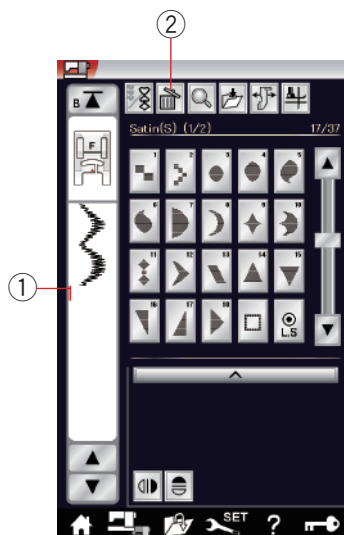
Bridge stitches are used for inserting straight stitches after a stitch pattern.

If you want more space between French knots (D6), for example, insert pattern BR10 after pattern D6.

Four counts of straight stitches are added to pattern D6.

### NOTE:

Patterns BR9, BR10 and BR12 will inherit the stitch length and needle drop position of the previous pattern in the pattern combination.



## Editing a Pattern Combination

### Deleting a pattern

The pattern before the cursor or shown in red is deleted by pressing the delete key.

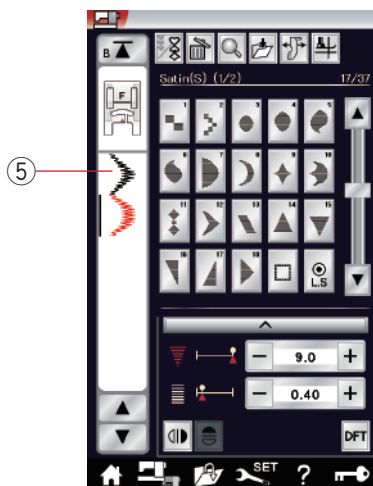
- ① Cursor
- ② Delete key



To delete a pattern in the middle of a combination, press the cursor key to select the pattern you wish to delete.

The stitch image of the selected pattern turns red. Press the delete key to delete the selected pattern.

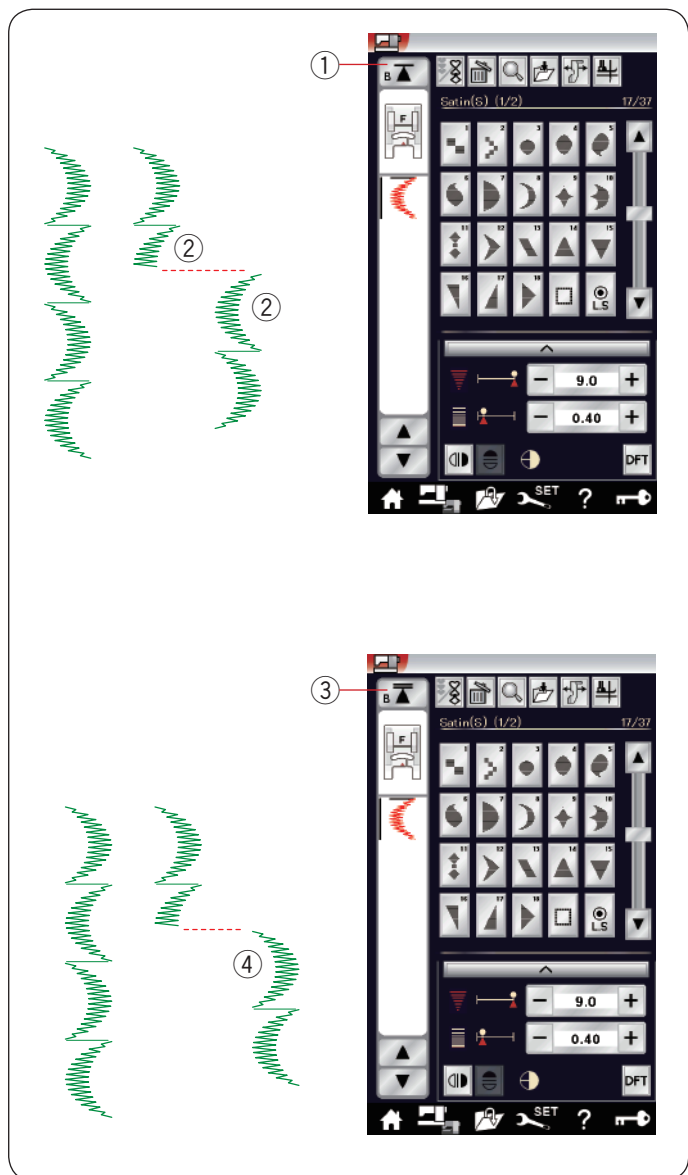
- ③ Cursor key
- ④ Selected pattern



### Inserting a pattern

Press the cursor key to select the pattern next to where you wish to insert a pattern. Enter the desired pattern to insert it before the selected pattern.

- ⑤ Inserted pattern



## Startover Key

This is a 2-way function key to start sewing a pattern combination over from the beginning.

When you stop sewing a pattern combination, the startover key is activated.

The key shows a triangle and single bar that means the machine will start over from the current pattern.

When you press the startover key, the key will change and show a triangle and double bar that means the machine will start over from the first pattern of the combination.

## Current pattern startover

If you wish to start sewing from the beginning of the current pattern, press the startover key once and start the machine.

- ① Startover key (current pattern)
- ② Current pattern

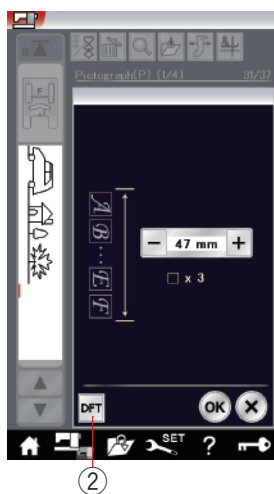
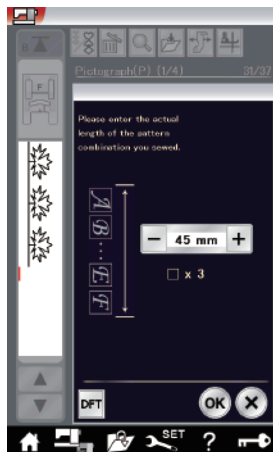
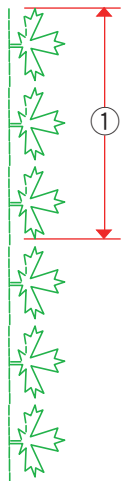
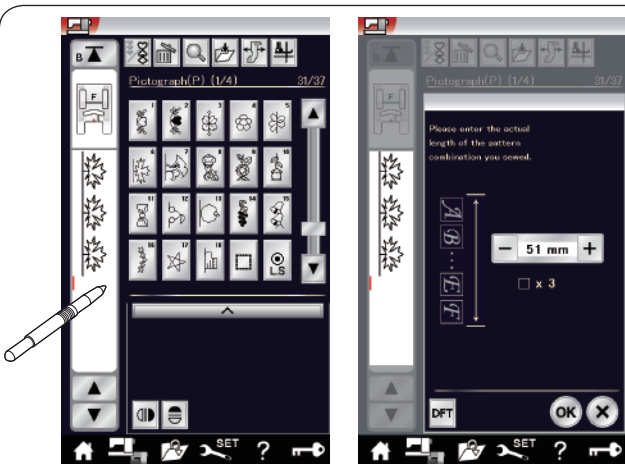
## First pattern startover

If you wish to start sewing from the beginning of the first pattern of the combination, press the startover key twice and start the machine.

- ③ Startover key (first pattern)
- ④ First pattern

## NOTE:

If auto thread cutting is done, the machine will startover from the first pattern.



## Checking Pattern Combination Length

You can check the total length of the pattern combination by pressing on the stitch image indicated in the left window.

The readout of the total length is a theoretical value and the actual length may vary depending on sewing conditions.

For example, select the pattern P6 three times, and sew a pattern combination.

If the actual length differs considerably from the readout, measure the actual length and enter the nearest value by pressing the “+” or “-” key.

In this case, the theoretical value is 51 mm. However, if the actual length ① is 45 mm, enter 45 mm by pressing “-” key. Press the OK to register it.

① Actual length

The readout is adjusted automatically when calculating the length of other pattern combinations.

The message “Please enter the actual length of the pattern combination” disappears to indicate that the displayed value is adjusted already.

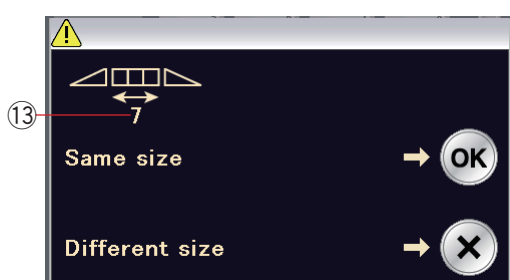
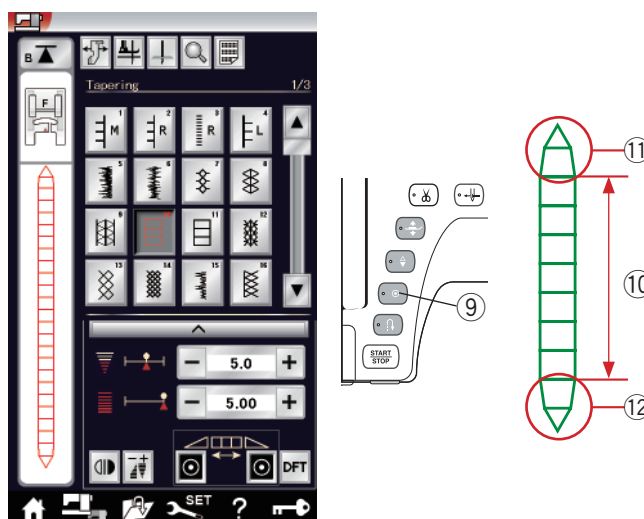
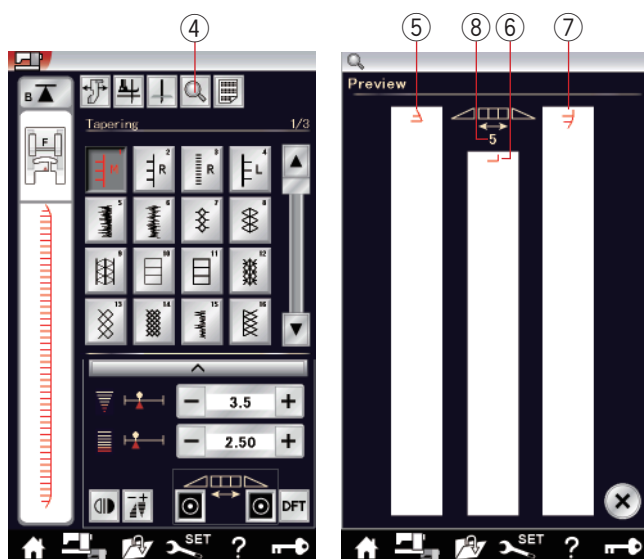
For example select patterns P19, P27 and P6.

The theoretical value is 53 mm. However, the read out is calculated according to the measured actual length. In this case, the adjusted value is 47 mm.

Press the default key to cancel the readout adjustment.

② Default key





## Tapering

You can taper the beginning and end of the decorative stitch patterns to create tapered corners and points. Press the home key to enter the category selection. Press the tapering icon to enter the tapering mode (refer to page 26).

### NOTE:

- The tapering length varies depending on the stitch pattern and its tapering shape. Make a test stitch on an extra piece of the fabric to check the tapering length.
- If you stop the machine while sewing, and change the stitch width, center needle position or stitch length, the machine will start tapered sewing from the beginning.

## Stitch reference chart for tapering

Press the stitch reference key to show the stitch reference chart for the tapering.

- ① Stitch reference key
- ② Stitch reference chart for tapering
- ③ Page number

## Preview

Press the preview key to preview the selected tapering stitch.

The left column shows the start tapering pattern ⑤.

The center column shows the pattern body ⑥.

The right column shows the end tapering pattern ⑦.

- ④ Preview key
- ⑤ Start tapering pattern
- ⑥ Pattern body
- ⑦ End tapering pattern

When the size of the tapering stitch is set, the number of the pattern body to be sewn appears above the center column.

- ⑧ Number of body patterns

## Tapered stitch sample 1

**Example:** To sew the tapered stitch pattern #10

Select the stitch pattern #10.

Start the machine. The machine sews the start tapering pattern and pattern body.

Sew to the required length, then press the auto-lock button. The machine sews the end tapering pattern and stops.

- ⑨ Auto-lock button
- ⑩ Required length
- ⑪ Start tapering pattern
- ⑫ End tapering pattern

## To sew the same sized tapered pattern

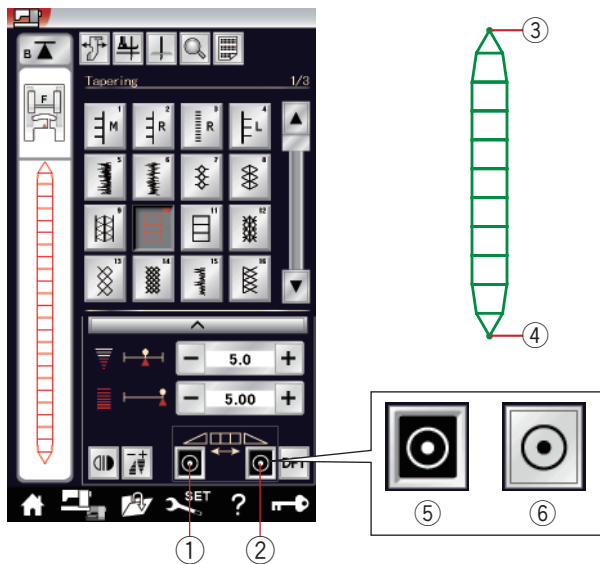
When finished sewing, a confirmation message will appear. The number shown indicates the number of the body patterns.

- ⑬ Number of the body pattern

Press OK and simply start the machine to sew another tapered pattern of the same size.

To sew the same tapered pattern in a different size, press the X key.



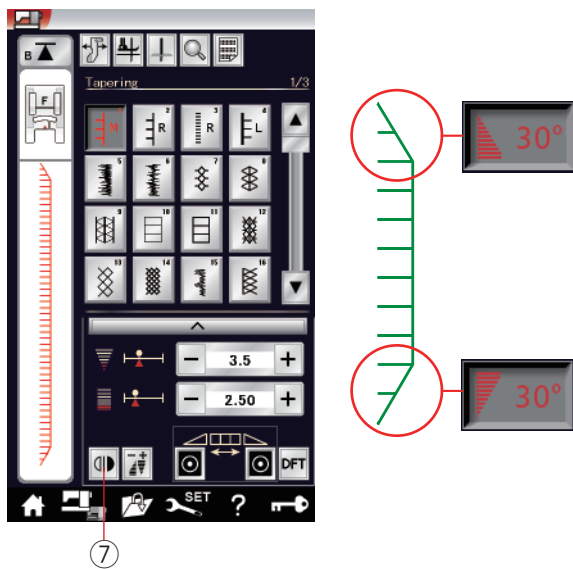


### Auto-lock stitch function

The machine sews auto-lock stitch at the beginning and end of the sewing with the default settings.

However, you can turn on or off the auto-lock stitches by pressing the corresponding auto-lock keys on the visual touch screen.

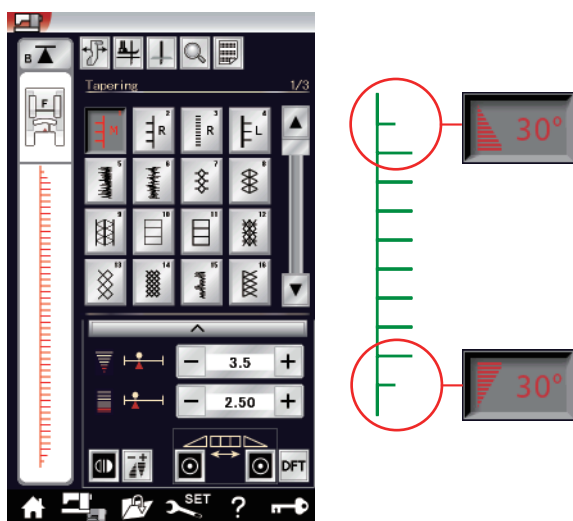
- ① Initial lock stitch key
- ② End lock stitch key
- ③ Initial lock stitch
- ④ End lock stitch
- ⑤ Lock stitch key (ON)
- ⑥ Lock stitch key (OFF)

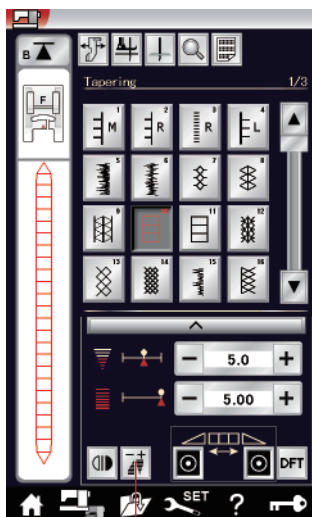


### Flipping the tapered pattern 1

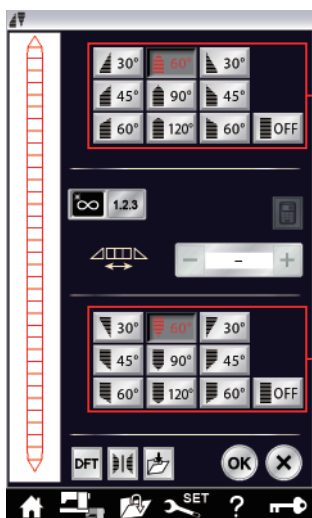
Press the static flip key to flip the tapered pattern vertically without flipping its start and end tapering degree angle.

- ⑦ Static flip key





①

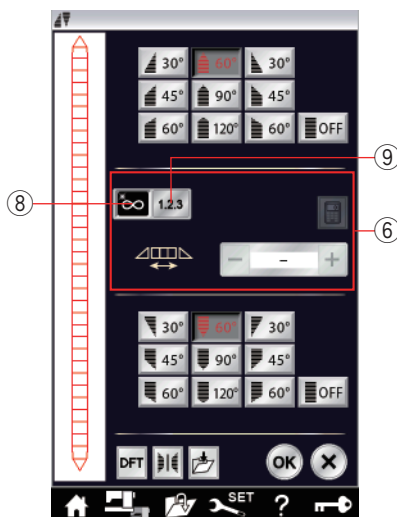


②

④

③

⑤

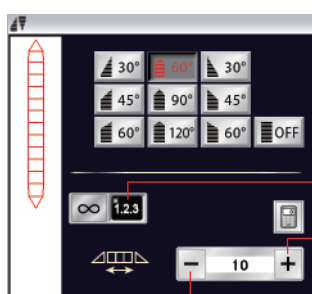


⑧

⑨

⑥

⑦



⑨

⑩

⑪

## Adjustment of tapered stitches

You can adjust the shape of the tapered stitch pattern.

Press the tapering adjustment key.

The dialog box will open.

① Tapering adjustment key

## Tapering shape

Select the shape of the tapering for the beginning and the end of the stitch patterns by pressing the tapering shape keys.

The keys on the top ② are for start tapering pattern ④.

The keys on the bottom ③ are for end tapering pattern ⑤.

② Tapering shape keys (for start tapering pattern)

③ Tapering shape keys (for end tapering pattern)

The numbers in the tapering shape keys indicate the degree of tapering. You can apply the tapering alignment from left, center, right or off. The start and end of the stitch patterns can be aligned separately.

## Pattern body length

The keys on the middle ⑥ are for pattern body length ⑦.

The machine sews the pattern body as long as the auto-lock key is pressed when the free length key ⑧ is turned on.

However, you can set the number of the pattern body to be sewn by pressing the pattern length key ⑨.

⑦ Pattern body

⑧ Free length key

⑨ Pattern length key

Press the pattern length key.

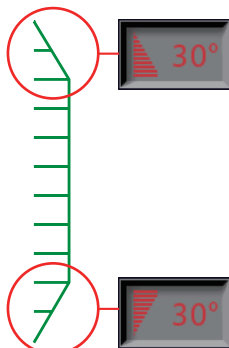
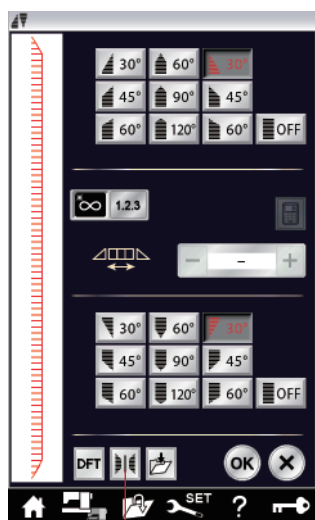
Press the "+" ⑩ or "-" ⑪ key to set the number to repeat the pattern body.

⑨ Pattern length key



You can also set the number to repeat the pattern body by pressing the numeric pad key. Press the numeric pad key and the numeric keypad window will open. Enter the desired pattern length and press the OK key.

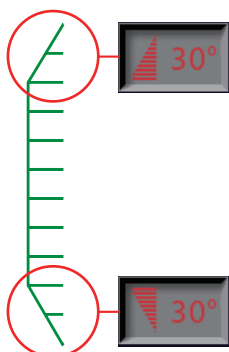
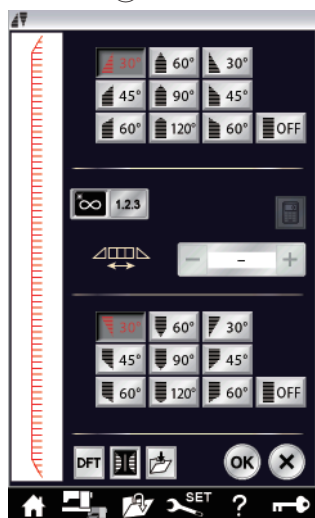
⑫ Numeric pad key



### Flipping the tapered pattern 2

Press the mirror image key to flip the tapered pattern vertically.

⑬ Mirror image key

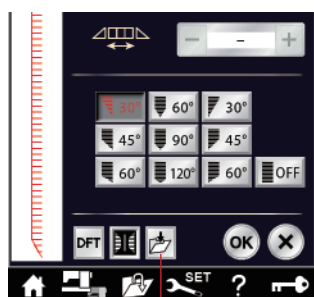


### Saving a tapered stitches

The customized tapered patterns can be saved as a file in the machine's internal memory or a USB flash drive.

Press the save file key after customizing a tapered stitch. The tapered stitch file is saved as \*.JCS file. To save or open the file refer to page 77-78.

⑭ Save file key



## Tapered stitch sample 2

**Example:** To create a corner frame with the tapered stitch pattern #27

- ① Select the stitch pattern #27 ①.
- ② Press the end lock stitch key ② to turn off the end lock stitch.

- ③ Press the tapering adjustment key ③.

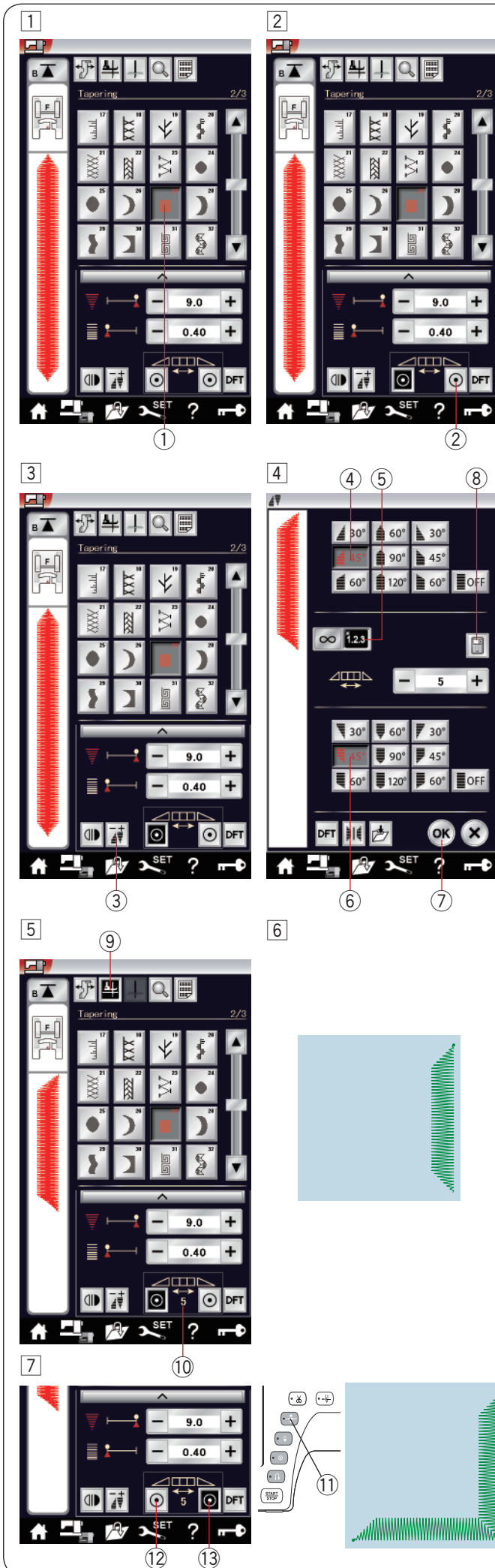
- ④ Press the tapering shape key ④.  
Press the tapering shape key ⑥.  
Press the pattern length key ⑤.  
Press the "+" key 4 times, or press the numeric pad key ⑧ and enter "5".  
Press the OK key ⑦.

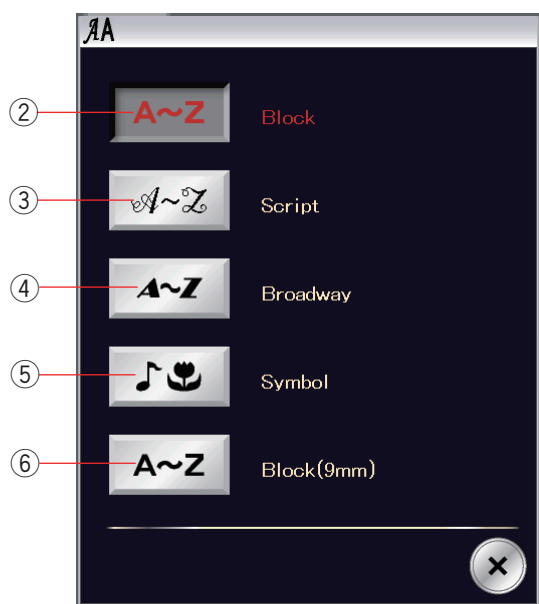
- ⑤ Press the foot-up key ⑨.  
⑩ Number of the body pattern

- ⑥ Lower the needle into the fabric at the point where you want to start sewing.  
Start sewing. Sew until the machine stops.  
The machine stops and the presser foot rises automatically.

- ⑦ Pivot the fabric 90 degrees.  
Press the foot lifter button ⑪ to lower the presser foot.  
Press the initial and end lock keys.  
Be sure that the initial lock key is turned off ⑫, and the end lock key is turned on ⑬.  
Start sewing in the new direction.

- ⑧ The machine automatically stops at the end of the corner with the lock stitch.





## Monogramming

You can program letters and symbol designs for monogramming.

Press the home key to enter the category selection. Press the monogramming icon to enter the monogramming mode (refer to page 26). Press the font selection key and the font selection window will open.

① Font selection key

You can select one of 5 fonts.

Select the desired font by pressing the corresponding key.

② Block font key

③ Script font key

④ Broadway font key

⑤ Symbol key

⑥ Block font (9 mm) key

The monogram mode window will open.

### NOTE:

- The height of Block font (9 mm) is approximately 9 mm.
- If you select Russian language for the visual touch screen, you can select Cyrillic alphabets in Gothic font as well.



## Function keys

⑦ **Cursor key**

Press the cursor key to move the cursor up or down.

⑧ **Letter size key**

Press this key to select the full size (L) or small size (S).

⑨ **Letter case key**

Press this key to select the upper case or lower case.

⑩ **Delete key**

Press this key to delete the selected character or symbol (refer to page 66).

⑪ **Memory check key**

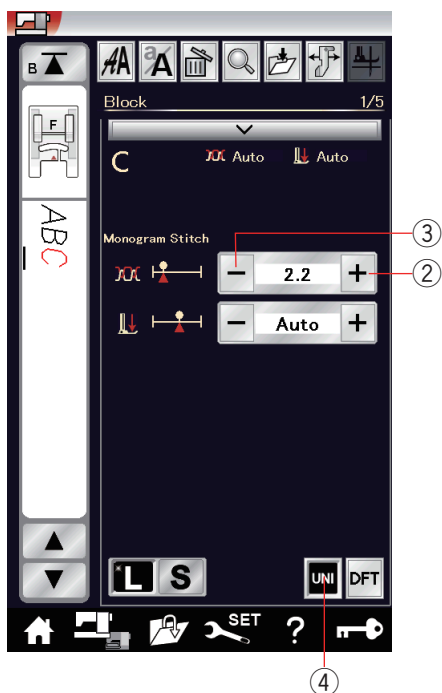
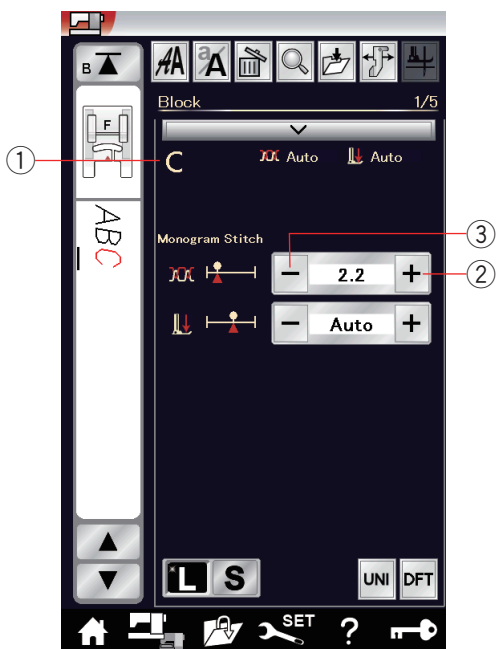
Press this key to view the entire monogram (refer to page 65).

⑫ **File save key**

Press this key to save the monogram as a data file (refer to page 77).

### NOTE:

Numbers, symbols and European letters are available on pages 2/5 through 5/5.



### Manual thread tension

This machine is equipped with automatic thread tension control. However, you may need to manually adjust the tension balance depending on the sewing conditions.

To adjust the thread tension, press the setting bar to show the option.

### Individual thread tension adjustment

To apply the thread tension adjustment to each letter individually, select the letter by moving the cursor. The selected character will be displayed at the upper left corner ① when the setting bar is pressed. Press “+” ② or “-” ③ to adjust the thread tension of the selected letter. The adjusted thread tension is applied to the selected letter.

### Unified thread tension adjustment

To apply the thread tension adjustment to all letters together, you do not need to select the letters.

Press the unified thread tension key ④.

Press “+” ② or “-” ③ to adjust the thread tension.

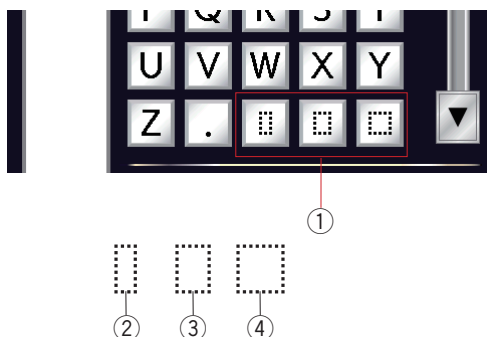
The adjusted thread tension is applied to all entered letters.

When unified thread tension control is applied, the unified thread tension key turns to black.

Press the unified thread tension key again to deactivate the unified thread tension adjustment.

### NOTE:

Unified thread tension adjustment can be applied to the monogram patterns such as Block, Script, Broadway and Block (9 mm) only.



### Spacing

To enter a space in monogramming, press one of the three space keys on the lower right corner of the monogram selection.

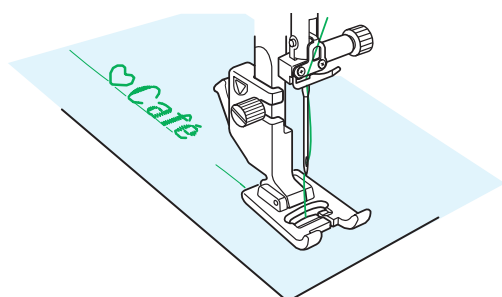
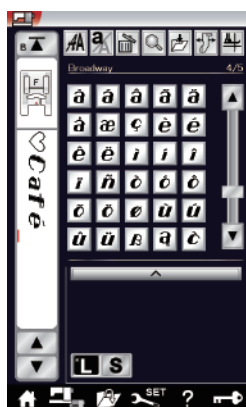
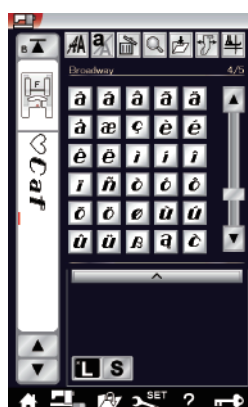
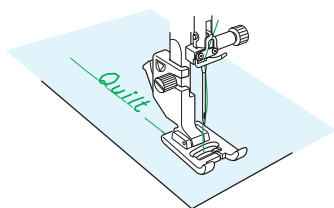
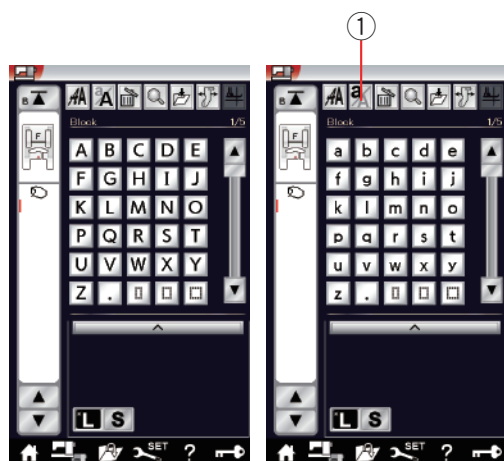
- ① Space keys
- ② Small-size space
- ③ Medium-size space
- ④ Large-size space



### Reducing the size of letters

To reduce the height of a character to approximately 2/3 of its original size, select the character and press the letter case key “S” ①.





## Programming a monogram

Simply enter the characters by pressing the corresponding keys to program a monogram.

### Example 1: “Quilt” in Block font

Select Block font. Enter “Q”.

Press the letter case key ① to select lower case.

① Letter case key

Enter “u”, “i”, “l” and “t”.

### Example 2: “ ♥ Café” in Broadway font

Press the monogram key ② and select symbol.  
Enter a hollow heart.

Press the monogram key and select Broadway font.  
Enter “C”.

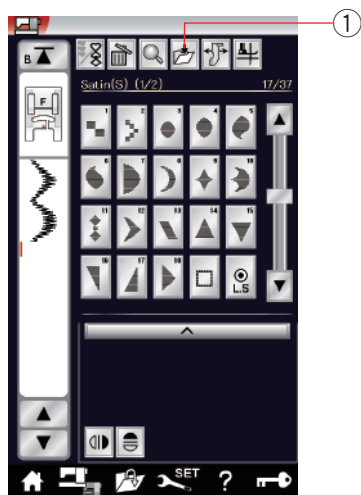
② Monogram key

Press the letter case key and select lower case letters.  
Enter “a” and “f”.

Press the next page key to go to page 4 of 5.  
Enter “é”.

#### NOTE:

Use a blue tip needle for sewing a monogram.  
Apply a sheet of stabilizer to fine fabrics or stretch fabrics.  
Test sew to check the sewing results.



## Saving Stitch Patterns

The pattern combination, monogram and tapered stitches can be saved as a file in the machine's internal memory or a USB flash drive.

The machine has two USB ports for USB flash drives.

Press the save file key after programming a pattern combination, and the save file window will open.

① Save file key

Select the location to where you wish to save the pattern combination.

The "Ord" folder is shown.

Select the "Ord" folder and the file name is assigned automatically starting from M\_001.....in order.

The file name is assigned starting from C\_001.....when saving a tapered stitches.

Press the OK key to save the file under the assigned name.

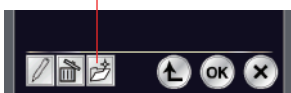
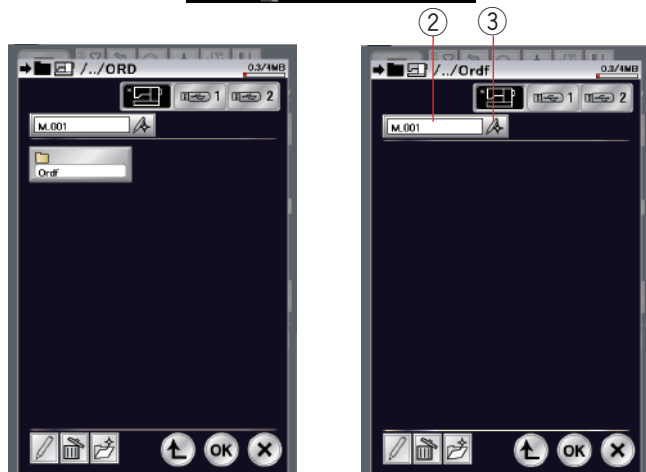
② File name

If you wish to assign a unique name to the file, press the rename key and the keyboard window will open.

③ Rename key

Enter a new name and press the OK key to change the file name.

Press the OK key and the file is saved under the new name.



## NOTE:

The files and folders are displayed on different pages.

## Creating a new folder

Select a location for a new folder and press the new folder key. The keyboard window will open.

Enter a folder name and press the OK key.

The new folder is created under the assigned name.

④ New folder key

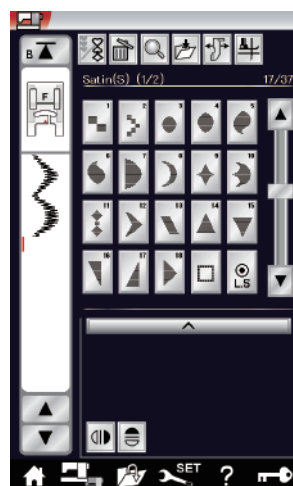
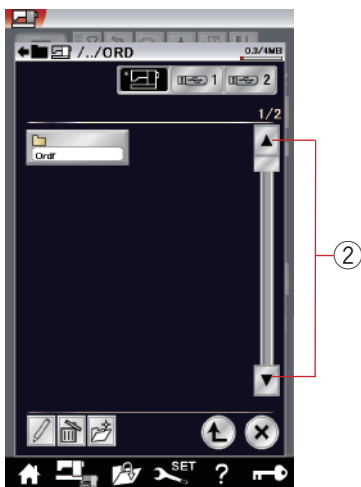
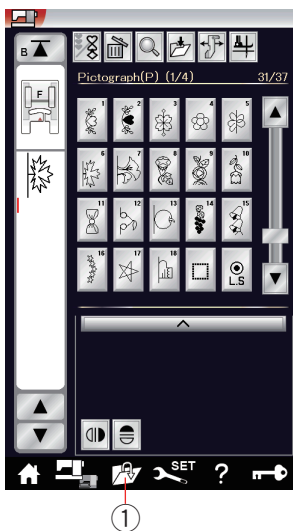
## Changing the folder name or file name

Press the rename key and select the folder or file of which you wish to change its name. The keyboard window will open.

Enter the new name and press the OK key.

The name of the folder or file will change.

⑤ Rename key



## Opening Stitch Patterns

You can open the pattern combination, tapered stitches and monogram saved in the machine's internal memory or a USB flash drive.

Press the open file key and the open file window will open.

- ① Open file key

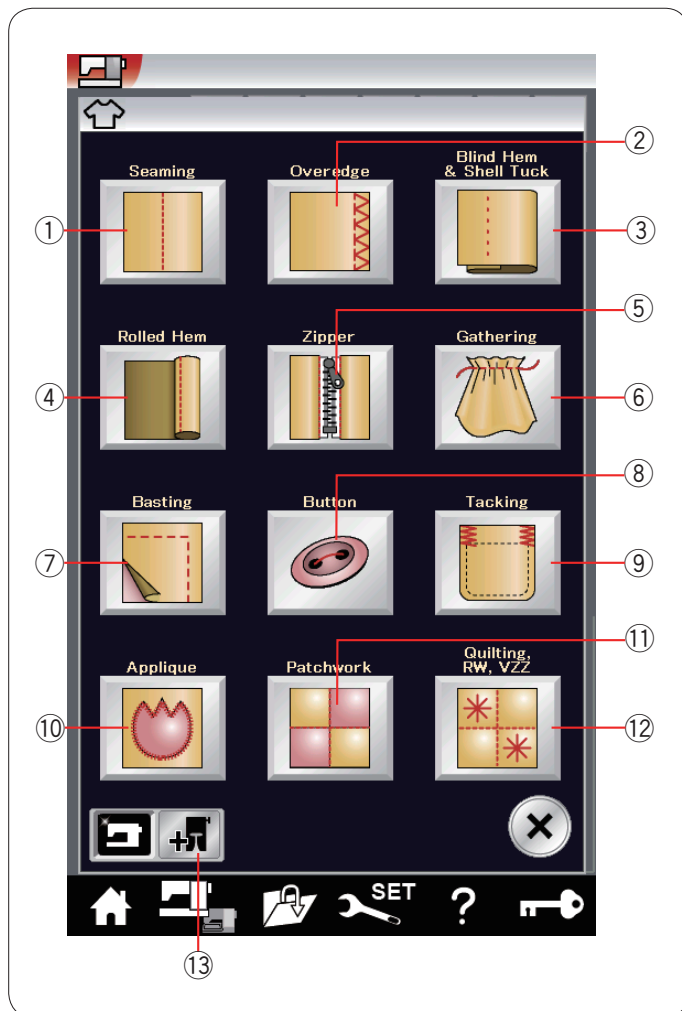
Select the memory location; either the machine's internal memory or a USB flash drive.  
The "Ordf" folder will appear.

### NOTE:

- If you created any folders before, those folders will also appear.
- If you cannot find the desired folder or the file in the page, press the next or previous page key ② to display the other pages.

Select the desired folder and the file list will appear.  
Select the desired file.

The screen will return to the ordinary sewing window showing the saved pattern combination or monogram.



## Sewing Application

Sewing application is a unique feature that provides you with 12 useful sewing applications.

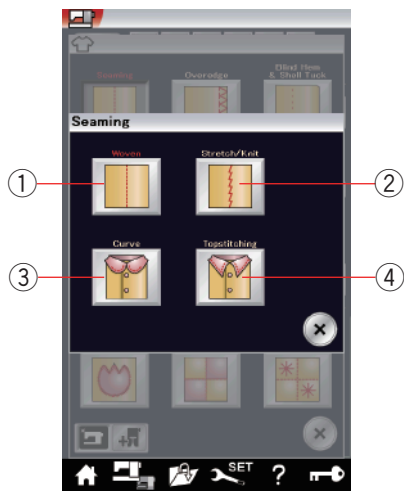
Press the sewing application key and the sewing application menu will open (refer to page 26).

The 12 sewing applications are as follows:

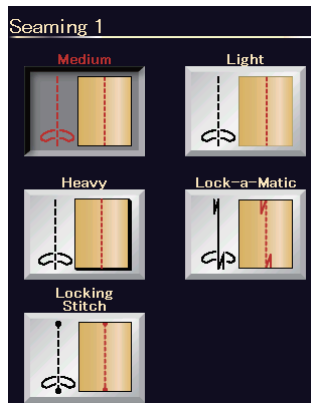
- ① Seaming
- ② Overedge
- ③ Blind Hem & Shell Tuck
- ④ Rolled Hem
- ⑤ Zipper Sewing
- ⑥ Gathering
- ⑦ Basting
- ⑧ Button Sewing
- ⑨ Tacking
- ⑩ Applique
- ⑪ Patchwork
- ⑫ Quilting, Ruler Work and Variable Zigzag

The sewing applications using optional presser feet can be selected by pressing optional foot key ⑬. Please refer to optional feet instructions for usage details.

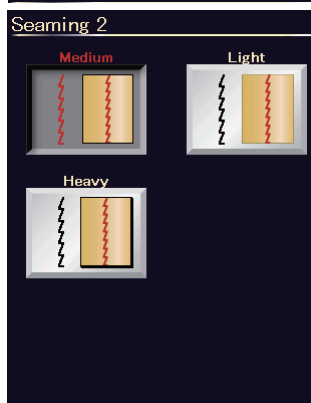
- ⑬ Optional foot key



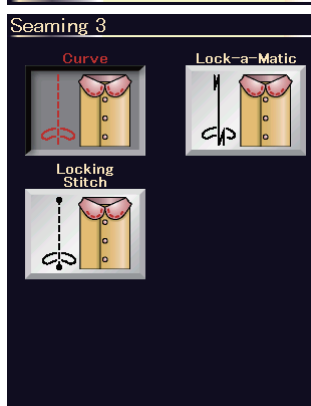
①



②



③



④



## Seaming

There are 4 types of stitches for seaming in this group.

### ① Woven (Seaming 1)

Straight stitches for seaming regular woven fabrics.

### ② Stretch/Knit (Seaming 2)

Narrow stretch stitches for seaming stretch or knit fabrics.

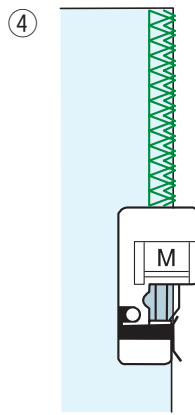
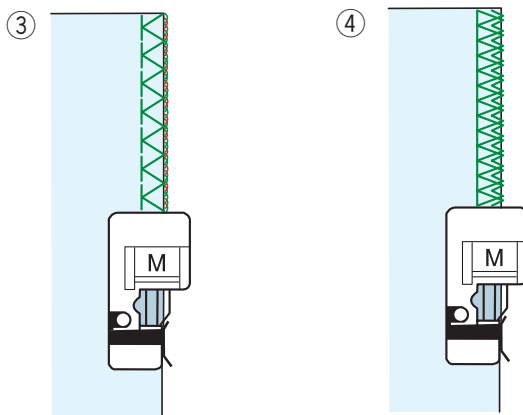
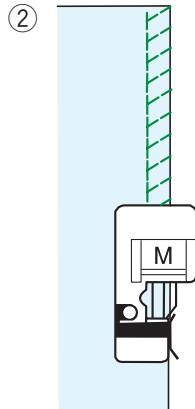
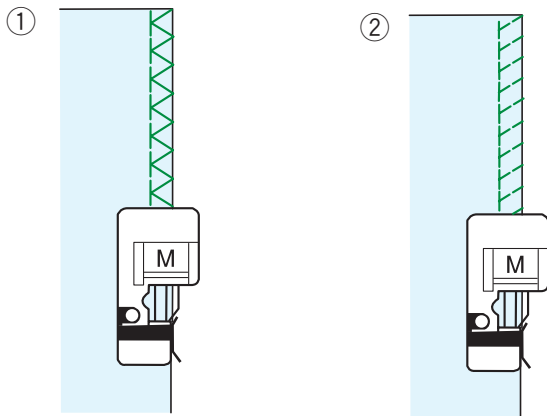
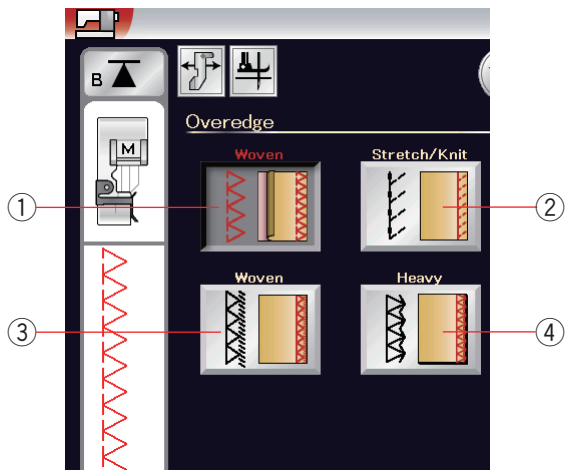
### ③ Curve (Seaming 3)

Short straight stitches for seaming curved line.

### ④ Topstitching (Seaming 4)

Long straight stitch for topstitching with thick threads.

## Overedge



### ① Woven

Overcasting stitch for regular woven fabrics.

### ② Stretch/Knit

Knit stitch for finishing raw edges of stretch or knit fabrics.

For better results, use the zigzag foot A and sew leaving an adequate seam allowance.

After sewing, trim the seam allowance close to the stitches (refer to page 36).

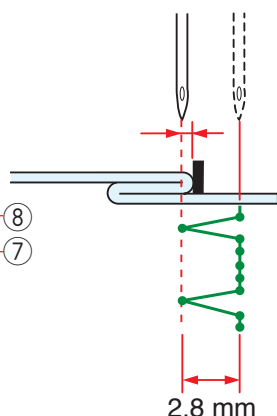
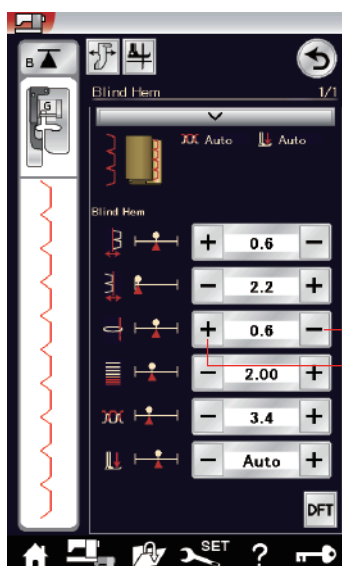
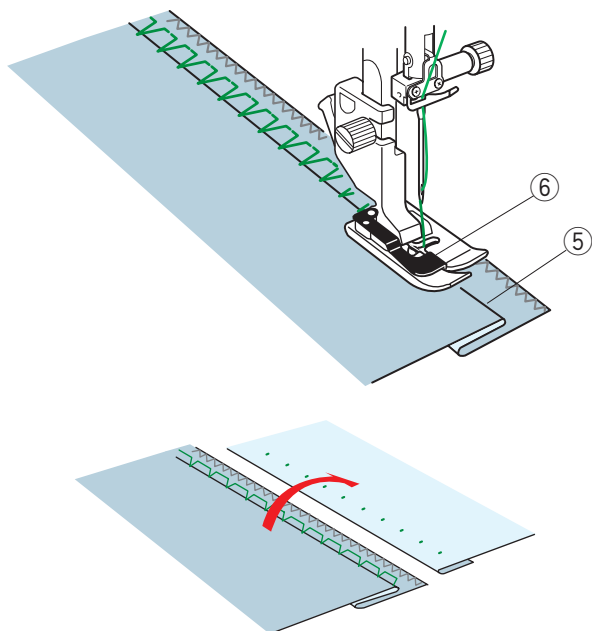
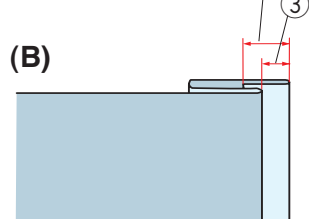
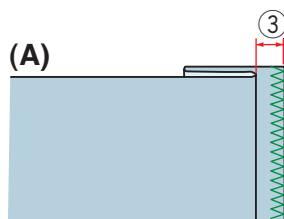
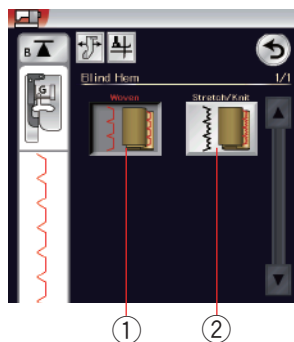
### ③ Woven

Overlock stitch similar to a professional overlocker stitch.

### ④ Heavy

Double overedge stitch for preventing raw edges of linens and gabardines from ravelling.





## Blind Hem

Select "Blind Hem".

The following 2 options are available.

### ① Woven

For blind hemming regular woven fabric

### ② Stretch/Knit

For blind hemming stretch or knit fabric.

## To sew:

Attach the blind hem foot G.

Fold the fabric to form a hem leaving a 0.5 cm (1/4") allowance as shown.

③ 0.5 cm (1/4")

(A) Medium to heavy fabrics: The raw edge should be overcast.

(B) Fine fabrics: Fold the raw edge 1 cm (1/2").

④ 1 cm (1/2")

Position the fabric so that the fold comes to the left side of the guide on the foot. Lower the presser foot.

The needle should just pierce the folded edge when it comes over to the left side.

Adjust the position of the needle drop if necessary.

Sew guiding the fold along the guide.

⑤ Fold

⑥ Guide

After sewing is finished, open the fabric flat.

The seam on the right side of the fabric is almost invisible.

## Adjusting the needle drop position

Press the setting bar to expand the manual setting window.

Press the "+" key ⑦ in the upper row to move the needle drop positions to the left.

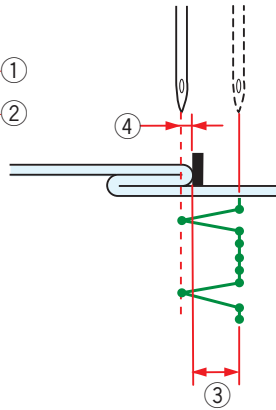
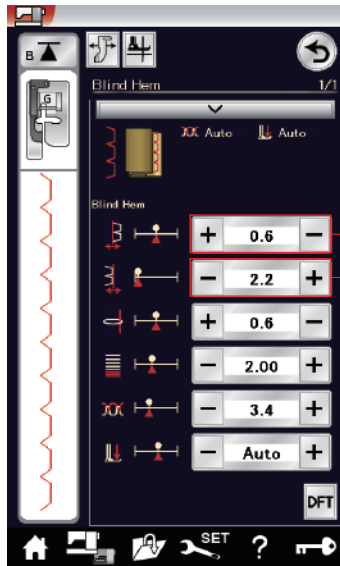
Press the "-" key ⑧ in the upper row to move the needle drop positions to the right.

The needle drop position will change, while the stitch width (2.8 mm) remains consistent.

The distance between the left needle drop position and guide of the foot is indicated in millimeters.

### NOTE:

You can alter the stitch width by changing the right needle drop position.



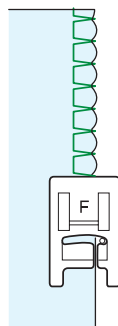
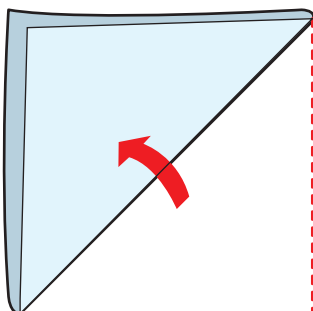
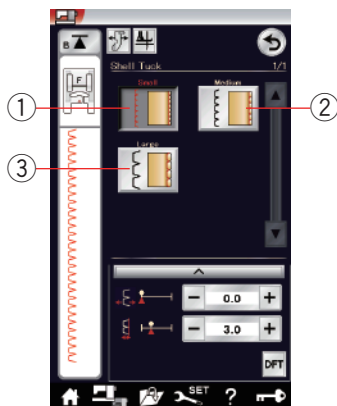
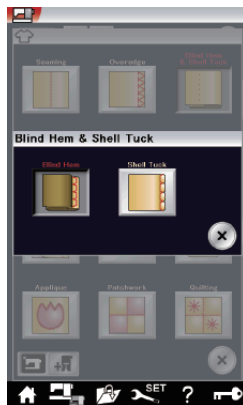
### Altering blind hem stitch width

Press the “+” key in the row ② to increase the stitch width ③.

Press the “-” key in the row ② to decrease the stitch width ③.

#### NOTE:

You can move the left needle drop position ④ with the “+” or “-” key in the row ①.



### Shell Tuck

Select “Shell Tuck”.

The following 3 options are available.

- ① Small  
Narrow shell tuck stitch
- ② Medium  
Medium width shell tuck stitch
- ③ Large  
Regular shell tuck stitch

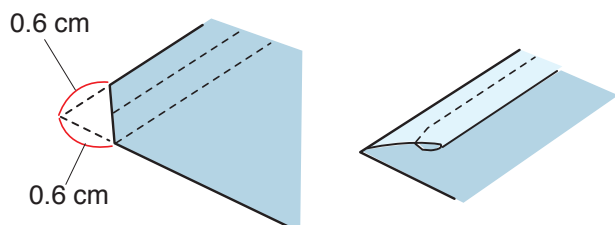
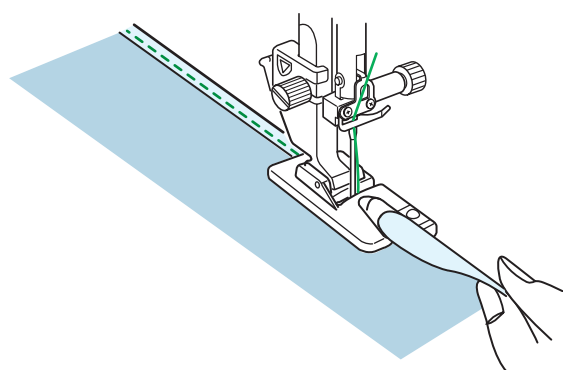
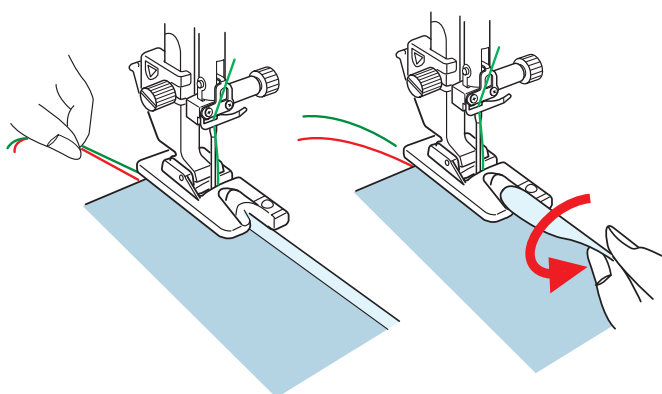
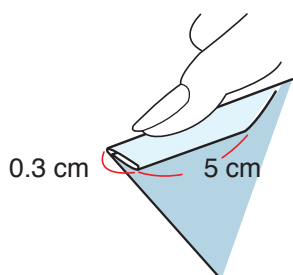
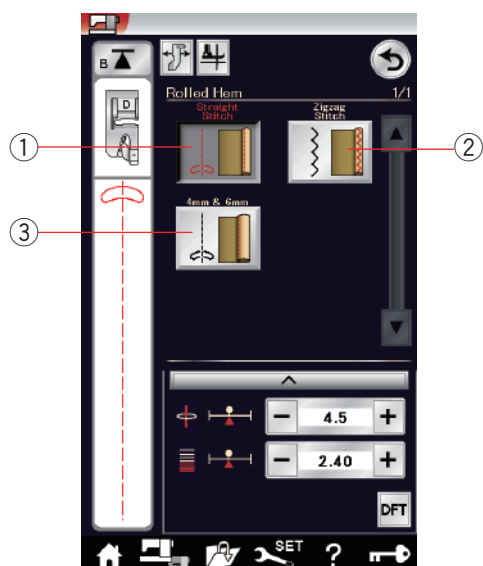
#### To sew:

Use a light weight fabric (Tricot, for example).

Fold the fabric on bias as shown and stitch on the fold.

Allow the needle to barely clear the folded edge to create a shelled edge.

If you sew shell tucks, space the rows at least 1.5 cm (5/8”) apart.



## Rolled Hem

### ① Straight Stitch

Rolled hemming with straight stitch

### ② Zigzag Stitch

Rolled hemming with narrow zigzag stitch

### ③ 4 mm & 6 mm

Rolled hemming using optional rolled hemming feet D1 and D2

### To sew:

Attach the rolled hem foot D.

Fold the fabric edge twice to form a hem, 0.3 cm (1/8") wide and 5 cm (2") long then press.

Place the fabric aligning the hem edge with the guide of the foot. Turn the hand wheel to lower the needle to the starting point.

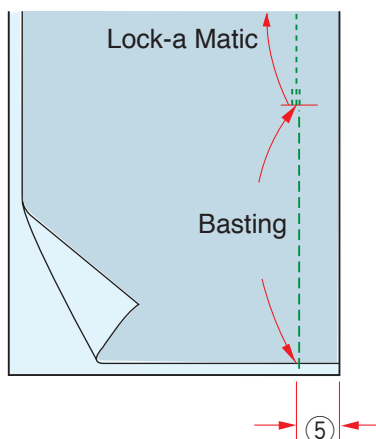
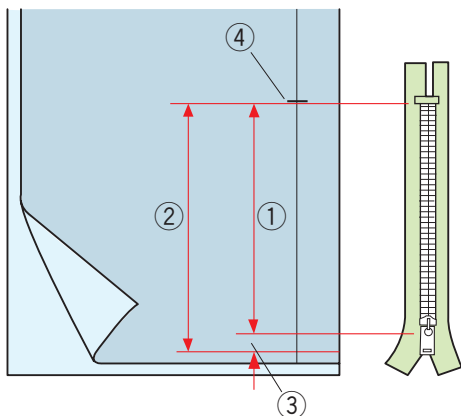
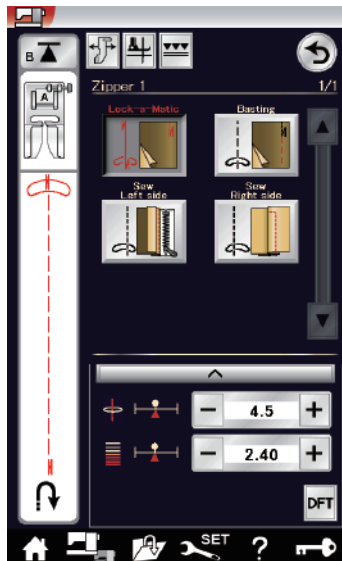
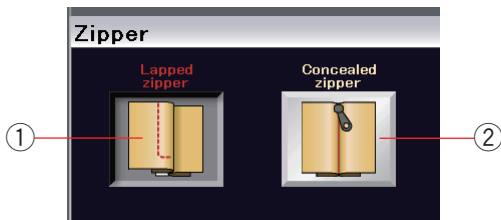
Lower the foot and sew several stitches slowly while pulling on the threads to assist feeding the fabric.

Stop the machine and lower the needle into the fabric. Raise the foot and insert the folded portion of the fabric into the curl of the foot.

Lower the foot and sew while lifting the edge of the fabric to keep it feeding into the curl smoothly and evenly.

### NOTE:

Trim the corners 0.6 cm (1/4") to reduce bulk.



## Zipper Sewing

### ① Lapped zipper

Lapped zipper application with the zipper foot E

### ② Concealed zipper

Concealed zipper application with the concealed zipper foot Z

## Lapped zipper sewing

Press the lapped zipper icon and the zipper sewing window will open.

Press the sewing step icon and the machine setting will automatically adjust to suit each sewing step.

## Fabric preparation

Add 1 cm (3/8") to the zipper size. This is the overall opening size.

Mark the end of opening.

- ① Zipper size
- ② Opening size
- ③ 1 cm (3/8")
- ④ End of opening

Attach the zigzag foot A.



### Lock-a-Matic

Place the right sides of the fabric together and sew to the end of the opening leaving a 2 cm (3/4") allowance.

- ⑤ 2 cm (3/4")



### Basting

Baste the zipper opening.



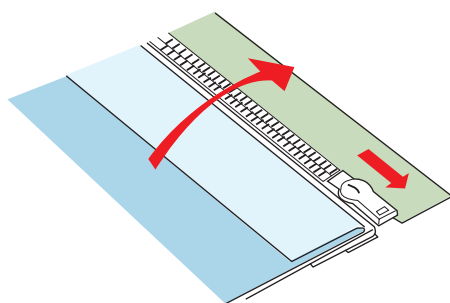
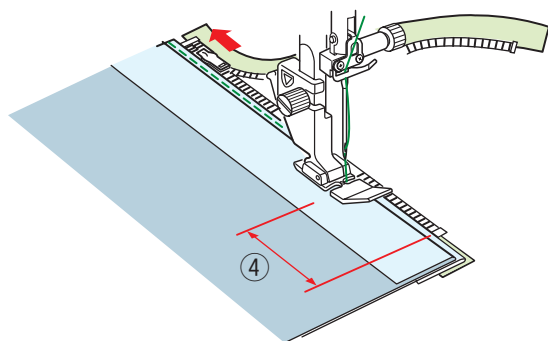
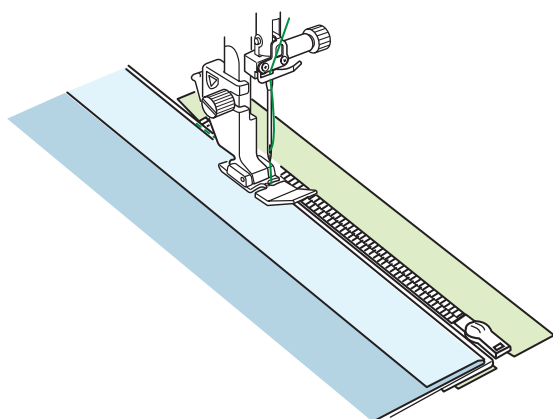
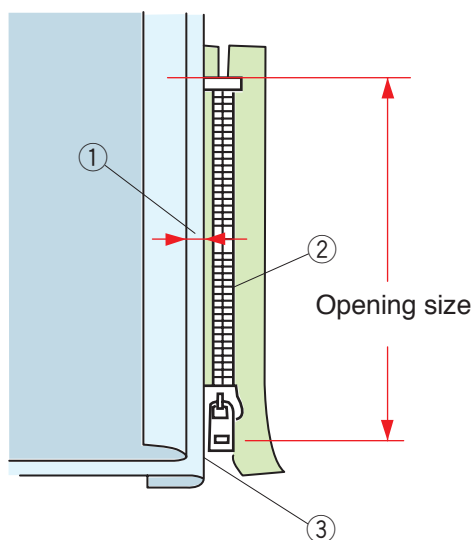
### Sew left side

Attach the zipper foot E.

Fold back the left seam allowance. Turn the right seam allowance under to form a 0.2 to 0.3 cm (1/8") fold.

Place the zipper teeth next to the fold and pin in place.

- ① 0.2-0.3 cm (1/8")
- ② Zipper teeth
- ③ Fold



Lower the foot onto the topside at the bottom of the zipper so that the needle pierces the fabric next to the fold and the zipper tape.

Sew along the zipper guiding the zipper teeth along the bottom edge of the foot.

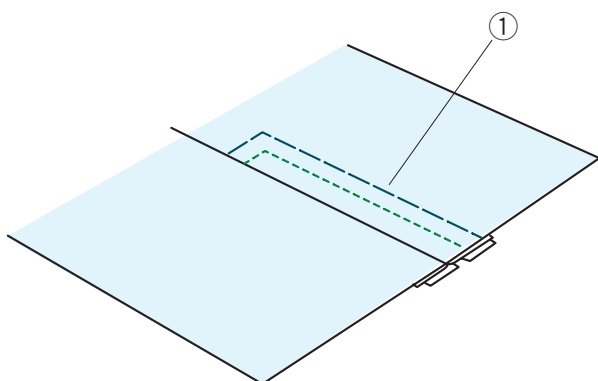
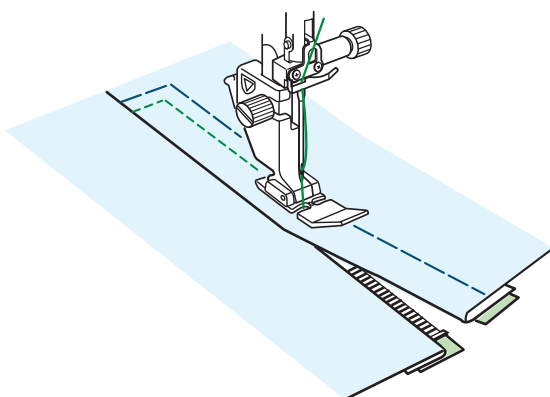
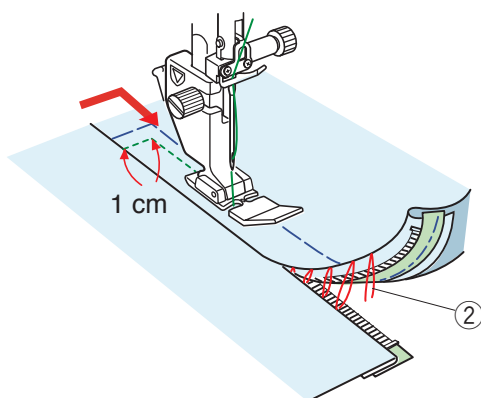
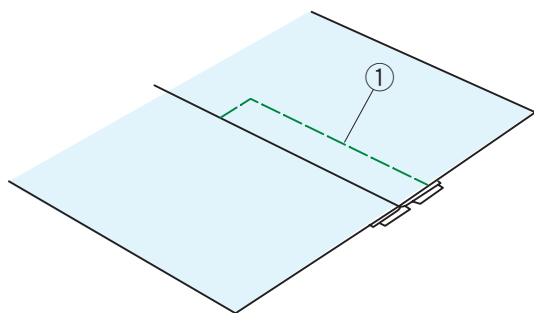
Sew through all layers next to the fold.

Stop 5 cm (2") before zipper foot E reaches the slider on the zipper tape.

- ④ 5 cm (2")

Raise the foot and open the zipper. Lower the foot and stitch the remainder of the seam.

Close the zipper and spread the fabric open flat with the right side of the fabric facing up.



### Basting

Replace the foot with the zigzag foot A.  
Baste the opened fabric and zipper tape together.

① Basting



### Sew right side

Replace the foot with the zipper foot E.  
Backstitch across the end of opening to 1 cm (3/8").  
Stitch through the garment and zipper tape, guiding the zipper teeth along the bottom edge on the foot.  
Stop about 5 cm (2") from the top of the zipper.  
Lower the needle into the fabric, raise the foot and remove the basting stitches.

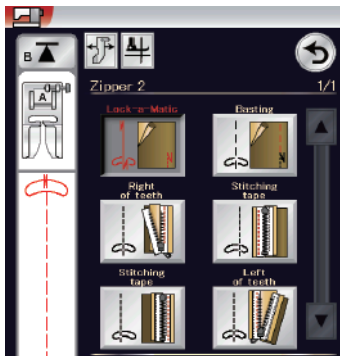
② Basting stitches

Open the zipper and move the slider to the rear of the foot.

Lower the foot and stitch the remainder of the seam making sure the fold is even.

Remove the basting stitches.



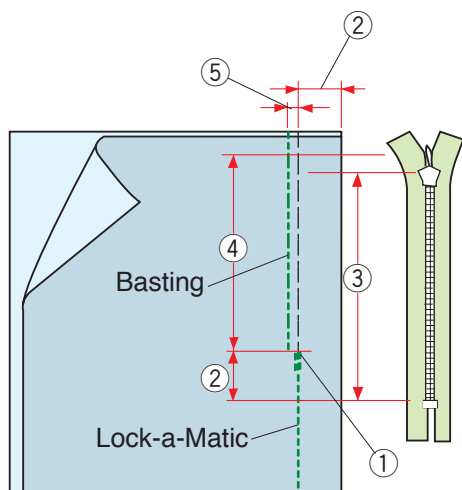


## Concealed zipper sewing

Press the concealed zipper icon and the window will show the step-by-step icon keys.

Prepare a concealed zipper 2 cm (3/4") longer than the opening size.

Press the sewing step icon and machine settings will automatically adjust to suit each sewing step.



### Lock-a-Matic

Attach the zigzag foot A. Place the right sides of the fabric together and sew to the end of the opening with a 2 cm (3/4") seam allowance. Press the reverse button to lock the seams.

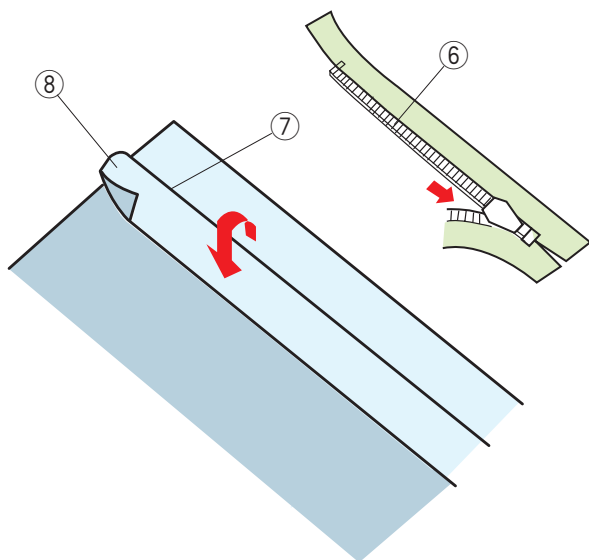
- ① End of opening
- ② 2 cm (3/4")
- ③ Zipper size
- ④ Opening size



### Basting

Baste the opening 0.3 cm (1/8") inside of the seam line.

- ⑤ 0.3 cm (1/8")



Place the right zipper teeth next to the fold and pin it in place.

Fold up the left seam allowance to the bodice. Open the zipper and put it on the right seam allowance with the back side up.

- ⑥ Zipper teeth
- ⑦ Fold
- ⑧ Left seam allowance



### Right of teeth

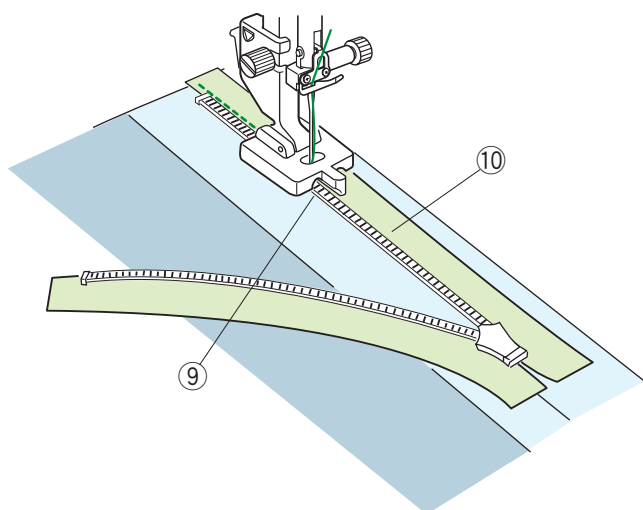
Attach the concealed zipper foot Z.

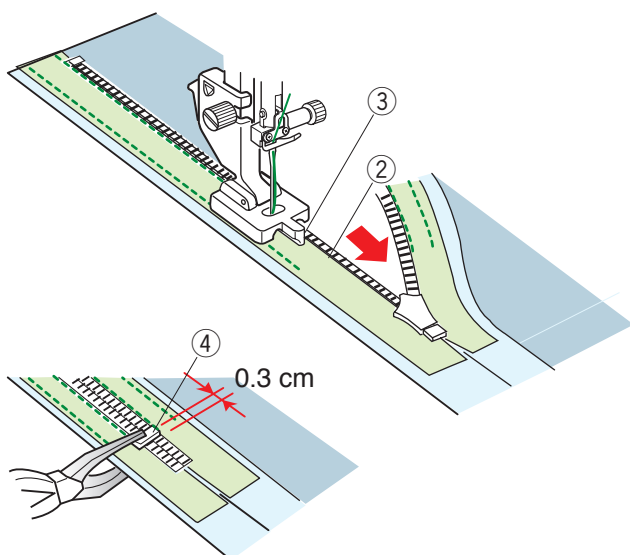
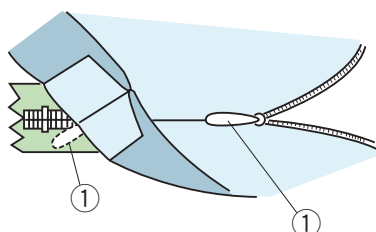
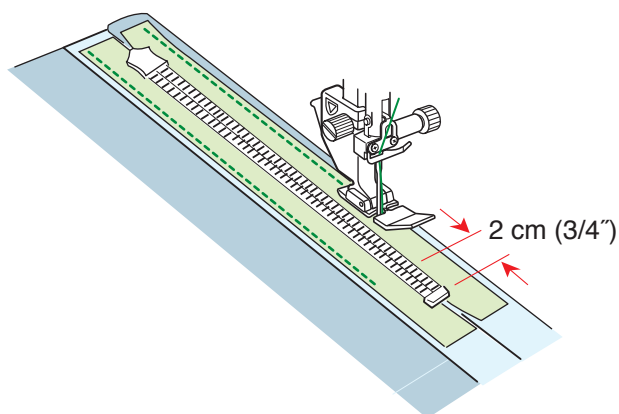
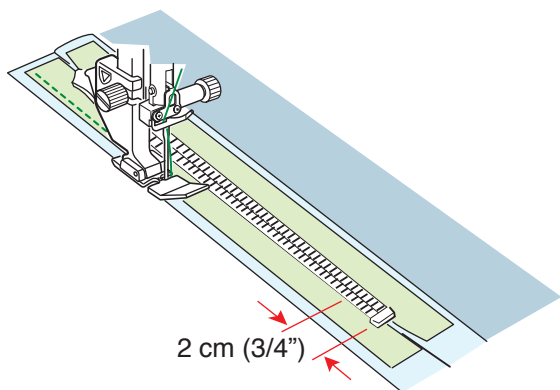
Raise the zipper teeth on the right and lower the foot so the left groove of the foot catches the zipper teeth.

Stitch through the zipper tape and fabric up to the end of the opening.

Reverse the stitches to secure the seam.

- ⑨ Left groove
- ⑩ Zipper tape





### Stitching tape

Raise the foot and close the zipper.  
Replace the foot with the zipper foot E.  
Turn and fold the bodice to the right. Seam along the edge of the left zipper tape and reverse the stitches 2 cm (3/4") before the zipper bottom.



### Stitching tape

Turn and fold the bodice to the left. Seam along the edge of the right zipper tape and reverse the stitches 2 cm (3/4") before the zipper bottom.



### Left of teeth

Raise the foot and replace it with the concealed zipper foot Z.

Remove the basting stitches.

Open zipper and insert the pull tab between fabric and zipper tape to allow the slider to reach the stopper.

① Pull tab

Raise the zipper teeth on the left and lower the foot so the right groove of the foot catches the zipper teeth. Stitch through the zipper tape and fabric up to the end of the opening. Reverse the stitches to secure the seam.

② Zipper teeth

③ Groove

Slide up the stopper to 0.3 cm (1/8") below the end of the opening and fasten the stopper with pliers.

④ Stopper

## Gathering

- 1 Pull both threads 10 cm (4") under and behind the presser foot (refer to page 17).
- 2 Sew two rows of straight stitches 0.6 cm (1/4") apart. Knot the threads at the beginning.
- 3 Pull the bobbin threads at the end to gather the fabric.
- 4 Knot the threads at the end and distribute the gathers evenly.
- 5 Prepare the fabric to attach the gathering.  
Exit the sewing application.  
Select the Straight Stitch U1.  
Set the thread tension to "3.8" and the stitch length to "2.40" (default settings).  
Place the wrong side of the fabric ① under the gathering.  
Sew the straight stitch between the two gathering rows.  
Remove the two rows of straight stitches.

### NOTE:

You may sew the straight stitch under the two gathering rows to cover the remains of gathering rows.

## Easing a sleeve top

In addition to the regular gathering stitch, this section offers you a special stitch for easing sleeve tops.

Pull both of the threads about 10 cm (4").

Sew a pair of lines, 3 mm (1/8") apart, along the edge of the sleeve top.

Pull the bobbin threads to contract the sleeve top carefully, matching it with the armhole size.

Make sure not to make gathers in the sleeve top.

## Basting

There are 2 basting stitches available in this section.

### Basting (Auto)

This stitch is used for basting zipper tape or fitting of garments.

Sew in the same way as that for straight stitch sewing.

### Basting (Manual/Quilting)

Attach the darning foot PD-H.

When basting is selected, the feed dog lowers automatically.

### NOTE:

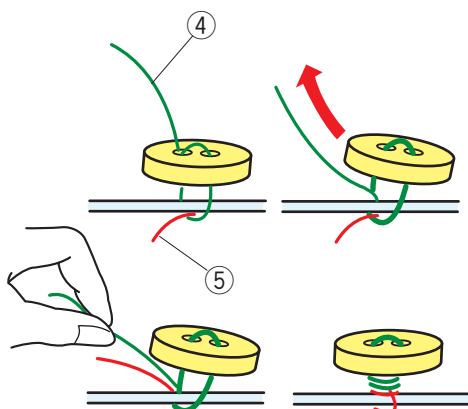
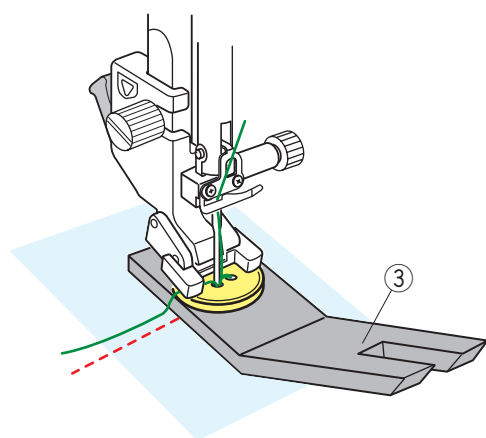
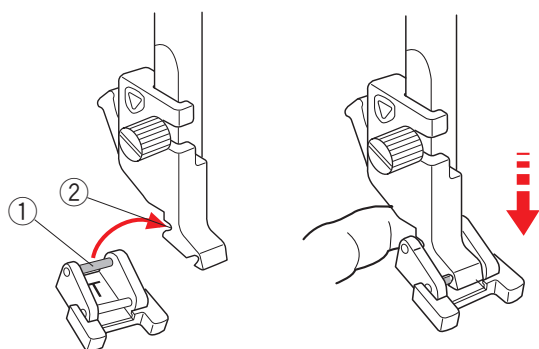
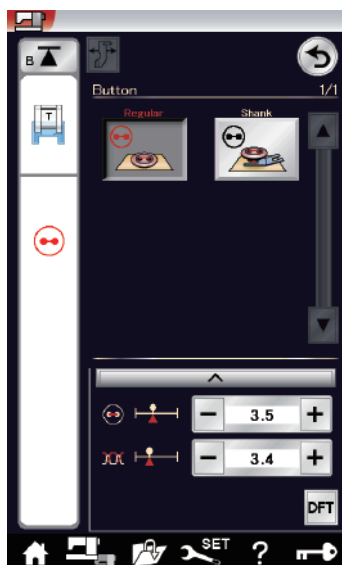
Refer to page 21 for how to attach the darning foot PD-H.

### To sew

Hold the fabric taut and depress the foot control.

The machine will make one stitch and stop automatically.

Slide the fabric to the rear for the next stitch.



## Button Sewing

When attaching a button to thick fabric, you need to make a shank by using the button shank plate.

The feed dog lowers automatically when selecting the button sewing section.

### Attaching the button sewing foot T

Make sure to press the lockout key to lock the machine. Insert the rear pin of the foot into the rear groove of the foot holder.

- ① Rear pin
- ② Rear groove

Gently lower the presser foot lifter while holding the foot with your finger to fit the foot. Press the unlock key to unlock the machine.

Place a button on the fabric and lower the needle into the left hole of the button by turning the handwheel with your hand.

Insert the button shank plate under the button.

Lower the foot to hold the button in place, aligning the direction of the button.

- ③ Button shank plate

Raise the needle by turning the handwheel until the needle bar swings to the right.

Press the "+" or "-" key so the needle enters into the right hole of the button. The maximum stitch width is 0.7 cm (1/4").

Start sewing and continue until the machine stops automatically.

Remove the fabric from the machine.

Cut the all threads leaving at least 10 cm (4") tails. Trim the threads at the end close to the fabric.

Pass the needle thread at the beginning of stitching through the left hole in the button, between the button and fabric.

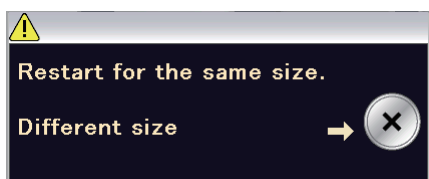
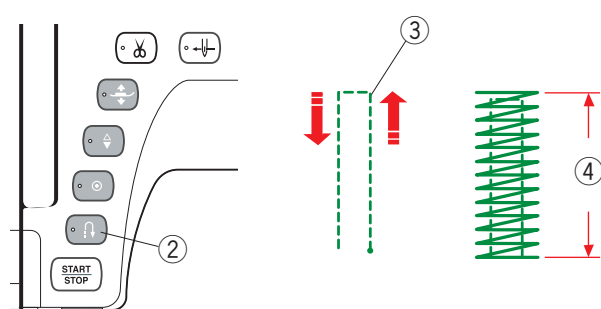
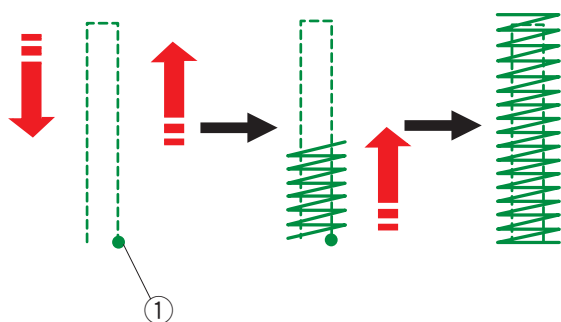
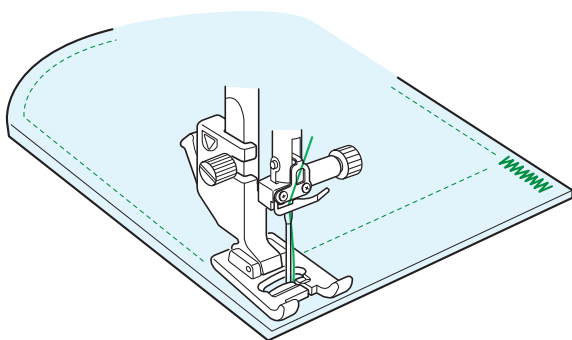
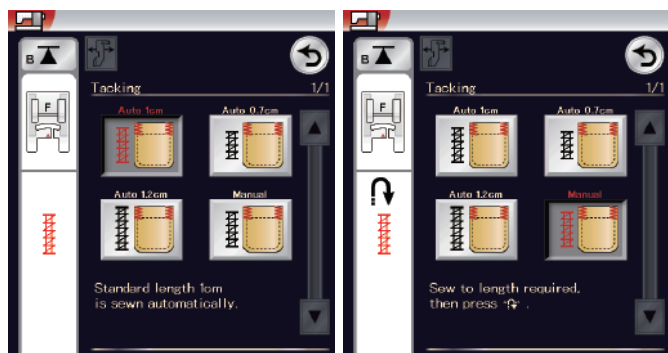
Pull the needle thread to bring the bobbin thread up to the right side of the fabric.

- ④ Needle thread at the beginning
- ⑤ Bobbin thread

Wind the threads to form a shank and knot them together.

### NOTE:

The button shank plate cannot be used if the button is too thick.



## Tacking

Tacking is used to reinforce pockets, crotches and belt carriers where extra strength is needed.

There are 3 auto tacking sizes and manual tacking available.

Attach the satin stitch foot F.

### Auto tacking

Lower the needle at the starting point and start sewing. The machine will sew the tack of the selected size and stop automatically when it is finished.

- ① Starting point

### Manual tacking

Start the machine and sew to the required length ③, then press the reverse button ②. This sets the tack length ④. Continue sewing until the machine stops automatically.

- ③ Required length

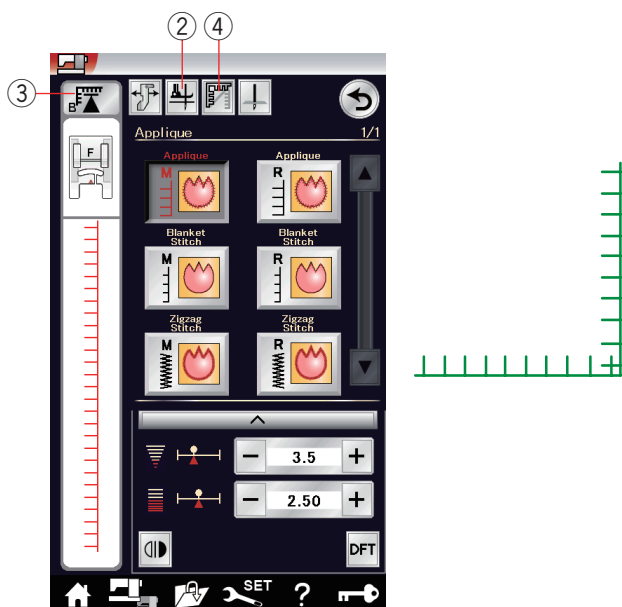
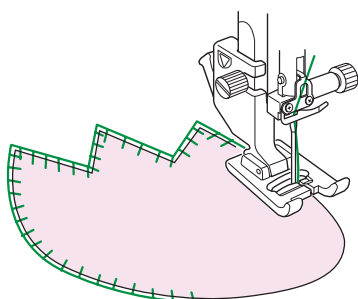
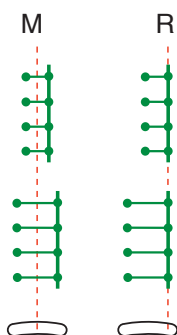
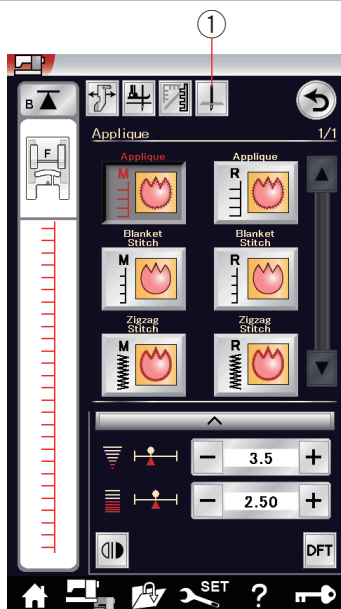
#### NOTE:

The maximum length of tacking is 1.5 cm (5/8").

### To sew the same size tack

To sew another tack in the same size, simply start the machine and sew until the machine stops automatically.

To sew the next tack in a different size, press the X key.



## Applique

There are 6 types of applique stitches available in this section.

You can select the needle stop position either up or down by pressing the needle stop position key.

① Needle stop position key

The letter above the stitch image denotes the baseline of the needle drop position.

**M:** Middle (center)

**R:** Right

The baseline can be adjusted without changing the stitch width by pressing the “+” or “-” key on the bottom row.

## Pivoting at applique corners

When sewing an applique with sharp corners, you may turn on the “Foot up for pivoting” option so that the presser foot automatically goes up when the machine stops.

Press the foot-up key to turn on this option

② Foot-up key

### NOTE:

Make sure to stop the machine with the needle dropped at the outer edge of the applique.

## Starting over from the corner

Press the startover key before sewing in the new direction to sew from the beginning of the pattern.

③ Startover key

Two options of startover are available for applique stitches. Press the cornering key to select normal startover or cornering startover.

The key icon will change to show which option is being selected when pressing the key.

④ Cornering key

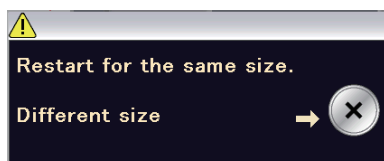
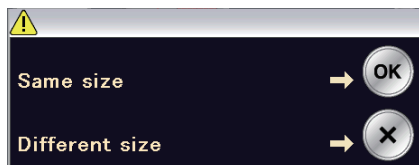
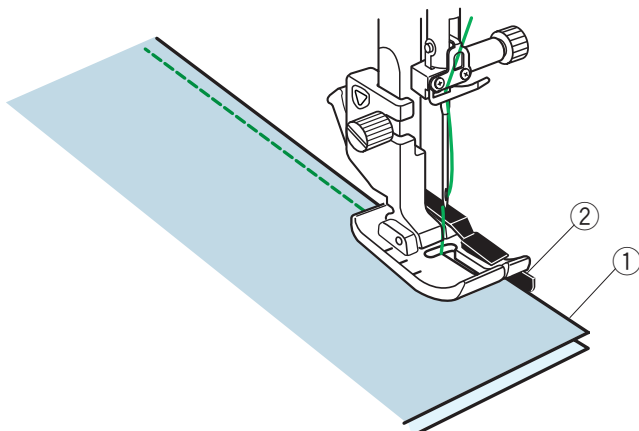
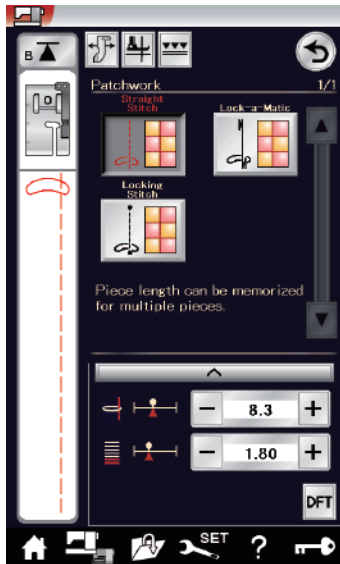
### Normal startover:

Sew a locking stitch then start sewing from the beginning of the pattern.

### Cornering startover:

Start sewing from the beginning of the pattern without a locking stitch.





## Patchwork

### Patchwork piecing

There are 3 stitches for seaming patchwork pieces in this section.

The default stitch length is set at 1.8 mm, ideal for patchwork piecing, but you can fine tune the stitch length by pressing the “+” or “-” key.

Attach 1/4” seam foot O, which helps you to keep a constant 1/4” (6 mm) seam allowance.

Put 2 pieces of fabric with right sides together.

Place the patchwork pieces under the foot so that the edge of the fabric matches the guide on the presser foot.

- ① Edges of fabric
- ② Guide on the 1/4” seam foot O

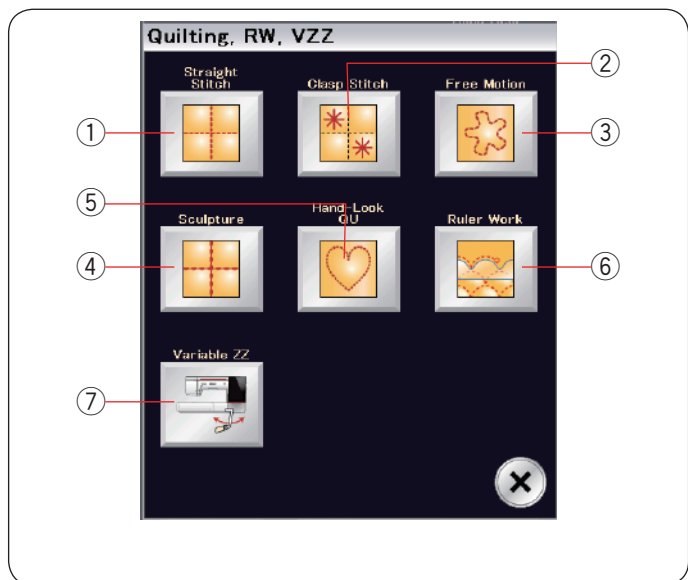
When you stop the machine, a confirmation message will appear.

Press the OK key and the machine memorizes the seam length to sew another piece of the same length.

Press the X key to sew in a different size.

After sewing the memorized length, a message will appear.

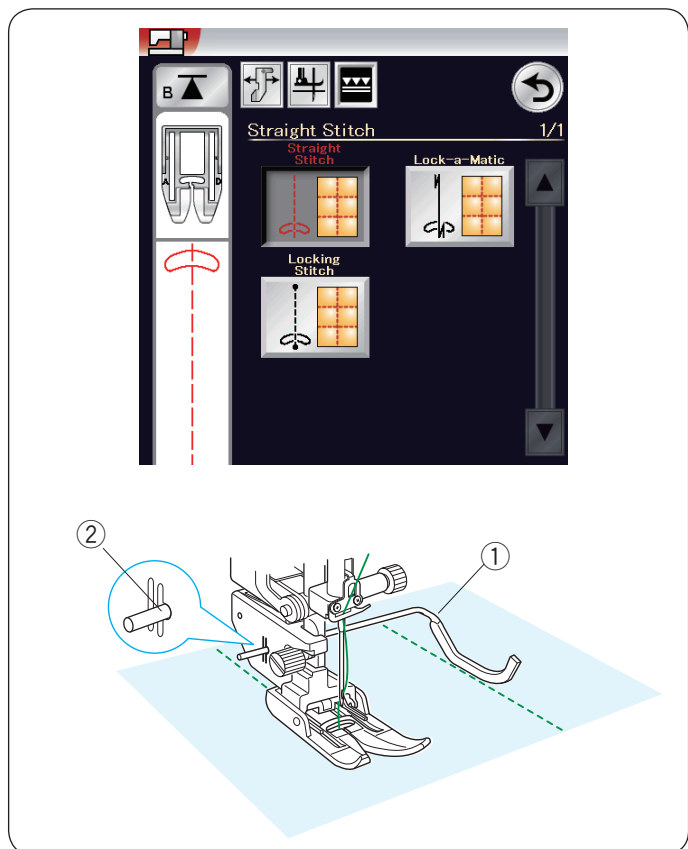
To sew the same length, start the machine and it will stop automatically after sewing the memorized length.



## Quilting

In this section, 7 types of useful stitches for quilting are available.

- ① Straight stitches (with dual feed)
- ② Clasp stitches
- ③ Free motion quilting stitches
- ④ Sculpture stitches (with dual feed)
- ⑤ Hand-look quilt stitches
- ⑥ Ruler work
- ⑦ Variable zigzag stitches



### Straight stitches (with dual feed)

Straight stitches in this section are suitable for seaming quilt layers using the dual feed foot (refer to page 20 for how to attach it).

#### Quilting guide bar for dual feed foot

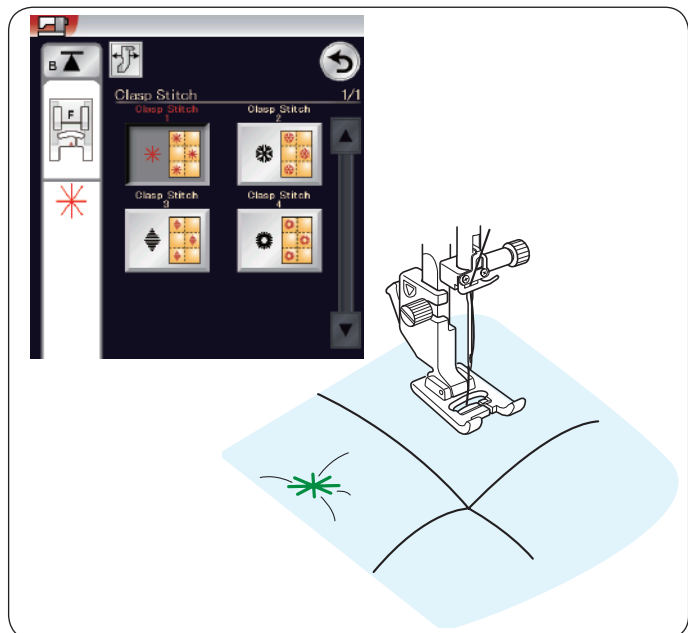
The quilting guide bar is helpful when sewing parallel, evenly spaced rows of stitching.

Insert the quilting guide bar into the hole in the rear of the foot holder.

Shift the quilting guide bar to the desired spacing.

- ① Quilting guide bar
- ② Hole

Sew rows of stitching while tracing the previous row of stitches with the quilting guide bar.

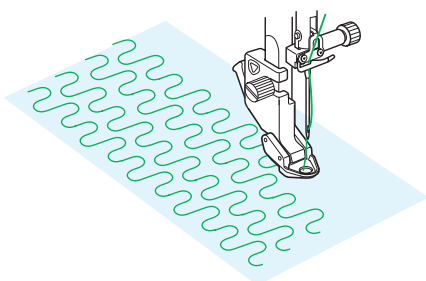
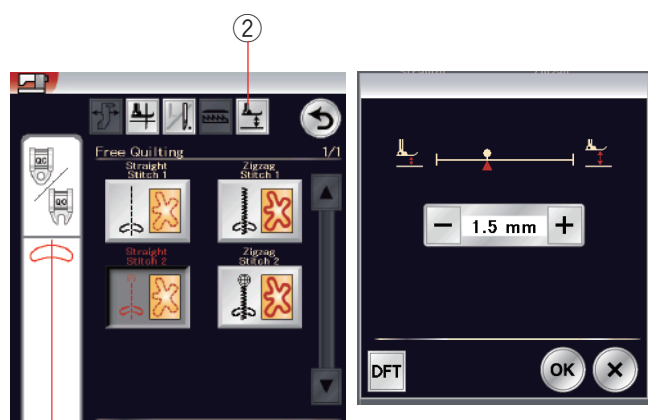
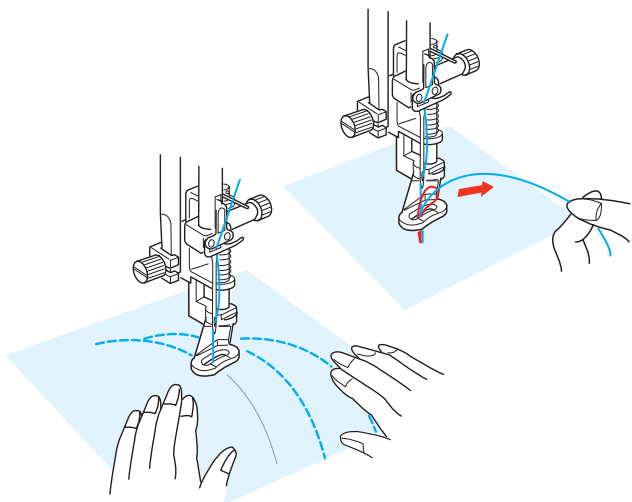
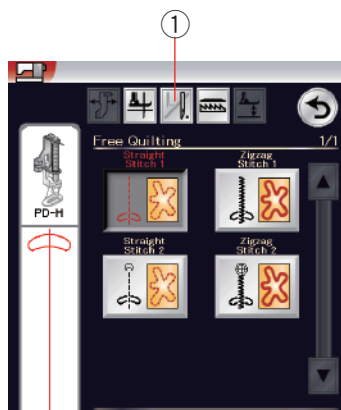


### Clasp stitches

You can close quilt layers and batting using the clasp stitch.

Use the satin stitch foot F.

The machine sews one unit of the pattern and automatically stops with the needle in up position when completed.



## Free quilting

For ordinary and bulky quilts, select the “Straight Stitch 1” or “Zigzag Stitch 1” and use the darning foot PD-H or darning foot (open-toe) PD-H (refer to page 21 for how to attach the feet).

Select the “Straight Stitch 2” or “Zigzag Stitch 2” for flatter quilts and use the free quilting foot QC, QO or QV (refer to page 91 for how to attach these feet).

## One stitch off

The machine stops automatically after sewing one stitch so that you can bring the bobbin thread up to prevent it from bunching up on the wrong side of the fabric.

Hold the needle thread and sew one stitch and the machine stops automatically.


Pull the needle thread up to bring the bobbin thread up.

Hold both the needle and bobbin threads and sew several stitches to secure the threads.

You can trim the thread tails with scissors.

The machine will stitch continuously when you resume sewing.

If you wish to start sewing without “one stitch off”, press the one stitch off key to cancel this function.

The key icon changes to .

When “one stitch off” is active, the key icon shows .

① One stitch off key

## To sew

Sew at medium speed while guiding the fabric with your hands.

Move the quilt 3 mm or less per stitch.

## Foot height for free motion quilting

When straight stitch 2 or zigzag stitch 2 is selected, the height of down position of the free motion quilting feet (QC, QO, QV) is optimized automatically.

However, you can fine tune the foot height according to the quilt thickness.

Place the fabric under the foot and lower the foot.

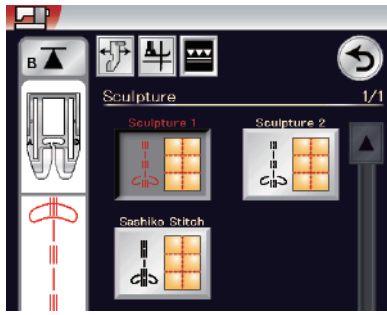
Press the foot height key and the adjusting window opens. Adjust the foot height by pressing the “+” key or “-” key and press the OK key to register the setting.

② Foot height key

Reduce the height if the fabrics bounce when sewing. Increase the height if the foot gets trapped in the fabrics when sewing.

## NOTE:

- Purple tip needle is recommended for free motion quilting to prevent skipped stitch.
- Do not move the quilt layers toward you when the open-toe foot is attached.

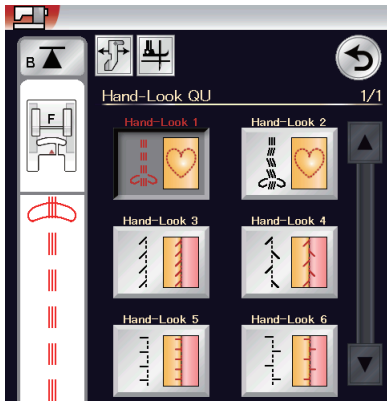


### Sculpture stitches

These stitches are used to accentuate design outlines and to create a mock hand-quilt.

Use the dual feed foot AD.

Refer to page 20 for how to attach the dual feed foot.



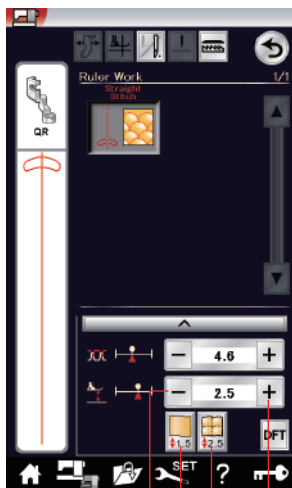
### Hand-look quilt stitches

Use a transparent nylon thread for the needle and ordinary sewing thread for the bobbin.

The bobbin thread is pulled up on the right side of the fabric and the stitches will look as if sewn by hand.

#### NOTE:

Use the net to prevent the thread from slipping off and jamming. Refer to page 12.



### Ruler work

Guide the foot along the quilting template (optional) to create straight, curved or repetitious patterns depending on the shape of the ruler.

Attach the ruler work foot (QR) when the "Ruler Work" is displayed as shown.

Refer to page 21 for how to attach the ruler work foot.

Place the fabric under the ruler foot.

Adjust the presser foot height to suite the quilt thickness. For ordinary and bulky quilts, select 2.5 ① for the foot height.

For flatter quilts, select 1.5 ② for the foot height.

You can fine adjust the presser foot height by pressing the "+" ③ or "-" ④ key.

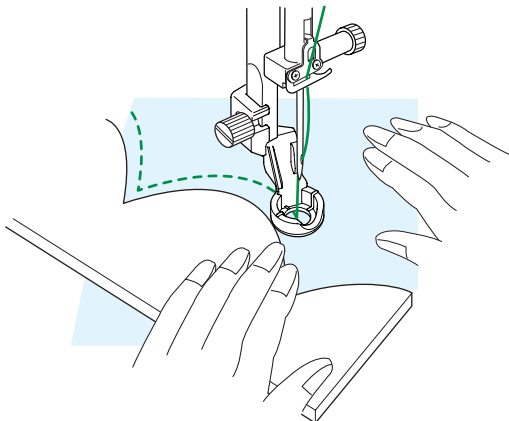
Place the quilting template on the edge of the ruler work foot.

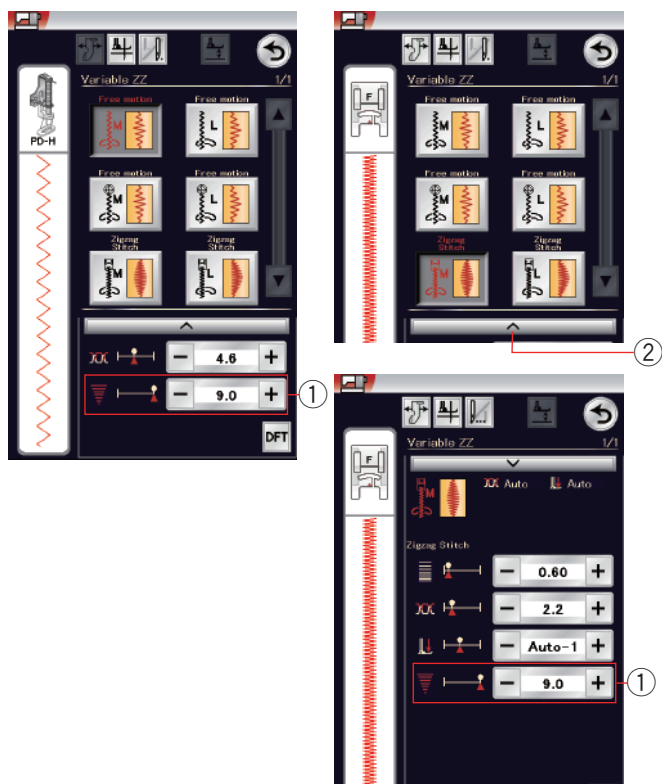
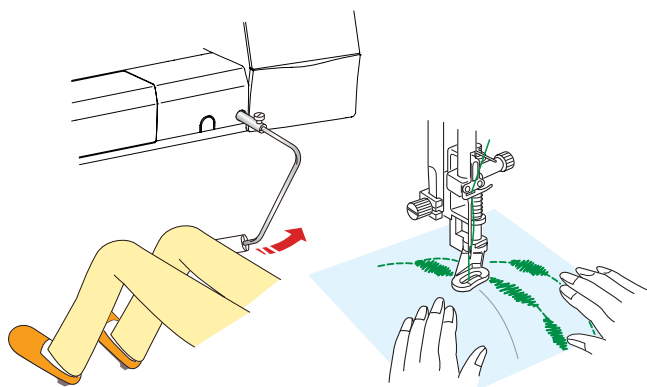
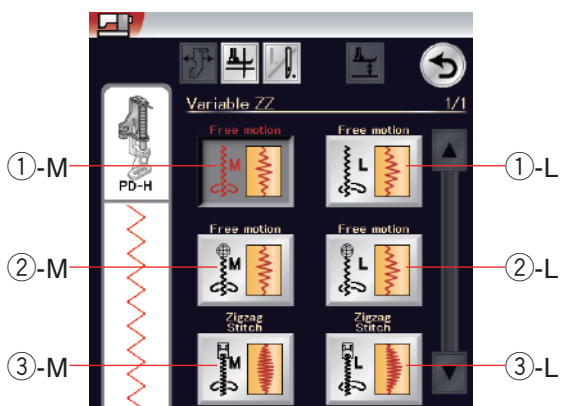
Sew while guiding the fabric and ruler together along the edge of the ruler foot.

#### NOTE:

A ruler (quilting template) for ruler work sewing is required.

Use the ruler (quilting template) for high shank or Longarm quilting machines (4.5 mm - 6.35 mm thickness).





## Variable zigzag

This unique feature allows you to control zigzag width with the knee lifter.

Select ①-M or ①-L, using the darning foot PD-H for sewing quilt layers. The feed dog drops automatically. Guide the fabric with your hands while sewing.

Select ②-M or ②-L, using the clear view free quilt foot QV or variable zigzag foot QZ (refer to page 91 for how to attach the foot) for sewing flat and firm fabrics. The feed dog drops automatically. Guide the fabric with your hands while sewing.

Select ③-M or ③-L, using the satin stitch foot for sewing variable zigzag stitches.

The fabric is fed by the feed dog and the stitch width can be varied with the knee lifter.

Attach a stabilizer to the wrong side of the fabric if needed.

Sew at slow to medium speed while guiding the fabric with your hands and controlling the stitch width with your knee.

### NOTE:

When the machine stops, you can raise and lower the presser foot with the knee lifter.

Purple tip needle is recommended for free motion quilting to prevent skipped stitch.

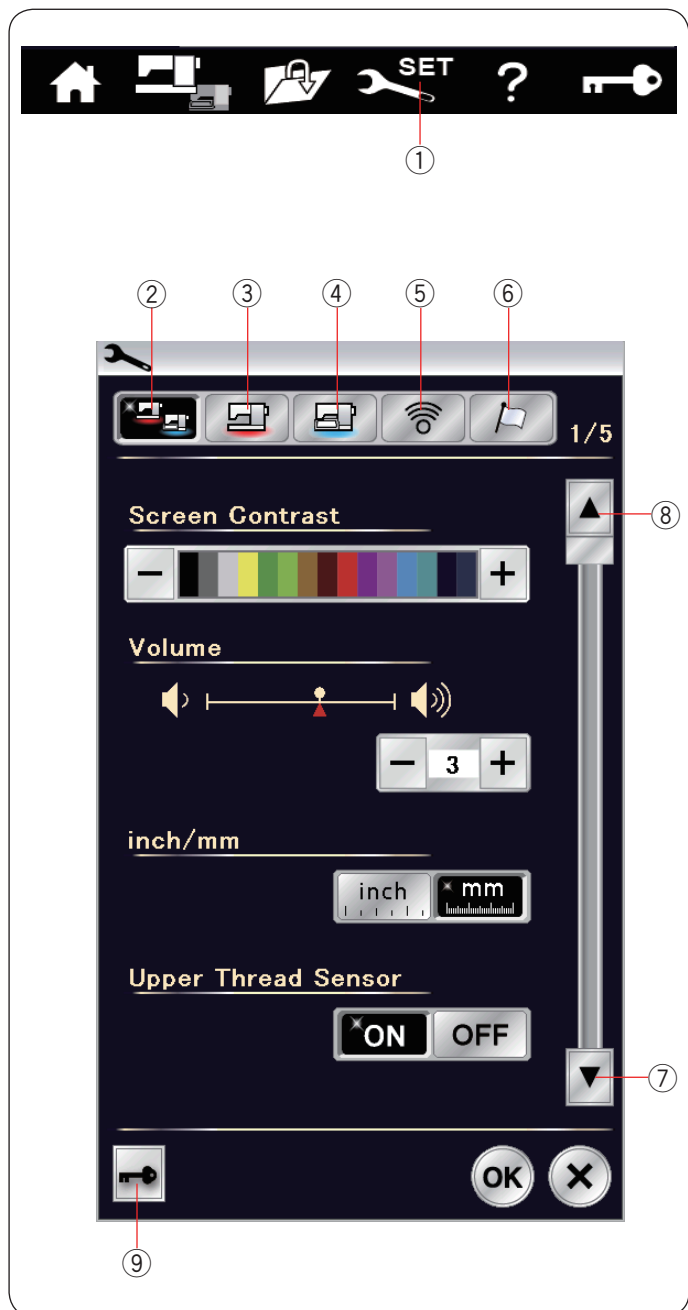
## Maximum zigzag width adjustment

The maximum zigzag width can be limited to suit your sewing needs.

Press the “+” or “-” key beside the maximum zigzag width setting ① to limit the maximum zigzag width to your preference.

For the variable zigzag stitches with the satin stitch foot, press the setting bar ② to open the maximum zigzag width setting.

- ① Maximum zigzag width setting
- ② Setting bar



## CUSTOMIZING MACHINE SETTINGS

### Machine Setting Mode

Press the set mode key to enter the machine setting mode.

You can select various options and customize the machine settings to suit your personal preference.

① Set mode key

Press one of the 5 keys to select the mode to customize.

### ② Common Setting Mode

In this mode, you can customize the machine settings and options for both ordinary sewing and embroidery.

### ③ Ordinary Sewing Setting Mode

In this mode, you can customize the machine settings and options for ordinary sewing (refer to pages 104-106 for the operation).

### ④ Embroidery Setting Mode

In this mode, you can customize the machine settings and options for embroidery (refer to pages 162-165 for the operation).

### ⑤ Wi-Fi Setting Mode

In this mode, you can set up the Wi-Fi connection for both ordinary sewing and embroidery (refer to pages 107-109).

### ⑥ Language Selection Mode

In this mode, you can select the desired language for the screen messages.

To browse pages in each mode, press the next page key or previous page key

⑦ Next page key

⑧ Previous page key

### ⑨ Lockout key

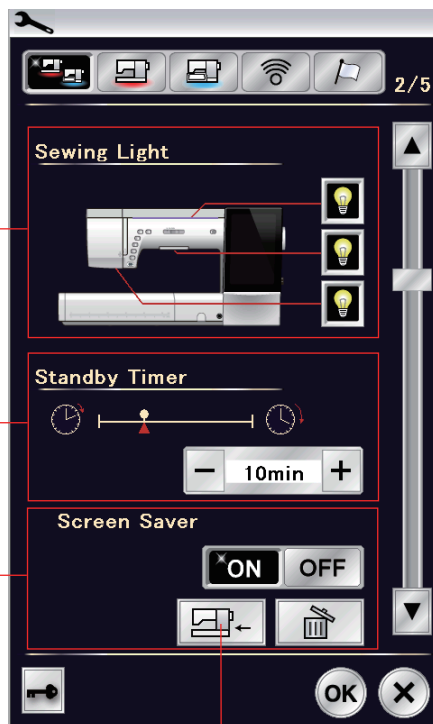
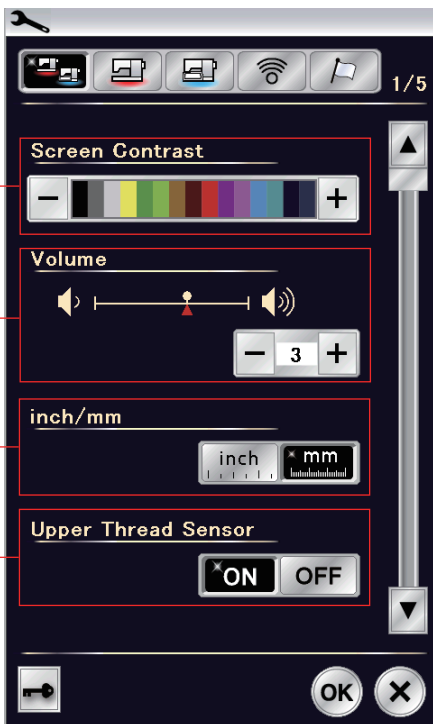
Refer to page 11 for the operation.

### Registering the custom settings

After customizing the settings, press the OK key to enable the new settings.

To cancel the changes to the settings, press the X key and the setting mode window will close.





⑧

## Common Setting Mode

### ① Screen Contrast

You can adjust the contrast of the visual touch screen by pressing the “+” or “-” key.

### ② Sound Volume

The signal sound can be adjusted by pressing the “+” or “-” key.

Set the value to “OFF” by pressing the “-” key several times to mute the signal sounds.

### ③ Inch/mm Option

You can set your machine’s dimensional unit to either inches or millimeters by pressing the “inch” or “mm” icon key.

The default unit is millimeters.

### ④ Upper Thread Sensor

If you need to run the machine without threads, turn off the upper thread sensor.

Press the next page key to show the next menu.

### ⑤ Sewing Light

The sewing lights can be turned on or off individually, however the retractable sewing light will always turn on when extended.

Press the corresponding light keys to turn on or off the sewing lights.

### ⑥ Standby Timer

The sewing lights will turn off and the machine will enter standby mode if you do not use the machine within the time period set by this timer. Doing any operation will turn the lights and screen on again.

The standby timer can be set from 1 to 30 minutes.


If you wish to turn off the timer, press and hold the “+” key until “OFF” shows in the timer window.

### ⑦ Screen Saver

Press the ON/OFF key to turn on the screen saver, and the visual touch screen will show the screen saver when the machine is in standby status.

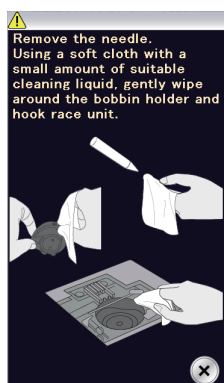
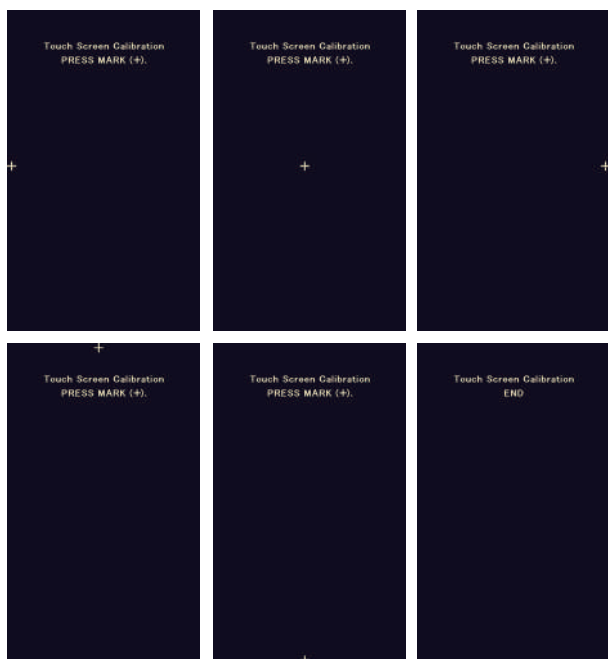
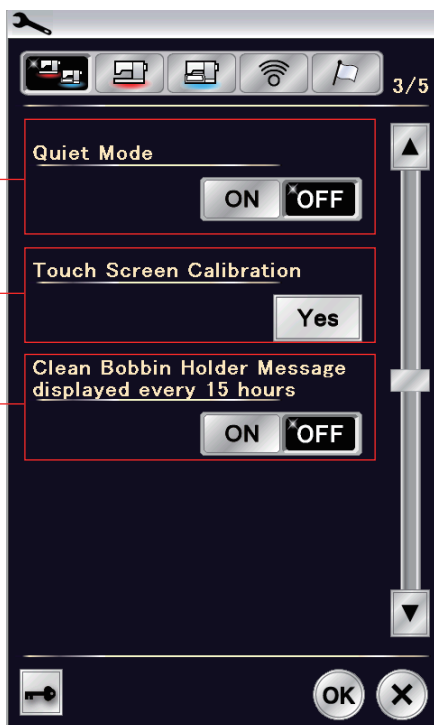
Press the import key to import a screen saver from a USB flash drive.

You can create an original screen saver with Screen Saver Tool included in the Horizon Link Suite CD-ROM.

The imported screen saver data will be deleted if the delete key  is pressed, or the internal memory is formatted (refer to page 103).

### ⑧ Import key

Press the next page key to show the next menu.



### ⑨ Quiet Mode

If you prefer the machine to run more quietly, turn on this option so the signal sound, start-up sewing speed and maximum embroidery speed will be set at the lowest levels.

The quiet mode setting overrules any previous settings for these parameters.

#### NOTE:

Custom settings for sound volume, start-up speed and maximum embroidery speed are disabled, and the quiet sign ⑫ will appear on the right upper corner of the screen when the quiet mode is on.

### ⑩ Touch Screen Calibration

You can calibrate the key positions of the touch screen if you feel the touch screen key is not responding properly.

Press the Yes key to open the calibration window.

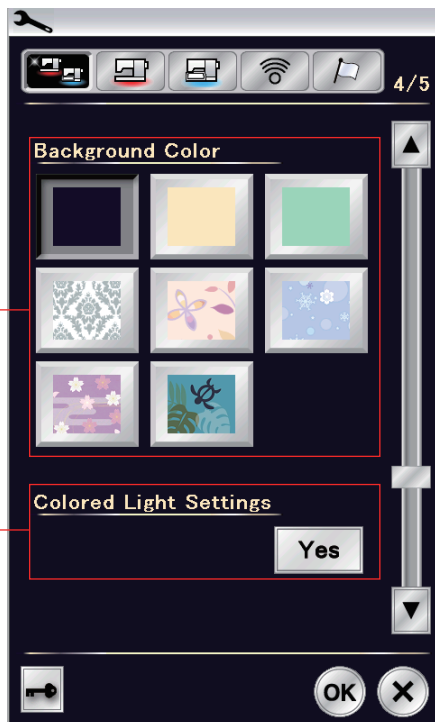
Press the “+” sign with the touch panel stylus as the sign appears.

When you press the last sign, the screen shows “END” and the calibration window will close.

### ⑪ Clean Bobbin Holder Message

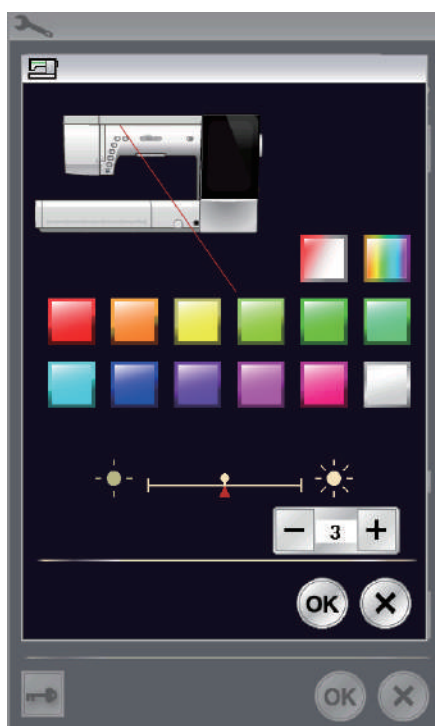
The caution message for cleaning the bobbin case and the hook race will be displayed when the certain time (15 hours) passes when this option is turned on.

The caution message will not be displayed when this option is turned off.



### ⑬ Background Color

You can select from the colorful wallpapers for the background of the visual touch screen by pressing the relevant icon.



### ⑭ Colored Light Settings

If you wish to change the color of the glow light, press the Yes key and open the color selection window.

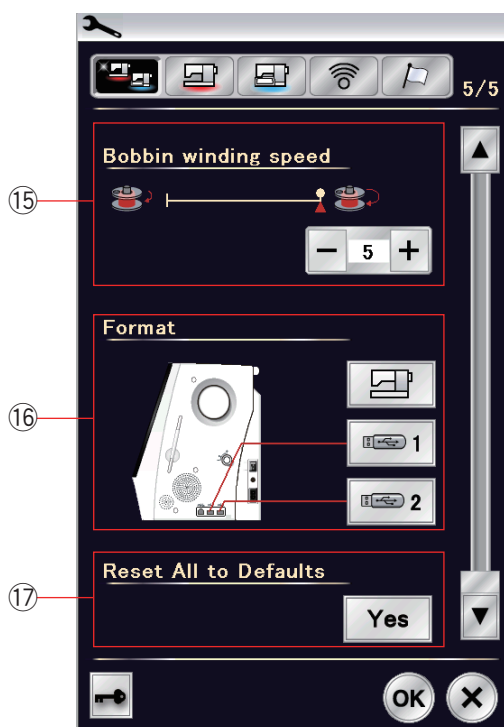
You can change the color of the glow light by pressing the desired color key.

You can adjust the brightness of the light by pressing the “+” or “-” key.

#### NOTE:

This option will be off when turning the color light off (refer to page 100).

Press the next page key to show the next menu.



### 15 Bobbin winding speed

If you wish to wind the bobbin thread more quickly or slowly, you can adjust the maximum bobbin winding speed by pressing the corresponding key.

### 16 Formatting the memory

If the internal memory of the machine or USB flash drive does not function due to damage to the memory bank, you need to re-enable it by formatting the memory.

To format the machine's internal memory, press the machine icon key and a confirmation message will appear. Press the OK key to format.

To format a USB flash drive, press one of the USB icon and the confirmation window will open. Press the OK key to format.



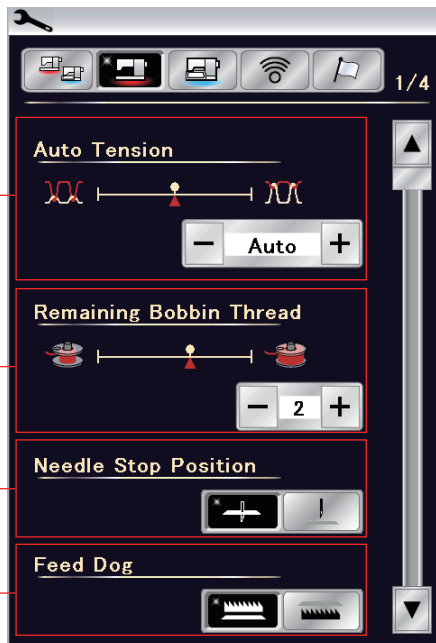
### CAUTION:

Do not turn off the power or disconnect the USB flash drive while a warning message is displayed otherwise it may damage the memory bank.

### 17 Reset All to Defaults

Press the Yes key to reset all the parameters except Wi-Fi settings to the original values (factory settings).

Press the OK key to register the new menu.



## Ordinary Sewing Setting Mode

### ① Auto thread tension

You can adjust the auto thread tension level by pressing the “+” or “-” key.

### ② Low bobbin thread warning

You can adjust the low bobbin thread warning level by pressing the “+” or “-” key.

To turn off the low bobbin thread warning, press the “-” key until “OFF” shows in the window.

### ③ Needle stop position

The machine always stops with the needle in the down position except when sewing buttonholes, specialty stitches, monograms, etc. However you can change the needle stop position to up by pressing the needle up key.

#### NOTE:

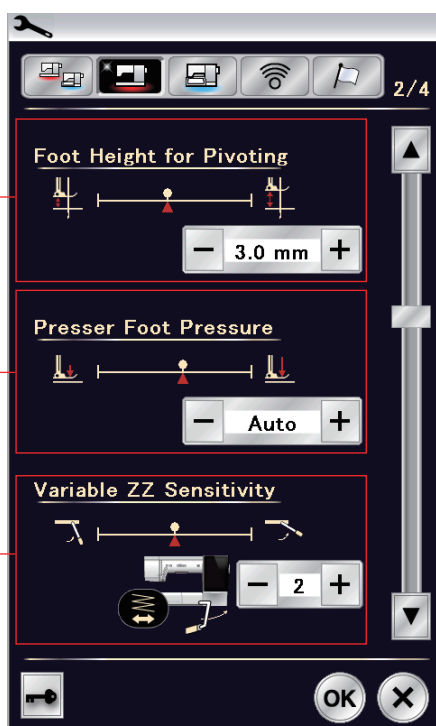
The machine stops with the needle in the down position if Foot-up key option is turned on, even if the needle stop position is set to up position.

### ④ Drop feed option

Turn this option on if you wish to sew decorative stitches and sewing applications with the feed dog down.

Press the drop feed key to turn on this option.

Press the next page key to show the next menu.



### ⑤ Foot height for pivoting

When the foot up option is turned on, the presser foot will automatically go up when the machine stops.

The height of the foot in the up position can be adjusted by pressing the “+” key or “-” key in accordance with thickness of the fabrics.

### ⑥ Foot pressure

The foot pressure is automatically optimized but you can adjust the foot pressure manually by pressing the “+” key or “-” key.

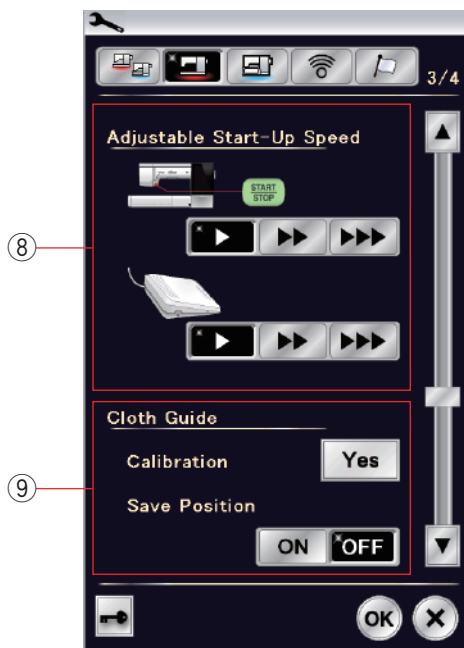
### ⑦ Variable zigzag sensitivity

You can adjust the amount of needle swing against the knee lifter movement for variable zigzag in sewing applications.

Press the “-” key so the needle swings a small amount when moving the knee lifter.

Press the “+” key so the needle swings a large amount when moving the knee lifter.

Press the next page key to show the next menu.



### ⑧ Adjustable Start-Up Speed

The machine will start running slowly and the sewing speed will gradually increase to maximum. You can select the desired start-up speed from slow, normal or high by pressing the corresponding key, and set the speed for the start/stop button or foot control individually.



### ⑨ Cloth Guide

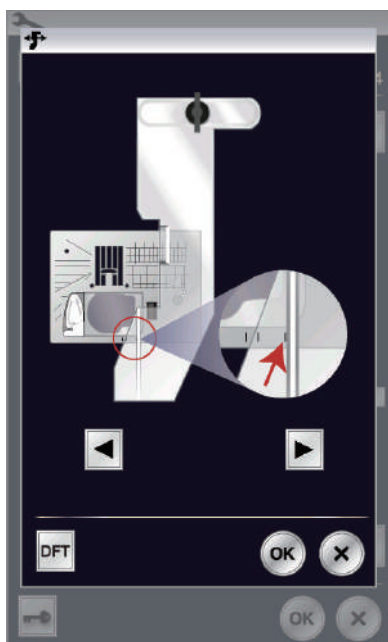
#### Calibration of the default position

The default position of the cloth guide is 15 mm (5/8") from the center needle drop position. However, you can fine tune the default position of the cloth guide.

Press the Yes key and a warning message will appear. Press the OK key and the carriage will move to the standard position.

#### NOTE:

- The embroidery unit must be attached when calibrating.
- The default position cannot be adjusted when the professional grade needle plate is attached to the machine.



Press the ◀ key or ▶ key to adjust the position of the cloth guide.

Press the OK key. The message is displayed and the carriage will return to the home position.

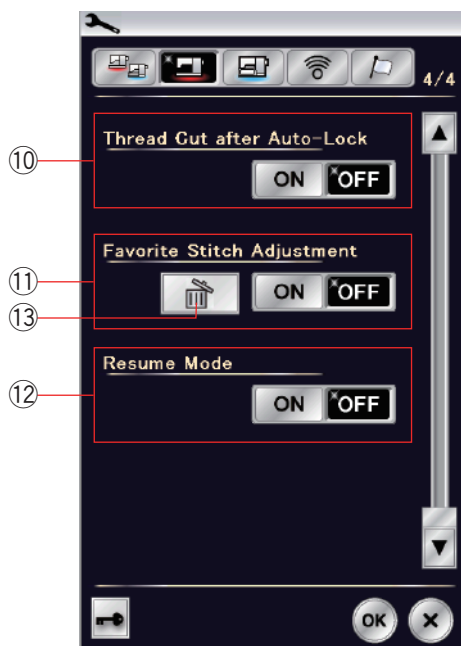
#### Saving favorite positions

If you have set the cloth guide to your favorite position, 6.4 mm (1/4") in the manual setting window for example (refer to page 41), you can save this position for future use.

To save favorite positions, press the ON/OFF key to turn ON the save position option.

Press the next page key to show the next menu.



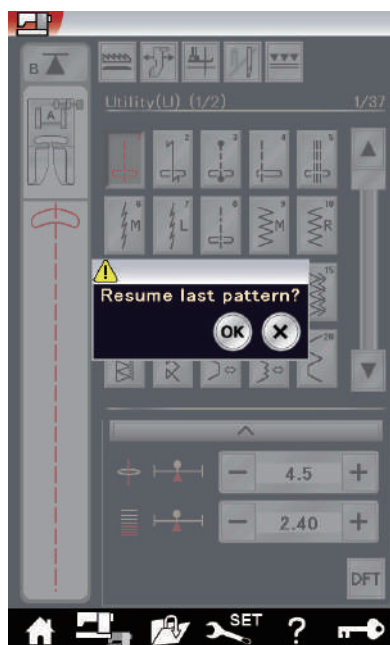


⑩

⑪

⑬

⑫



## ⑩ Thread Cut after Auto-Lock

The machine automatically trims the threads after sewing locking stitches when this option is turned on.

## ⑪ Favorite Stitch Adjustment

If you wish to save the changes to manual stitch settings, turn on this option by pressing the ON/OFF key.

If this option is turned off, the manual stitch setting will be cleared when the power switch is turned off.

Press the delete icon ⑬ to clear the manual stitch setting.

### NOTE:

This option is available for all stitches in ordinary sewing mode except monogram.

## ⑫ Resume Mode

Turn on this option when you wish to resume the last pattern sewn before turning the power switch off.

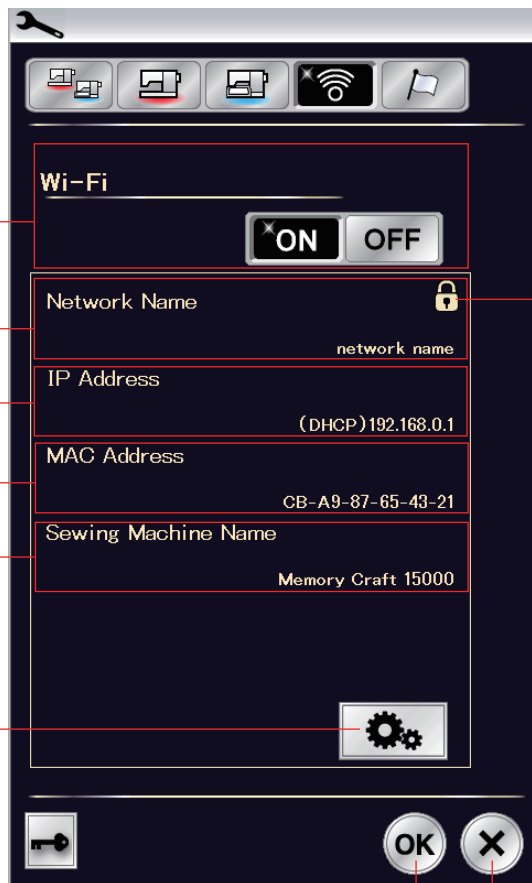
When the power is turned on again, the confirmation message will appear. Press the OK key to resume the last pattern.

### NOTE:

Resume data will be cleared under the following conditions:

- Created stitch is imported with the import key.
- Created stitch is deleted with the delete key.
- Created stitch is deleted, imported or renamed with Horizon Link Suite.
- The internal memory is formatted.

After customizing the settings, press the OK key to enable the new settings.



## Wi-Fi® Setting Mode

### Connecting Wi-Fi Network

A wireless router device that complies with the IEEE802.11b/g/n wireless standard is required for connecting your machine with a Wi-Fi network.

### Starting Wi-Fi connection

To start the Wi-Fi settings, press “ON” ①. The network setting button ⑥ is enabled.

Press the network setting button ⑥ to enter the network settings.

Choose one of the 4 methods to connect with the Wi-Fi connection (see page 108-109).

#### ① Wi-Fi connection

The default setting of the Wi-Fi connection is “OFF”.

Press “ON” to enable the Wi-Fi connection.

The Wi-Fi connection and the network setting button ⑥ are enabled.

Press “OFF” to disconnect the Wi-Fi connection.

#### ② Network Name

The name of the wireless network (SSID) connected with your MC15000 is displayed.

The lock icon ⑨ appears if the connected access point is secured with an encryption key.

#### ③ IP Address

The IP address of your machine is displayed.

“(DHCP)” is displayed in front of the IP address when the DHCP option is turned on.

The IP address can be changed in the network settings.

#### ④ MAC Address

The MAC address of the MC15000 is displayed.

#### ⑤ Sewing Machine Name

The sewing machine name for network identification is displayed.

The sewing machine name can be changed in the network settings.

#### ⑥ Network setting button

Press this button to open the Network Settings window.

#### ⑦ OK key

Press this key to confirm the Wi-Fi connection setting.

#### ⑧ Cancel key

Press this key to cancel the Wi-Fi connection setting.

#### NOTE:

If you select WEP for the security setting of your wireless LAN router, check the followings:

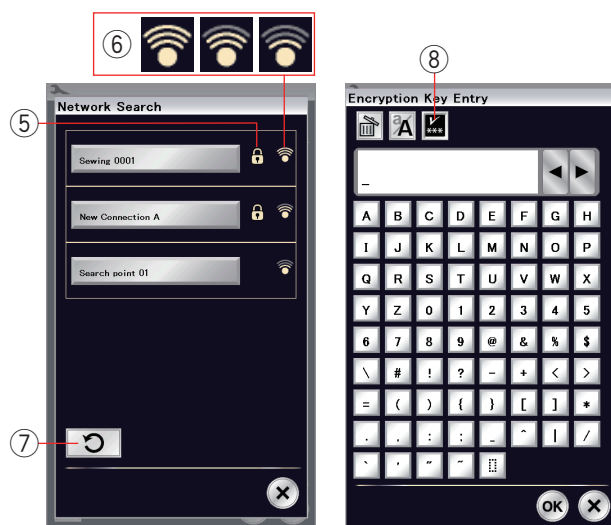
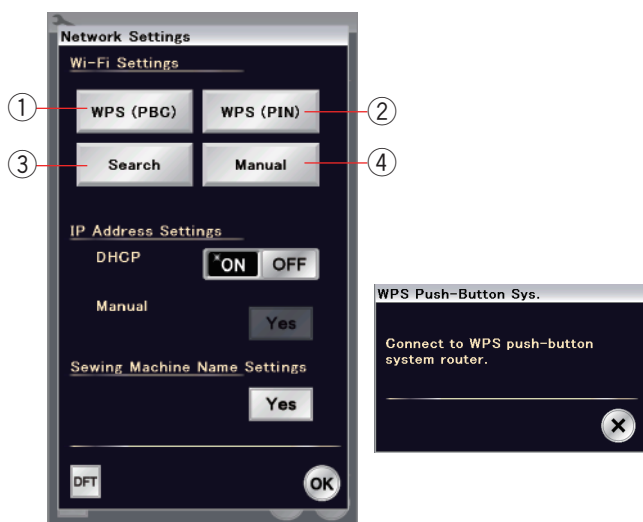
- Select “ASCII” for the encryption type.
- Select the initial number for the key index number (The initial number can be “0” or “1”, depending on the wireless LAN router.).

For setting up, refer to your wireless router’s instructions.

#### NOTE:

The use of home appliances such as a microwave oven, bluetooth devices or cordless phones can reduce the range of the Wi-Fi connection (if your wireless router’s network standard is using IEEE802.11b or IEEE802.11g).

You may need to reduce the distance between MC15000 and the wireless LAN access point, or install the wireless LAN access point at an appropriate location.



## Network Settings

### NOTE:

Please refer to your wireless router's instructions when using the push-button or PIN method to connect with the Wi-Fi connection.

### ① Wi-Fi Protected Setup™\* push-button configuration method

Press "WPS (PBC)" ①.

The WPS Push-Button Sys. dialog box appears on the screen. Press the Wi-Fi Protected Setup™ button on the wireless LAN router.

The dialog box appears and the wireless LAN router will automatically connect with your MC15000.

To use the Wi-Fi Protected Setup™ push-button configuration method, the wireless router must support this method. Please also refer to the wireless router's instructions about this method.

### NOTE:

The machine displays "Connection to the network failed" if it cannot receive the signal from the wireless LAN access point within 2 minutes.

### ② Wi-Fi Protected Setup™ PIN method

If the wireless router supports the Wi-Fi protected Setup™ PIN method, you can connect the machine using the method.

Press "WPS (PIN)" ②. The WPS PIN Code System dialog box appears.

Register the PIN code to the router before the PIN Code System dialog box is closed to establish the network.

To enter the PIN code to your wireless router, please refer to the instructions of your wireless router's Wi-Fi Protected Setup™ PIN method setup.

### NOTE:

The machine displays "Connection to the network failed" if the Wi-Fi connection is not established within 2 minutes.

### ③ Search for access point

Press "Search" ③.

The machine will search for any wireless LAN access point within the range, and the names of network will be listed.

The lock icon ⑤ appears on the right side of the list if the connection requires an encryption key to get connected.

The signal strength icon ⑥ shows the strength of the connection signal. The number of waves above the dot indicates the signal strength of the wireless connection.

Press the wireless network name you would like to connect with.

### NOTE:

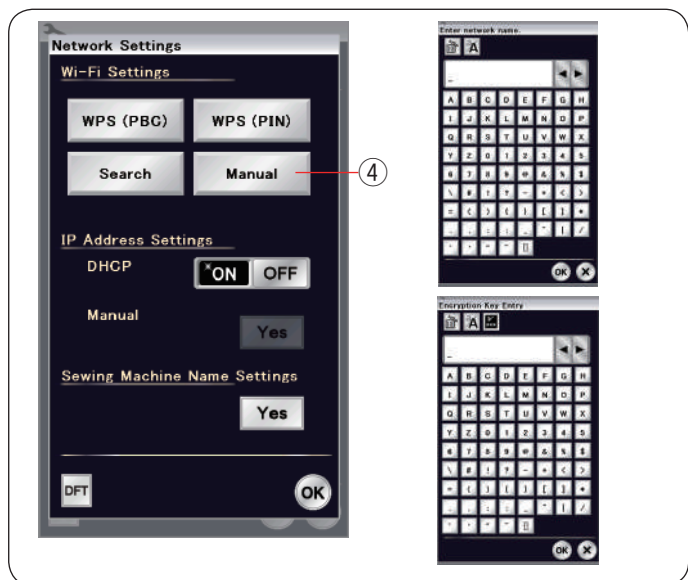
If you cannot find the wireless LAN access point you are looking for, press the refresh key ⑦ to search for the wireless LAN access point again.

If the selected wireless network requires an encryption key for connection, the Encryption Key Entry dialog box appears. Be careful to enter uppercase or lowercase letters required.

Enter the encryption key and press the OK key to establish the network.

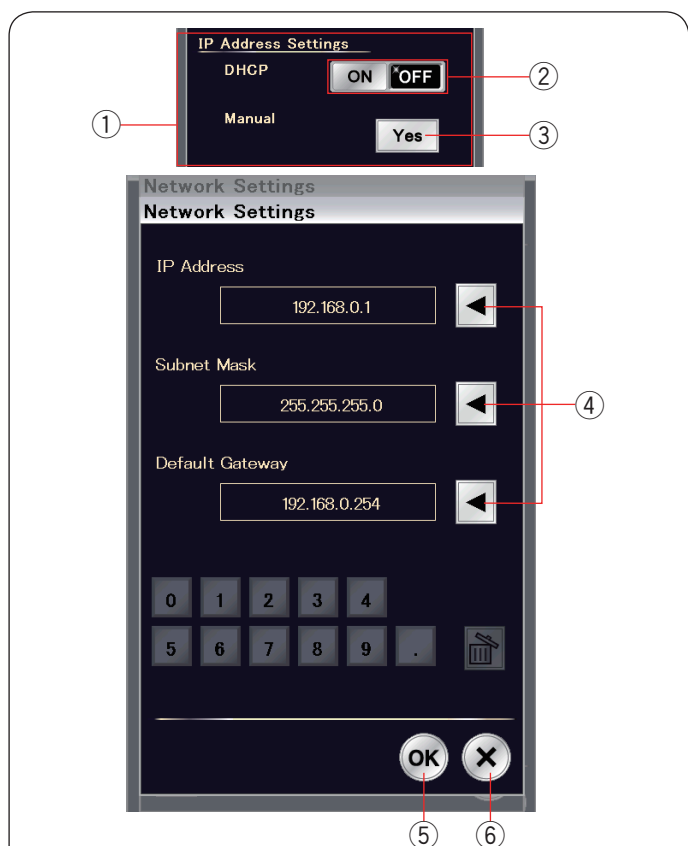
Press show/hide key ⑧ to show or hide the entry.

\* Wi-Fi Protected Setup™ is a trademark of Wi-Fi Alliance®.



#### ④ Manual method

Press “Manual” ④. Enter the network name you would like to connect with. Press the OK key.  
If the selected wireless network requires an encryption key for connection, the Encryption Key Entry dialog box appears.  
Enter the encryption key and press the OK key to establish the network.



#### ① IP Address Settings (network settings)

Turn the DHCP option ON to use DHCP to assign an IP address.

If you want to configure the network settings manually, press the DHCP option OFF ②, and press the Yes key ③ for the Manual option.

The network settings window appears.

Press the arrow ④ of the item you would like to set, choosing from IP Address, Subnet Mask or Default Gateway.

Enter the setting by pressing the numeric keys that appear under the settings.

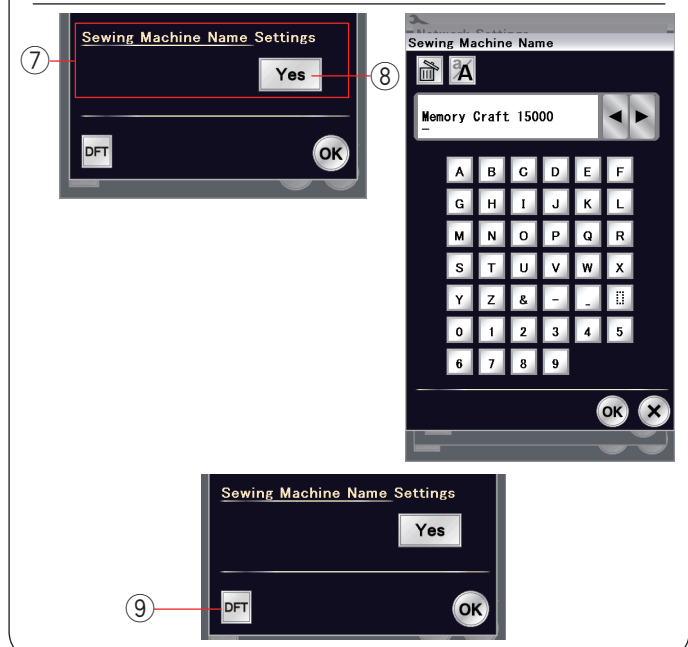
Press the arrow again to assign the settings.

Press the OK key ⑤ to confirm the network settings.

Press X key ⑥ to cancel the settings.

#### NOTE:

- You do not need to turn off the DHCP option and configure the network settings manually unless you know the appropriate IP address, Subnet Mask and Default Gateway for this machine.
- When DHCP option of MC15000 is turned ON, turn on the DHCP option of your wireless router as well.



#### ⑦ Sewing Machine Name Settings

Press Yes ⑧ to open the sewing machine name setting screen.

Enter the sewing machine name for the network identification.

Press the OK key to change the name.

Press X to cancel the settings.

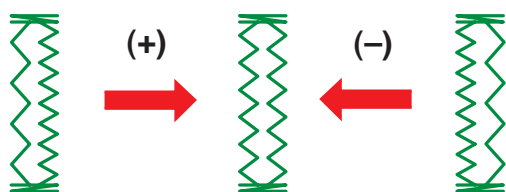
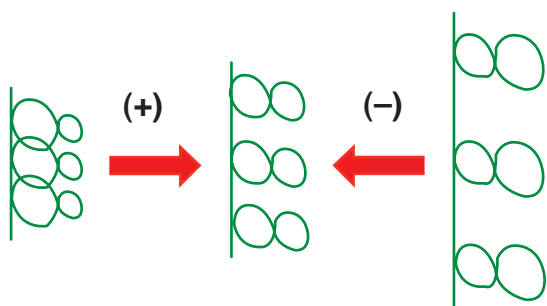
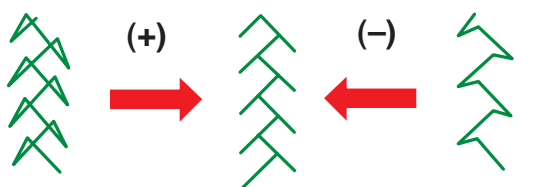
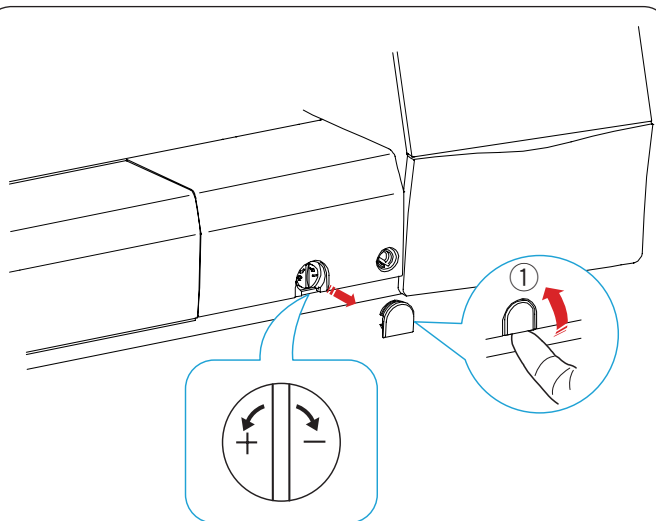
#### ⑨ Default key

Press Default key ⑨ to reset the Wi-Fi settings (factory settings).



## Language Selection Mode

Select the desired language and press the OK key.  
The visual touch screen shows messages in the selected language.



## Correcting Deformed Stitch Patterns

The sewing results of the stretch stitch patterns may vary depending upon the sewing conditions, such as sewing speed, type of the fabric, number of layers etc.  
Always test sew on a scrap piece of the fabric that you wish to use.

If decorative stitch patterns, letters, numbers or the manual buttonhole stitch are deformed, correct them with the feed balancing dial.

Remove the cap with your finger.

① Cap

### NOTE:

In normal sewing, set the feed balancing dial to the neutral position, i.e. the groove on the dial is centered with the standard setting mark.

## Decorative stretch stitch patterns

If the pattern is compressed, turn the dial in the direction of "+".

If the pattern is drawn out, turn the dial in the direction of "-".

## Letters and numbers

If the pattern is compressed, turn the dial in the direction of "+".

If the pattern is drawn out, turn the dial in the direction of "-".

## Stitch balance of the stretch buttonhole (B10)

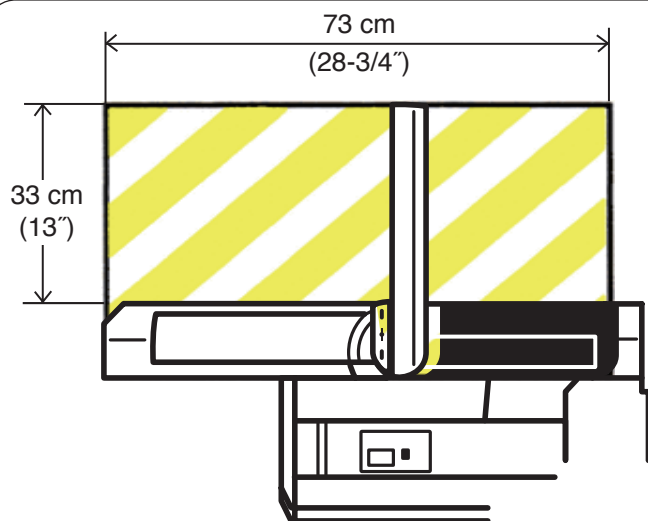
The stitch balance of the right and left rows of the stretch buttonhole may vary depending on sewing conditions.

If the stitches are not balanced, correct the unevenness with the feed balancing dial.

If the right row is denser, turn the dial in the direction of "+".  
If the left row is denser, turn the dial in the direction of "-".

### NOTE:

Return the feed balancing dial to the neutral position and attach the cap when sewing is finished.

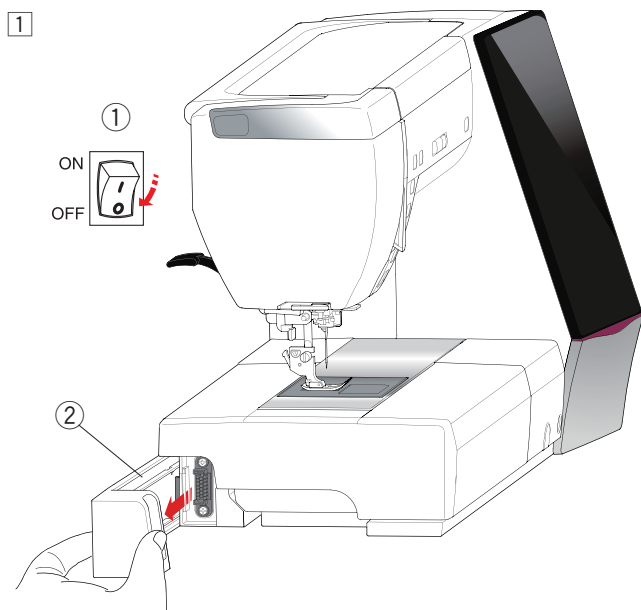


## EMBROIDERY MODE

### Embroidery Unit

#### NOTE:

Be sure to provide sufficient space around the machine to allow the hoop to move freely. Do not place anything inside the area shown on the left.

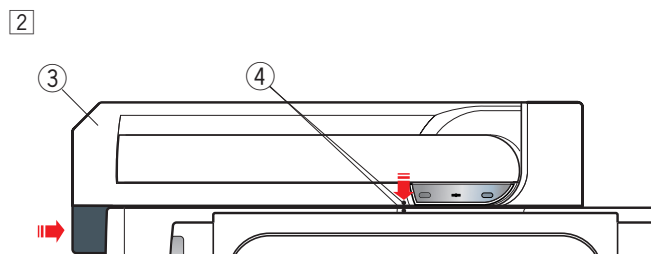


#### Attaching the embroidery unit

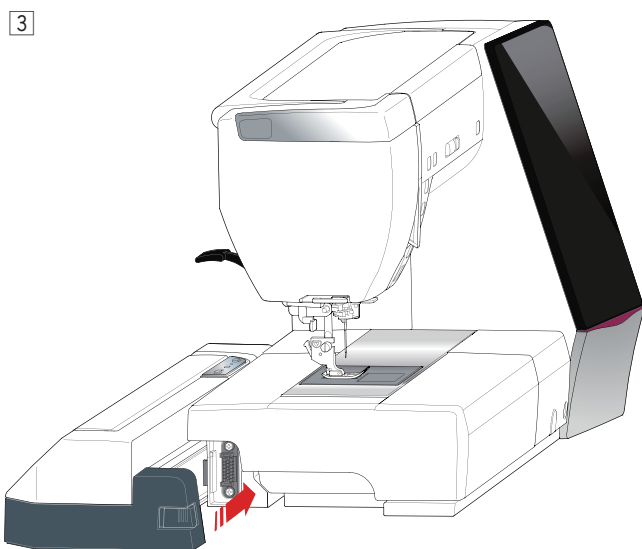
- 1 Turn the power switch off.  
Remove the cover from the machine.
  - ① Power switch
  - ② Cover

#### NOTE:

Always attach the extension table except when using the free-arm hoop.

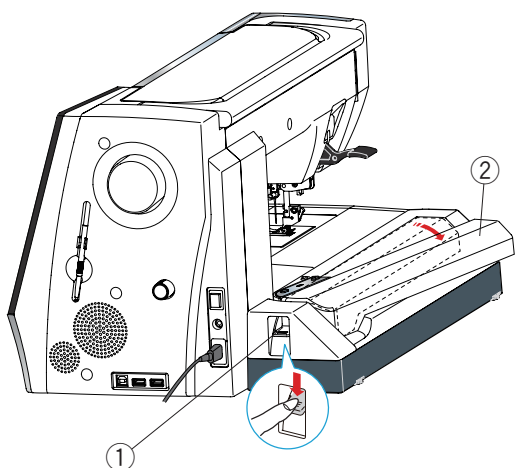


- 2 Place the embroidery unit on the back side of the machine base, matching the small dots as shown.
  - ③ Embroidery unit
  - ④ Small dots

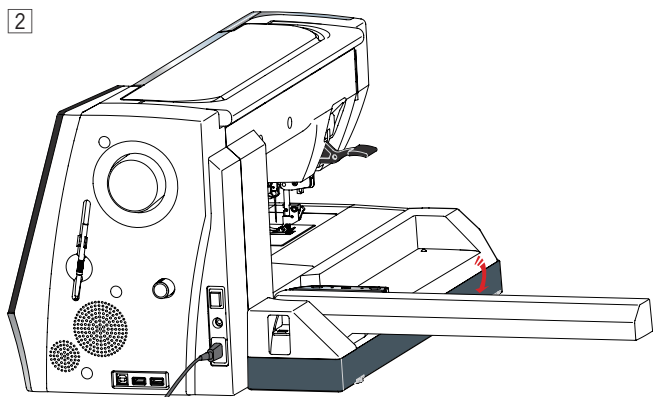


- 3 Slide the embroidery unit along the machine to the right and push the embroidery unit firmly until it fits securely.

1



2



### Extending the carriage arm

- 1 Press down the carriage arm release lever to extend the carriage arm.

- ① Carriage arm release lever
- ② Carriage arm

- 2 Swing out the carriage arm until it locks in the fully extended position.



### CAUTION:

Do not push on the carriage arm when it is extended.  
 Do not forcefully move the carriage or carriage arm by hand.  
 Do not hold the carriage or carriage arm while it is moving.  
 Failure to follow these instructions may result in damage to the carriage mechanism.



## Detaching the embroidery unit

### NOTE:

- Be sure to remove the embroidery unit when carrying or storing the machine.
- If the needle is in down position, make sure to raise the needle by pressing the needle up/down key.

- 1 Remove the hoop from the carriage and return the carriage to the home position (refer to page 131).

- ① Carriage arm release lever
- ② Carriage arm



### WARNING:

Be careful not to get your finger caught between the embroidery unit and machine bed with the extension table removed when the carriage returns to home position.

- 2 Push down the carriage arm release lever to retract the carriage arm.

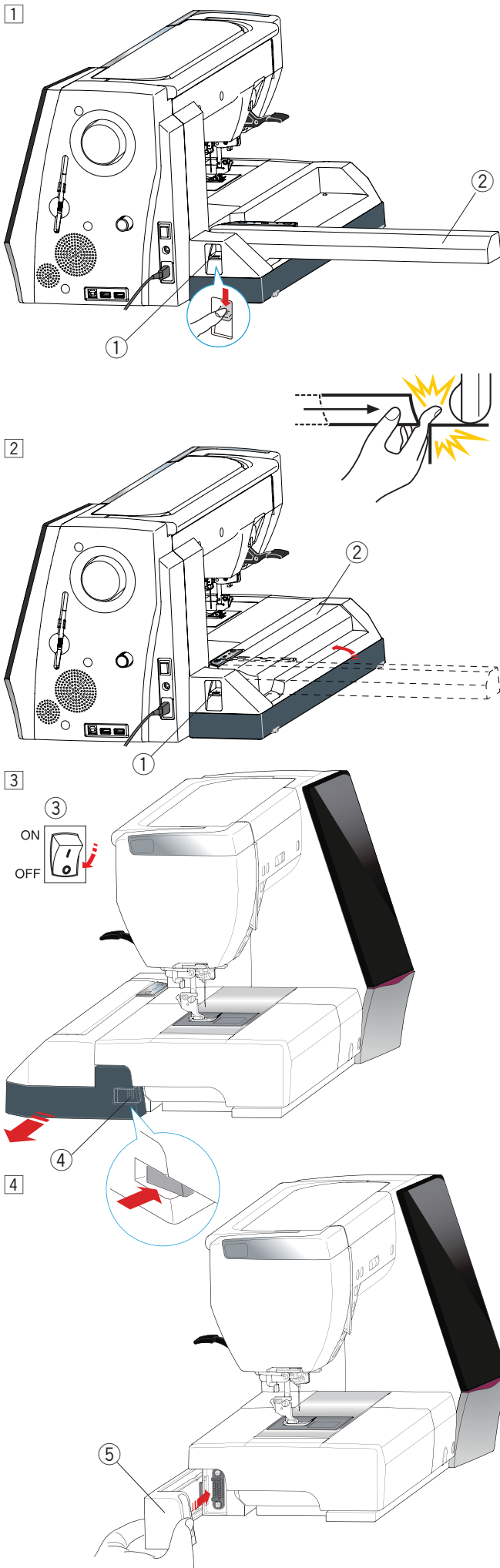
- ① Carriage arm release lever
- ② Carriage arm

- 3 Turn the power switch off.  
Push the embroidery unit release button.  
Slide the embroidery unit to the left and remove it.

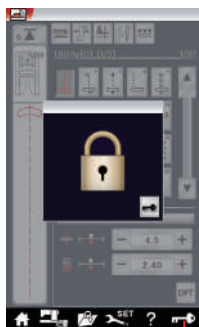
- ③ Power switch
- ④ Embroidery unit release button

- 4 Attach the cover to the machine.

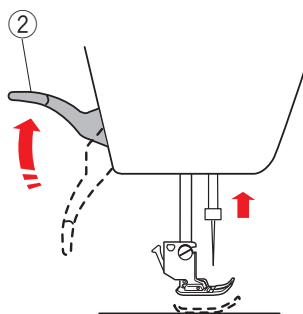
- ⑤ Cover



1

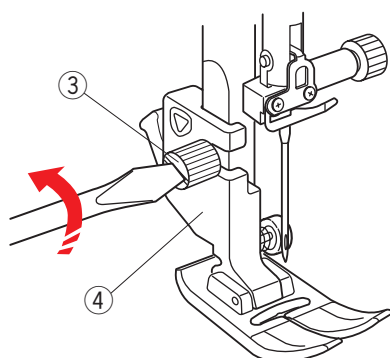


①



②

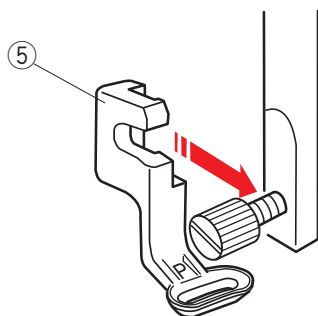
2



③

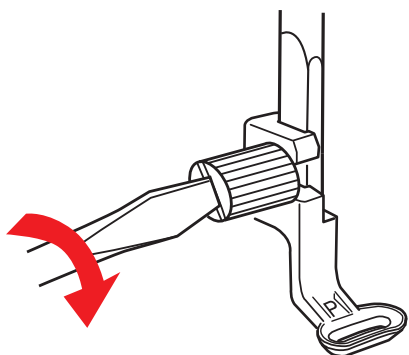
④

3



⑤

4



## Attaching the Embroidery Foot

Use the embroidery foot P for embroidery.

- 1 Turn the power switch on.  
Raise the needle by pressing the needle up/down button.  
Press the lockout key and raise the presser foot with the presser foot lifter.

- ① Lockout key
- ② Presser foot lifter

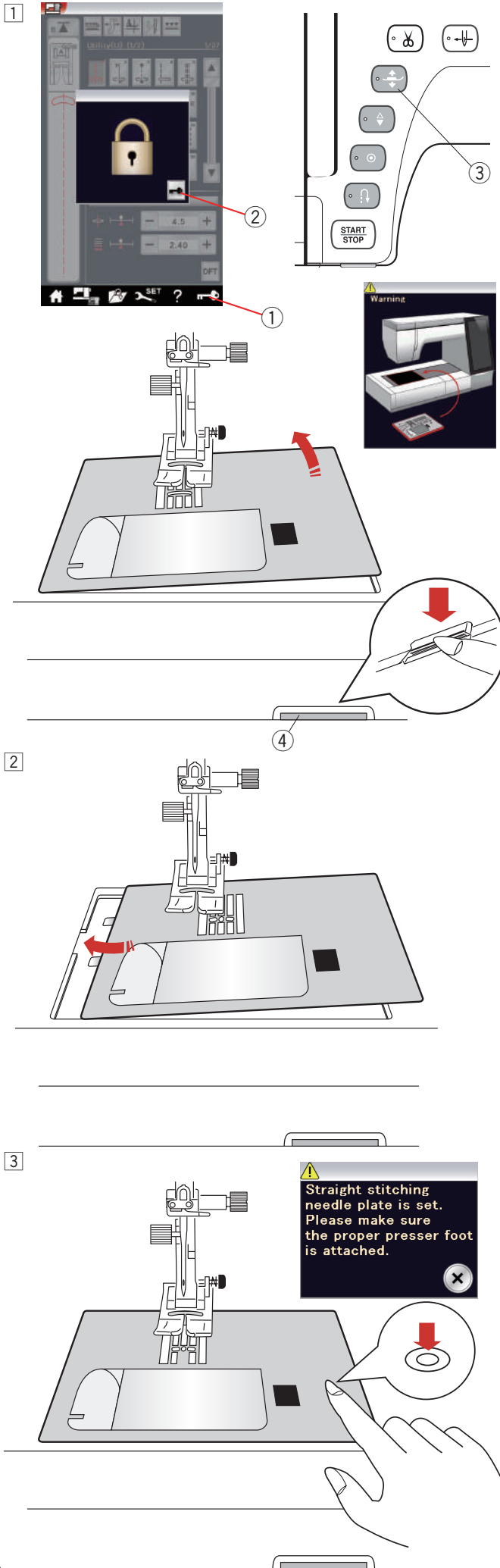
- 2 Loosen the thumbscrew with the screwdriver and remove the foot holder.

- ③ Thumbscrew
- ④ Foot holder

- 3 Attach the embroidery foot P to the presser bar from behind. Tighten the thumbscrew partially by hand.

- ⑤ Embroidery foot P

- 4 Lower the foot with the presser foot lifter.  
Tighten the thumbscrew securely with the screwdriver.



## Attaching the Straight Stitch Needle Plate

Use the straight stitch needle plate for embroidery.



### CAUTION:

Always make sure to press the lockout key to lockout the machine before replacing the needle plate.

- 1 Raise the needle and press the lockout key. Press the presser foot lifter button to raise the presser foot.

Slide the extension table to the left to remove it.

Push down the needle plate release lever and the needle plate will snap off.

A message will appear warning that the needle plate is not secured.

Remove the needle plate to the right.

- ① Lockout key
- ② Unlock key
- ③ Presser foot lifter button
- ④ Needle plate release lever

- 2 Place the straight stitch needle plate on the machine. Set the left edge of the needle plate into the opening.

- 3 Push down on the mark of the needle plate until it locks in place.

Make sure the warning message disappears and the straight stitch is automatically selected.

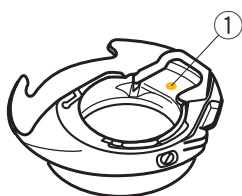
Turn the hand wheel slowly and make sure that the needle does not hit the needle plate.

Press the unlock key to unlock.

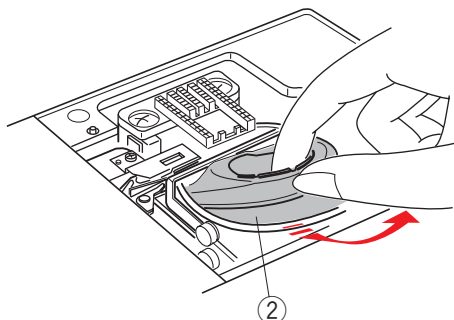


### CAUTION:

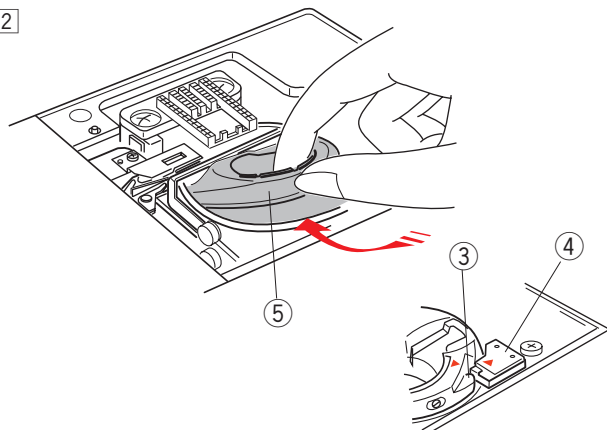
Never press the needle plate release lever while running the machine.



1



2



## Special Bobbin Holder for Embroidery

Replace the standard bobbin holder with the special bobbin holder for embroidery when using bobbin threads other than Janome bobbin thread for embroidery.

### NOTE:

The special bobbin holder is marked with a yellow dot for identification.

① Yellow dot

1 Remove the needle plate (refer to the previous page).  
Take out the standard bobbin holder.

② Standard bobbin holder

2 Insert the special bobbin holder into the hook race.  
Make sure to match the knob of the bobbin holder with the stopper on the machine.  
Attach the needle plate.

③ Knob

④ Stopper

⑤ Special bobbin holder for embroidery

### NOTE:

Use the standard bobbin holder when sewing lace designs and quilting designs that use the same thread for the bobbin as the needle thread.

## Bobbin Winding While Working on an Embroidery Project

You can wind a bobbin while running the machine.

To set the additional spool pin, please refer to page 12.

Draw the thread to the left and forward around the thread guide ③.

Draw the thread to the rear and to the right around and under the guide plate ④.

Firmly pull the thread to the right.

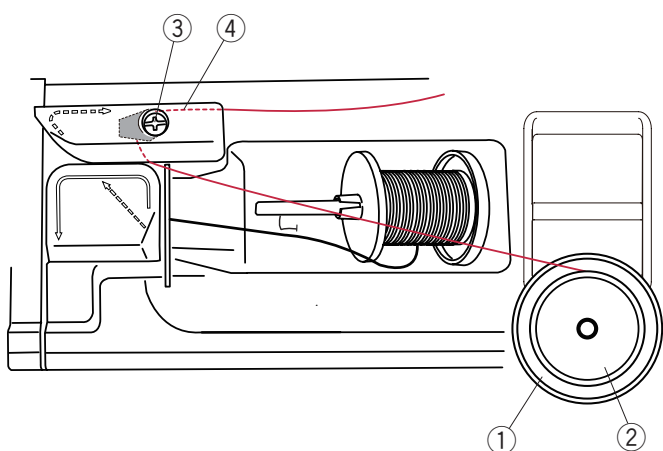
Follow the procedure from ③ to ⑧ of page 13 to wind the bobbin.

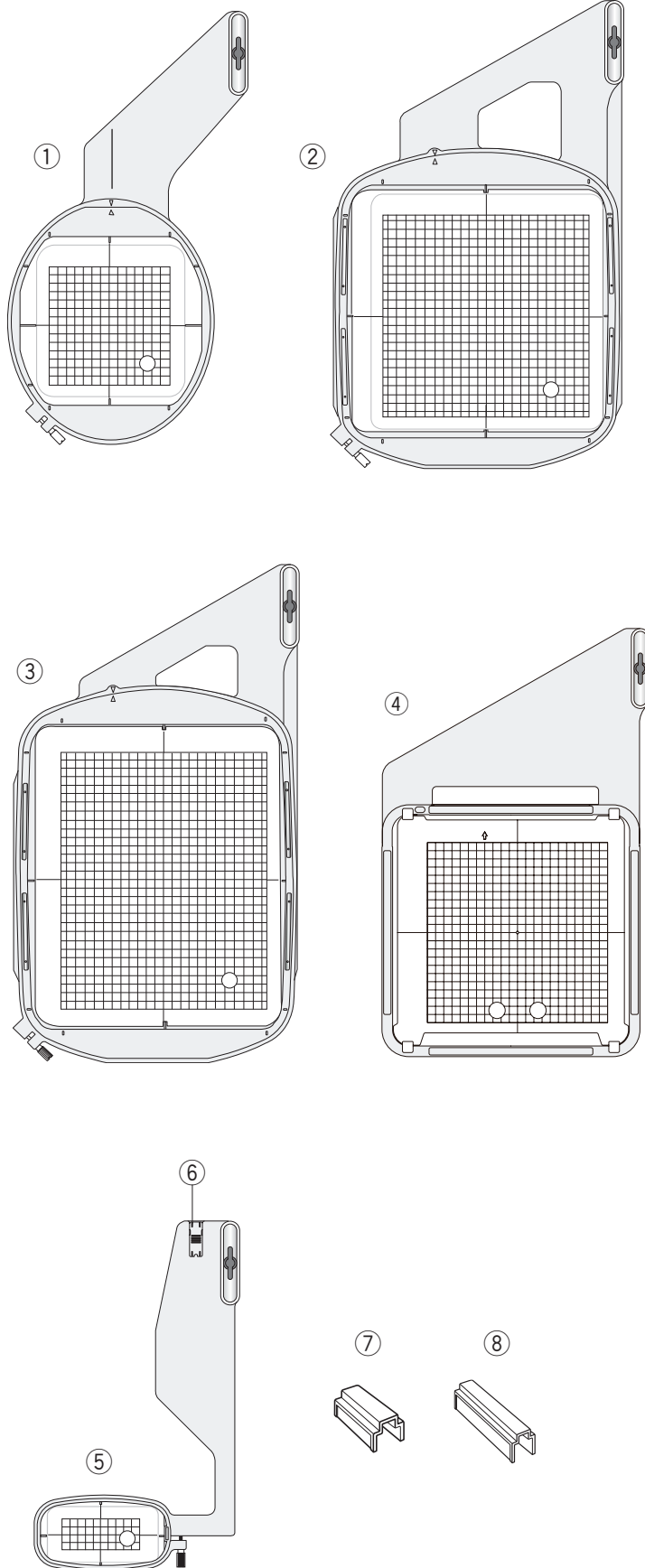
① Spool stand

② Spool

③ Thread guide

④ Guide plate





## Embroidery Hoops

There are 5 embroidery hoops included in the standard accessories.

### ① Embroidery hoop SQ14

An oval embroidery hoop with a 14 cm (5.5") square embroidery area.

### ② Embroidery hoop SQ23

A square embroidery hoop with a 23 cm (9.1") square embroidery area.

### ③ Embroidery hoop GR

An extra large embroidery hoop with a 23 cm by 30 cm (9.1" by 11.8") embroidery area.

### ④ Embroidery hoop ASQ22

A square embroidery hoop with a 22 cm (8.7") square embroidery area.

Hoop ASQ22 is very useful for filling a large size quilt with AcuFil design patterns created with AcuFil Tool (refer to page 154).

### ⑤ Embroidery hoop FA10

A free arm embroidery hoop with a 10 cm by 4 cm (3.9" by 1.6") embroidery area.

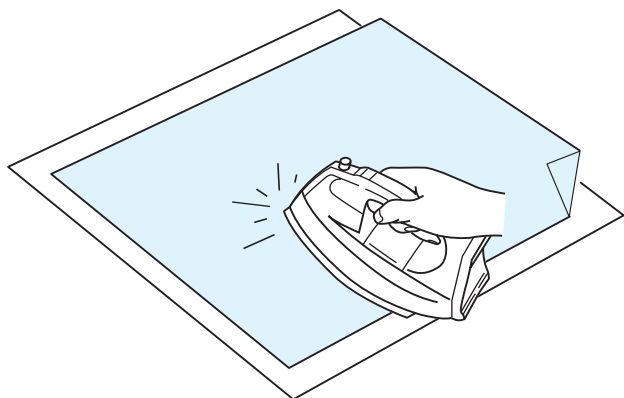
### ⑥ Blocking plate

### ⑦ Magnetic clamp (SQ23 and GR)

A short magnetic clamp for holding the fabric to the embroidery hoops SQ23 and GR.

### ⑧ Magnetic clamp (ASQ22)

A long magnetic clamp for holding the fabric to the embroidery hoop ASQ22.



## Stabilizers

To create the best quality embroidery, it is important to use stabilizers.

### How to use:

Attach the stabilizer to the wrong side of the fabric. You may need to use more than one layer.

For firm fabrics, you may place a thin sheet of paper under the fabric.

The non-adhesive type should be used when embroidering fabric which cannot be ironed or for sections which are difficult to iron.

Cut the stabilizer larger than the embroidery hoop and set it on the hoop so that the entire piece is fastened to the hoop to prevent any looseness in the fabric.

### Attaching the stabilizer

Place the wrong side of fabric and the glossy side of the stabilizer together. Fold up a corner of the stabilizer and fuse it with an iron.

#### NOTE:

Fold up a corner of the stabilizer, to make it easier to peel off the excess stabilizer after stitching. Ironing temperatures vary depending on the kind of adhesive stabilizer you are using.

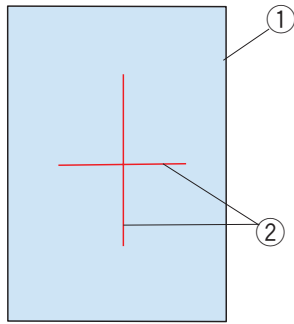
## Types of the stabilizers

Type	Usage	Property
Tear-away	Stable woven fabrics	Made from a fiber that will tear easily.
Iron-on	Knits and all kinds of unstable fabrics	Adhesive type fusible with an iron.
Cut-away	Knits and all kinds of unstable fabrics	Non-woven fabric that does not tear.
Water soluble	Cutwork or lace embroidery Right side of looped fabrics such as towels to avoid loops coming through the embroidery	A thin film that will dissolve in water.
Heat-away	Cutwork or lace embroidery	A thin film that will melt away with heat.

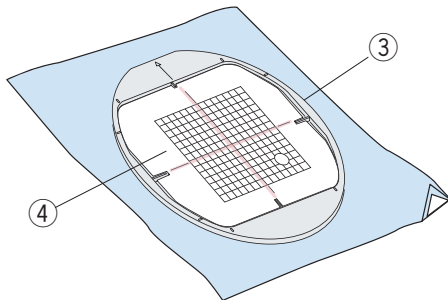
#### NOTE:

Sticky type stabilizers can be used only for securing a small piece of fabric or work that cannot be secured in the hoop, or for securing velvet and other napped fabric that would be permanently marked by the hoop. Clean the bobbin holder after stitching as glue can get stuck on it.

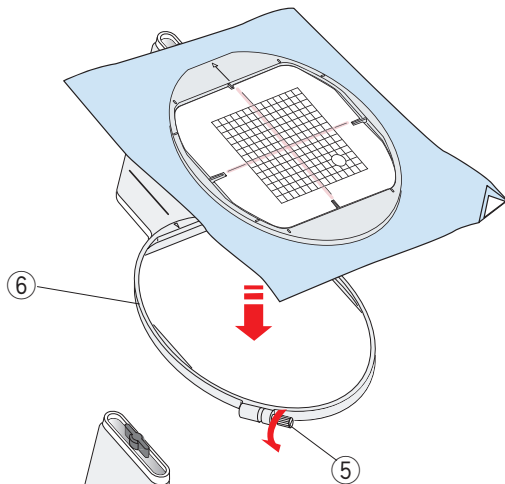
1



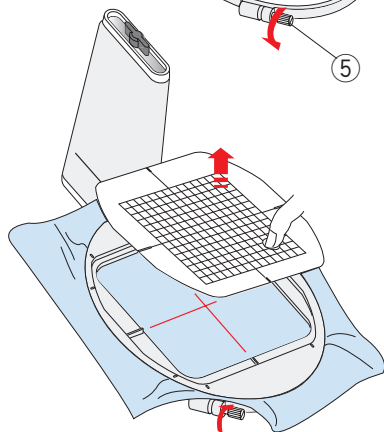
2



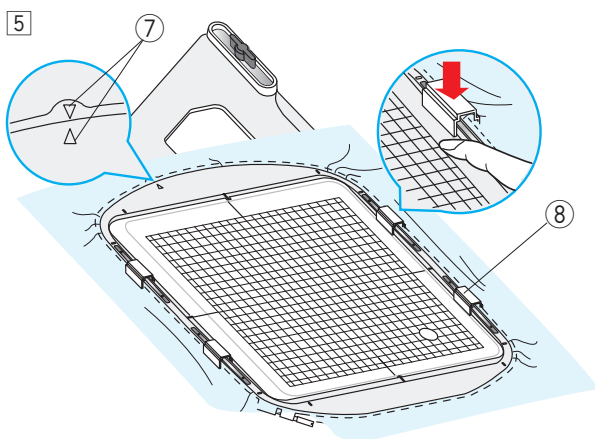
3



4



5



## Setting the Fabric in an Embroidery Hoop

- 1 Prepare a fabric and attach a stabilizer to the wrong side of the fabric.  
The fabric and stabilizer should be larger than the hoop size.  
Draw the centerlines on the fabric with tailor's chalk.

- ① Fabric
- ② Centerlines

- 2 Lay the inner hoop and template on the fabric, matching the centerlines of the fabric with the template.

- ③ Inner hoop
- ④ Template

- 3 Loosen the hoop tightening screw on the outer hoop.  
Place the inner hoop and fabric on the outer hoop.

- ⑤ Hoop tightening screw
- ⑥ Outer hoop

- 4 Push the inner hoop and fabric into the outer hoop.  
Tighten the screw on the outer hoop to stretch the fabric. Make sure that the fabric is stretched tightly in the hoop.  
Remove the template.

### NOTE:

Make sure to match the alignment marks of the outer and inner hoops when stretching the fabric.

- ⑦ Alignment marks

- 5 Clamp the fabric to the hoop with the short magnetic clamps when using hoop SQ23 or hoop GR.  
Use the long magnetic clamps when using hoop ASQ22.

- ⑧ Magnetic clamp (short)

### NOTE:

Thick layers of fabric and stabilizer may cause skipped stitches, or broken threads and needles.  
Avoid sewing on the layers thicker than 3 mm (1/8").



## Attaching the Embroidery Hoop to the Machine

- 1 Turn the power switch on and open the carriage arm. Press the mode switch key and a warning message will appear. Press the OK key and the carriage will move to the starting position. The visual touch screen will display the embroidery mode window.

① Mode switch key

### NOTE:

If you press the mode switch key with the carriage arm retracted, a confirmation message will appear. Do not press the OK key or X key. Instead, open the carriage arm.

- 2 Place the hoop on the machine and attach the hoop to the carriage by inserting the lock pin of the hoop into the hole in the carriage.

Turn the knob clockwise to secure the hoop.

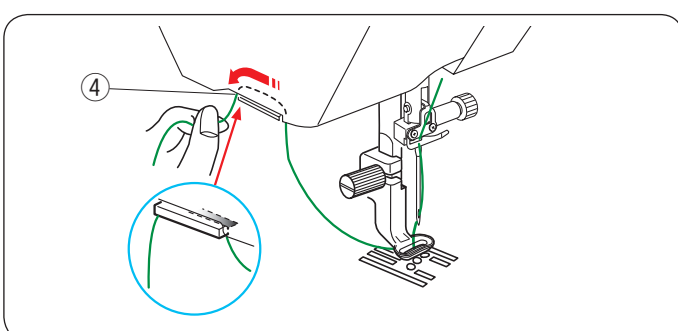
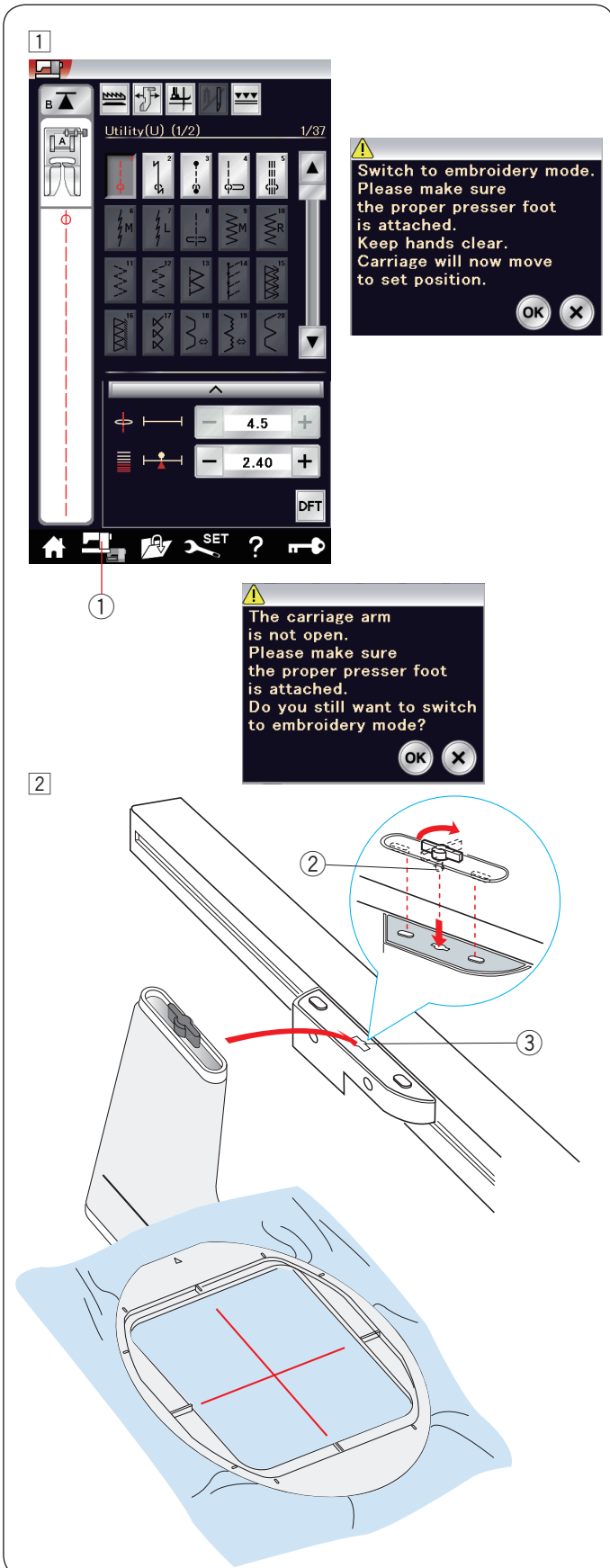
- ② Lock pin
- ③ Hole

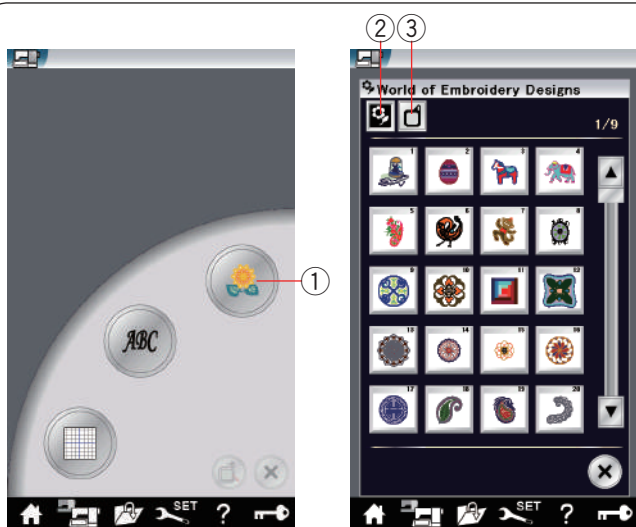
## Thread Holder

To avoid sewing over a tail of the needle thread, place the thread end on the thread holder.

- ④ Thread holder

Pass the needle thread through the hole in the embroidery foot and draw it up to the thread holder. Hang the thread on the thread holder from front to back.





## Selecting Built-in Embroidery Designs

Press the built-in design key and the first page of the design list of World of Embroidery Designs will open.

- ① Built-in design key

Press the design category key to browse the design list by design category, or press the hoop selection key to browse the designs by hoop size.

- ② Design category key  
③ Hoop selection key

## Design category

Press the design category key ② to show the design lists by category.

Press the previous/next page keys to browse the design lists.

- ④ Previous page key  
⑤ Next page key



Page 1 of 4

- World of Embroidery Designs
- Designers Designs
- Redwork Designs by Y.GANAHA
- Sashiko Designs

Page 2 of 4

- Home Decor Designs
- Everyday & Holiday Designs
- Abstract Designs
- Monochrome Designs

Page 3 of 4

- Border Designs
- Quilting Designs
- Cross Stitch Alphabet Designs
- Cross Stitch Designs

Page 4 of 4

- Favorite Designs
- Lace Designs
- Fringe Designs
- Calibration Pattern



Press the desired category to select and the pattern selection window will open.

Browse the pattern list with the previous/next page keys, and select the desired pattern by pressing the pattern icon key.

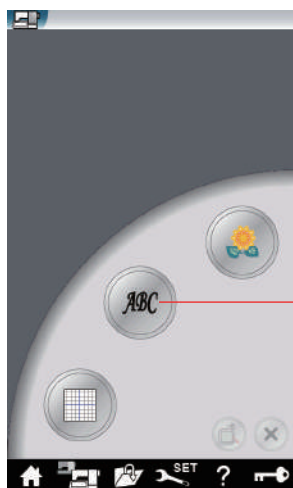
## Hoop size

Press the hoop selection key ③ and the hoop selection window will open. Select the same hoop as the one attached to the machine.

Browse the design list with the previous/next page keys, and select the desired pattern by pressing the pattern icon key.

The visual touch screen will show the hoop confirmation window.





## Monogramming

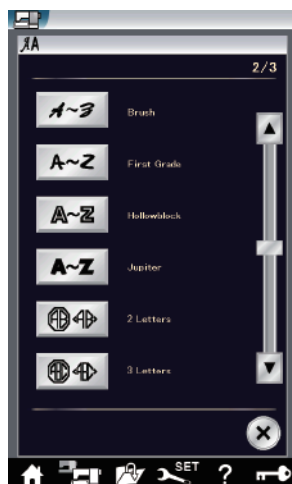
Press the monogram key and the monogram window for Gothic font will open.

Press the font selection key to open the font selection window.

- ① Monogram key
- ② Font selection key

You can select one of the 11 fonts for monogramming as well as 2-letter, 3-letter, border patterns and normal sew patterns.

The following fonts and patterns are available:



Page 1 of 3

- Gothic font
- Script font
- Cheltenham font
- Bauhaus font
- Galant font
- Typist font

Page 2 of 3

- Brush font
- First grade font
- Hollowblock font (upper case only)
- Jupiter font (upper case only)
- 2-Letter
- 3-Letter



Page 3 of 3

- Border patterns
- Normal sew patterns (patterns similar to ordinary stitches)
- Micro Gothic font



Press the icon key of the desired font and the monogram window will open.

Browse pages with the previous/next page keys.

You can enter alphabet letters, numbers, symbols and European letters.

### NOTE:

- If you select Russian language for the visual touch screen, you can select Cyrillic characters in Gothic font as well.
- The height of Micro Gothic font is approximately 5 mm.



## Function keys

### ① Font selection key

Press this key to open the font selection window.

### ② Lettering orientation key

Press this key to select the horizontal or vertical orientation.

### ③ Letter size key

You can select the following 3 letter sizes by pressing this key.

The approximate letter sizes of upper case are as follows:

**L (Large):** 30 mm (1.2")

**M (Medium):** 20 mm (0.8")

**S (Small):** 10 mm (0.4")

### ④ Letter case key

Pressing this key changes the letter case from upper case to lower case and vice versa.

### ⑤ Delete key

Press this key to delete the character above the cursor.

### ⑥ Save file key

Pressing this key opens the save file window and allows you to save the text or monogram as a file.

### ⑦ Cursor key

Press these keys to move the cursor to the left or right.

### ⑧ OK key

Press this key to confirm your entry and open the embroidery screen.

### ⑨ Space adjust key

This key is activated only when a space is entered.

If the spaces between characters look uneven, insert a blank space between characters and adjust the space width to justify.

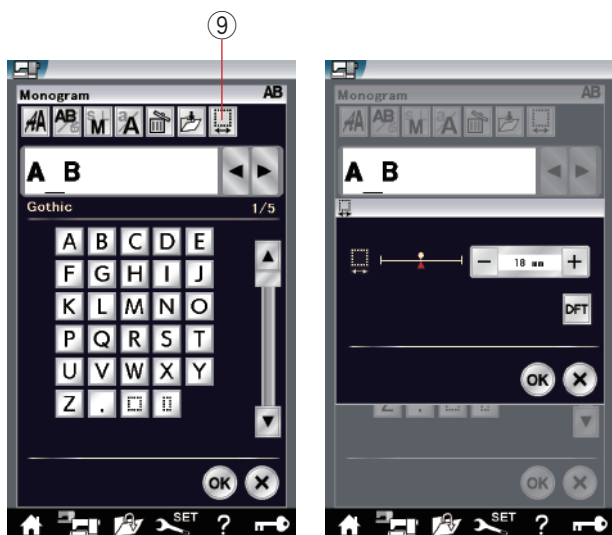
Press this key to open the space adjustment window.

To increase the space width, press the "+" key.

To decrease the space width, press the "-" key.

#### NOTE:

The space width is shown only in millimeters.



## Programming a monogram

**Example:** Programming “R&B” in Gothic style font.

Enter “R”, the cursor shifts to the right and “R” is automatically memorized.

Press the letter size key and select small size.

① Letter size key

Enter “&”, the cursor shifts to the right and “&” is automatically memorized.

Press the letter size key and select medium size.

Enter “B”, the cursor shifts to the right and “B” is automatically memorized.

Press the OK key and a warning message will appear. Press the OK key and the carriage moves to starting position.

The hoop confirmation window will appear.

Press the OK key.

The screen changes to the ready to sew window.

## Color change

You can sew a multi-colored monogram by changing the thread color of each letter if you press the color change key before sewing.

The machine will stop automatically when each character has been sewn.


Change the thread to the next color and start sewing again.

② Color change key

## Monogram placement

You can select one of 3 monogram placements: left justify, center justify and right justify.


① Left Justify

Press the  key to start sewing from the left end reference line on the template.

② Center Justify

Press the  key to sew in the center of the hoop.

③ Right Justify

Press the  key to sew from the right end reference line on the template.

## 2-Letter monogram

**Example:** 2-Letter in an octagon

- 1 Press the font selection key ①.  
Select 2-letter ②.



- 2 Select the octagon.



- 3 Enter "A" and "B".  
Press the OK key and a warning message will appear.  
Press the OK key and the carriage moves to the starting position.  
The hoop confirmation window will appear.  
Press the OK key.  
The screen changes to the ready to sew window.

### NOTE:

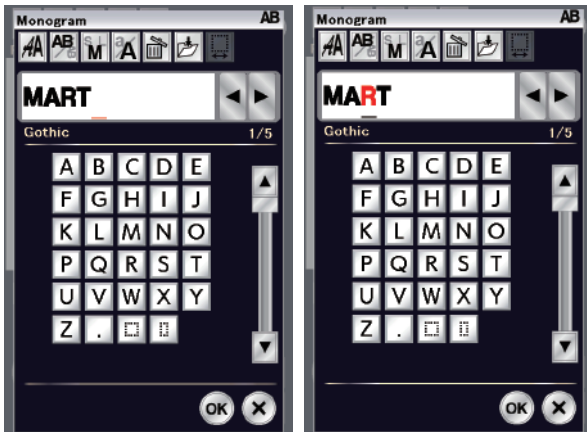
The 3-letter monogram is sewn in the same way as the 2-letter monogram.  
The starting position for the 2-letter and 3-letter monogram is in the center of the hoop.





## Editing a monogram

1



- 1 Deleting a character: Deleting “R” from “MART”  
Press the cursor key to move the cursor under “R”.

2



- 2 Press the delete key and letter “R” is deleted.

3



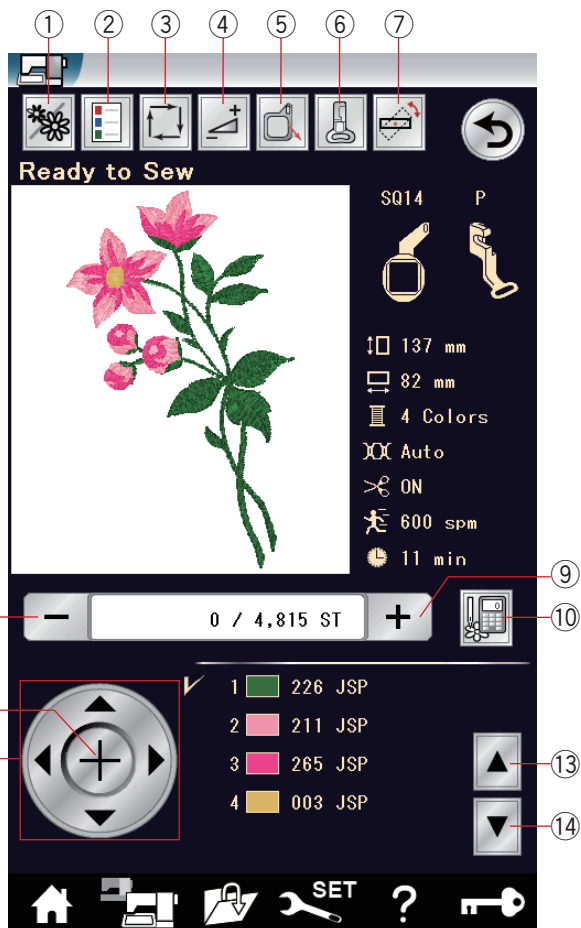
- 3 Inserting a character: Inserting “E” into “MAT”  
Press the cursor key to move the cursor under “A”.

4



- 4 Enter “E”.  
The letter “E” is inserted before “A”.



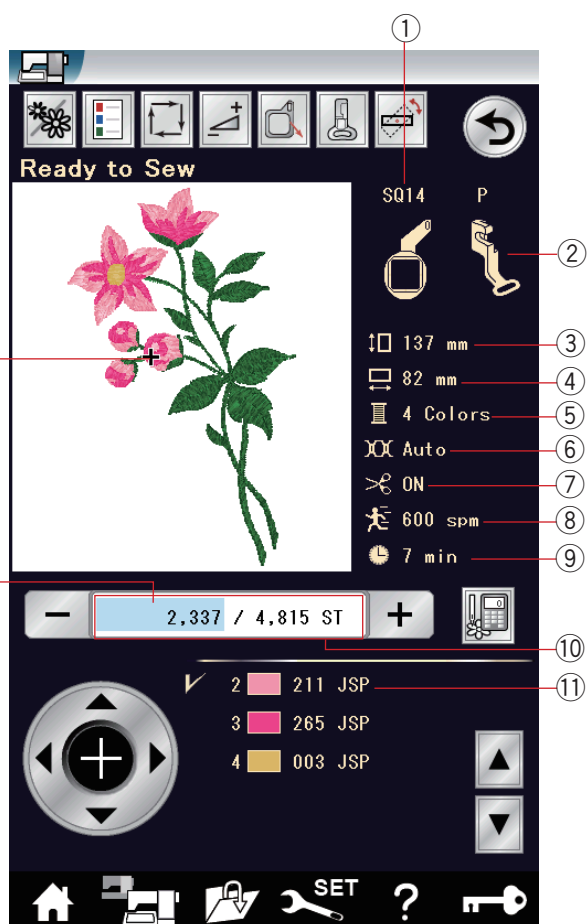


## Ready to Sew Window

The ready to sew window shows embroidery function keys and information on the selected pattern.

### Function keys

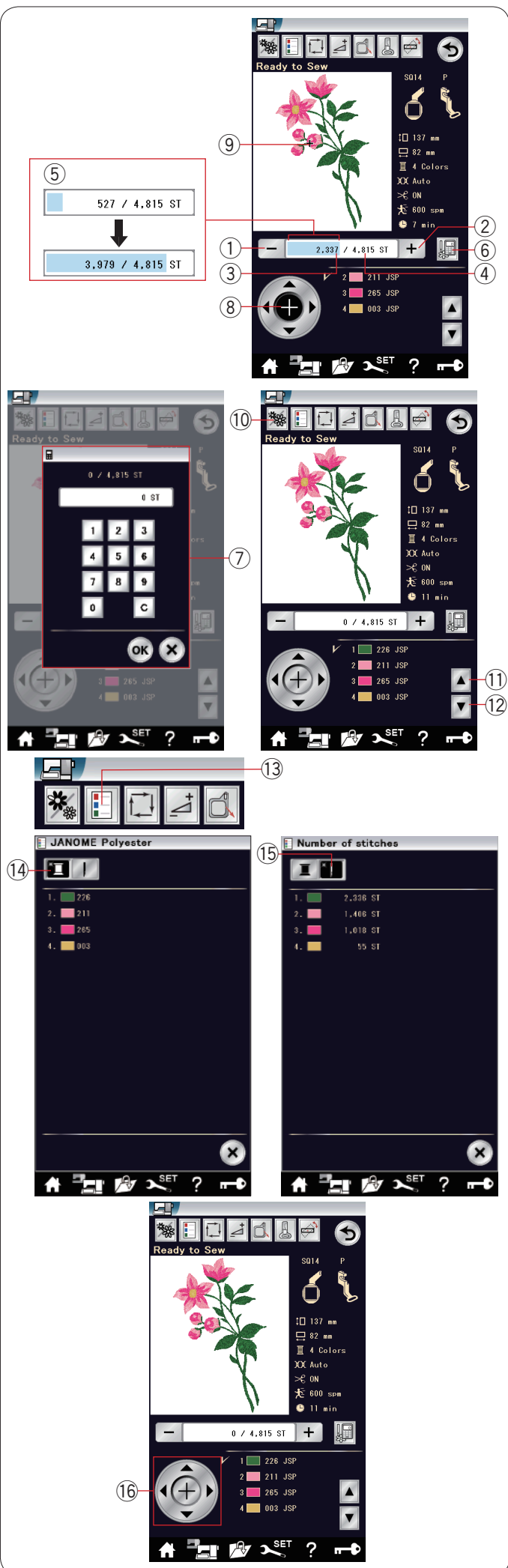
- ① Color section key
- ② Color list key
- ③ Trace key
- ④ Adjust key
- ⑤ Hoop back key
- ⑥ Embroidery foot key
- ⑦ Fine position/angle adjustment key
- ⑧ Stitch back key
- ⑨ Stitch forward key
- ⑩ Jump key
- ⑪ Jog key
- ⑫ Cross key
- ⑬ Previous color section key
- ⑭ Next color section key



### Pattern information

The visual touch screen displays the following details:

- ① Hoop size
- ② Presser foot type
- ③ Vertical dimension of the design
- ④ Horizontal dimension of the design
- ⑤ Number of thread colors (layers)
- ⑥ Tension setting
- ⑦ Auto thread cutting
- ⑧ Maximum sewing speed
- ⑨ Required sewing time
- ⑩ Stitch count
- ⑪ Thread color
- ⑫ Cross mark
- ⑬ Progress bar



### Stitch back/forward keys

Press the “-” key ① to move the hoop back to a previous sewing point.

Press the “+” key ② to move the hoop ahead.

The hoop will move one stitch each time the key is pressed. Hold down the key to travel faster and jump 10, 100 or 500 stitches at a time. The stitch count ③ and the total number of stitch count ④ are displayed in the stitch count window.

You can use these keys to move the embroidery hoop to where the thread has broken or run out.

- ① Stitch back key
- ② Stitch forward key
- ③ Stitch count
- ④ Total number of stitch count

The pale blue bar in the stitch count window is the progress bar. The progress bar ⑤ appears when the stitch count increases, and indicates the progress of the embroidery sewing project. When the project is completed, the progress bar returns to 0.

- ⑤ Progress bar

### Jump key

If you want to jump to the desired sewing point directly, press the jump key ⑥ and the numeric keypad window ⑦ will open. Enter the desired stitch count number and press the OK key.

The hoop moves to the sewing point you entered.

- ⑥ Jump key
- ⑦ Numeric keypad window

### Cross key

Press the cross key ⑧ to display the current sewing point as a cross mark ⑨. Press the cross key again to hide the cross mark.

- ⑧ Cross key
- ⑨ Cross mark (Current sewing point)

### Color section key

Press this key ⑩ to show the complete image of the selected design or partial image of each color section only.

To view the next color section, press the next color section key ⑫.

To view the previous color section, press the previous color section key ⑪.

You can sew only the specific color section by pressing the next color section key ⑫ until the desired section is displayed.

- ⑩ Color section key
- ⑪ Previous color section key
- ⑫ Next color section key

### Color list key

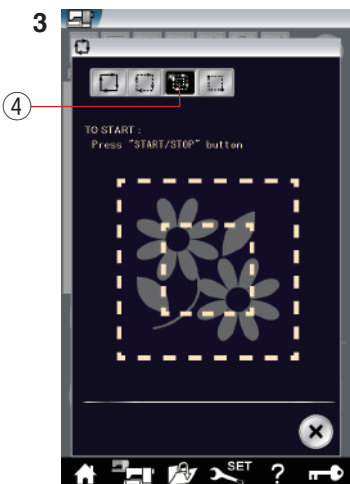
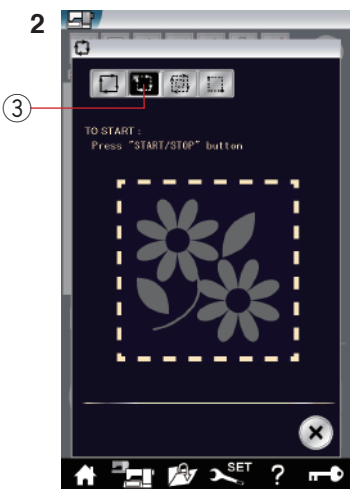
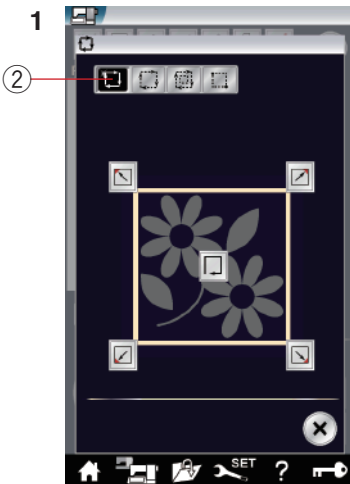
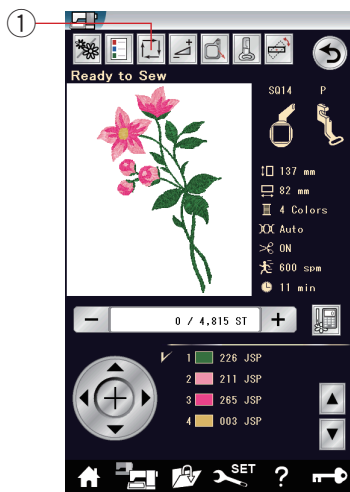
Press this key to view a list of thread colors employed in the selected design. Press the stitch number key ⑮ to view a number of stitches for each color in the selected design. Press the spool key ⑭ to view a list of thread colors employed in the selected design.

- ⑬ Color list key
- ⑭ Spool key
- ⑮ Number key

### Jog keys

Adjust the hoop position with the jog keys so that the needle position comes right above the center of the reference lines on the fabric.

- ⑯ Jog keys



## Trace key

You can check the size of the embroidery area by tracing the pattern outline without stitching or with basting stitches.

Press the trace key and the trace option window will open.


### ① Trace key



#### NOTE:

- The machine will baste around the embroidery area with a 5 mm allowance. However, the allowance will be null if the pattern spreads over the maximum limit of embroidery area.
- Lower the presser foot if the presser foot is raised with the presser foot lifter when tracing and basting.


The following 4 options are available:

### 1. Trace without stitching

Press the  key ② to open the trace without stitching window.


Press the trace key  to start tracing or press one of the  keys to move the hoop to a corner.

### 2. Trace and baste (single)

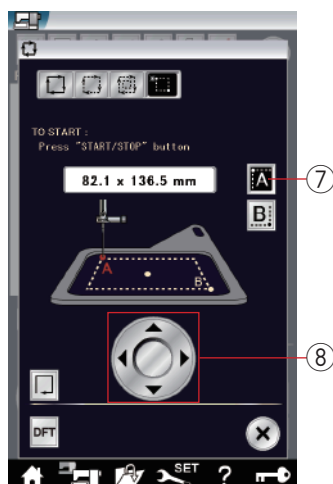
Press the  key ③ to open the trace and baste (single) window.

Press the start/stop button to start tracing with basting stitches.

### 3. Trace and baste (double)

Press the  key ④ to open the trace and baste (double) window.

Press the start/stop button to start tracing with basting stitches. First, the machine bastes inside the pattern then traces the pattern outline with basting stitches.



#### 4. Custom trace and baste

The machine will baste around the embroidery area with a 5 mm allowance when keys are pressed. However, you can customize the tracing and basting area size by pressing key ⑤.

You can set the tracing and basting area by indicating the left upper corner and lower right corner of the tracing and basting area.

Press the key ⑤ to open the custom trace and baste window.

The size of the tracing and basting area is displayed in the center of the window ⑥.

Press the key ⑦ and a warning message will appear. Press the OK key and the carriage moves to the left upper corner of the basting area.

Press jog keys ⑧ to move the carriage to the desired position.

Press the key ⑨ and the carriage moves to the right lower corner of the basting area.

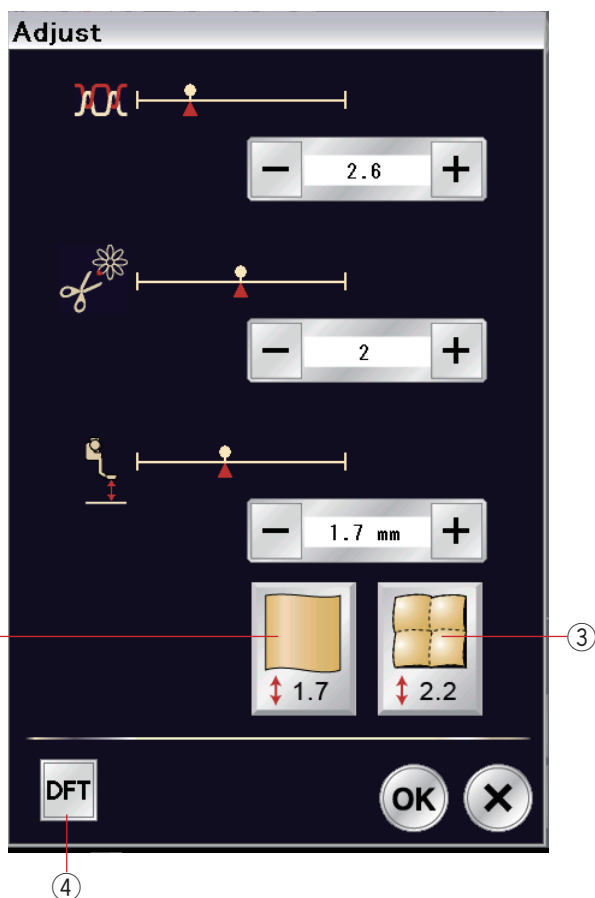
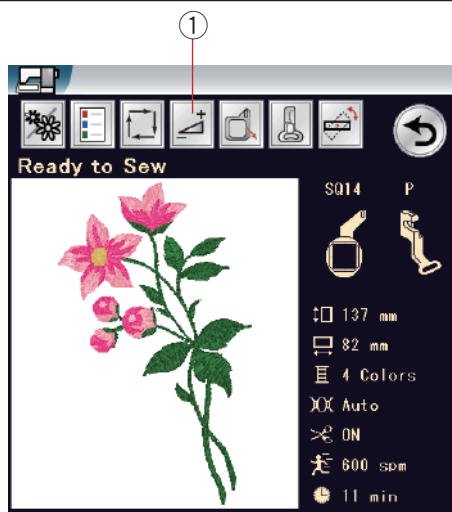
Press jog keys ⑧ to move the carriage to the desired position.

Press the trace key ⑩ to trace the set area without basting.

To trace and baste, press the start/stop button.

To return to the trace and baste area to their default settings, press the default key ⑪.

To close the tracing option window, press the X key.



### Adjust Key

Press the adjust key to open the manual setting window. You can adjust the following settings in this window.

- ① Adjust key

### • Auto thread tension level

Press the “+” or “-” key to adjust the thread tension to your preference.

### • Cutting the tails of jump threads

This option can be used when the “jump thread cutting length” setting or “cutting command” is activated (refer to page 163).

Press the “+” or “-” key to adjust the tail length of jump thread.

### • Embroidery foot height

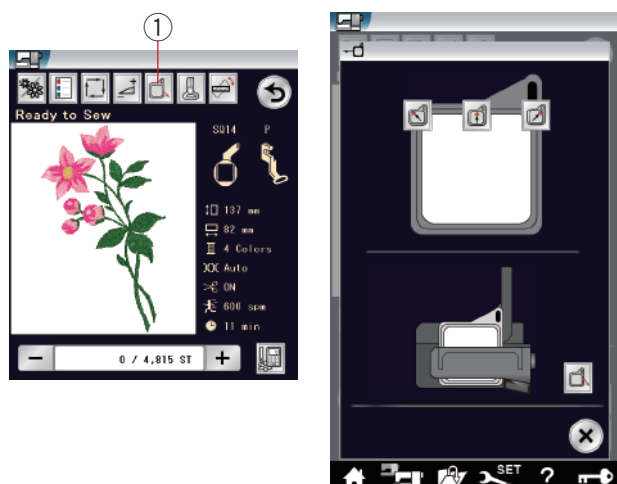
Press one of the fabric icon keys to select the recommended height or press the “+” or “-” key to fine tune the foot height.

- ② Plain fabric key
- ③ Quilting key

Press the OK key to activate the new settings.

To return to the default settings, press the default key.


- ④ Default key






### Hoop back key

Raise the needle by pressing the needle up/down key, if the needle is in down position.

Press the hoop back key ① and hoop back option window will open.

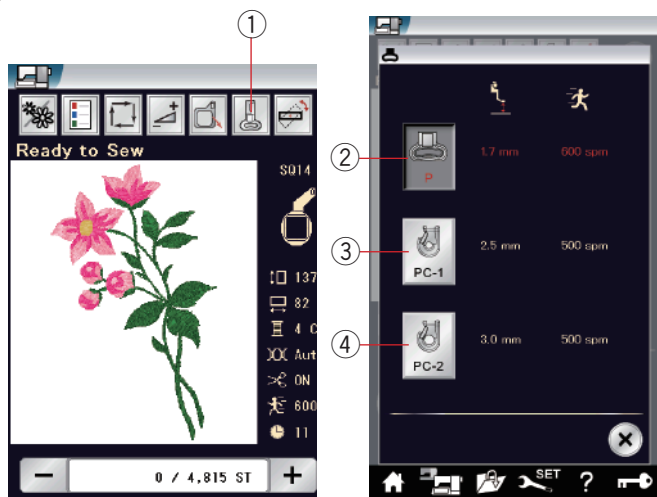
Press the  key and the confirmation window open.

Press the OK to move the carriage back to the home position and return to the Ready to Sew screen. Press one of the    keys to move the carriage to a standby position.

Press the X key to close the hoop back option window.

- ① Hoop back key

The hoop will go back to the original position when pressing the start/stop button.



### Embroidery foot key

Press this key to open the embroidery foot window.

Press one of the presser foot icon key (②, ③ or ④).

The presser foot height and the sewing speed will be automatically adjusted to suit the selected presser foot.

① Embroidery foot key

② Embroidery foot (P)

③ Couching foot (PC-1)

④ Couching foot (PC-2)

#### NOTE:

Select and attach couching feet (PC-1 or PC-2) only when selecting couching designs (optional items).

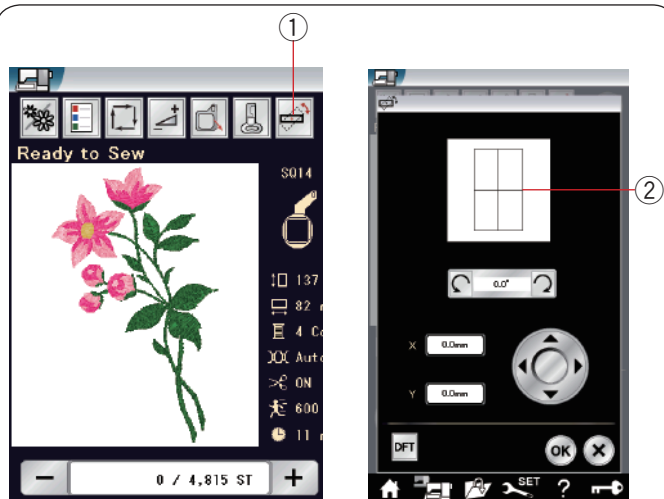


### Embroidery mode key

Press this key to open the embroidery mode window.

⑤ Embroidery mode key



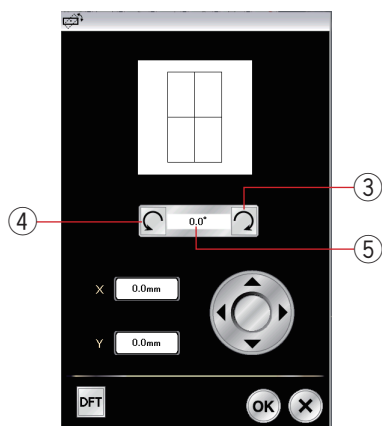


### Fine position/angle adjustment key

You can make fine adjustments to the position or angle of the embroidery design without removing the embroidery hoop from the machine.

Press the fine position/angle adjustment key ①.

The original embroidery design position is previewed as a rectangle ②.



### Rotating a design

You can make fine adjustments to the angle of the embroidery design.

Press the key ③ to rotate the design 0.5 degrees clockwise.

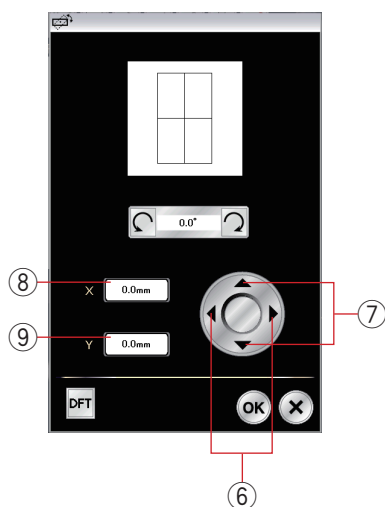
Press the key ④ to rotate the design 0.5 degrees counterclockwise.

The angle value is displayed in the window ⑤.

#### NOTE:

The angle of an embroidery design can be adjusted from -5.0 to 5.0 degrees.

The angle of the embroidery design cannot be adjusted to exceed the sewing area.



### Moving a design

You can make fine adjustments to the position of the embroidery design.

Press the or keys ⑥ to move the design 0.5 mm right or left (X window ⑧).

Press the or keys ⑦ to move the design 0.5 mm forward or backward (Y window ⑨).

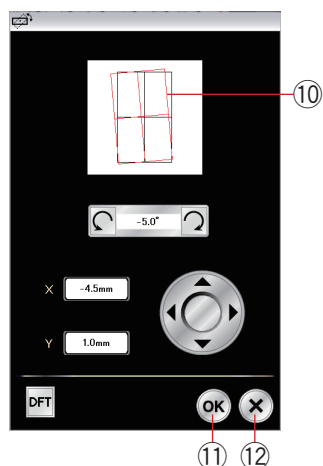
The moving distance from the original position is shown as coordinates in the X and Y windows.

#### NOTE:

The position of an embroidery design can be fine adjusted from -5.0 mm to 5.0 mm.

The position of the embroidery design cannot be adjusted to exceed the sewing area.

The moving distance from the original position is shown only in millimeters.



The red rectangle ⑩ appears when you make fine adjustments to the embroidery design, and it shows the difference between the original position and the adjusted position.

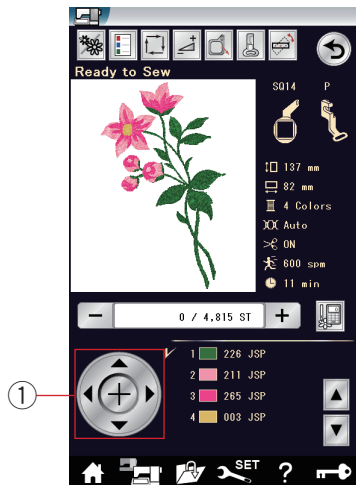
Press the OK key ⑪ to apply the fine adjustment.

Press the X key ⑫ to cancel the settings.



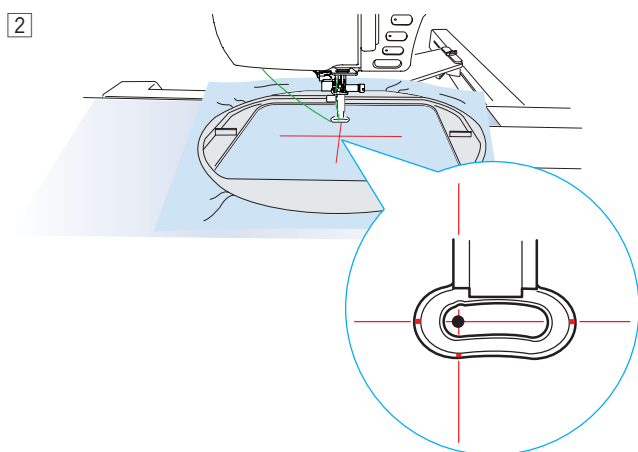
## Starting to Sew Embroidery

1 Select the desired pattern.



2 Adjust the hoop position with the jog keys so that the needle position comes right above the center of the centerlines on the fabric.

① Jog key



3 Press the start/stop button and sew 5 to 6 stitches. Press the start/stop button again to stop the machine. The presser foot will be raised automatically. Cut the loose thread close to the beginning of the starting point.

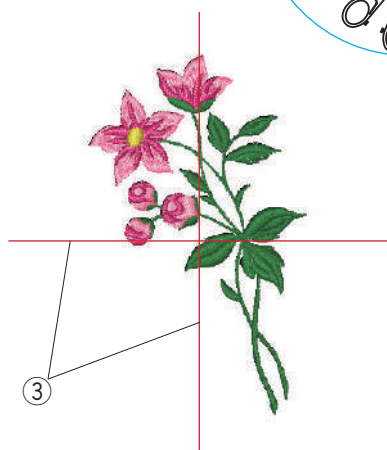
② Loose thread

Press the start/stop button to start sewing again. The machine will stop (and trim the threads if the auto thread cutting is activated) automatically when the first color section is finished. Change the thread to the next color and sew the next section.

### Sewing results

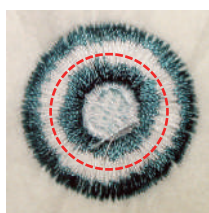
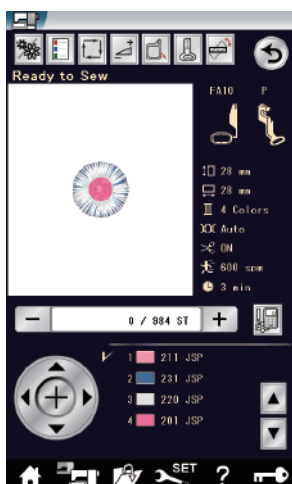
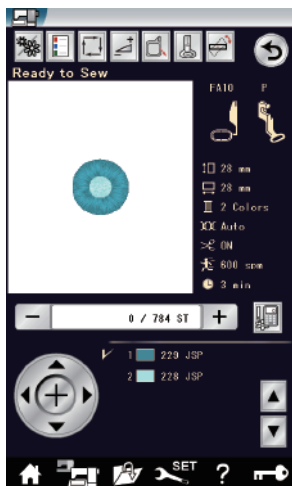
The embroidery pattern is sewn against the centerlines on the fabric as shown.

③ Centerlines on the fabric



### NOTE:

Refer to page 163 for how to set auto thread cutting.



## Fringe designs

Fringe designs are special patterns for creating fringed flower or border designs.

The embroidery design easily turns into an attractive fringed flower.

### Example: Fringe design FA10-66

Select fringe design FA10-66 and sew the pattern as you would sew a normal embroidery design.

Remove the fabric from the hoop.

Cut the needle threads along the red broken line at the outer edge of the pattern as shown.

Ruffle the threads to make fringe.

### Example: Fringe design FA10-67

Select fringe design FA10-67 and sew the pattern as you would sew a normal embroidery design.

Remove the fabric from the hoop.

Cut the bobbin threads on the wrong side of the fabric along the red broken line as shown.

Pull the needle threads up and bring the loop ends to the right side of the fabric to make fringe.

**Example: Cutting lines**

Cut the bobbin threads on the wrong side of the fabric along the broken line as shown.

Pull the needle threads up and bring the loop ends to the right side of the fabric to make fringe.

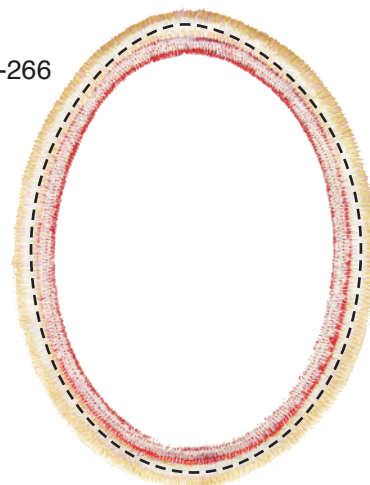
SQ14-264



SQ14-265



SQ14-266



SQ14-267



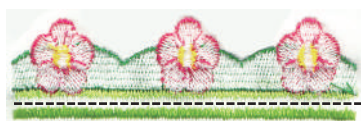
SQ14-268



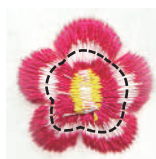
SQ23-112



FA10-63

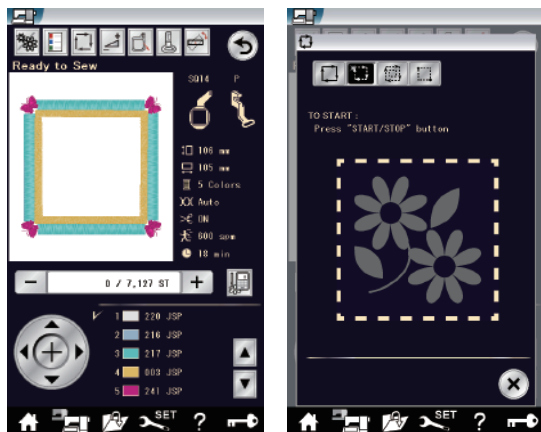


FA10-64



FA10-65



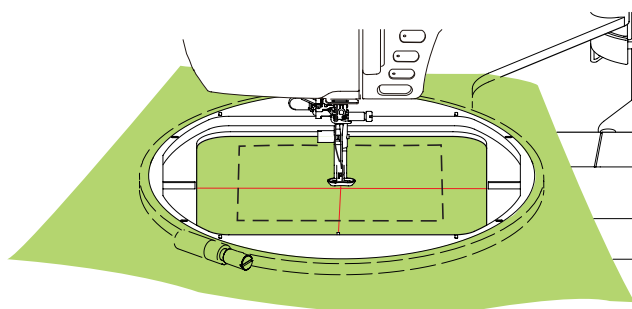



## Applique Designs

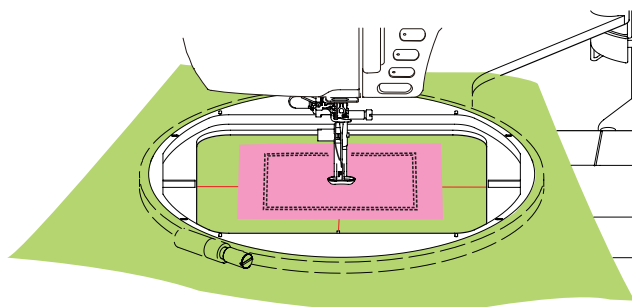
Fringe designs SQ14-265 and SQ14-266 are special designs for machine embroidery applique. You can attach applique piece to background fabric and embroider applique design at the same time.

### Example: Fringe design SQ14-265

Prepare background fabric and applique fabric. Select fringe design SQ14-265, and set the background fabric to the hoop.



Attach the hoop to the carriage and press the trace key. Press the  key to select trace and baste (single) (refer to page 129). Start the machine to mark around embroidery design with basting stitches.

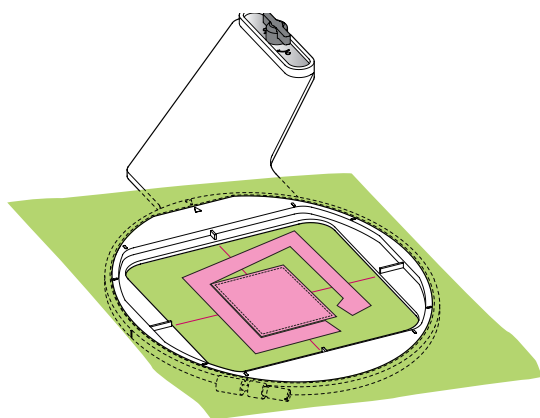


Cut the applique fabric the same size as the marked area.

Place the applique piece on the marked area and sew the first section (color).

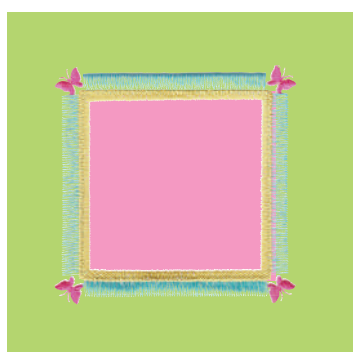
#### NOTE:

Pin the applique piece or use spray adhesive to fix it in place as necessary.

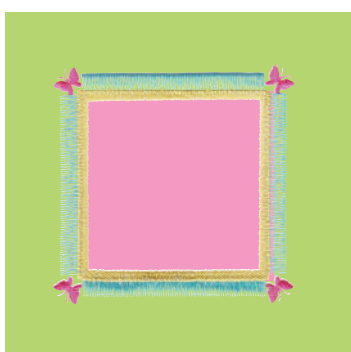
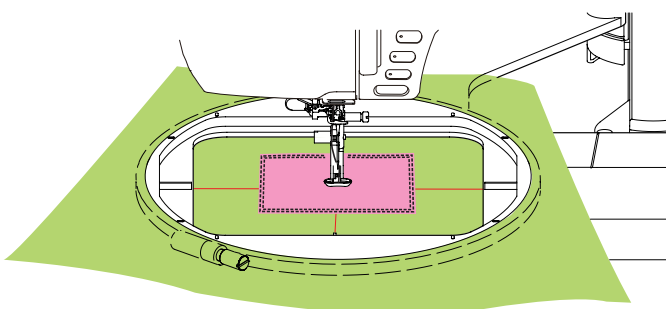
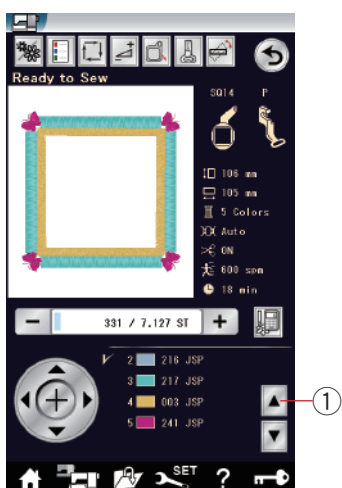
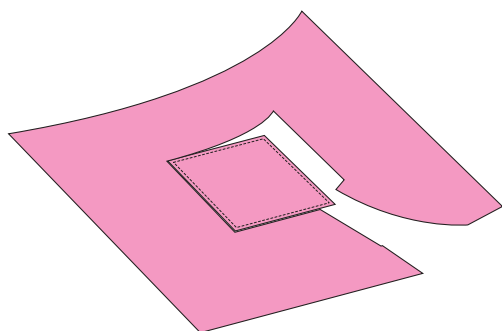
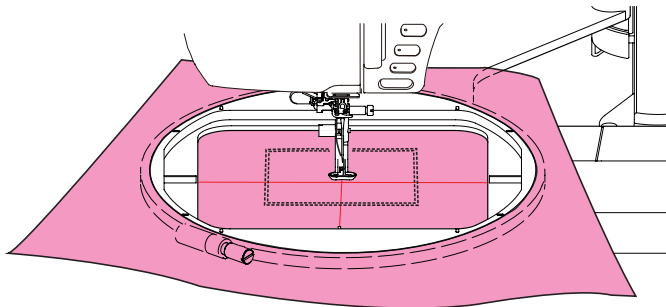


Remove the hoop from the machine, but do not unhoop the fabric.

Remove the basting stitches. Cut away the excess applique fabric as close to the seam line as possible.



Attach the hoop to the machine again. Sew the remaining sections (colors) of the applique design.



## Alternative method

Prepare applique fabric larger than hoop size.  
Set the applique fabric to the hoop.  
Sew the first section (color) only.

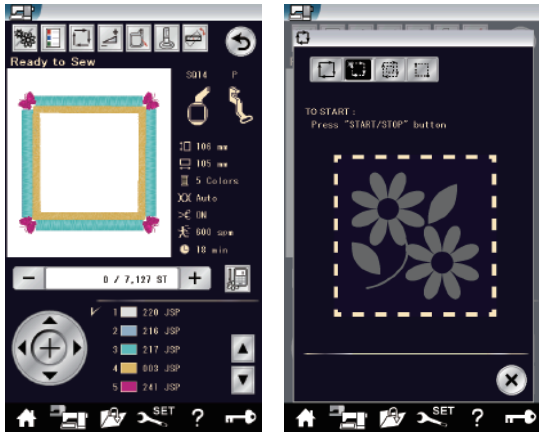
Remove the hoop and unhoop the applique fabric. Cut the applique fabric along the stitching line to make an applique piece.

Prepare background fabric and set it to the hoop.  
Attach the hoop to the carriage.  
Press the previous color section key to go back to the first section (color) and sew the first section (color) to mark the applique position.

① Previous color section key

Place the applique piece on the background fabric and align the applique piece with the positioning mark. Fix the applique piece in place with sticky tape or a pin.

Sew the remaining sections (colors) of the applique design.



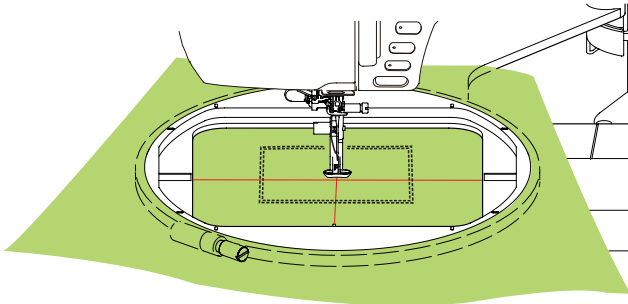
## Frame Designs

Fringe designs SQ14-265 and SQ14-266 can also be used as the frame designs.

**Example:** Fringe design SQ14-265 for framing a picture

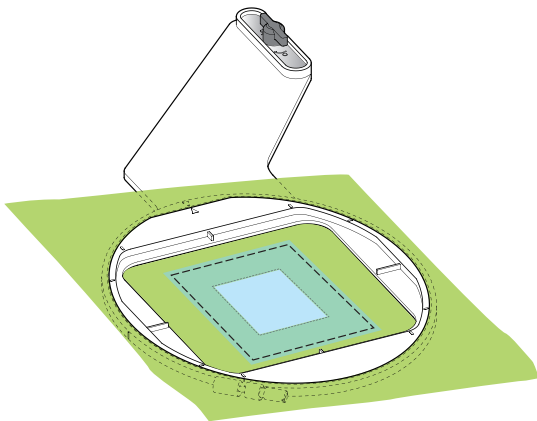
Prepare heat-away stabilizer.

Select fringe design SQ14-265.



Set the fabric to the hoop.

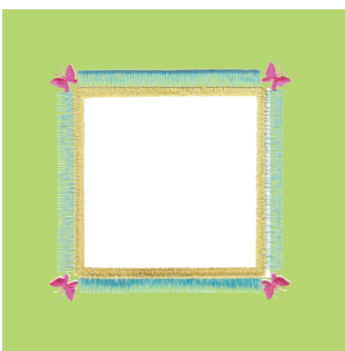
Sew the first section (color) only.



Remove the hoop from the machine, but do not unhoop the fabric.

Cut away the inside of the marked area.

Baste the heat-away stabilizer over the marked area.

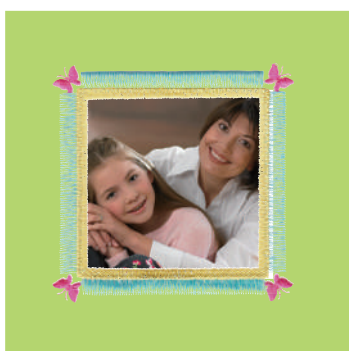


Attach the hoop to the machine again.

Sew the remaining sections (colors) of the applique design.

Remove the unnecessary parts of the stabilizer.

Melt away the rest of stabilizer with an iron.



Prepare your favorite picture, etc.

Frame your favorite picture as shown.



## Lace Designs

You can make a free standing lace by sewing the lace designs on organdy.

Attach a heat-away stabilizer to organdy, two or more layers may be required.

Use the same thread for the bobbin as the needle thread.  
Use a fully wound bobbin.

Adjust the embroidery foot height to 2.2 mm or higher (refer to page 132 or 162).

Set the low bobbin thread warning level to 3 or 4 (refer to page 162).

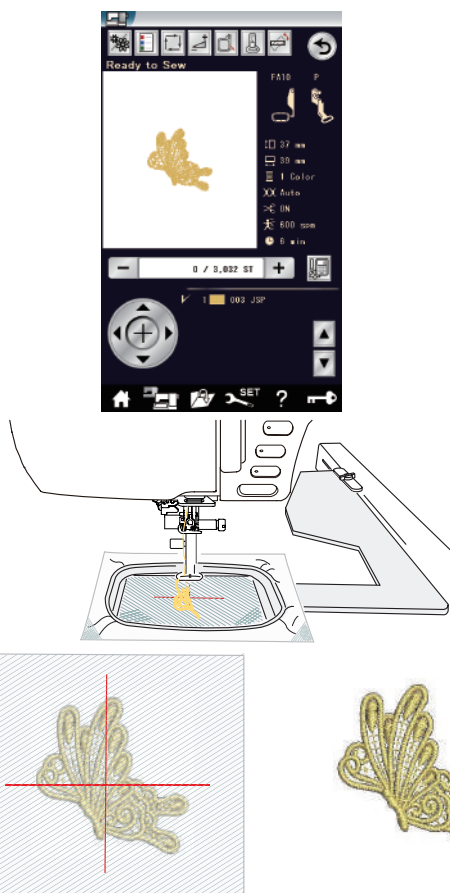
Set the sewing speed to 600 spm or less with the speed control slider.

Select the desired lace design pattern and sew.

Remove the organdy from the hoop.

Trim away the organdy and stabilizer surrounding the design pattern with scissors.

Melt away the stabilizer using an iron.



## Quilting Designs

The quilting designs SQ14-178 through SQ14-201 comprise 3 color sections.

However you sew the following specific sections only by pressing the relevant icon keys.

- ① Outer frame, stippling and center design
- ② Stippling and center design
- ③ Center design

Use the same thread for the bobbin as the needle thread.  
Use the purple tip needle to avoid skipped stitches.

Adjust the foot height if necessary (refer to page 132 or 162).

Set the low bobbin thread warning level to 3 or 4 (refer to page 162).

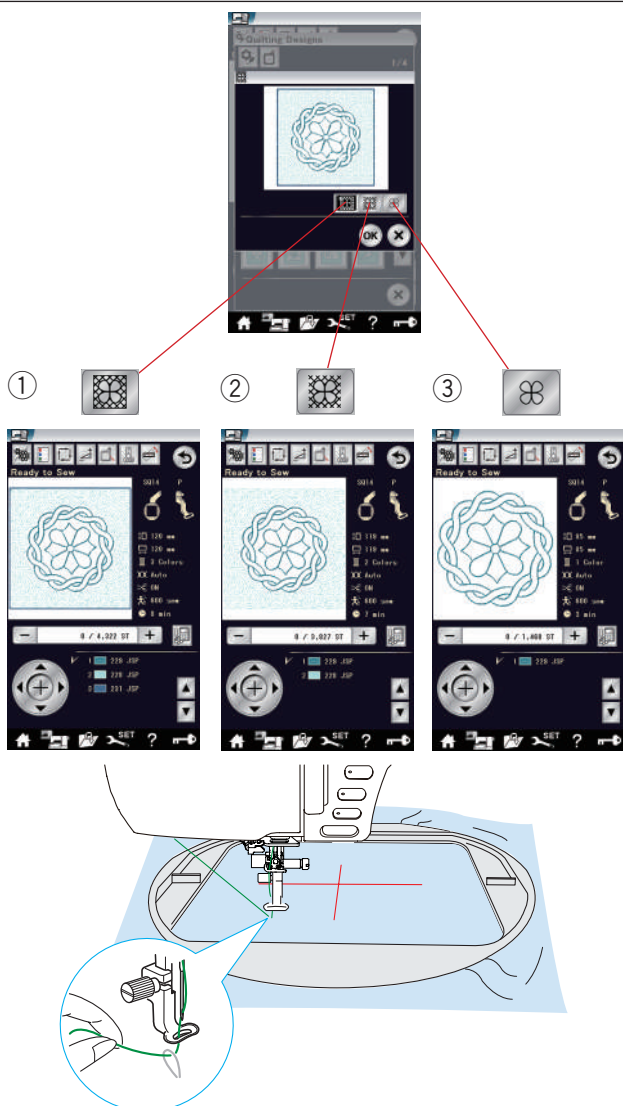
Turn on the one stitch stop function in the embroidery setting mode (refer to page 162).

When pressing the start/stop button, the machine sews one stitch and stops automatically.

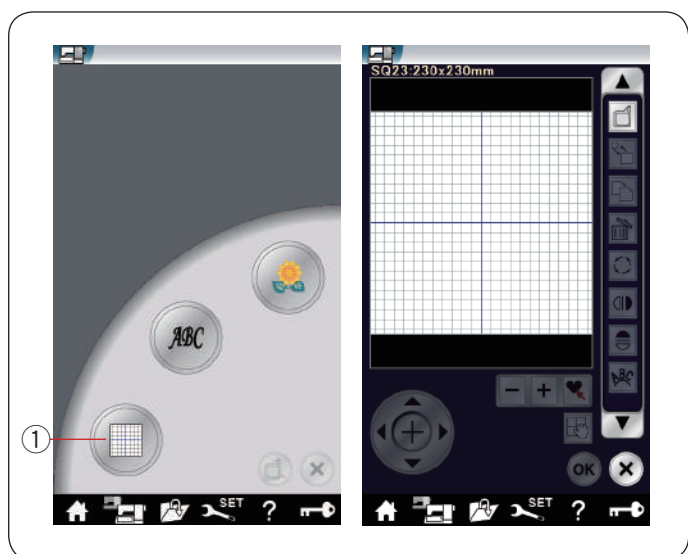
Pull the needle thread to bring the bobbin thread up and place both threads on the thread holder.

Sew several stitches and stop the machine.

Cut the loose threads close to the beginning of the stitch.  
Start the machine again to sew the design pattern.



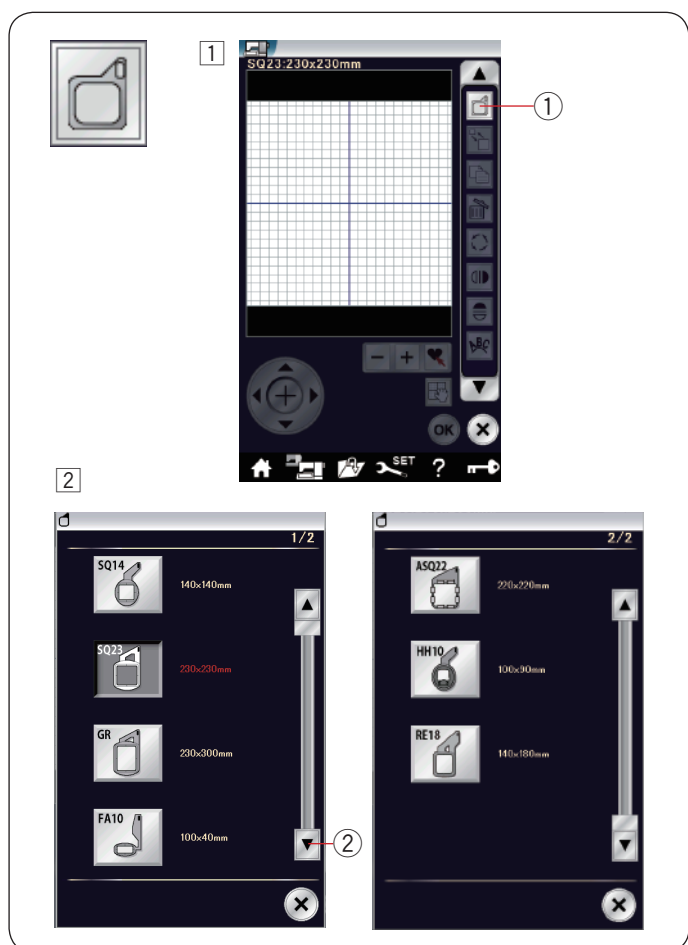




## Editing Mode

In the editing mode, you can edit and combine patterns to create original embroidery designs. Press the editing mode key ① and the editing window for the hoop SQ23 will open.

- ① Editing mode key



## Selecting a hoop size

You can select other hoop sizes.

- ① Press the hoop selection key ① and the hoop selection window will open.

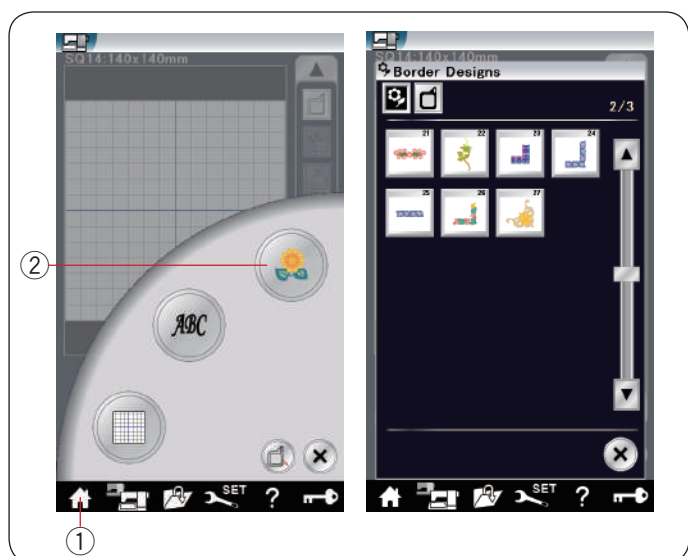
- ① Hoop selection key

- ② Press the next page key ② to show the other hoops. Press the hoop icon key to select the desired hoop. The screen will return to the editing window.

- ② Next page key

### NOTE:

- In the editing mode, you cannot select patterns larger than the size of the selected hoop.
- HH10 hoop (100 x 90 mm) and RE18 hoop (140 x 180 mm) are optional items.



## Opening the embroidery designs

You can open the built-in designs, monogram, and designs from the USB flash drive in the editing window.

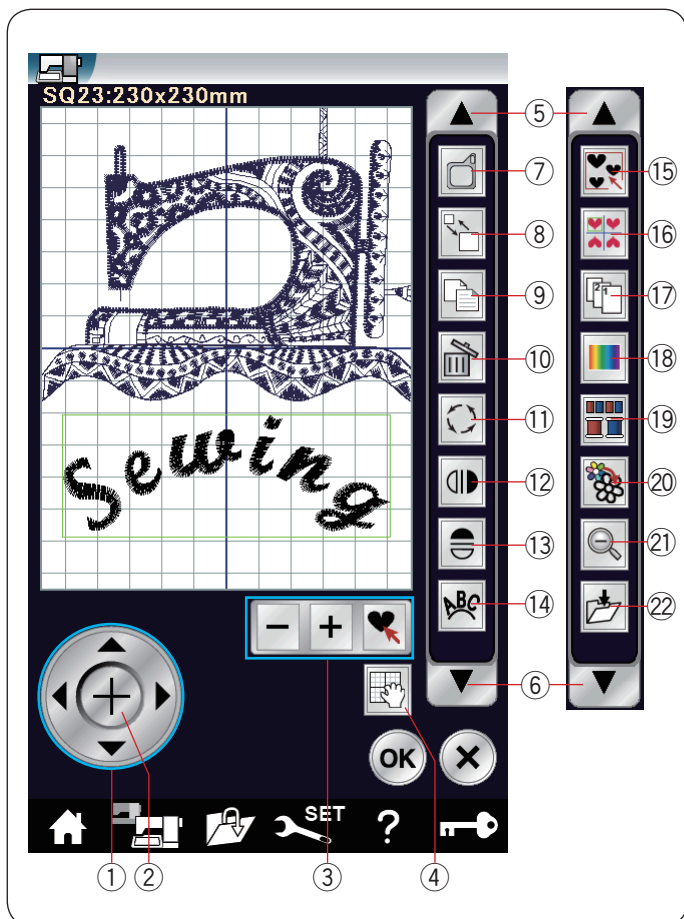
To open design patterns, press the home key ①.

Press the built-in design key ②.

Select the desired pattern from the design list (refer to page 121).

- ① Home key

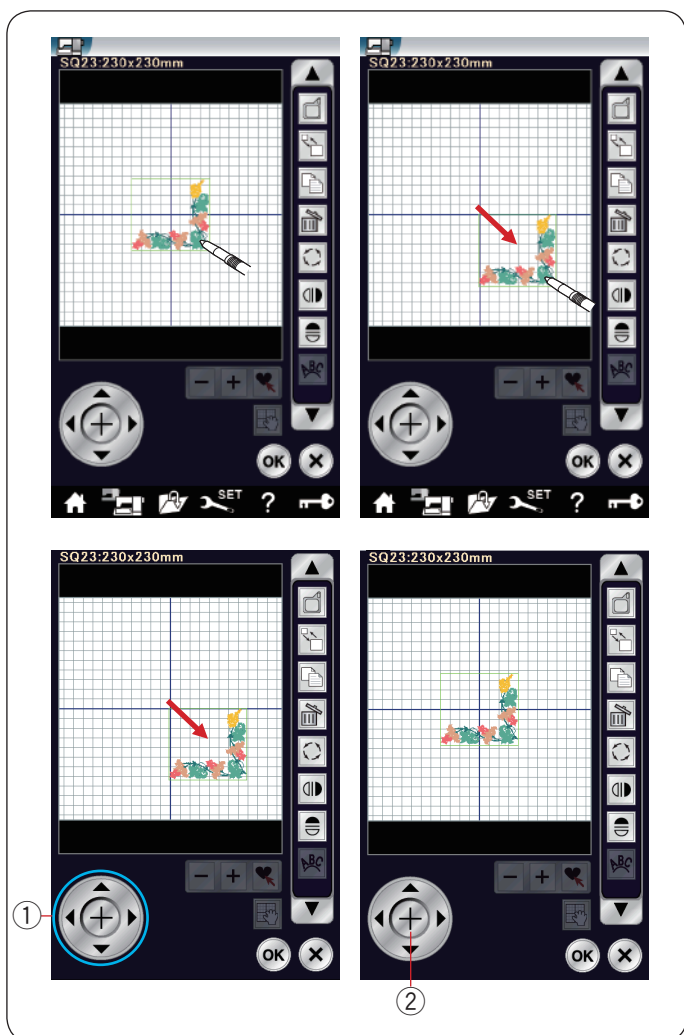
- ② Built-in design key



### Editing tool bar information

The editing tool bar contains the following keys as shown. Press the down arrow key ⑥ to show the next set of editing tools. Press the up arrow key ⑤ to show the previous set of editing tools.

- ① Layout key
- ② Cross key
- ③ Pattern selection keys
- ④ Scroll key
- ⑤ Up arrow key
- ⑥ Down arrow key
- ⑦ Hoop selection key
- ⑧ Resize key
- ⑨ Duplicate key
- ⑩ Delete key
- ⑪ Rotate key
- ⑫ Vertical mirror image key
- ⑬ Horizontal mirror image key
- ⑭ Arc key
- ⑮ Group key
- ⑯ Corner layout key
- ⑰ Sewing order key
- ⑱ Custom color key
- ⑲ Color group key
- ⑳ Single color sewing key
- ㉑ Zoom key
- ㉒ Save file key



### Selecting a pattern

To select the pattern to edit, press on the pattern image in the editing window.

The green frame appears around the selected pattern.

### Moving a pattern

To move the embroidery pattern in the editing window, press and drag the pattern to a desired location with the touch panel stylus or your fingertip.

#### NOTE:

Do not drag the pattern on the screen with a sharp pointed object.

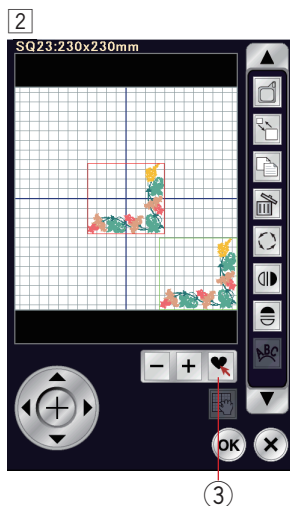
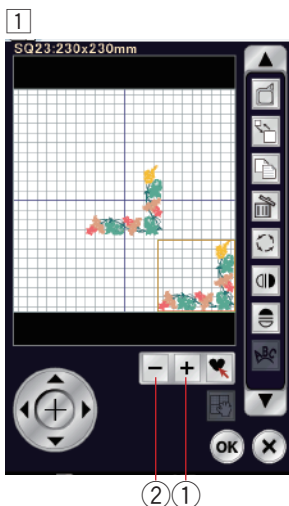
You can move the selected pattern also by pressing the layout keys.

Press the layout keys ① to move the pattern to the desired position in the editing window.

Press the cross key ② to move the pattern to the center of the editing window.

- ① Layout keys
- ② Cross key

The carriage will not move when you press the layout keys since the pattern position will move relative to the hoop, not to the machine.

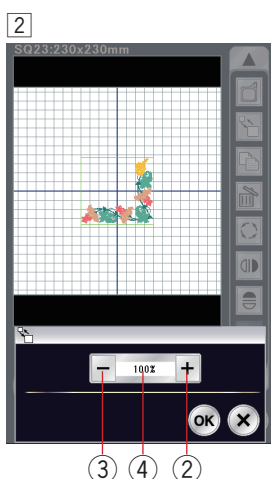
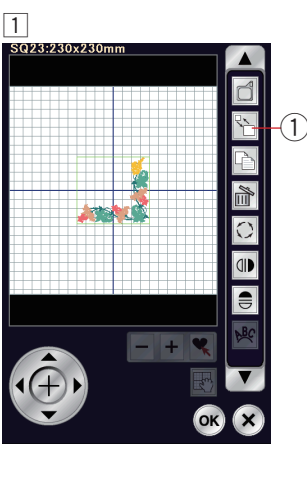


### Selecting a pattern with pattern selection keys

When multiple patterns are closely positioned, it can be hard to select the desired pattern.

Pattern selection keys appear when multiple patterns are shown in the editing window for easier pattern selection.

- 1 Press the “+” ① key or “-” ② key and the red frame appears.
- 2 Press the “+” ① or “-” ② key until the red frame surrounds the pattern you want to select.
- Press key ③ to select the desired pattern.



### Resizing a pattern

- 1 Press the resize key to open the resize option window.
  - ① Resize key
- 2 You can change the embroidery pattern size from 80% to 120% of the original size.
 

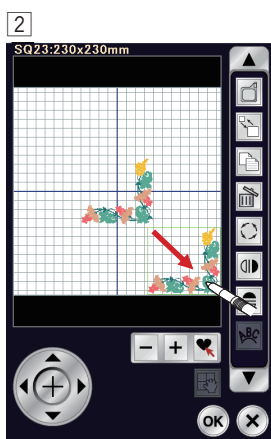
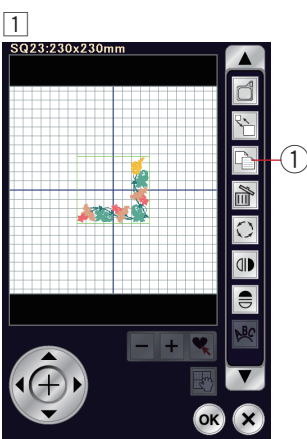
Press the “+” key ② to enlarge the pattern size.

Press the “-” key ③ to reduce the pattern size.

The size will change 1% each time you press the “+” or “-” key. To change the size quickly, press and hold the “+” or “-” key.

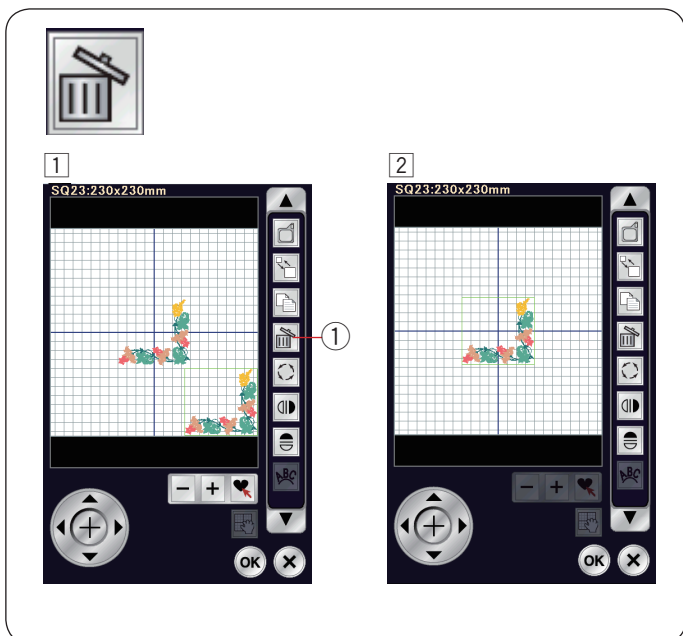
The scale of a resized pattern is displayed in percentage ④.

Press the OK key to confirm the new size.



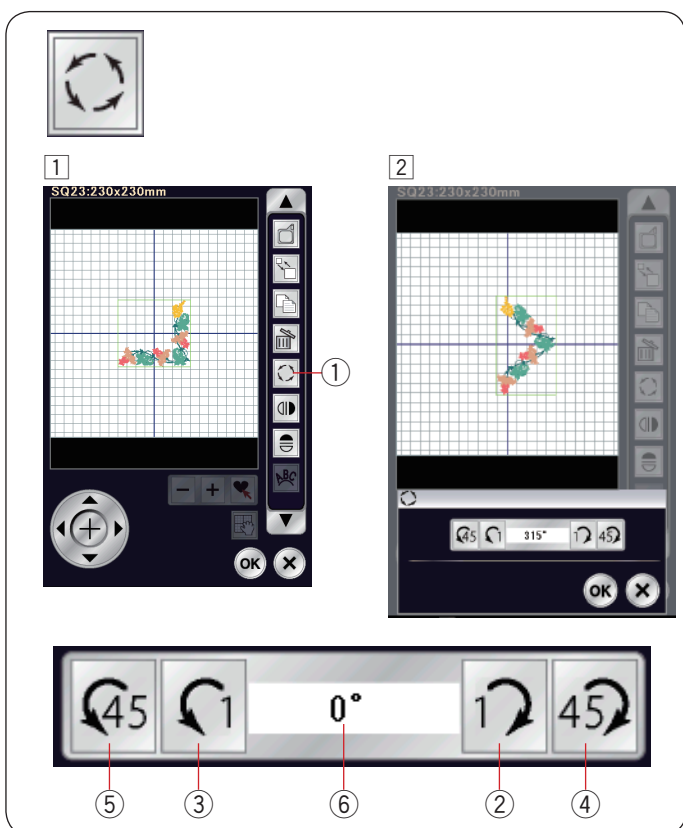
### Duplicating a pattern

- 1 Press the duplicate key to make a copy of the selected pattern.
  - ① Duplicate key
- 2 The duplicated pattern will be superimposed over the original pattern. Move the duplicate to show the original pattern.



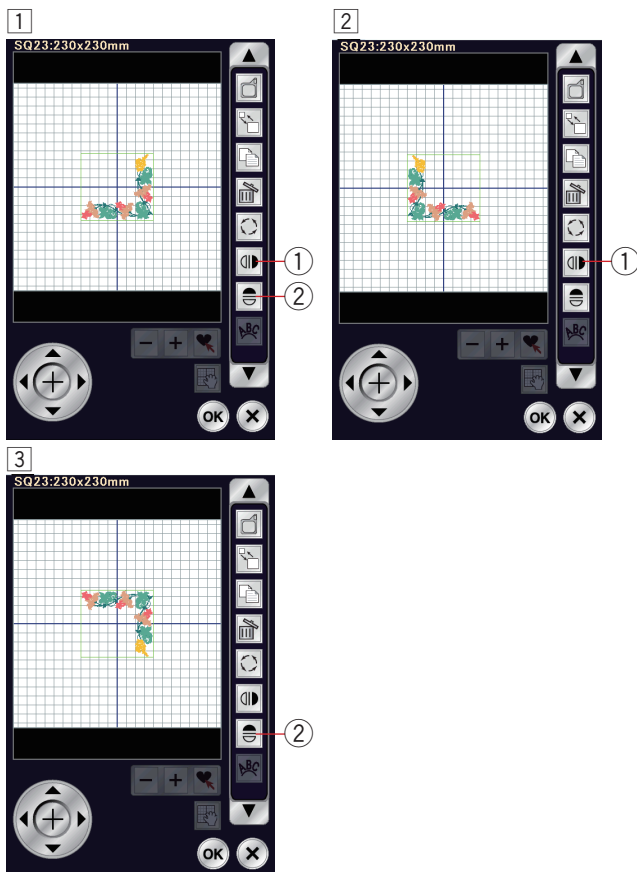
### Deleting a pattern

- 1 Press on the pattern to delete.
  - 2 Press the delete key ① to delete the selected pattern.
- ① Delete key





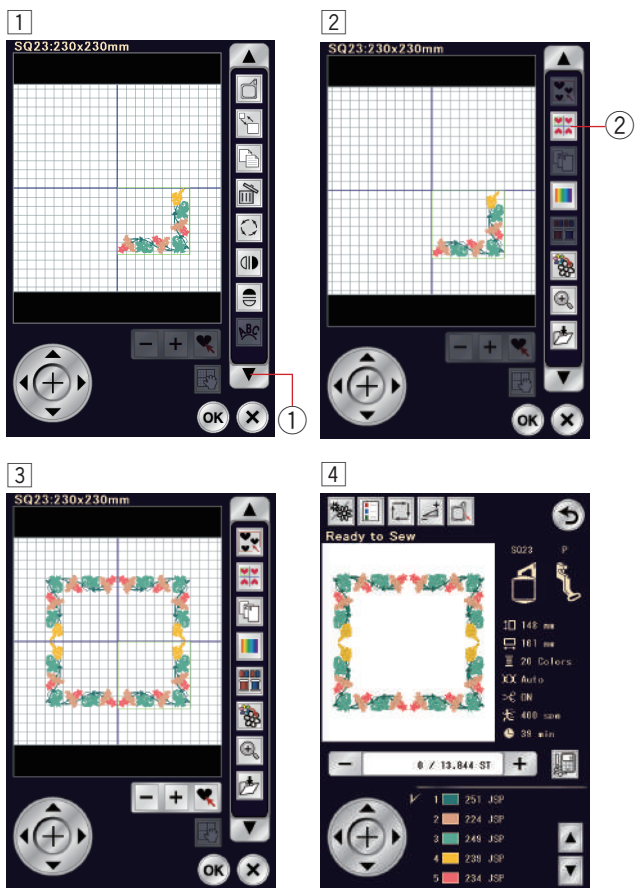
### Rotating a pattern

- 1 Press the rotate key to open the rotation option window.
- ① Rotate key
- 2 Press the key ② to rotate the selected pattern 1 degree clockwise. Press the key ③ to rotate the selected pattern 1 degree counter-clockwise. Press the key ④ to rotate the selected pattern 45 degrees clockwise. Press the key ⑤ to rotate the selected pattern 45 degrees counter-clockwise. The angle of a rotated pattern is displayed in the window ⑥. Press the OK key to confirm.



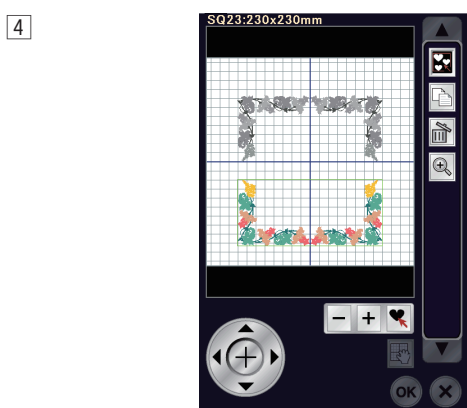
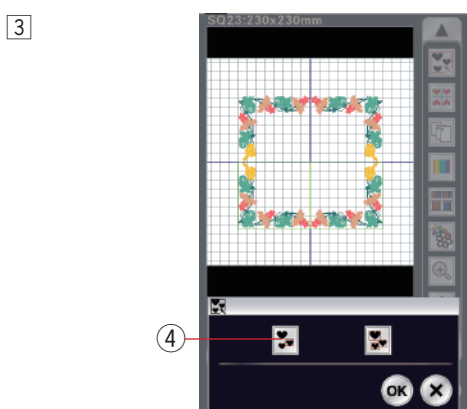
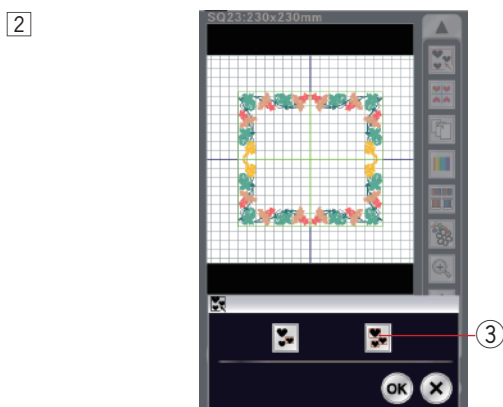
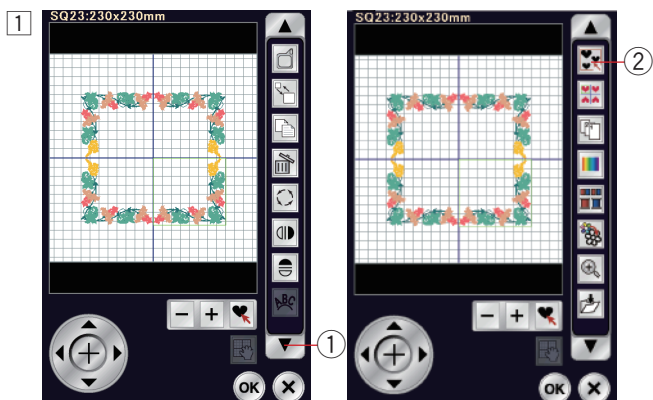
## Flipping a pattern

- 1 Press the vertical or horizontal mirror image key.
  - ① Vertical mirror image key
  - ② Horizontal mirror image key
- 2 Press the  key ① to create the vertical mirror image of a selected pattern.
- 3 Press the  key ② to create the horizontal mirror image of a selected pattern.



## Creating a square frame

- 1 Select pattern Border Design SQ14-170. Move the design down and to the right.
- 2 Press the down arrow key ① to show the next set of editing tool. Press the corner layout key ②.
  - ① Down arrow key
  - ② Corner layout key
- 3 The pattern will automatically be copied and placed symmetrically into 4 corners. Press the OK key.
- 4 The ready to sew window will open.



## Grouping patterns

- 1 You can group patterns together.  
Press the down arrow key ① to show the next set of editing tools.  
Press the group key ② and the grouping option window will open.

- ① Down arrow key
- ② Group key

- 2 Press the group all key ③ and press the OK key to group all the patterns in the editing window.

- ③ Group all key

- 3 If you wish to group the selected patterns only, press the group select key ④.  
Select the desired patterns by pressing on the pattern images.

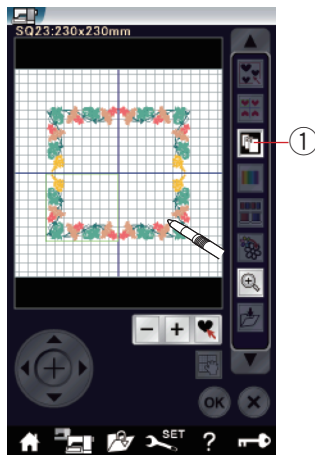
Press the selected pattern again to unselect the pattern.

Press the OK key to group the selected patterns.

- ④ Group select key

- 4 The grouped patterns can be moved and duplicated as a unit.  
When grouping the selected patterns only, the rest of the patterns are grayed out and cannot be selected.  
To ungroup the patterns, press the group key again.





## Sewing order

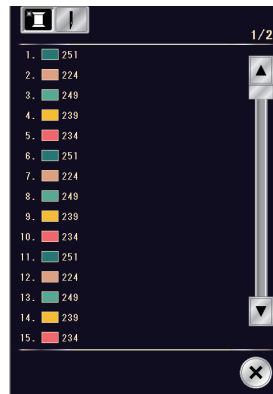
You can change the sewing order of a pattern combination.

Press the sewing order key ① and press on the images of the pattern one by one.

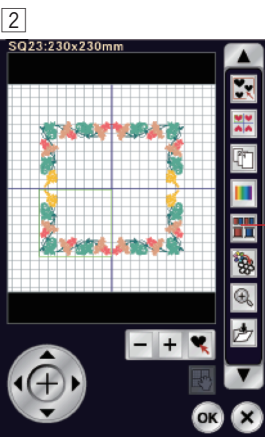
The patterns will be sewn in the order you press on the images.

Press the sewing order key ① again to return to the previous screen.

① Sewing order key



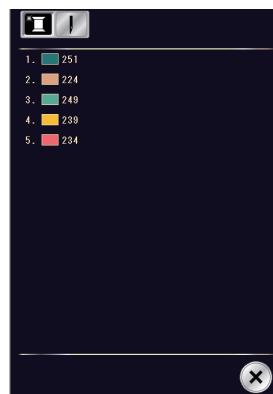
① For example, the combined design pattern created on page 145 has 20 color sections.



② Press the color group key ① and the color grouping window will open.

Press the OK key to unite all color sections of the same color and the ready to sew window opens.

① Color group key

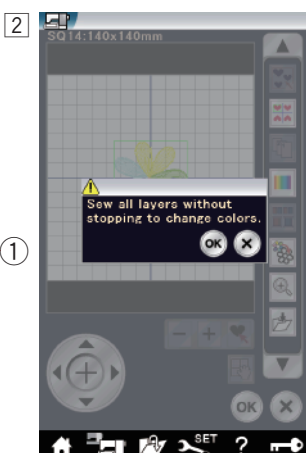
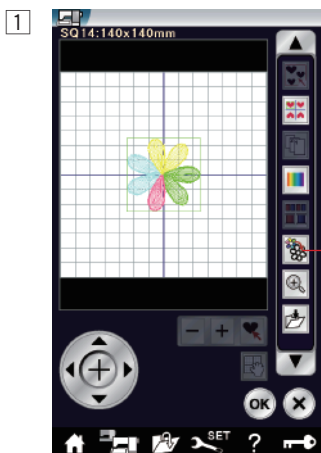


③ The number of color sections is reduced to 5.

### NOTE:

Color grouping will be cancelled when returning to the editing window.

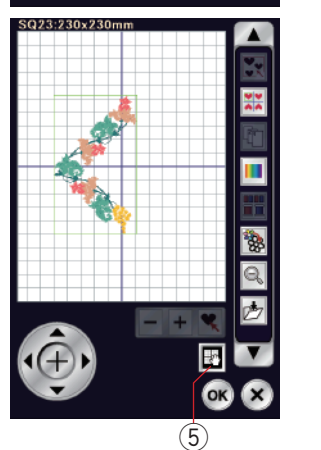
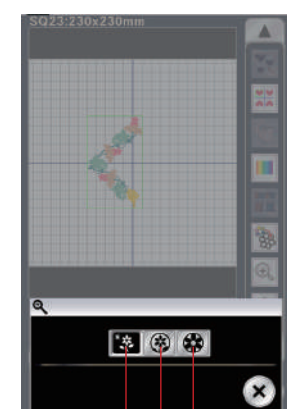
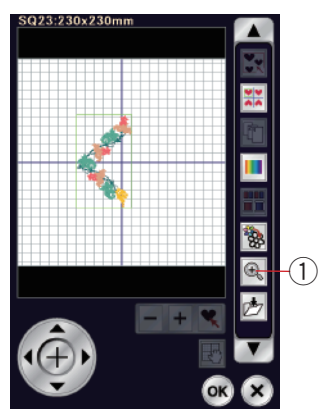




### Single color sewing

If you want to sew a pattern or a pattern combination in one color only, press the single color sewing key ①. The machine will not stop until the entire design is sewn.

- ① Press the single color sewing key ①.
- ② Press the OK key.
- ③ The design(s) will be displayed in gray. Press the start/stop button to start single color sewing. The design will be sewn without stopping for color change.



### Zooming in the editing window

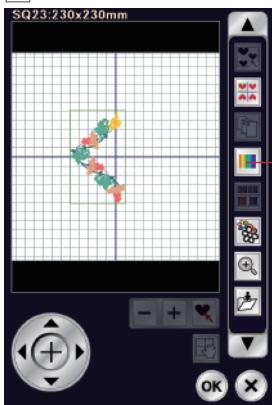
Press the zoom key to open the zoom in/out window. Select the view size from normal, large or largest by pressing one of the view size keys.

- ① Zoom key
  - ② Normal view size key
  - ③ Large view size key
  - ④ Largest view size key
- The scroll function is activated automatically when zoomed in.  
To scroll the magnified window, drag the window in the desired direction.  
Press the scroll key to cancel the scroll command.

- ⑤ Scroll key



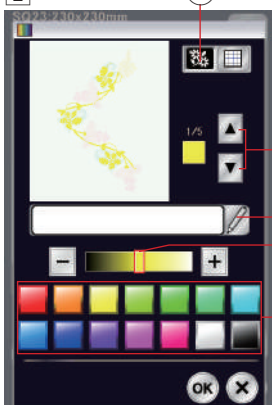
1



1



2



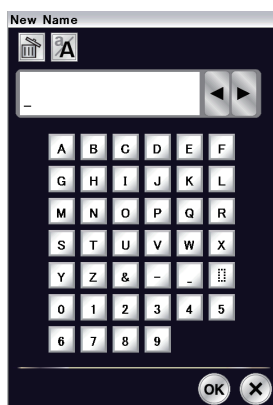
2

3

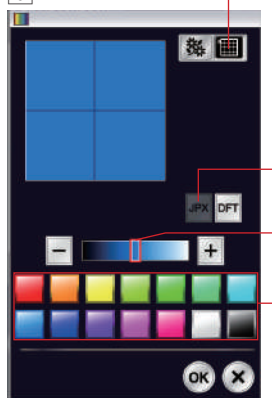
6

5

4



3



7

8

5

4

## Customizing the display colors

You can simulate the colors of the actual fabric and threads on the screen by customizing the colors of the design image and editing window.

- 1 Press the custom color key and the custom color window will open.

① Custom color key

- 2 If you wish to change the color of the design pattern, press the design color key.

Press the scroll keys until the desired section is displayed in the preview window.

② Design color key

③ Scroll keys

To select the hue, press one of the 14 color tiles.

To change the shade of the selected color, press “+” or “-” key, or drag the slider to the left or right.

④ Color tiles

⑤ Slider

You can assign a name to the customized color for the color section by pressing the name key.

The assigned name will be displayed instead of the name and code of the thread color in the embroidery window.

⑥ Name key

- 3 To change the background color, press the background color key and select the desired color.

To select the hue, press one of the 14 color tiles.

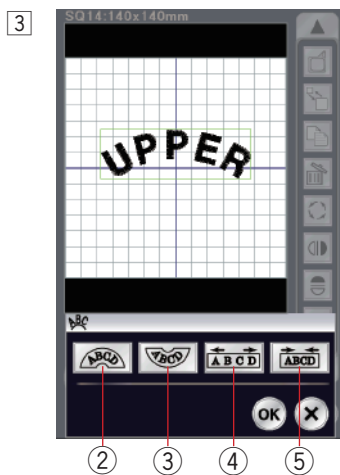
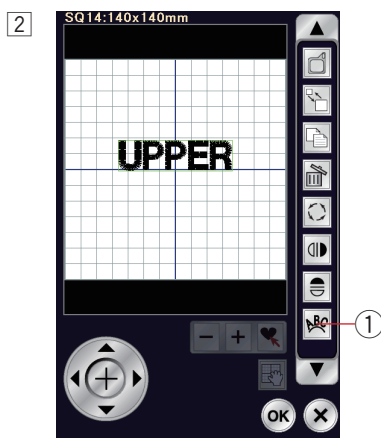
To change the shade of the selected color, press “+” or “-” key, or drag the slider to the left or right.

⑦ Background color key

### NOTE:

If a design in \*.JPX format is open, you can display the background image in the editing window by pressing the background image key (refer to the instruction book of Digitizer MBX).

⑧ Background image key



## Monogramming in an arc

In the editing mode, you can make a monogram in an upper or lower arc.

1 Enter the characters and press the OK key.

2 The entered characters are displayed in the editing window.

Press the arc key and the arc layout window will open.

① Arc key

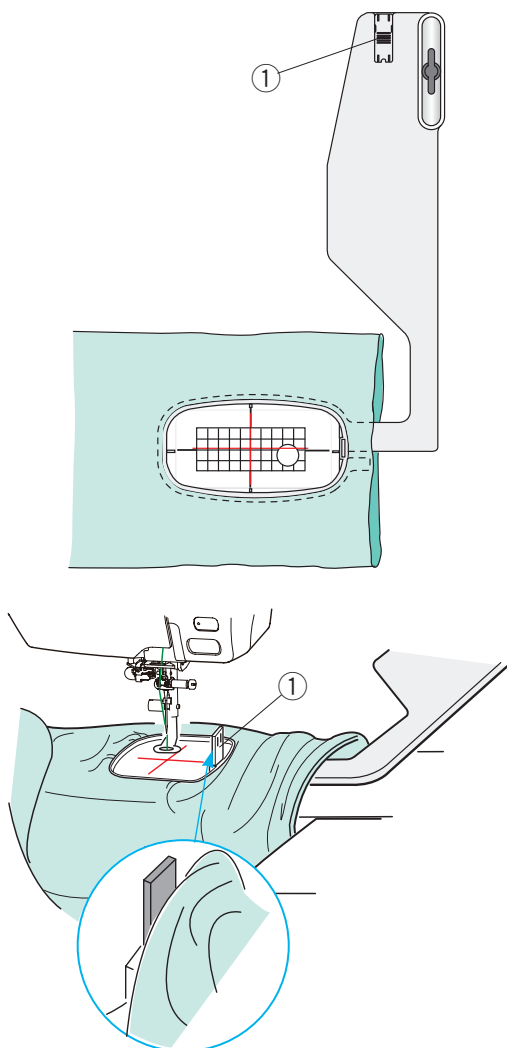
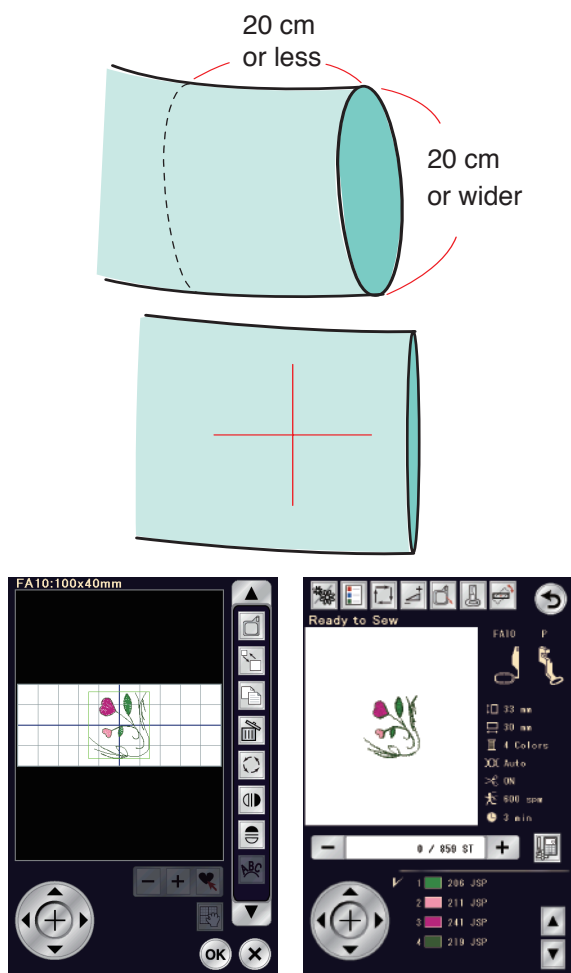
3 Press the upper arc key ② to make an upper arc.  
Press the lower arc key ③ to make a lower arc.  
Press the enlarge key ④ to make an arc longer.  
Press the shorten key ⑤ to make an arc shorter.  
Press the OK key to confirm.

② Upper arc key

③ Lower arc key

④ Enlarge key

⑤ Shorten key



## Free Arm Embroidery

The free arm hoop FA10 is specially designed for embroidering tubular garments such as sleeves, pant legs etc.

Check the opening size of the tubular portion of the garment. The opening width must be 20 cm (8") or wider. The area to be embroidered should be within 20 cm (8") from the opening.

Draw centerlines on the fabric with tailor's chalk.

Open the editing window and select the hoop FA10. Select the design list by hoop size and select the hoop FA10. Select design pattern FA10-17. Rotate design pattern 90 degrees counterclockwise (refer to page 144). Press the OK key to open the ready to sew window.

Remove the extension table.

Set the garment in the hoop FA10 as shown. Position the garment so that the centerlines match those on the template in the hoop.

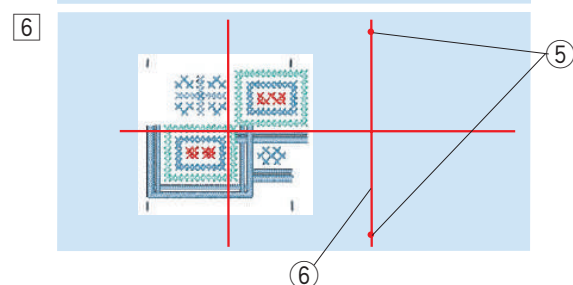
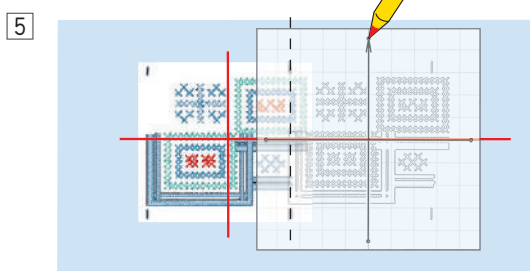
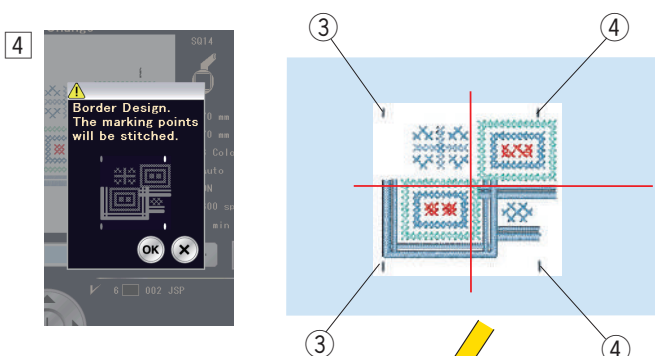
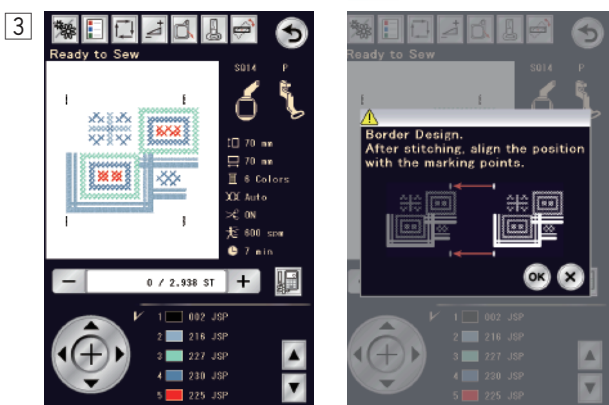
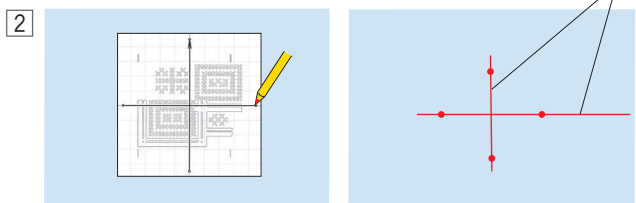
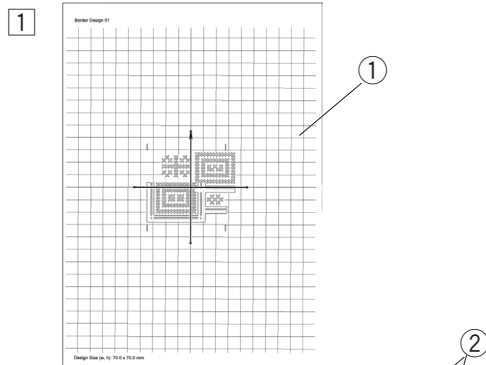
Place the garment over the free arm of the machine and attach the hoop FA10 to the carriage.

Roll up the cuff so that it will not jam at the neck of the free arm. Insert the blocking plate into the inner hoop to prevent the cuff from overlapping the embroidery area.

① Blocking plate

Press the start/stop button to sew making sure that the garment can move freely around the free arm.

Remove the hoop from the carriage when finished sewing. Remove the garment from the free arm.



## Border Designs

Border design patterns SQ14-145 to SQ14-146 can be accurately connected to each other with the built-in marking points.

**Example:** Connecting border design patterns SQ14-145 and SQ14-146.

- 1 Print template sheets on semi-opaque paper for border design patterns SQ14-145 and SQ14-146 by using Horizon Link Suite.
  - ① Template sheet
- 2 Place the template sheet on the fabric and mark the end points of the centerlines with tailor's chalk. Draw centerlines on the fabric. The horizontal line should be long enough to connect the next patterns.
  - ② Centerlines
- 3 Set the fabric in the hoop and attach the hoop to the carriage. Select border design pattern SQ14-145 and adjust the hoop position with the jog keys. Press the start/stop button and a message will appear asking you to sew the first marking points. Press the X key to skip sewing them and press the start/stop button to start sewing.
- 4 When finished sewing the design pattern, a message for the last 2 marking points will appear. Press the OK key and press the start/stop button to sew the last 2 marking points.
  - ③ First marking points
  - ④ Last marking points

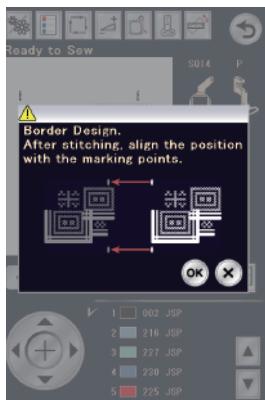
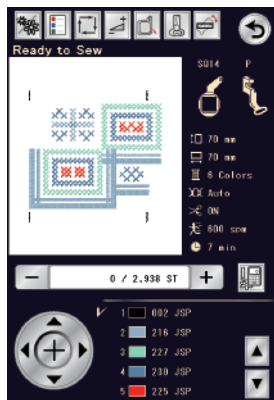
- 5 Remove the hoop from the carriage and remove the fabric from the hoop. Place the template sheet on the fabric. Align the marking points of the sewn pattern and template sheet.

### NOTE:

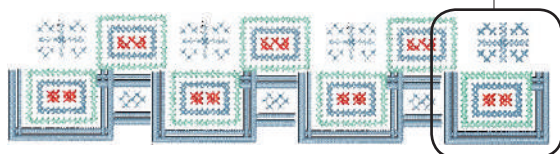
If semi-opaque paper is not available, print the template sheet on plain paper and cut the left side at the marking points (along the broken line in the illustration).

- 6 Mark the end points of the vertical centerline for the second pattern.
  - ⑤ Marking points
  - ⑥ Vertical centerline

7



8



- 7 Set the fabric in the hoop and adjust the fabric position to match the centerlines for the second pattern and template.

Attach the hoop to the carriage and press the start/stop button.

Press the OK key when the message appears.

The hoop will move to the first marking point for the second pattern.

Lower the needle by turning the hand wheel to check if the needle is right above the last marking point of the first pattern.

Adjust the hoop position with the jog keys if necessary. Press the start/stop button to sew the second pattern.

- 8 Repeat process 5 to 7 to sew the desired number of patterns.

You may sew border design pattern SQ14-146 at the end of the pattern series.

⑦ Border design pattern SQ14-146

### Connecting the patterns in the editing window

You can connect border design patterns in the editing window.

Open the editing window and select the hoop SQ23.

Select border design pattern SQ14-145.

Move the pattern to the left end and duplicate the pattern. Move the duplicate to the right until the marking points of both patterns overlap.

Press the zoom key to enlarge the pattern image.

Press the scroll key and drag the image to show the marking points.

Press the jog keys and adjust the position of the second pattern to align the marking points exactly.

① Zoom key

② Scroll key

To adjust the pattern position more precisely, use EmbLinkTool available in Horizon Link Suite.

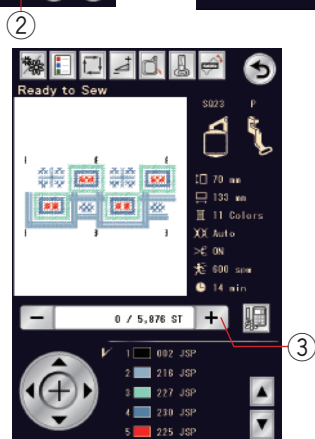
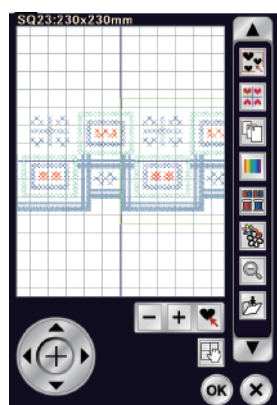
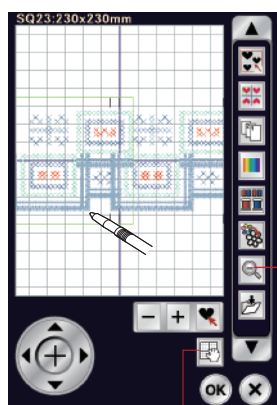
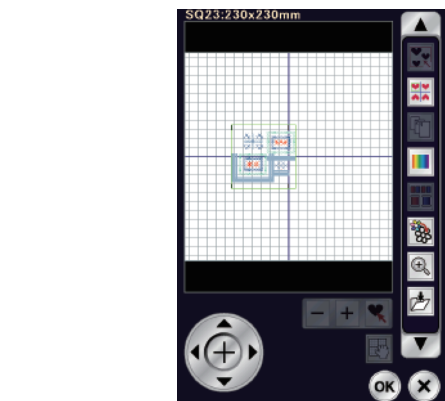
Press the OK key and the ready to sew window will open. Press the start/stop button to sew the pattern combination.

To align the second pattern combination, press the stitch forward key once to move the hoop to the marking points. Adjust the hoop position so that the needle comes right above the marking point of the first pattern combination.

③ Stitch forward key

### NOTE:

The message for the marking points will not appear, but marking points will be sewn.





## AcuFil Quilting with Hoop ASQ22

### AcuFil hoop ASQ22

Hoop ASQ22 is very useful for filling a large size quilt with AcuFil design patterns created with AcuFil Tool.

- ① Outer hoop
- ② Attaching knob
- ③ AcuFil template
- ④ Magnetic clamps



### CAUTION:

The magnetic clamp can damage items such as credit cards, floppy disks etc.

Do not use the magnetic clamp near the person with a pacemaker or other medical implants which may be affected by the strong magnetic field.

There is no inner hoop but the quilt layers are held in the hoop by means of the magnetic clamps.

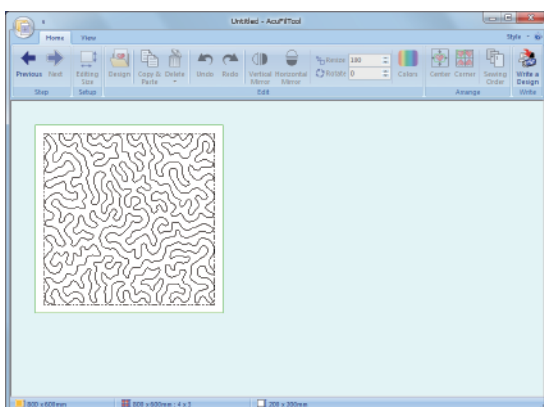
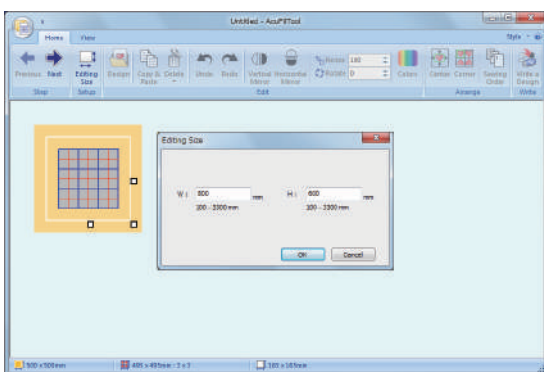
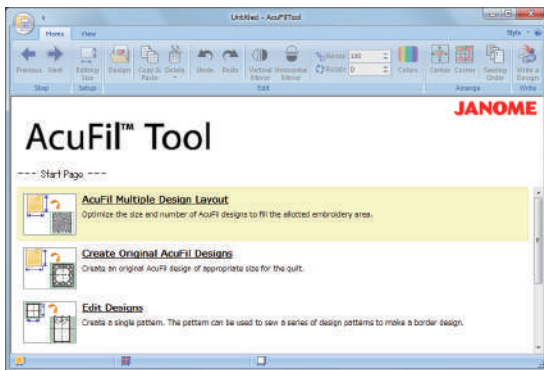
### AcuFil template

- ⑤ Centerlines for AcuFil design pattern
- ⑥ Maximum area of embroidery
- ⑦ Arrow mark

Calibrate the center position before use (refer to page 163).

### Preparing quilt layers

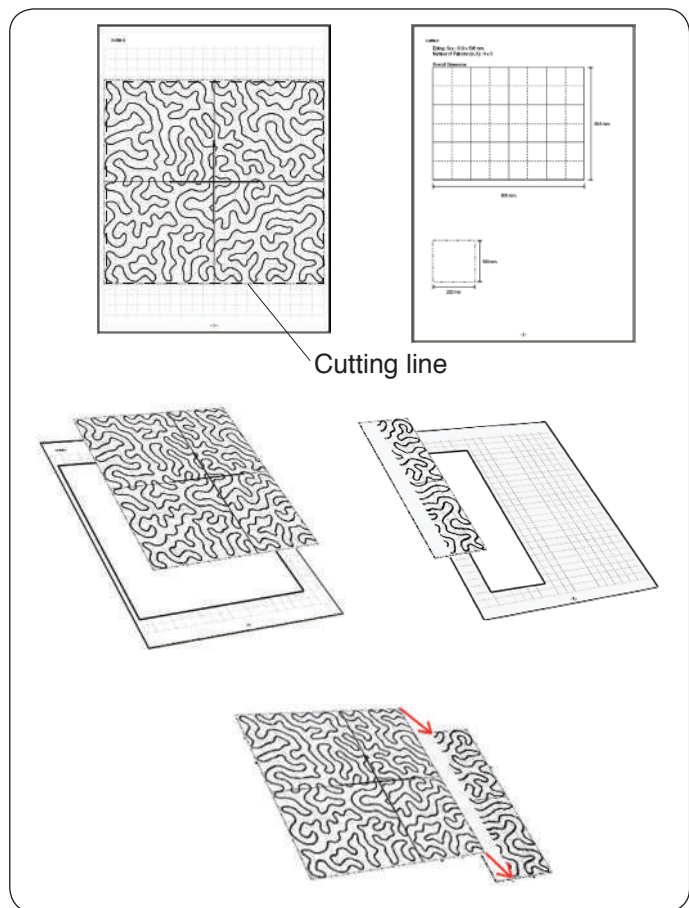
Start AcuFil Tool on your PC and click “AcuFil Multiple Design Layout” to open.



Decide the quilt size.

Enter the dimensions of the quilt and click “OK” to calculate the optimum size of the AcuFil design pattern and number of patterns to fill.

On Home tab, in Step group, click .



### Printing the template sheet

Click **Application>Print** and print the template sheets and design layout.

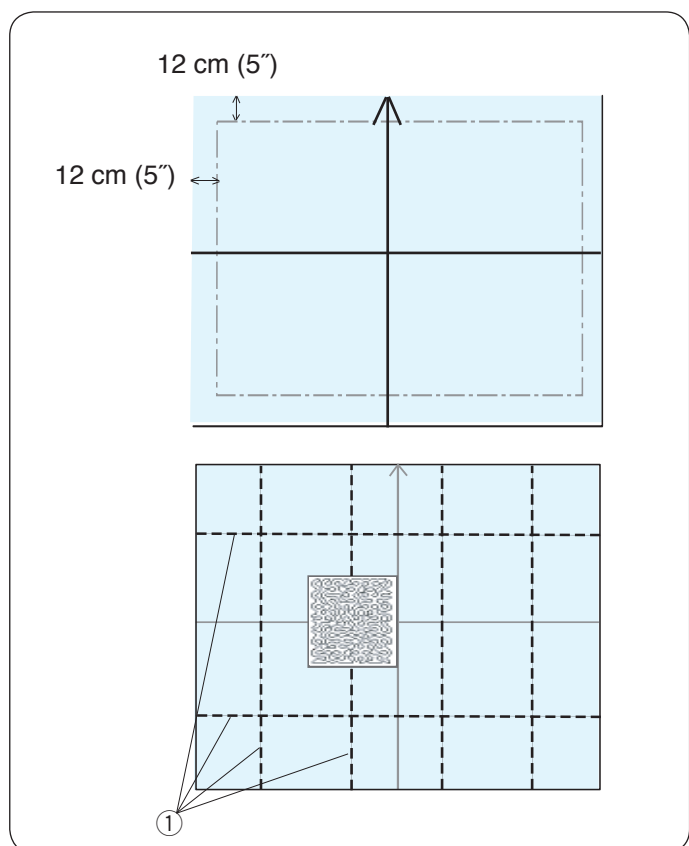
Cut the template sheet along the cutting line.

If the template sheet is printed on 2 pages, cut each section out and glue them together as shown.

Save the AcuFil design pattern on a USB flash drive.

#### NOTE:

You can transfer the design pattern to the machine and save it to the machine's built-in memory with the direct PC-Link.



### Marking the centerlines

Prepare a quilt top, base fabric and batting. Lightweight battings for machine quilting are recommended.

Add at least 12 cm (5") outer margin to the embroidery area when deciding the overall quilt size.

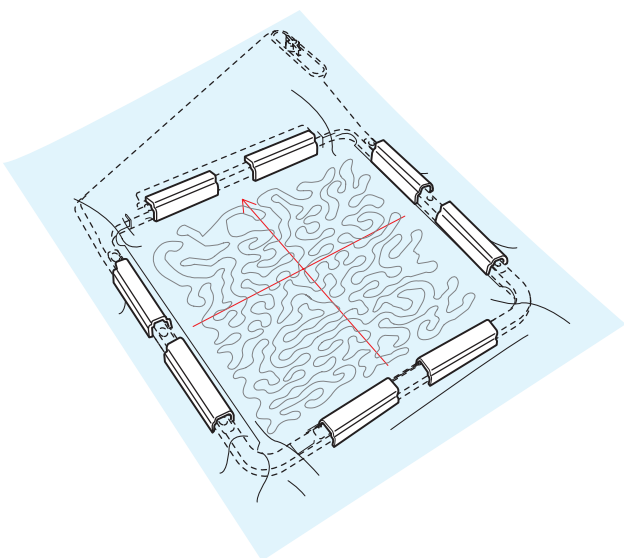
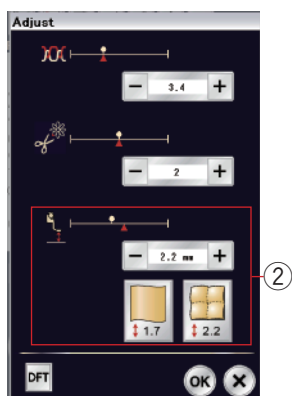
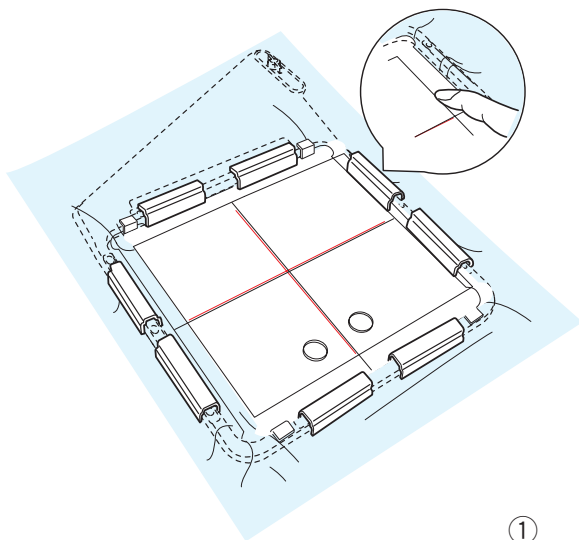
Draw centerlines and arrowhead with a washable marker.

Pin or baste all layers together.

Place the template sheet on the quilt to check the general arrangement.

Mark the centerlines ① for each section on the quilt top.

① Centerlines



### Setting quilt layers in hoop ASQ22

Position the quilt layers on hoop ASQ22. Place the AcuFil template (with the arrow mark facing up) on the quilt and adjust the position of the quilt aligning the centerlines of the quilt and AcuFil template.

Set the quilt layers in the hoop and press down the AcuFil template. While pressing the AcuFil template close to the outer frame, snap the magnetic clamps onto the hoop to fasten the quilt layers to the hoop.

Remove pins and basting stitches from the hooped area.

### Sewing AcuFil design pattern

Insert the USB flash drive that contains the AcuFil design file into the USB port of the machine.

Turn on the machine and go to Open File in the embroidery mode.

Press the icon key of the desired file and the selected AcuFil design will open.

Turn the one stitch stop ④ option "ON".

Attach hoop ASQ22 to the machine and sew the first section.

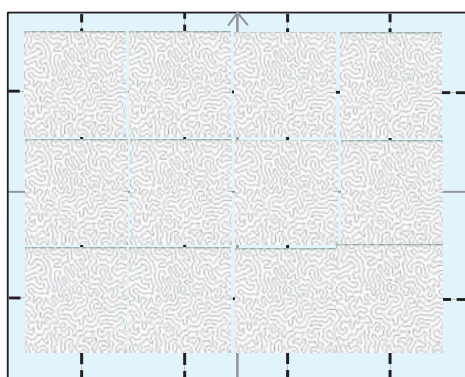
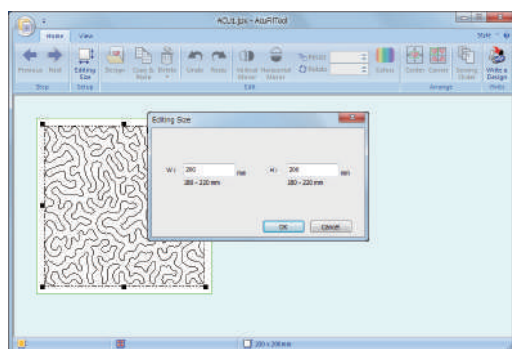
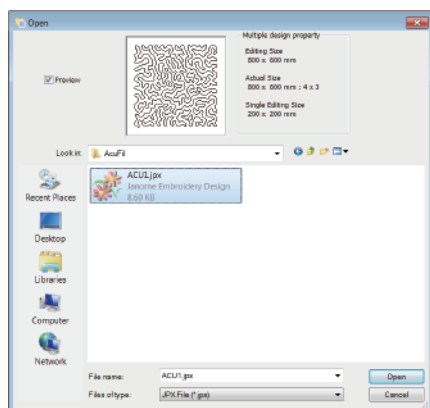
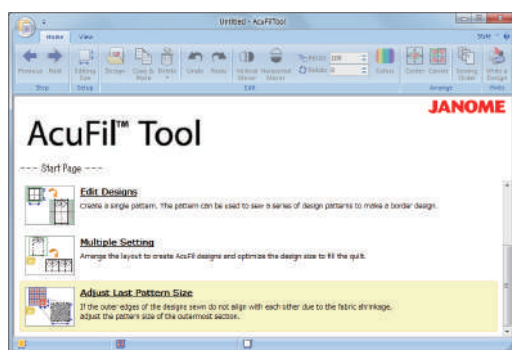
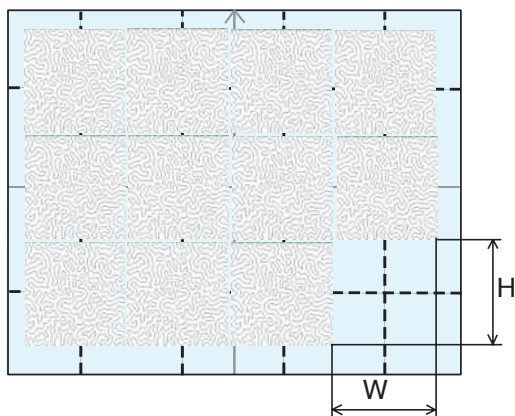
#### NOTE:

- Use the same thread for the bobbin as the needle thread.
- Adjust the foot height ② if necessary.
- Set the low bobbin thread warning level ③ to 3 or 4.
- AcuFil designs cannot be opened in the Editing mode.
- Use the purple tip needle.

Then rehoop the quilt layers and sew the next section. Repeat these steps. Sew the center section first, then neighboring sections one by one outward.

#### NOTE:

- Provide a wide space around the machine. Prevent the free end of the quilt layers from hanging down from the sewing surface. Use of the extra wide table is recommended.
- If you need to sew the quilt upside down, press the turnover key ① to flip the design pattern.
- Make sure to raise the needle by pressing the needle up/down button before moving the carriage to the home position.



## Adjusting the size of the last pattern

If the outer edges of each section do not align with each other due to fabric shrinkage, adjust the pattern size of the outer-most sections.

Measure the actual size (W: width, H: height) of blank section to be stitched.

Insert the USB flash drive that contains the AcuFil design files.

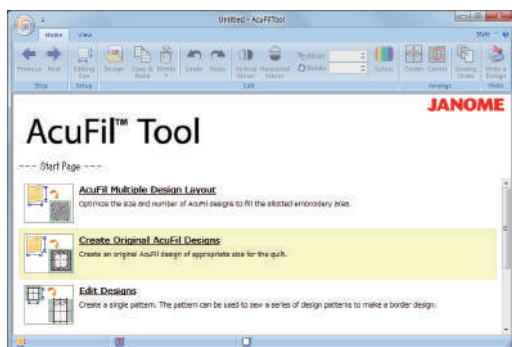
Click "Adjust Last Pattern Size" and the Open dialog box will open.

Select the design file that you have sewn and click Open.

Enter the measured size of the blank section and click "OK".

Save the adjusted design on the USB flash drive. Do not overwrite the design file. Save the file under a new name.

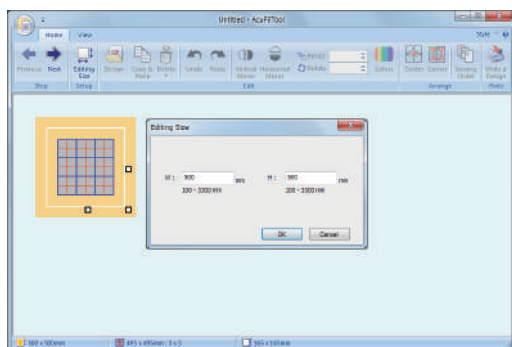
Insert the USB flash drive into the machine and sew the adjusted design in the last section.



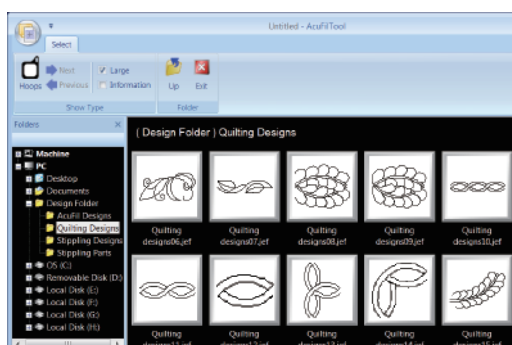
## Creating original AcuFil designs


You can create your own AcuFil design patterns by combining element patterns from the Design Collection folder.

Click “Create Original AcuFil Designs”.

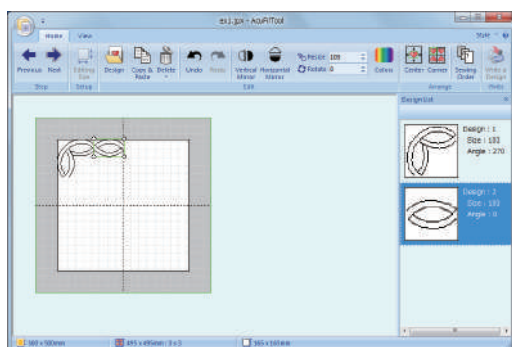


Enter the overall size of the quilt and click “OK” to calculate the optimum size of the AcuFil design pattern and number of patterns to fill the quilt.

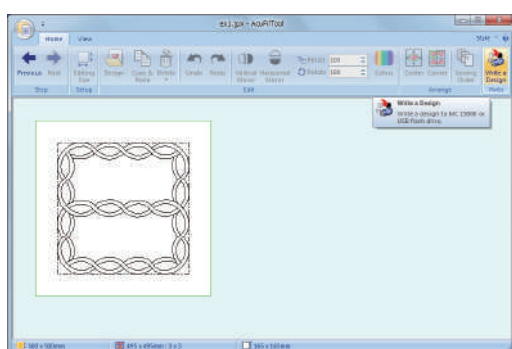


On Home tab, in Step group, click  and the layout window will open.

On Home tab, in Edit group, click “Design” and select the desired pattern to import.



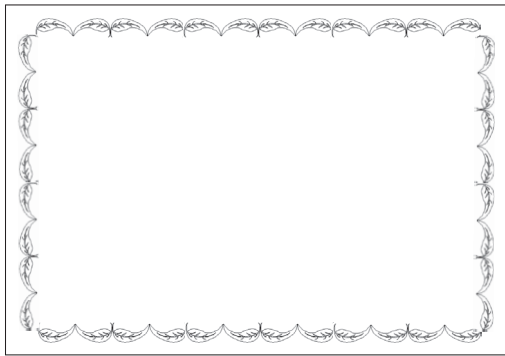
Edit and arrange the imported patterns to create your original design.



On Home tab, in Step group, click .

Save the design as a file on the USB flash drive to sew the created design pattern.

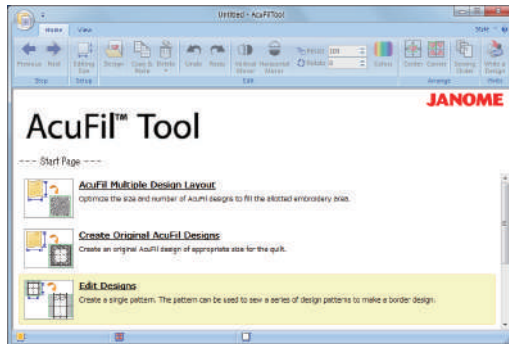




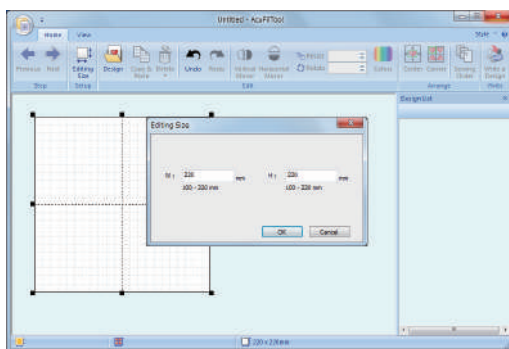
## Editing designs

You can edit the layout of the pattern combination and adjust the design size.

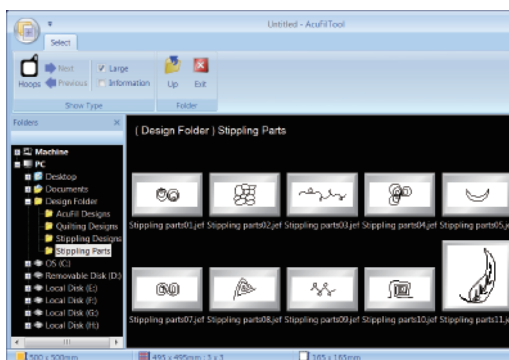
**Example:** Sewing leaf design border along the quilt edge



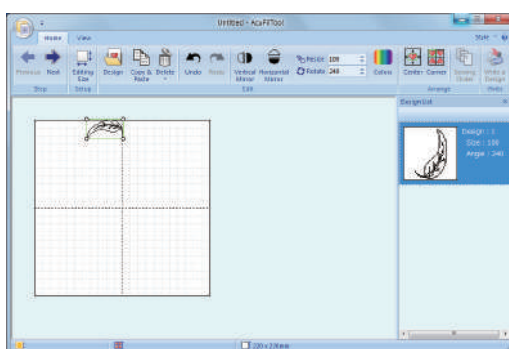
Click “Edit Designs”.



Enter the hoop size (220 x 220) and click “OK”.

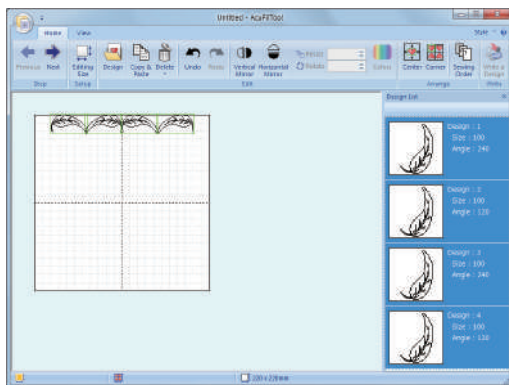


On Home tab, in Edit group, click “Design”.  
Select the desired pattern to import.

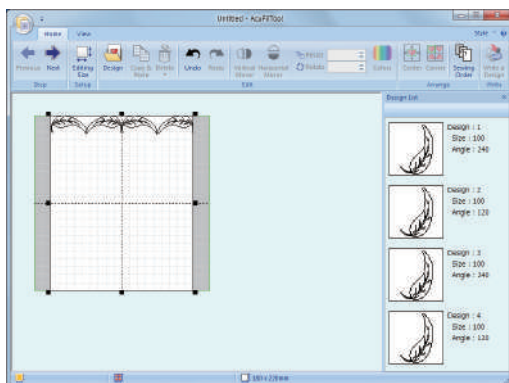


Rotate the design 240 degrees and place it at the upper edge as shown.





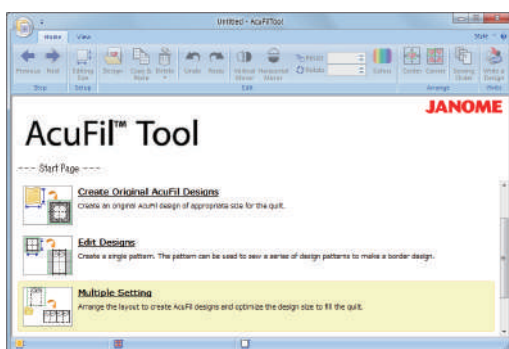
Duplicate the design, flip it over and place it opposite to the first one.  
Repeat the above steps and line up 4 element patterns.



Adjust the width of the working area by dragging the anchor point.

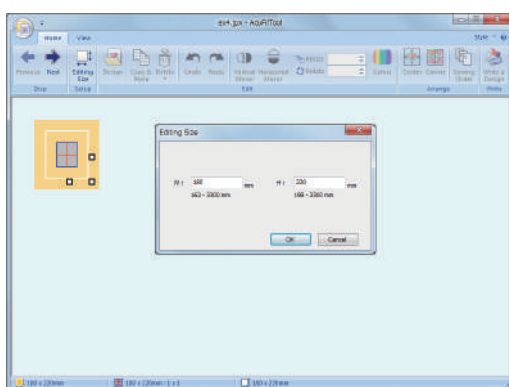
Click  .

Save the design as a file on the USB flash drive.



Go to the Start Page.

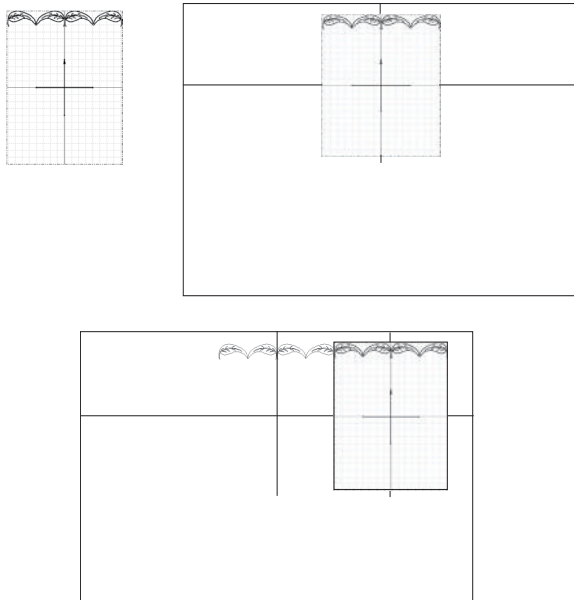
Click “Multiple Setting” and open the design saved in the previous step.



Enter the overall quilt width (W) and enter 220 for height (H) and then click “OK”.

Click  .

Save the design on the USB flash drive.



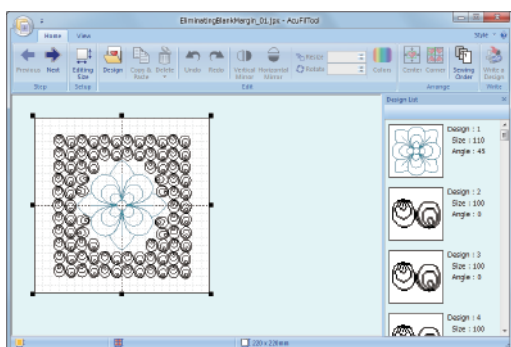
### Sewing the border design

Print the template sheet and place it at the center of the upper edge of the quilt.

Mark the end points of the centerlines. Draw the centerlines on the quilt. The horizontal line should be as long as the overall quilt width.

Place the quilt on hoop ASQ22 and adjust the position by aligning the centerlines on the quilt and the AcuFil template. Sew the first section.

Place the template sheet at the next section and draw the vertical centerline. Sew the next section and repeat these steps to sew the remaining sections from the center outward.



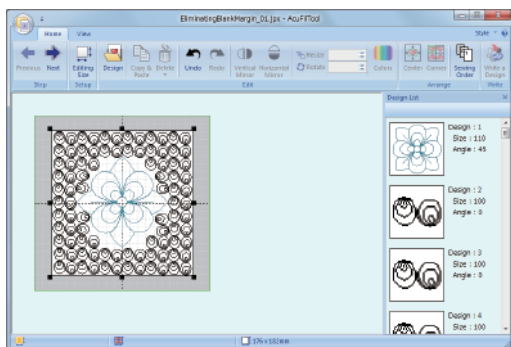
### Eliminating blank margin

If the design pattern created in the previous section is smaller than the calculated design size, there will be a blank margin around the design.

The blank margin can be eliminated by adjusting the working area.

Open a 220 x 220 working area and import the created design.

Adjust the working area size by dragging anchor points to eliminate the blank margin.



Save the design as a file.

## CUSTOMIZING EMBROIDERY MODE SETTINGS

### Embroidery Mode Settings

Press the embroidery setting mode key (refer to page 99).

#### ① Auto thread tension

The auto thread tension level can be adjusted with the “+” or “-” key. Increase the value when using the same threads on the bobbin and needle.

#### ② Low bobbin thread warning

The low bobbin thread warning level can be adjusted with the “+” or “-” key. To turn this option off, press the “-” key until “OFF” shows in the window.

#### ③ One stitch stop on/off

When this function is turned on, the machine sews one stitch and stops automatically so that you can bring the bobbin thread up before sewing.

#### ④ Hoop confirmation on/off

The hoop confirmation message will appear every time before opening the ready to sew window. However you can turn this option off by selecting off.

Press the next page key to go to the next menu.

#### ⑤ Maximum embroidery speed

The maximum embroidery sewing speed can be set from 400 to 1000 spm in 100 spm intervals by pressing the “+” or “-” key. (Sewing speed can be varied with the speed control slider even while running the machine.)

#### NOTE:

Reduce the sewing speed when sewing patterns with narrow zigzag stitches that tend to warp at high speeds.

#### ⑥ Embroidery foot height

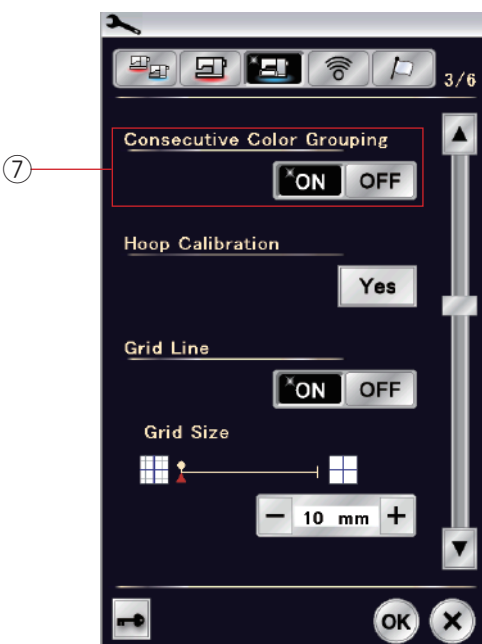
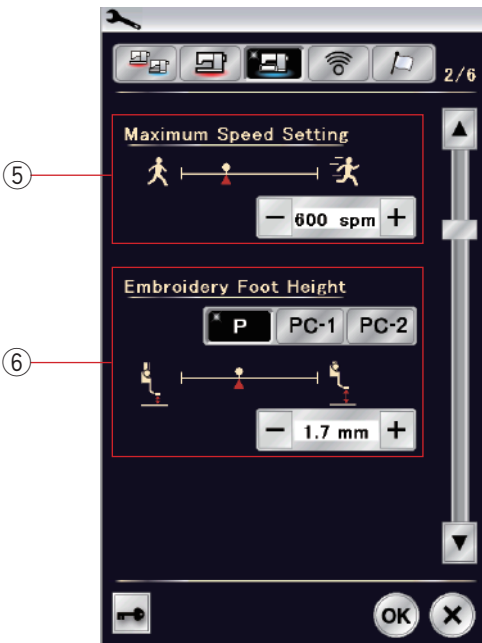
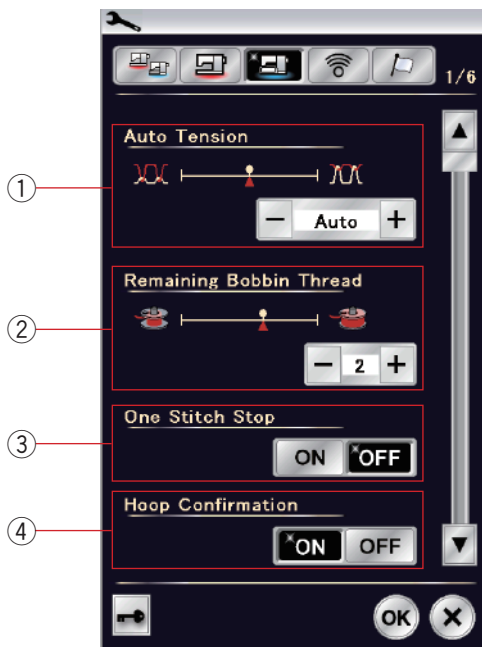
The machine measures fabric thickness and automatically sets the presser foot to the optimum height. However, you can fine tune the foot height according to fabric material and/or other sewing conditions by pressing the “+” or “-” key. The adjustable range is 0 mm to 4 mm. You can select the type of embroidery foot to set the embroidery foot height from P, PC-1 or PC-2 by pressing the corresponding key.

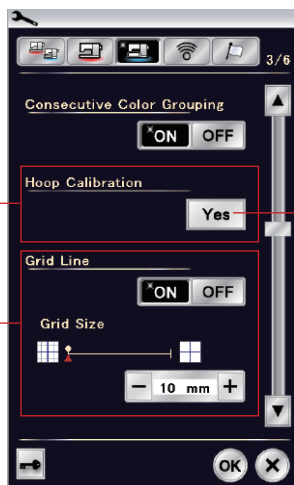
Press the next page key to go to the next menu.

#### ⑦ Consecutive color grouping on/off

If an imported stitch data file or design files of a pattern combination contain consecutive sections in the same color, these sections are automatically grouped together as one section when opening the file or saving the pattern combination as a file or going to the ready to sew window. This function is invalid when combining the built-in designs and externally sourced designs.

Turn this option off if you do not wish to group the sections together.





## ⑧ Hoop calibration

You can calibrate the center position of the hoops. You need to enter embroidery mode before opening the embroidery setting window.

Extend the carriage arm and press the Yes key.

⑧-1 Yes key

The carriage moves to the center position.

Press the hoop selection key to open the hoop selection window.

⑧-2 Hoop selection key

Select the hoop and attach it to the carriage. Set the template in the hoop.

Adjust the hoop position by pressing the jog keys so that the needle is right above the hole in the template and press the OK key.

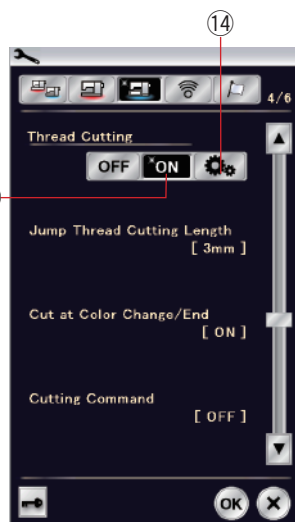
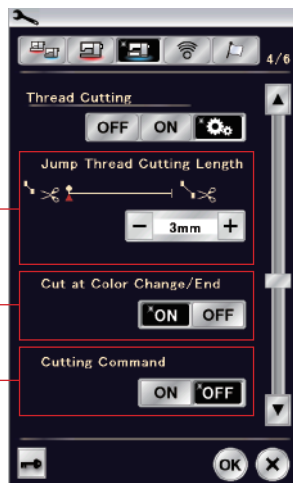
## ⑨ Grid line on/off

Turn this option on to show grid in the editing window.

The grid size can be altered from 10 to 30 mm with the “+” or “-” key when this option is on.

Turn this option off to hide the grid.

Press the next page key to go to the next menu.



## Thread cutting

There are 3 thread cutting options for embroidery.

### ⑩ Jump thread cutting length

When this option is turned on, the machine trims the jump threads if the jump thread length is the same or more than the set value.

### ⑪ Cut at color change/end

When this option is turned on, the machine trim the thread when it stops to change the thread to the next color.

### ⑫ Cutting command

When this option is turned on, the machine trim the threads at the trim code if the imported stitch data file contains a trim command (cutting command).

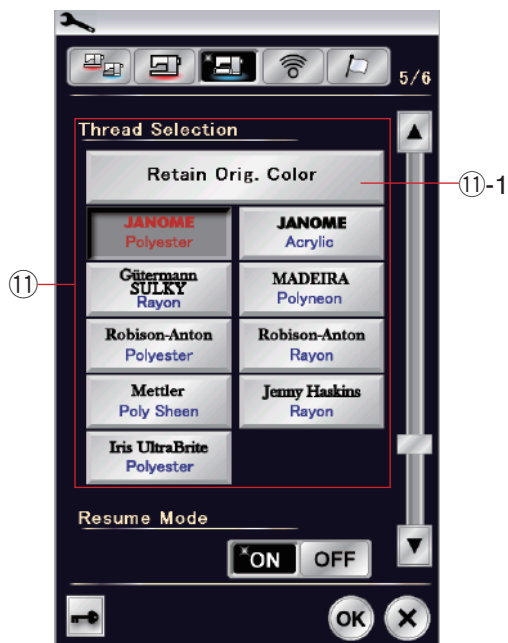
### ⑬ Easy setting

When this setting is turned on, the machine will trim the threads if the jump thread is 3 mm or longer, or when the machine stops to change the thread to the next color. Press the OK key to confirm the easy setting.

### ⑭ Advanced setting

When this setting is turned on, you can configure the Jump thread cutting ⑩, Cut at color change/end ⑪, and Cutting Command ⑫ options individually.

Press the OK key to confirm the advanced setting.

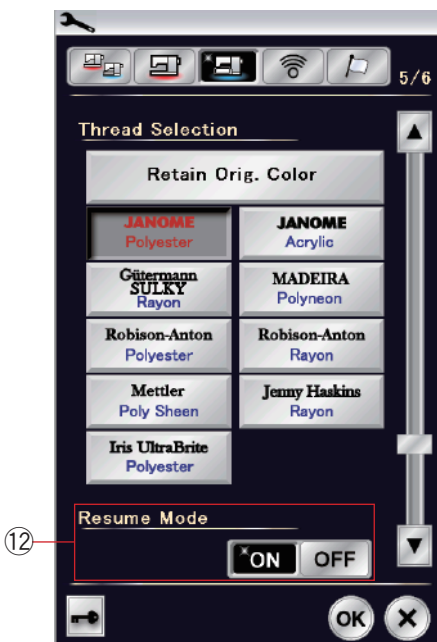


### ⑪ Thread selection

There are 9 types of embroidery thread to choose from. Press the key of the thread you wish to use. The color code of the selected brand is shown on the color/part key along with the name of the color.

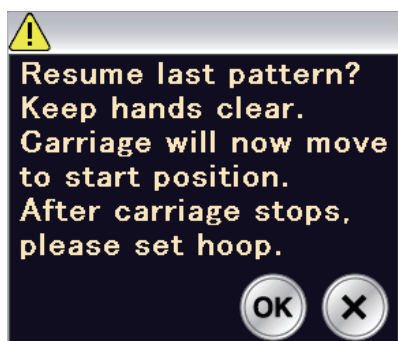
If you use imported embroidery stitch data containing proper thread information, press the retain original color key to retain this information.

⑪-1 Retain original color key



### ⑫ Resume mode

When Resume Mode is turned on, the last stitch sewn before turning the power off will resume when you turn the power on again.

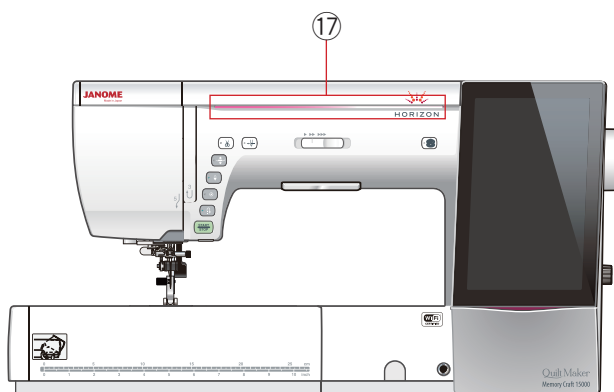
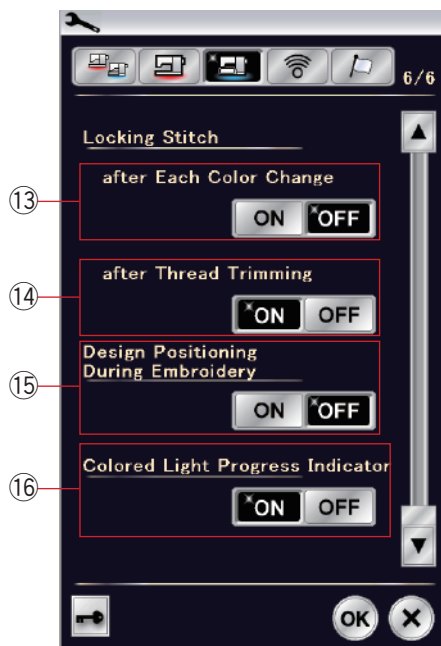


When you turn the power on, the confirmation window opens. Press the OK key to resume the last stitch of the sewn pattern.



After customizing the settings, press the OK key to enable the new settings.

To exit the setting mode without changing the settings, press X key.



#### NOTE:

You do not need to change Locking stitch function settings when using built-in embroidery designs.

#### ⑬ Locking stitch ON/OFF (after each color change)

The threads may ravel if the stitch data does not contain locking stitches at the beginning of each color section. To avoid raveling, insert locking stitches at the beginning when this function is turned ON.

#### ⑭ Locking stitch ON/OFF (after thread trimming)

If you turn ON the thread cutting (refer to the previous page "Thread cutting"), the machine will insert locking stitches after the jump to avoid threads from raveling.

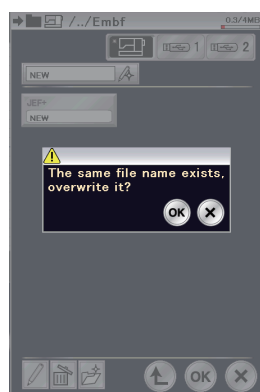
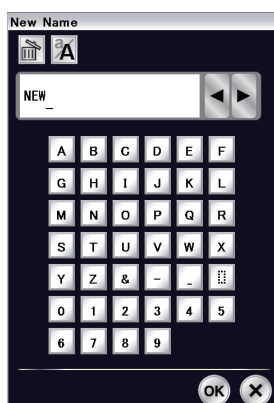
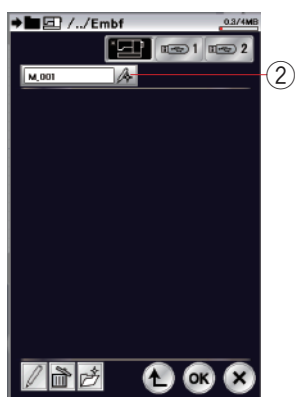
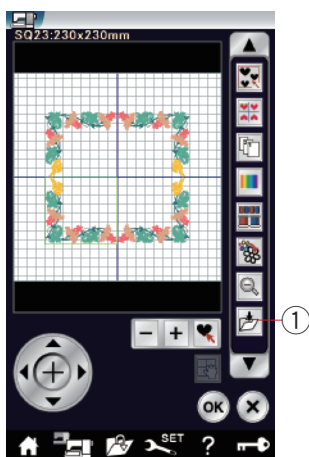
#### ⑮ Design positioning during embroidery

If you turn ON the "Design positioning during embroidery", you can re-position the embroidery design with the jog key.

#### ⑯ Colored light progress indicator

If you turn ON the "Colored light progress indicator", the sewing light on the front ⑰ will indicate the progress of the embroidery project.





## Saving and Opening a File

### Saving a file

You can save original embroidery designs created in embroidery mode as files in the built-in memory and/or USB flash drive.

Press the save file key and the save file window will open.

- ① Save file key

A folder labeled "Emb" (embroidery mode) is displayed on the screen.

To select a folder, press the folder icon.

File names are assigned automatically in numerical order starting from M\_001.....

Press the OK key and the file is saved in the selected folder.

To assign a particular name to the file, press the rename key.

- ② Rename key

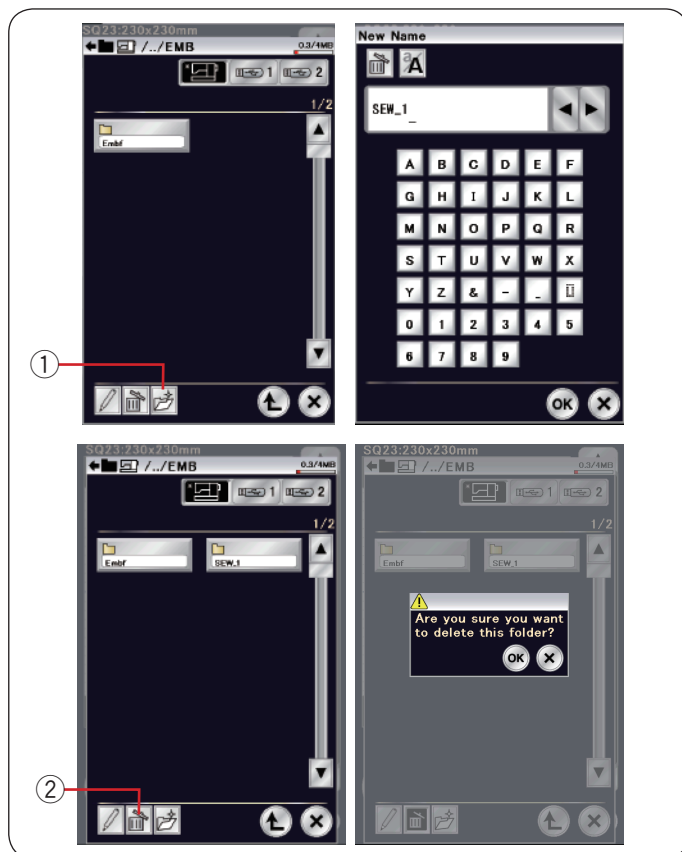
The keyboard window opens.

Enter a new name and press the OK key.

The file is saved under the new name.

When you attempt to save a file with a name that already exists, the confirmation message will appear.

Press the OK key to overwrite the existing file or press the X key if you do not want to overwrite it.



### Creating a new folder

Press the new folder key and the keyboard window will open.

- ① New folder key

Enter a folder name and press the OK key.

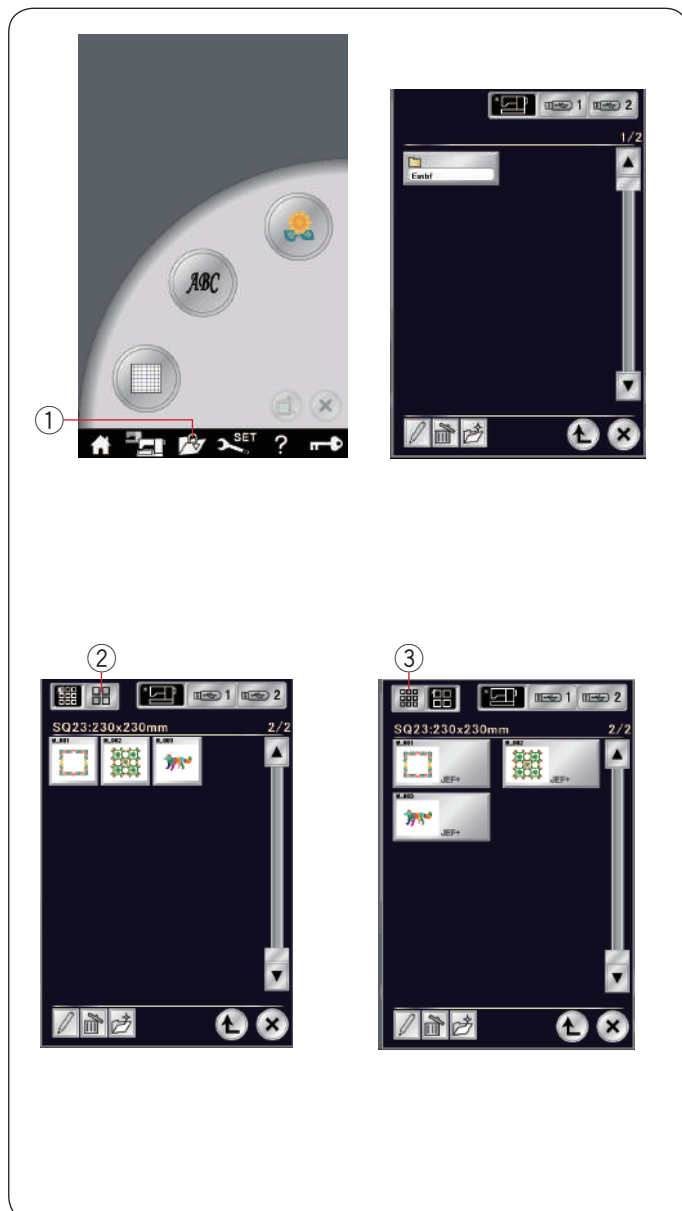
A new folder is created under the assigned name.

### Deleting a file or folder

Press the delete key and select the file or folder to delete. A confirmation message appears.

Press the OK key to delete the file or folder.

- ② Delete key



### Opening a file

To open saved files, press the open file key to open the open file window.

- ① Open file key

Select the folder location, either the built-in memory or USB flash drive.

Open the folder that contains the desired file by pressing the folder icon.

The file list of the selected folder is displayed.

To open the file, press the file icon.

In the embroidery mode, file attributes can be shown on the file icon.

To show the file attribute, press the “large icon” key.

- ② Large icon key

There are 6 file attributes as follows:

**JEF**: \*.JEF (Janome embroidery format)

**JEF+**: \*.JEF+ (editable Janome embroidery format)

**JPX**: \*.JPX (\*.JEF+ with a background bitmap image)

**JPX**: \*.JPX (Acufil embroidery format)

**JPX**: \*.JPX (Cutwork embroidery format)

**DST**: \*.DST (Tajima embroidery format)

To hide file attribute, press the small icon key.

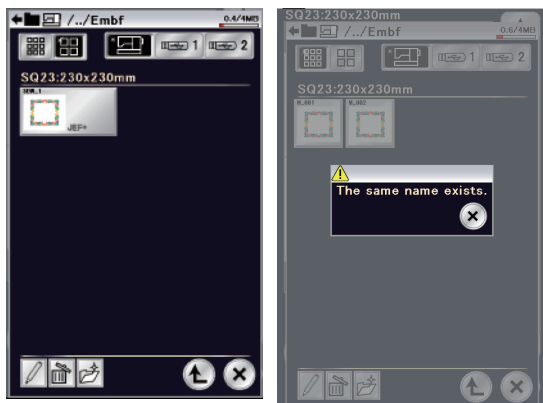
- ③ Small icon key

#### NOTE:

Tajima (\*.DST) format does not have thread color information. Janome's thread color will be assigned automatically when opening.



①

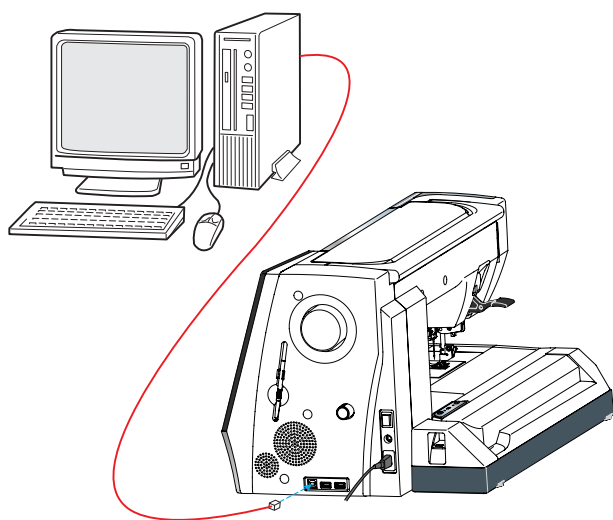


## Changing a name of the file or folder

Press the rename key and select the file or folder for which you wish to change the name.  
The keyboard window will open.  
Enter a new name and press the OK key.  
The name of the file or folder will change.

① Rename key

If you enter a name that already exists, the message “The same name exists.” will appear.  
Press the X key and enter another name.



## Direct PC-Link

You can connect the MC15000 to a PC with the USB cable included in the standard accessories.

You need to install Horizon Link Suite and the USB driver for the MC15000 on your computer.

Horizon Link Suite and the USB driver are available in the Horizon Link Suite CD-ROM included in the standard accessories.

Start up the MC15000 and PC, and insert the type “A” USB connector into the PC.

Insert the type “B” connector into the MC15000.

You can send original stitch patterns created with Stitch Composer and original embroidery design data from a PC to the MC15000.

Refer to on-screen help of Horizon Link Suite for more details.



### **CAUTION:**

Do not turn the power off or disconnect the USB cable while the data transfer is in progress, as this will cause loss of data and can damage the machine's memory.

## CARE AND MAINTENANCE

### Cleaning the Hook Area

Clean the hook area at least once a month.

Remove the needle plate (refer to page 22).

Turn the power switch off and unplug the machine.

Remove the needle and presser foot.

#### NOTE:

Do not dismantle the machine in any way other than as explained in this section.

Take out the bobbin and bobbin holder.

- ① Bobbin holder

Clean the bobbin holder with a lint brush.

Apply a few drops of the bobbin holder cleaner (included in the standard accessories) to a soft cloth and wipe the bobbin holder both inside and outside.

- ② Lint brush
- ③ Soft cloth

Clean the feed dog and auto thread cutter device with the lint brush.

- ④ Feed dog
- ⑤ Auto thread cutter device

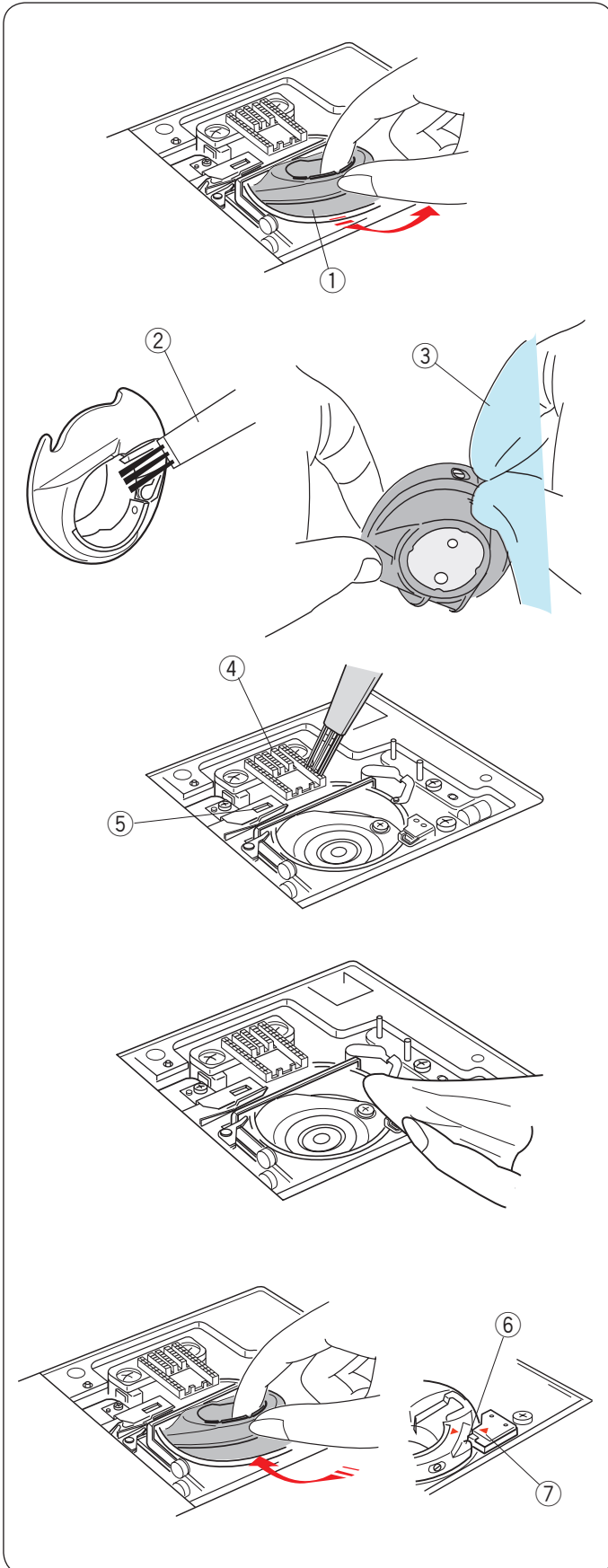
Clean the inside and lip of the hook race with a soft cloth.

Insert the bobbin holder so that the knob fits next to the stopper in the hook race.

Insert the bobbin.

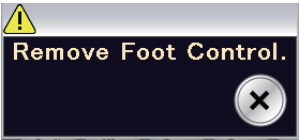
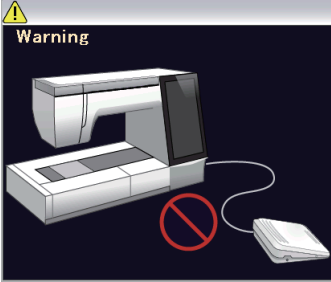
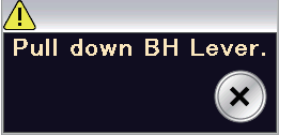
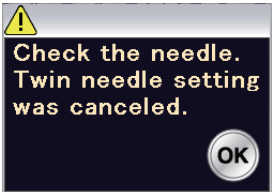
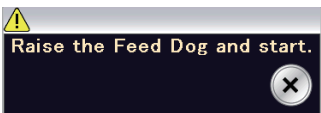
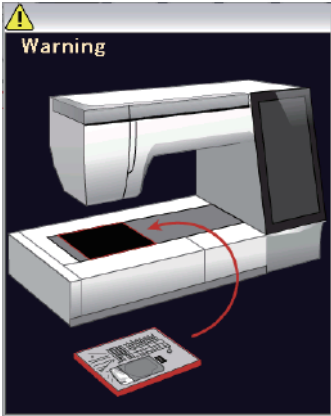
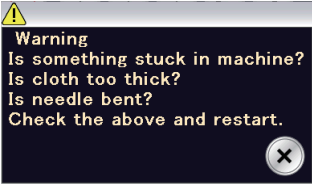
- ⑥ Knob
- ⑦ Stopper

Attach the needle plate, presser foot and needle.



## Problems and Warning Signals

If the visual touch screen shows a warning sign, follow the guidance below.

Warning Sign	Cause	Try this
	The start/stop button is pressed with the foot control connected.	Disconnect the foot control.
	The foot control is out of order.	Contact the service center or the store from whom the machine was purchased.
	The machine will stop if the buttonhole is sewn without lowering the buttonhole lever.	Lower the buttonhole lever and start the machine again.
	The twin needle key is pressed when the twin needle sign is indicated on the LCD screen.	Replace the twin needle with a single needle and press the OK key.
	The machine is started with the feed dog lowered.	Raise the feed dog unless you want to sew with the feed dog lowered.
	The needle plate is removed.	Attach the needle plate. Check if the needle plated is attached properly.
	The machine is halting due to overload.	Wait for at least 15 seconds to restart. Remove tangled threads around take-up lever, hook race and automatic thread cutting mechanism.

### IMPORTANT:

To carry the sewing machine, hold the carrying handle with your hand, and support the sewing machine with the other hand.

Clean the outside of the machine with a soft cloth. Do not use chemical solvents.

Store the machine in cool and dry place.

Do not store the machine in an area of high humidity, near a radiator or in direct sunlight.

The power supply cord and embroidery hoops can be stored in the semi-hard fabric cover.

Make sure to store the embroidery carriage arm before turning off the power switch.

## Troubleshooting

Problem	Cause	Reference
The machine is noisy.	<ol style="list-style-type: none"> <li>1. Thread is jammed in the hook area.</li> <li>2. The feed dog is packed with lint.</li> </ol>	<p>See page 169.</p> <p>See page 169.</p>
The needle thread breaks.	<ol style="list-style-type: none"> <li>1. The needle thread is not threaded properly.</li> <li>2. The needle thread tension is too tight.</li> <li>3. The needle is bent or blunt.</li> <li>4. The needle is inserted incorrectly.</li> <li>5. The thread is too heavy for the needle.</li> <li>6. The needle thread was not set in the thread holder when embroidery sewing started.</li> </ol>	<p>See page 15.</p> <p>See page 38.</p> <p>See page 18.</p> <p>See page 18.</p> <p>See page 18.</p> <p>See page 120.</p>
The bobbin thread breaks.	<ol style="list-style-type: none"> <li>1. The bobbin thread is not threaded properly in the bobbin holder.</li> <li>2. Lint has collected in the bobbin holder.</li> <li>3. The bobbin is damaged and does not turn smoothly.</li> </ol>	<p>See page 14.</p> <p>See page 169.</p> <p>Replace the bobbin.</p>
The needle breaks.	<ol style="list-style-type: none"> <li>1. The needle is inserted incorrectly.</li> <li>2. The needle is bent or blunt.</li> <li>3. The needle clamp screw is loose.</li> <li>4. The needle thread tension is too tight.</li> <li>5. The needle is too fine for the fabric being sewn.</li> <li>6. The fabric was pulled toward you when sewing free motion quilting with the free motion quilting open-toe foot QO.</li> </ol>	<p>See page 18.</p> <p>See page 18.</p> <p>See page 18.</p> <p>See page 38.</p> <p>See page 18.</p> <p>See page 96.</p>
Visual Touch Screen is not clear.	<ol style="list-style-type: none"> <li>1. The contrast of the screen is not adjusted properly.</li> </ol>	<p>See page 100.</p>
Skipped stitches	<ol style="list-style-type: none"> <li>1. The needle is inserted incorrectly.</li> <li>2. The needle is bent or blunt.</li> <li>3. The needle and/or threads are not suitable for the fabric being sewn.</li> <li>4. A blue needle is not being used for sewing stretch, very fine or synthetics.</li> <li>5. The needle thread is not threaded properly.</li> <li>6. The needle is defective (rusty, burr on needle eye or tip).</li> <li>7. The embroidery hoop is not set properly.</li> <li>8. The fabric is not stretched tightly enough on the embroidery hoop.</li> <li>9. A purple needle is not being used for sewing thick fabrics, denims and across the hem.</li> </ol>	<p>See page 18.</p> <p>See page 18.</p> <p>See page 18.</p> <p>See page 18.</p> <p>See page 15.</p> <p>Change the needle.</p> <p>See page 119.</p> <p>See page 118.</p> <p>See page 18.</p>
Seam puckering	<ol style="list-style-type: none"> <li>1. The needle tension is too tight.</li> <li>2. The needle thread or the bobbin thread is not threaded correctly.</li> <li>3. The needle is too heavy for the fabric being sewn.</li> <li>4. The stitch length is too long for the fabric.</li> <li>5. The stitch width is too wide.</li> <li>6. The fabric is not stretched tightly enough on the embroidery hoop.</li> </ol>	<p>See page 38.</p> <p>See pages 14-15.</p> <p>See page 18.</p> <p>Make stitches shorter.</p> <p>Reduce the stitch width.</p> <p>See page 119.</p>
Slipping layers	<ol style="list-style-type: none"> <li>1. The dual feed foot is not being used for sewing hard to feed material.</li> </ol>	<p>Use the dual feed foot.</p>
The cloth is not feeding smoothly.	<ol style="list-style-type: none"> <li>1. The feed dog is packed with lint.</li> <li>2. The dual feed foot is not being used for sewing hard to feed material.</li> <li>3. The stitches are too fine.</li> <li>4. The feed dog is lowered.</li> </ol>	<p>See page 169.</p> <p>Use the dual feed foot.</p> <p>Make stitches longer.</p> <p>See page 28.</p>



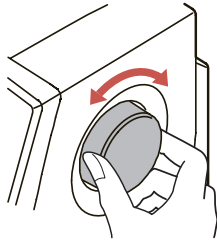
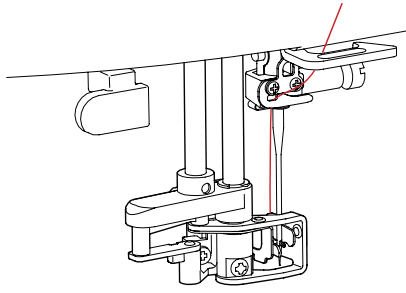
Problem	Cause	Reference
The machine does not run.	<ol style="list-style-type: none"> <li>1. The machine is not plugged in.</li> <li>2. A thread is caught in the hook race.</li> <li>3. A faulty foot control is plugged in while the machine is turned on (buzzer sounds once when plugging in).</li> <li>4. The start/stop button is used for ordinary sewing with the foot control plugged in.</li> </ol>	<p>See page 8. See page 169. Replace the foot control. See page 10.</p>
Crunching sound occurs when running the machine.	<ol style="list-style-type: none"> <li>1. Something is caught between the carriage and the arm.</li> <li>2. The carriage is hitting something around the machine</li> <li>3. The power is turned on when the feed dog is lowered.</li> </ol>	<p>Remove the object. See page 111. It is initializing sound, not a defect.</p>
Patterns are distorted.	<ol style="list-style-type: none"> <li>1. The needle thread tension is too loose.</li> <li>2. The stitch length is not suitable for the fabric being sewn.</li> <li>3. Feed balancing dial is not properly set.</li> <li>4. Interfacing is not used for sewing stretch and very fine fabrics.</li> <li>5. The embroidery hoop attaching knob is loose.</li> <li>6. The embroidery hoop is hitting something around the machine.</li> <li>7. The fabric is not stretched tightly enough on the embroidery hoop.</li> <li>8. The fabric is caught or trapped when sewing embroidery.</li> <li>9. The embroidery foot is trapped by a jump thread.</li> <li>10. The embroidery foot stumbles on a mound of embroidery threads.</li> </ol>	<p>See page 38. See page 37. See page 110. Use an interfacing. See page 120. See page 111. See page 119.  Stop the machine and free the fabric. Trim the jump thread. Adjust the foot height (see page 131).</p>
The automatic buttonhole stitches are not balanced.	<ol style="list-style-type: none"> <li>1. The stitch length is not suitable for the fabric being sewn.</li> <li>2. The feed balancing dial is not set properly.</li> <li>3. Interfacing is not being used with stretch fabric.</li> </ol>	<p>See page 47. See page 110. Use an interfacing.</p>
Pattern selection keys do not work.	<ol style="list-style-type: none"> <li>1. The electronic control circuit is not working correctly.</li> <li>2. The key position is out of alignment</li> </ol>	<p>Turn the switch off and turn it on again. See page 101.</p>
Threads frequently bunch up on the underside of the stippling design pattern.	<ol style="list-style-type: none"> <li>1. The minimum length of the jump thread cutting is too short.</li> </ol>	<p>See page 163.</p>
The automatic needle threader does not return to up position.	<ol style="list-style-type: none"> <li>1. The automatic needle threader is not working correctly.</li> </ol>	<p>See page 173.</p>
The machine cannot connect to the wireless LAN access point.	<ol style="list-style-type: none"> <li>1. The wireless router device does not comply with IEEE802.11b/g/n wireless standard.</li> <li>2. The wireless router device using WEP security, and encryption type or/and key index is not set correctly.</li> </ol>	<p>See page 107. See page 107.</p>
The machine's Wi-Fi connection is unstable.	<ol style="list-style-type: none"> <li>1. The wireless router device's DHCP option is not turned on.</li> <li>2. A microwave oven, bluetooth devices or cordless phones is being used between the machine and the access point.</li> </ol>	<p>See page 107. See page 107.</p>
The visual touch screen swells.	<ol style="list-style-type: none"> <li>1. The machine has exposed to high humidity and high temperature.</li> </ol>	<p>Use and store the machine in a cool and dry area.</p>

### Troubleshooting (automatic needle threader)

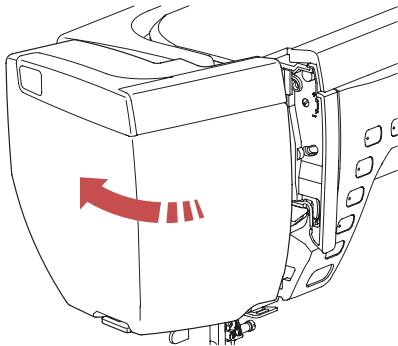
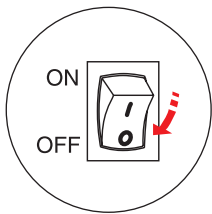
If the automatic needle threader stuck and will not return to the up position automatically, correct it as follows:

Carefully turn the handwheel away from you or toward you to move the needle up a little. The automatic needle threader will return to the up position automatically.

If the automatic needle threader still does not return to the up position, follow the procedure below.

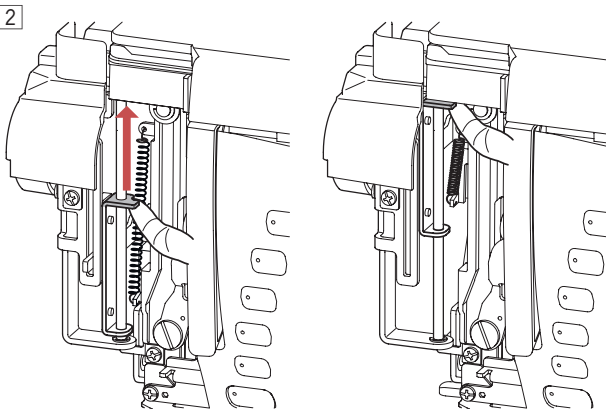


1



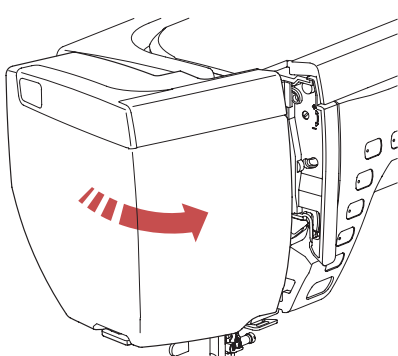
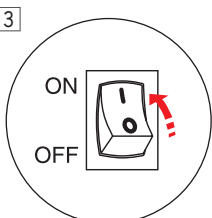
- 1 Turn the power switch off.  
Open the face plate.

2



- 2 Lift the shaft plate with your finger as far as it goes.

3

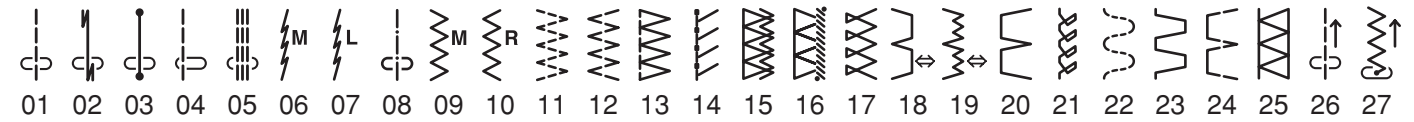


- 3 Close the face plate.  
Turn the power switch on.

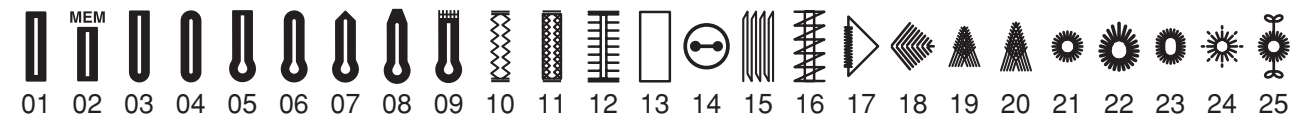
# STITCH CHART

## Ordinary Sewing

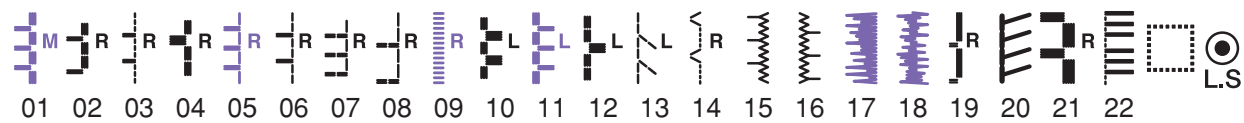
### Utility (U)



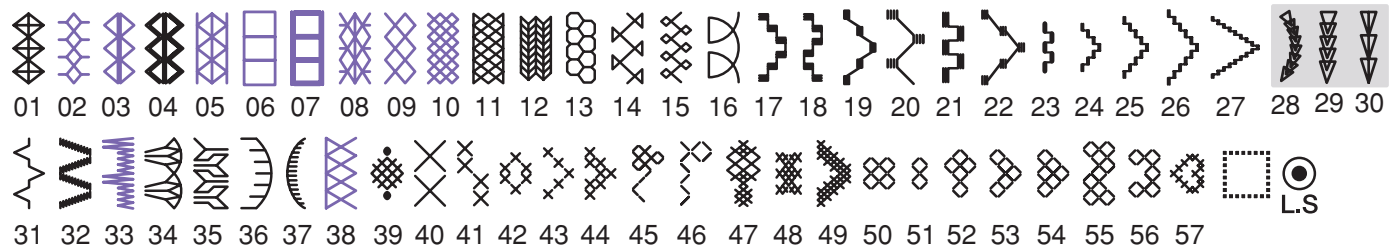
### Buttonhole (B)



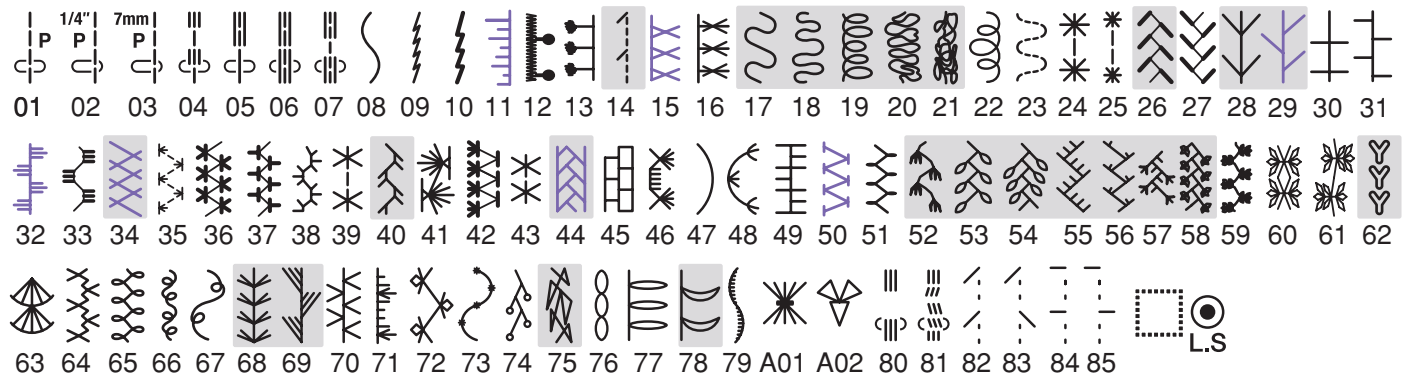
### Applique (A)



### Heirloom (H)



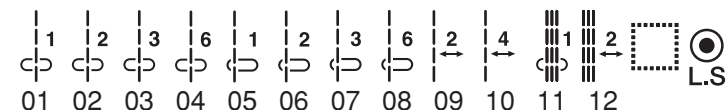
### Quilt (Q)



### Satin (S)



### Bridge (BR)



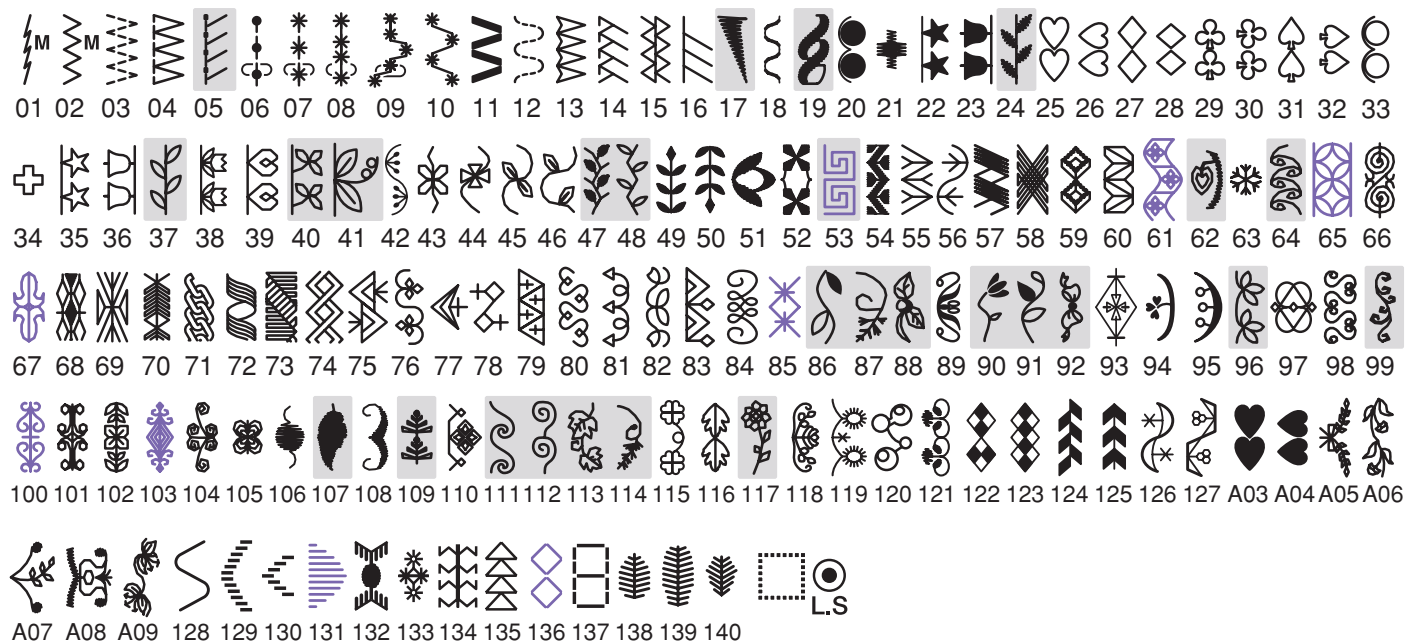
\* Stitch patterns in purple can be tapered.

\* Stitch patterns shaded in light grey can be flipped vertically (Horizontal mirror image).

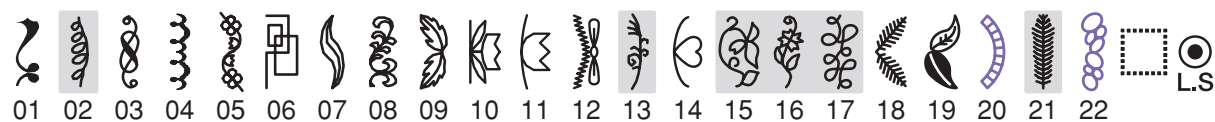
# STITCH CHART

## Ordinary Sewing

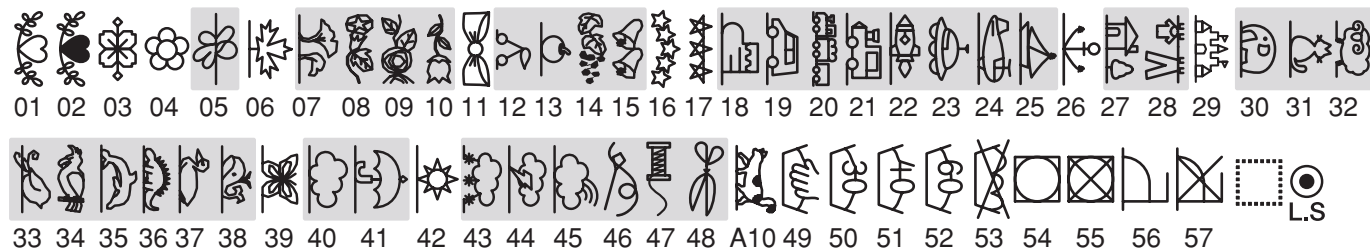
### Decorative (D)



### Long (L)



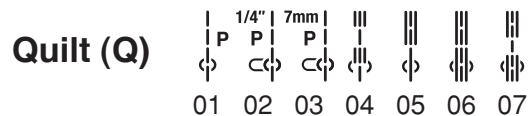
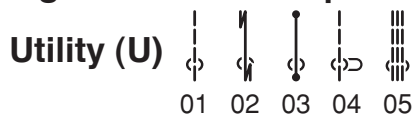
### Pictograph (P)



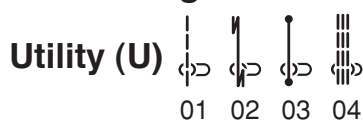
### Play (PL)



### Straight stitch needle plate



### Professional grade needle plate



\* Stitch patterns in purple can be tapered.

\* Stitch patterns shaded in light grey can be flipped vertically (Horizontal mirror image).

# STITCH CHART

## Ordinary Sewing

### Block

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z . □ □ □  
a b c d e f g h i j k l m n  
o p q r s t u v w x y z . □ □ □  
1 2 3 4 5 6 7 8 9 0 & - \$ @ . .  
, ? ! ' ' < > ( ) - + = / // % ~ :  
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ  
Ò Ó Ô Õ Ö Ø Ù Ú Û Ü ß À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ  
Ł Ń Ņ Æ Š Š Ÿ Ž Ž Ž  
à á â ã ä å æ ç è é ê ë ì í î ï ñ  
ò ó ô õ ö ø ù ú û ü ß à á â ã ä å æ ç è é ê ë ì í î ï ñ  
ł Ń Ņ Æ Š Š Ÿ Ž Ž Ž

### Script

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z . □ □ □  
a b c d e f g h i j k l m n  
o p q r s t u v w x y z . □ □ □  
1 2 3 4 5 6 7 8 9 0 & - \$ @ . .  
, ? ! ' ' < > ( ) - + = / // % ~ :  
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ  
Ò Ó Ô Õ Ö Ø Ù Ú Û Ü ß À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ  
Ł Ń Ņ Æ Š Š Ÿ Ž Ž Ž  
à á â ã ä å æ ç è é ê ë ì í î ï ñ  
ò ó ô õ ö ø ù ú û ü ß à á â ã ä å æ ç è é ê ë ì í î ï ñ  
ł Ń Ņ Æ Š Š Ÿ Ž Ž Ž

### Broadway

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z . □ □ □  
a b c d e f g h i j k l m n  
o p q r s t u v w x y z . □ □ □  
1 2 3 4 5 6 7 8 9 0 & - \$ @ . .  
, ? ! ' ' < > ( ) - + = / // % ~ :  
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ  
Ò Ó Ô Õ Ö Ø Ù Ú Û Ü ß À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ  
Ł Ń Ņ Æ Š Š Ÿ Ž Ž Ž  
à á â ã ä å æ ç è é ê ë ì í î ï ñ  
ò ó ô õ ö ø ù ú û ü ß à á â ã ä å æ ç è é ê ë ì í î ï ñ  
ł Ń Ņ Æ Š Š Ÿ Ž Ž Ž

### Symbol

✚ ✨ ♥ ♦ ♣ ♠ ✚ ✨ ✨ ✨ ✨ ✨ ✨ ✨ ✨ ✨ ✨  
☀ # ♭ ♯ ♪ ♫ ✨ ✨ ✨ ✨ ✨ ✨ ✨ ✨ ✨ ✨

### Block (9 mm)

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z . □ □ □  
1 2 3 4 5 6 7 8 9 0 & - \$ @ . .  
, ? ! ' ' < > ( ) - + = / // % ~ :



## DESIGN CHART

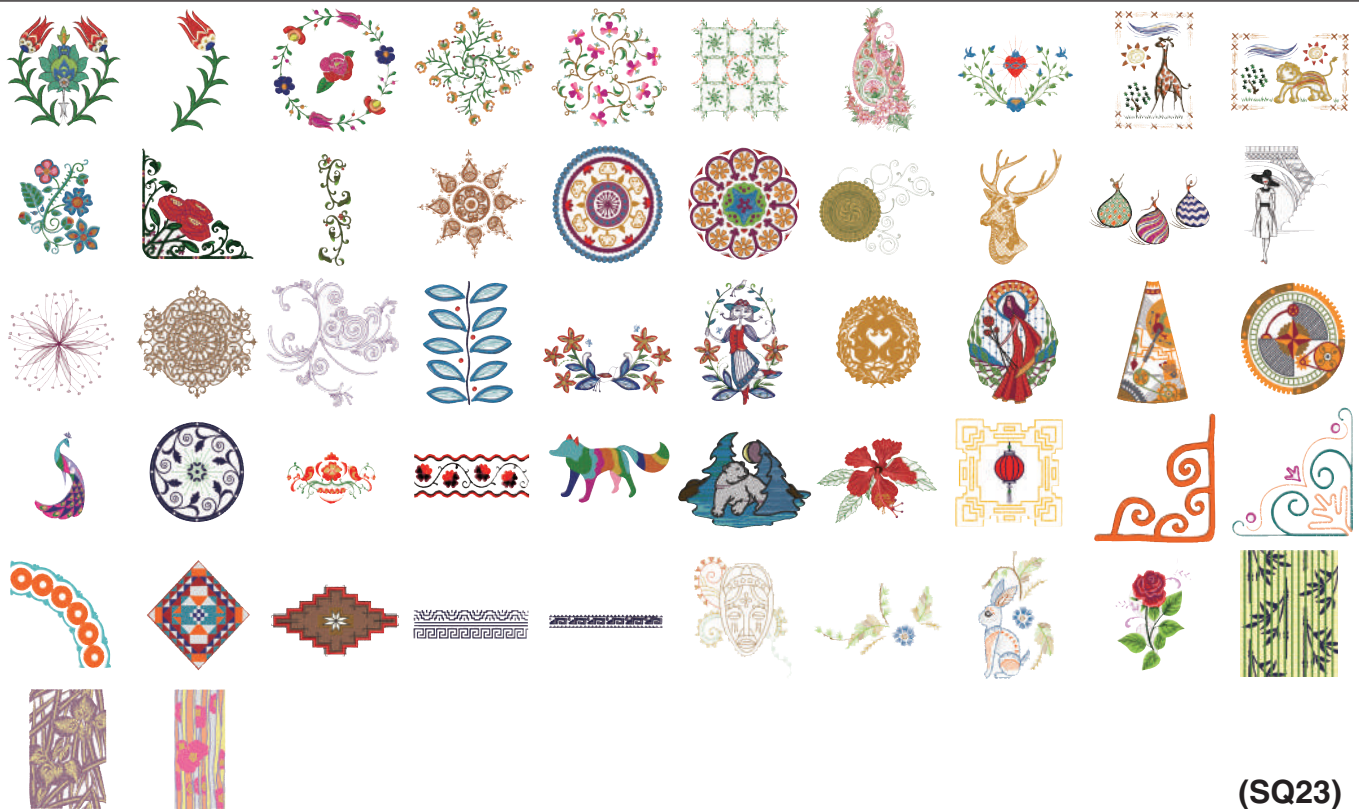
### Embroidery

Pattern images are not to scale.

## World of Embroidery Designs



**(SQ14)**



**(SQ23)**



(GR)



## World of Embroidery Designs



(FA10)

## Designers Designs

### • Sublime Stitching by Jenny Hart



(SQ14)



(SQ23)



(GR)

### • Leah Day



(SQ23)

### • Lonni Rossi



(SQ23)

### • Stitchique by Tira Schulteis



(SQ14)



(SQ23)

### • Noriko Nozawa



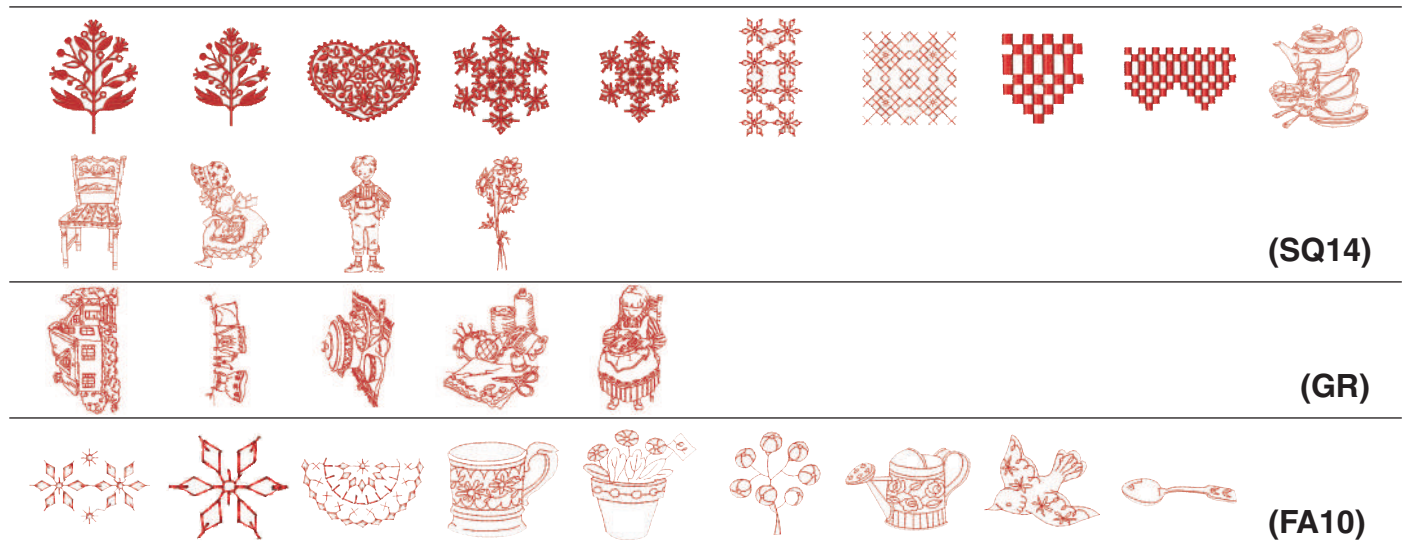
(GR)

\* The gaps in the outline and the white spaces that appear between the color patterns on Noriko Nozawa designs are part of the design.

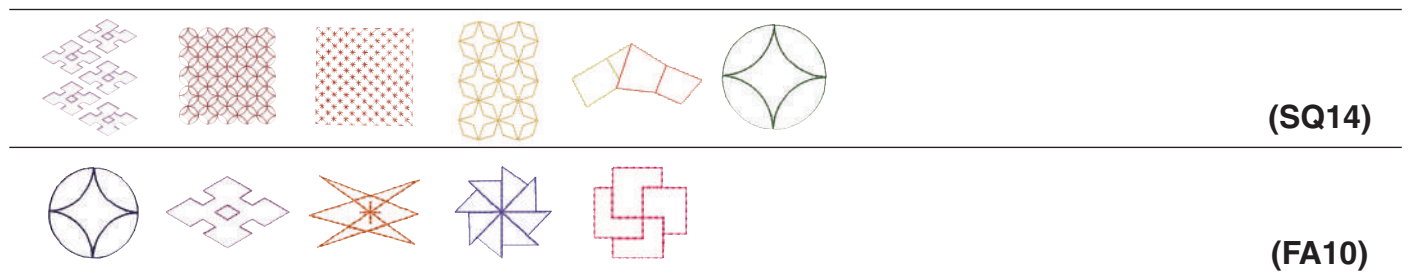
# DESIGN CHART Embroidery

Pattern images are not to scale.

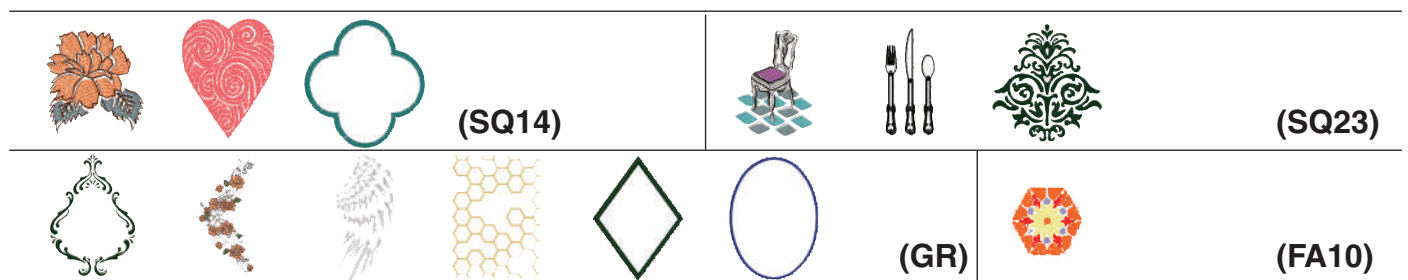
## Redwork Designs by Y.GANAHA



## Sashiko Designs



## Home Decor Designs



## Everyday & Holiday Designs



**DESIGN CHART**  
Embroidery

Pattern images are not to scale.

**Everyday & Holiday Designs**



(FA10)

**Abstract Designs**



(SQ14)



(SQ23)

**Monochrome Designs**



(SQ14)



(SQ23)



(FA10)

**Border Designs**



(SQ14)



# DESIGN CHART

## Embroidery

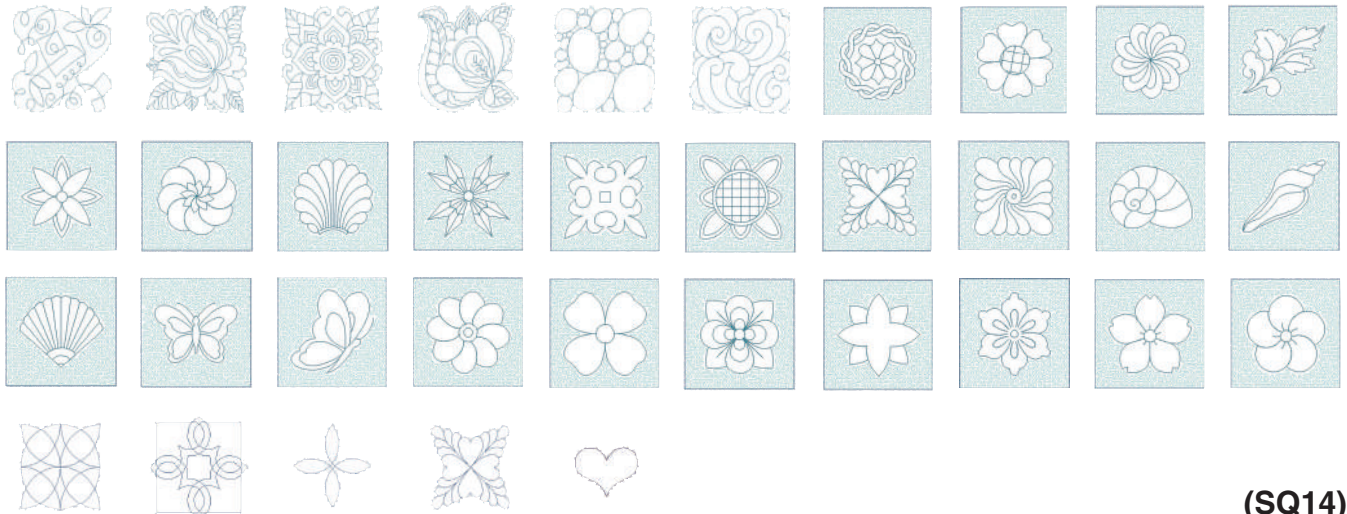
Pattern images are not to scale.

### Border Designs

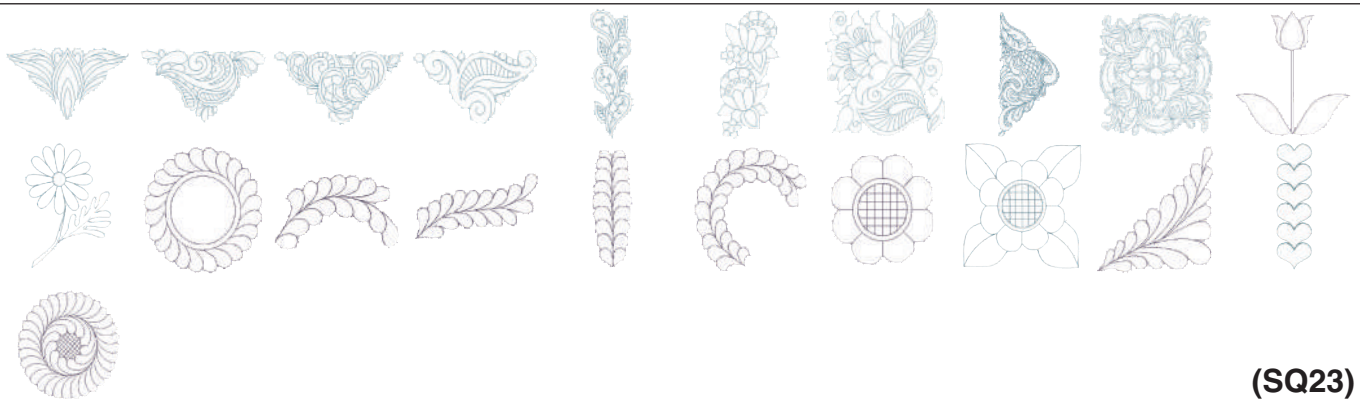


(FA10)

### Quilting Designs



(SQ14)



(SQ23)

### Cross Stitch Alphabet Designs



























(FA10)
















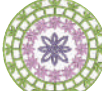


































**DESIGN CHART**  
**Embroidery**

Pattern images are not to scale.



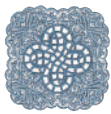



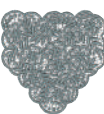



**Cross Stitch Designs**

									
								<b>(SQ14)</b>	
						<b>(FA10)</b>			

**Favorite Designs**

									
									
									
	(SQ14)								
								(SQ23)	
					(GR)				
						(FA10)			

**Lace Designs**

									
<b>(SQ14)</b>								<b>(FA10)</b>	

# DESIGN CHART

## Embroidery

Pattern images are not to scale.

### Fringe Designs



(SQ14)

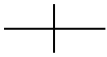


(SQ23)



(FA10)

### Calibration Pattern





# DESIGN CHART

## Embroidery

### Gothic

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### Bauhaus

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### Galant

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### Cheltenham

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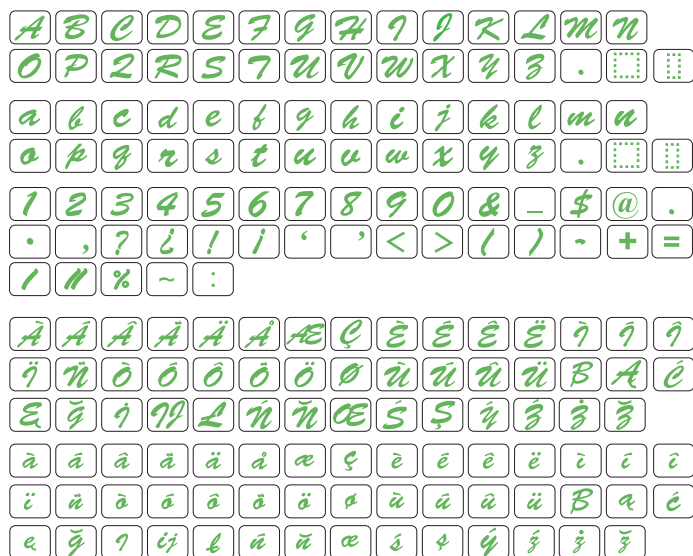
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# DESIGN CHART

## Embroidery

### Brush



### Hollowblock



### First Grade



### Jupiter



### 2-letters



### 3-letters



## Embroidery

## Border



## Normal Sew



# Micro Gothic

[illegible]

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